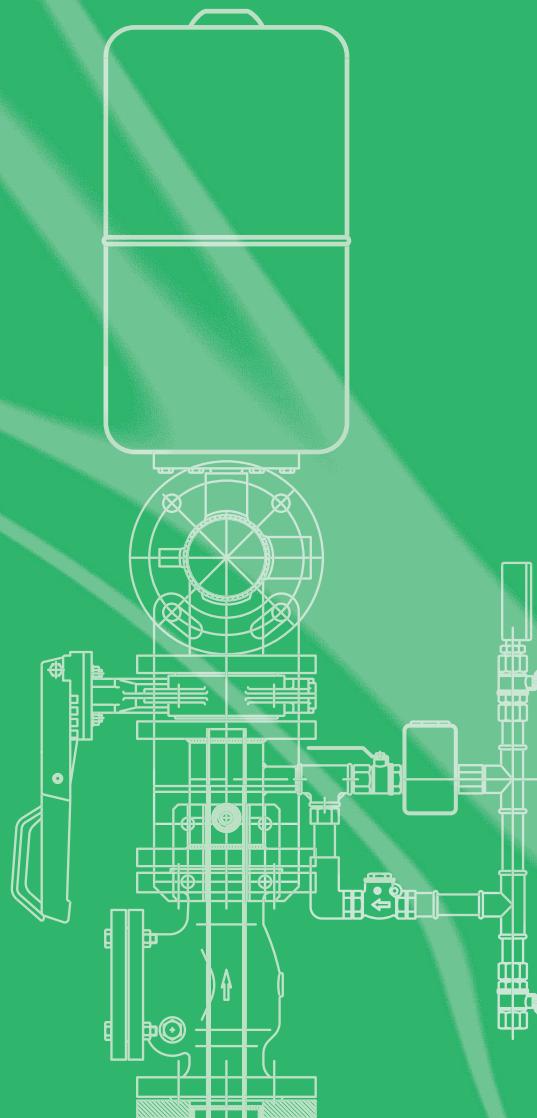
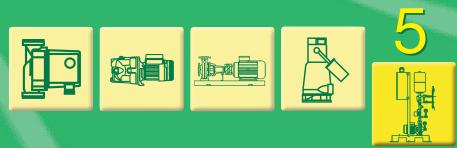


BOOSTER SETS



PUMP PERFORMANCE

TECHNICAL CATALOGUE SECTIONS:

- 1  WET ROTOR CIRCULATORS AND IN-LINE PUMPS
- 2  SELF-PRIMING AND MULTISTAGE CENTRIFUGAL PUMPS
- 3  CENTRIFUGAL PUMPS
- 4  SUBMERSIBLE AND SUBMERGED PUMPS
- 5  BOOSTER SETS

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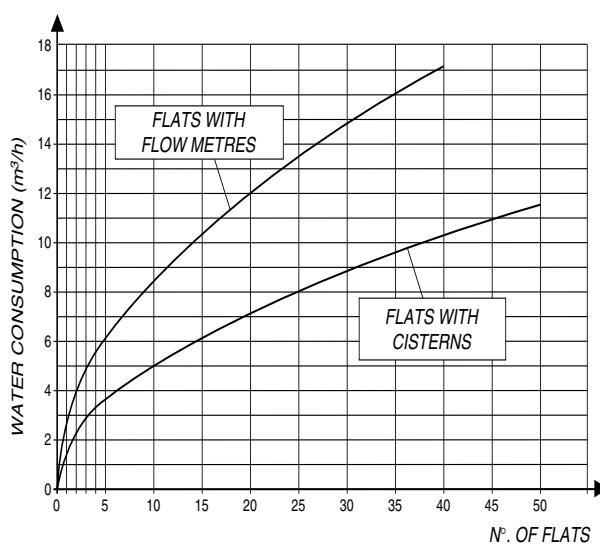
CHOICE PARAMETERS OF A UNIT IN ORDER TO SUPPLY WATER TO APARTMENTS, IT LODGES, SIMILAR HOSPITALS AND BUILDINGS

To be able to choose a pump you have to know two things: how much water is needed and to what height it has to be taken. In the following table you will see how water is used in a house or flat.

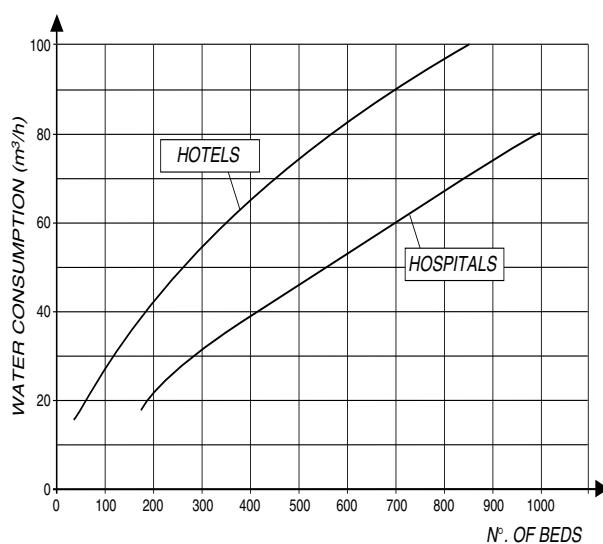
	Q (l/min)
Toilet with quick flush	90
Bath tub	15
Shower	12
Washing machine	12
Dish washer	10
Wash basin	9
Sink	6
Bidet	6
Toilet with flushing cistern	6
	166

Of course, 166 Lt./min are not needed for a flat because the shower, toilets, etc., are not used all at once, so to calculate how much water is needed mathematical formulas have to be used which will give us the required quantity of water for flats. The results of such calculations are given in the following tables.

To flats



To hotels and hospitals



In the case of flats with two bathrooms increase the quantity of water 30%.

In the case of flats with three bathrooms increase the quantity of water 25%.

In the case of flats with four bathrooms increase the quantity of water 20%.

For tourist resorts multiply the number of flats by 1,2.

When we know the number of flats or beds, we know how much water is needed. The pump must take the water to the highest floor in the building and its pressure must be at least 1 bar (about 10 m) in the furthest point. But the pump must overcome the leaks in the system while it is helped by the pressure from the water mains. So the pump's head is worth:

$$H = (\text{building } H + \text{leak } H + \text{residual } H) - \text{water mains } H \text{ (m)}$$

Considering that the leaks are equivalent to about 20% of building H we have:

$$H = (1,2 \times \text{building } H + 10) - \text{water mains } H \text{ (m)}$$

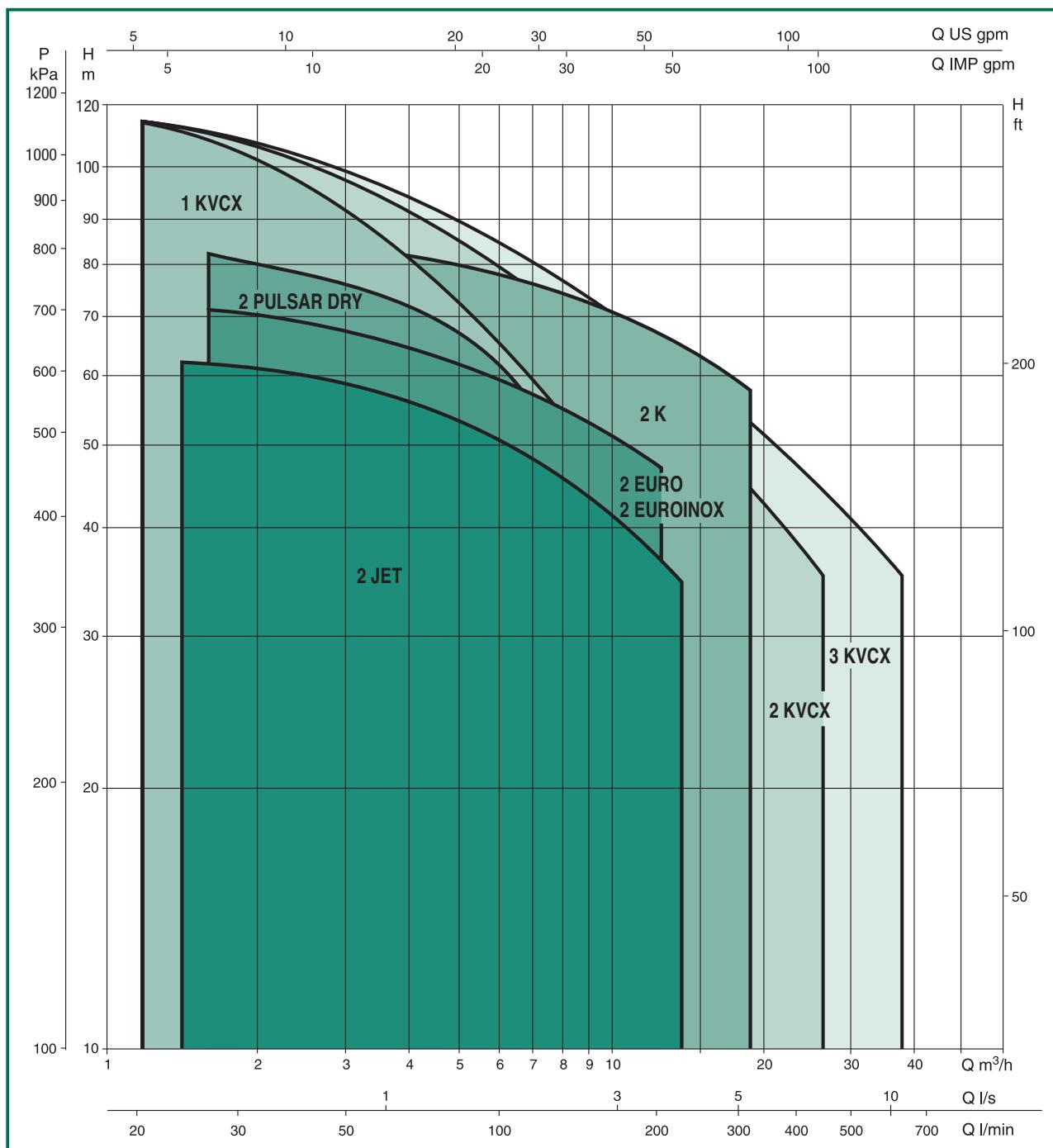
Summarising: 1) From the number of flats find the quantity Q.

2) From the height of the building and water mains pressure find H.

3) From the tables on the following pages choose the pump that has, as its end of curve point, the calculated values of Q and H and which has at least 2 bar (20 m) between the start and finish of the curve.

DOMESTIC AND CIVIL PRESSURE UNITS AND BOOSTER SETS

SELECTION TABLES



2 JET SETS WITH 2 SELF-PRIMING JET PUMPS



CE

GENERAL DATA

Applications

Water lifting sets particularly suitable for domestic, small installations for civil, agricultural or industrial use.

The self-priming JET electric pumps can also handle water containing air, gas or small amounts of sand.

They are indispensable for use in artesian wells and where suction difficulties arise.

They are totally reliable, easy to use and maintenance-free.

The units are supplied:

- in the version with tanks (air connector available on request)
- in the version with air connector (tanks on request).

Constructional characteristics

HYDRAULIC PART

- 2 Self-priming centrifugal JET electric pumps;
- Tropicalised galvanised sheet base complete with 4 anti-vibration rubber feet;
- Threaded suction and delivery manifold in tropicalized galvanised steel;
- Ball valves on the suction and delivery pipe union of each single pump;
- Check valve on the suction side of each pump;
- 2 female manifold caps in galvanised tropicalised cast iron;
- Radial pressure gauge with shut-off valve;
- Galvanised tropicalised steel column support for electrical panel.
- 2 x 20 liters membrane tanks.

ELECTRICAL PART

Control panel in shockproof fire-resistant plastic material, IP 55 protection level.

The panel comprises a general switch, pump overload circuit breakers, starting order exchange system for pumps, low voltage circuit for control pressure switches, selectors (start buttons for single-phase panel), front of panel indicator LED's.

It is installed on a column fitted to the pump support.

Pre-calibrated pump start/stop pressure switches.

The panel can be connected to:

- Float or pressure switch KIT as protection against operation without water (*)
- Maximum pressure switch KIT (*)

(*) Optional items available on request

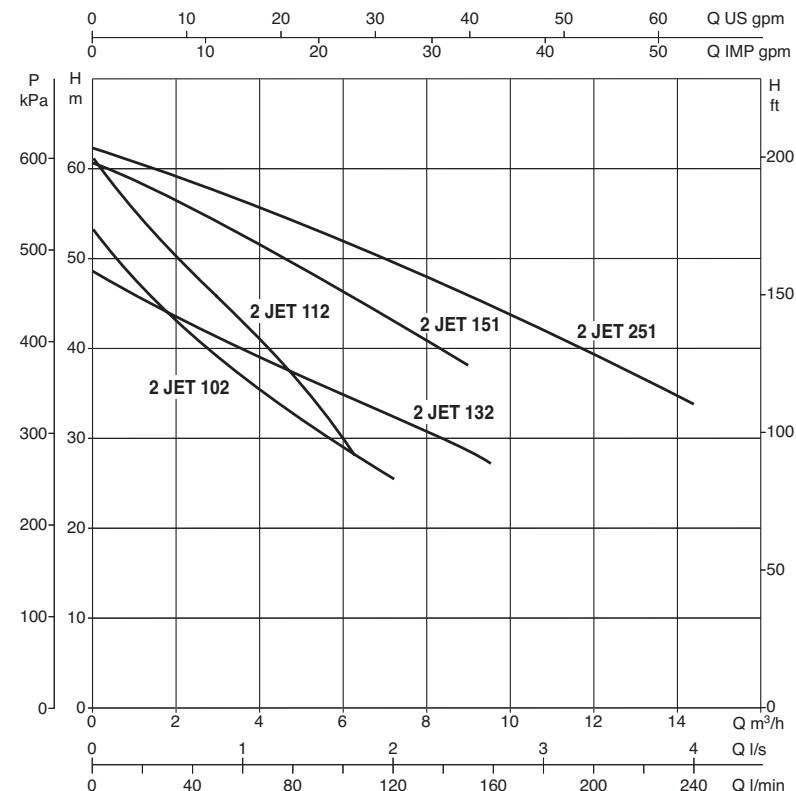
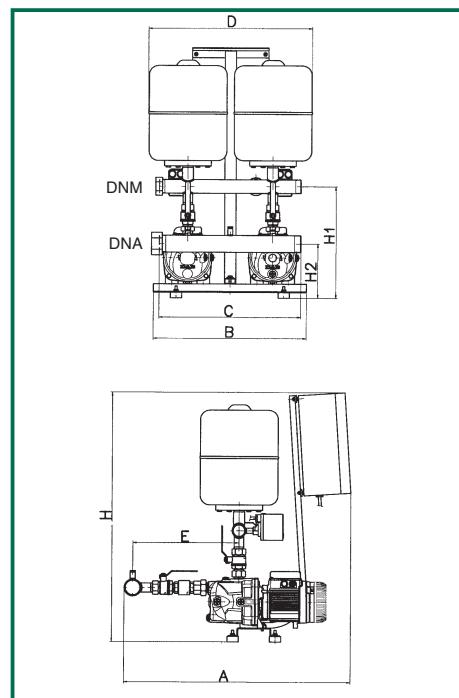
The units are supplied packed in a strong cardboard box with a wooden pallet and installation/maintenance instructions complete with wiring diagram.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 JET SETS

Liquid temperature range: from 0°C to +35°C
Maximum ambient temperature: +40°C

Max flow rate: 14,4 m³/h



MODEL	A	B	C	D	E	H	H1	H2	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
2 JET 102 M	840	540	500	575	395	890	405	205	2"	1½"	71
2 JET 112 M	840	540	500	575	395	890	405	205	2"	1½"	74
2 JET 132 M	840	540	500	575	395	890	405	205	2"	1½"	77
2 JET 151 M	960	540	500	565	535	910	465	195	2"	1½"	101
2 JET 251 M	835	540	500	575	395	890	405	205	2"	1½"	75
2 JET 102 T	840	540	500	575	395	890	405	205	2"	1½"	75
2 JET 112 T	840	540	500	575	395	890	405	205	2"	1½"	78
2 JET 132 T	840	540	500	575	395	890	405	205	2"	1½"	81
2 JET 151 T	960	540	500	565	535	910	465	195	2"	1½"	105
2 JET 251 T	960	540	500	565	535	910	465	195	2"	1½"	108

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h	MAX. PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING BAR
		kW	HP				
2 JET 102 M	1x220-240 V ~	2x0,75	2x1	2x5,1	6,6-3,0	5	2,5÷4
2 JET 112 M	1x220-240 V ~	2x1	2x1,36	2x7	6,6-3,0	5,8	3,5÷5
2 JET 132 M	1x220-240 V ~	2x1	2x1,36	2x7	9,6-3,0	4,6	2,5÷4
2 JET 151 M	1x220-240 V ~	2x1,1	2x1,5	2x7,2	9,4-5,0	6,1	3,3÷5
2 JET 251 M	1x220-240 V ~	2x1,85	2x2,5	2x10	14,0-7,2	6,4	3,3÷5
2 JET 102 T	3x400 V ~	2x0,75	2x1	2x1,98	6,6-3,0	5	2,5÷4
2 JET 112 T	3x400 V ~	2x1	2x1,36	2x2,7	6,6-3,0	5,8	3,5÷5
2 JET 132 T	3x400 V ~	2x1	2x1,36	2x2,7	9,6-3,0	4,6	2,5÷4
2 JET 151 T	3x400 V ~	2x1,1	2x1,5	2x3	9,4-5,0	6	3,3÷5
2 JET 251 T	3x400 V ~	2x1,85	2x2,5	2x4	14,4-7,2	6	3,3÷5

2 K SETS

WITH 2 OPPOSED TWIN-IMPELLER CENTRIFUGAL PUMPS



CE

GENERAL DATA

Applications

Water lifting sets particularly suitable for small and medium installations for civil use.

The use of twin impellers centrifugal K electric pumps offers a high power-pressure ratio, thereby ensuring outstanding performance and silent running.

They are totally reliable, strong and compact.

The units are supplied:

- in the version with tanks (air connector available on request)
- in the version with air connector (tanks on request).

Constructional characteristics

HYDRAULIC PART

- 2 Twin-impeller centrifugal K electric pumps;
- Tropicalised galvanised sheet base complete with 4 anti-vibration rubber feet;
- Threaded suction and delivery manifold in tropicalized galvanised steel;
- Ball valves on the suction and delivery pipe union of each single pump;
- Check valve on the suction side of each pump;
- 2 female manifold caps in galvanised tropicalised cast iron;
- Radial pressure gauge with shut-off valve;
- Galvanised tropicalised steel column support for electrical panel.
- 2 x 20 liters membrane tanks.

ELECTRICAL PART

Control panel in shockproof fire-resistant plastic material, IP 55 protection level.

The panel comprises a general switch, pump overload circuit breakers, starting order exchange system for pumps, low voltage circuit for control pressure switches, selectors (start buttons for single-phase panel), front of panel indicator LED's.

It is installed on a column fitted to the pump support.

Pre-calibrated pump start/stop pressure switches.

The panel can be connected to:

- Float or pressure switch KIT as protection against operation without water (*)
- Maximum pressure switch KIT (*)

(*) Optional items available on request

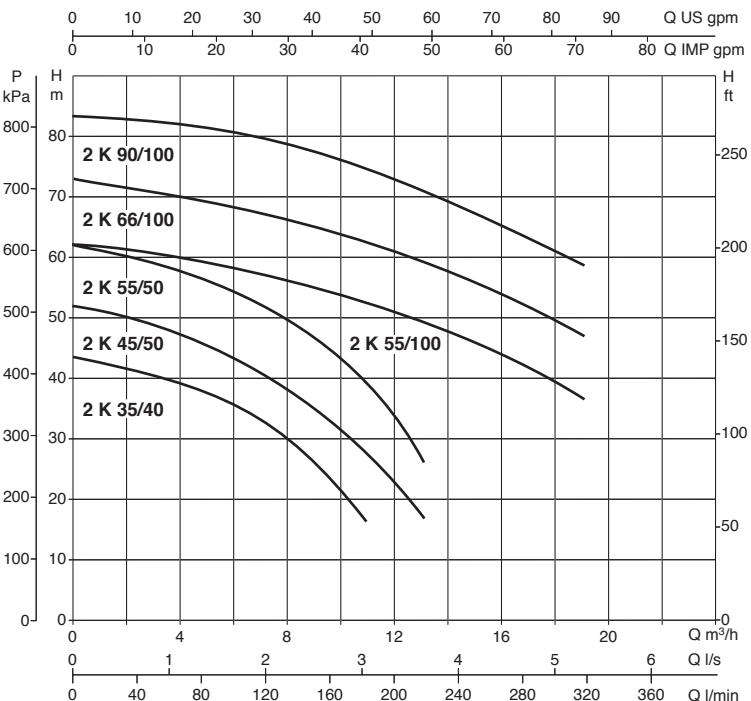
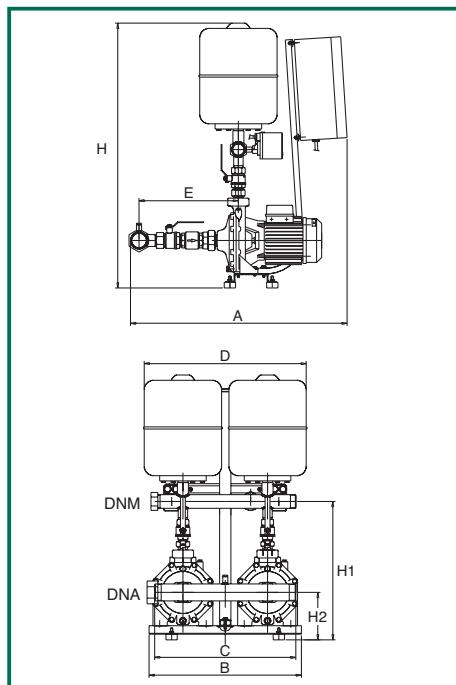
The units are supplied packed in a strong cardboard box with a wooden pallet and installation/maintenance instructions complete with wiring diagram.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 K SETS

Liquid temperature range: from -10°C to +50°C (K 35/40 - K 45/50 - K 55/100)
from -10°C to +70°C (K 55/50 - K 66/100 - K 90/100) Max flow rate: 19 m³/h

Maximum ambient temperature: +40°C



MODEL	A	B	C	D	E	H	H1	H2	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
2 K 35/40 M	750	540	500	555	425	905	457	150	2"	1½"	69
2 K 45/50 M	815	540	500	555	425	920	480	205	2"	1½"	85
2 K 55/50 M	815	540	500	555	425	920	480	205	2"	1½"	92
2 K 35/40 T	750	540	500	555	425	905	457	150	2"	1½"	73
2 K 45/50 T	815	540	500	555	425	920	480	205	2"	1½"	89
2 K 55/50 T	815	540	500	555	425	920	480	205	2"	1½"	92
2 K 55/100 T	950	580	500	545	425	1120	570	220	2½"	2½"	155
2 K 66/100 T	950	580	500	545	425	1120	570	220	2½"	2½"	160
2 K 90/100 T	950	580	500	545	425	1120	570	220	2½"	2½"	167

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m³/h	MAX. PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING BAR
		kW	HP				
2 K 35/40 M	1x220-240 V ~	2x0,75	2x1	2x5,5	9,0-6,0	4,2	2,2-3,3
2 K 45/50 M	1x220-240 V ~	2x1,1	2x1,5	2x8,3	10,8-6,0	5,2	2,9-4,6
2 K 55/50 M	1x220-240 V ~	2x1,85	2x2,5	2x12,8	12,0-7,0	6,2	3,4-5,3
2 K 35/40 T	3x400 V ~	2x0,75	2x1	2x3,5	9,6-6,0	4,2	2,2-3,3
2 K 45/50 T	3x400 V ~	2x1,1	2x1,5	2x3,6	10,8-6,0	5,2	2,9-4,6
2 K 55/50 T	3x400 V ~	2x1,85	2x2,5	2x4,8	12,0-7,0	6,2	3,4-5,3
2 K 55/100 T	3x400 V ~	2x2,2	2x3	2x6,7	18,0-10,0	6,2	3,5-5,5
2 K 66/100 T	3x400 V ~	2x3	2x4	2x8,4	18,0-10,0	7,3	4,3-6,5
2 K 90/100 T	3x400 V ~	2x4	2x5,5	2x9,7	21,0-14,0	8,4	5,5-8

1-2-3 KVCX SETS

WITH 1-2-3 MULTISTAGE CENTRIFUGAL PUMPS ON A VERTICAL AXIS



CE

GENERAL DATA

Applications

Water lifting sets suitable for domestic, small installations for civil, agricultural or industrial use. The use of vertically-mounted multistage centrifugal electric pumps ensures outstanding performance and elevated efficiency. They are particularly compact and strong, totally reliable and extremely silent-running.

Constructional characteristics

HYDRAULIC PART

- 2 Multistage KVC electric pump on a vertical axis;
- Tropicalised galvanised sheet base complete with 4 anti-vibration rubber feet;
- suction and delivery manifolds in AISI 304 stain-less steel (1KVCX without suction manifold);
- 1 - 2 - 3 membrane tanks;
- Ball valves on the suction and delivery pipe union of each single pump;
- Check valve on the suction side of each pump;
- 1/4 " air connectors on suction side of each pump;
- 2 female manifold caps in INOX;
- Radial pressure gauge with shut-off valve;
- Galvanised tropicalised steel column support for electrical panel.

ELECTRICAL PART

1KVCX SETS

Single-phase version: 1 bipolar pressure switch connected to the electric pump, including power supply plug.

Three-phase version: Motor overload protection panel with reset button, 1 bipolar pressure switch connected to the electric pump.

2KVCX - 3KVCX SETS

Control panel in shockproof fire-resistant plastic material, IP 55 protection level.

The panel comprises a general switch, pump overload circuit breakers, starting order exchange system for pumps, low voltage circuit for control pressure switches, selectors (start buttons for single-phase panel), front of panel indicator LED's. It is installed on a column fitted to the pump support. Pre-calibrated pump start/stop pressure switches.

The panel can be connected to:

- Float or pressure switch KIT as protection against operation without water (*)
- Maximum pressure switch KIT (*)

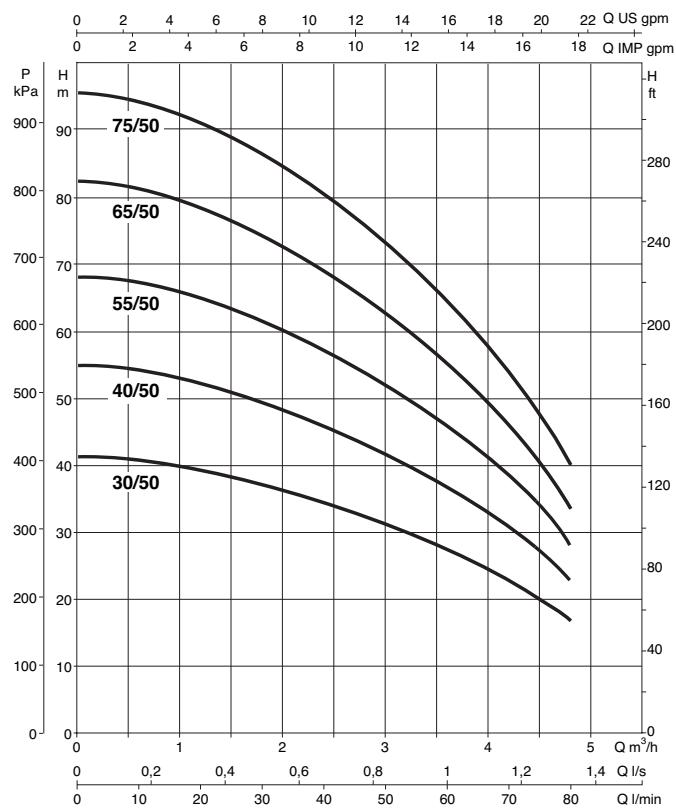
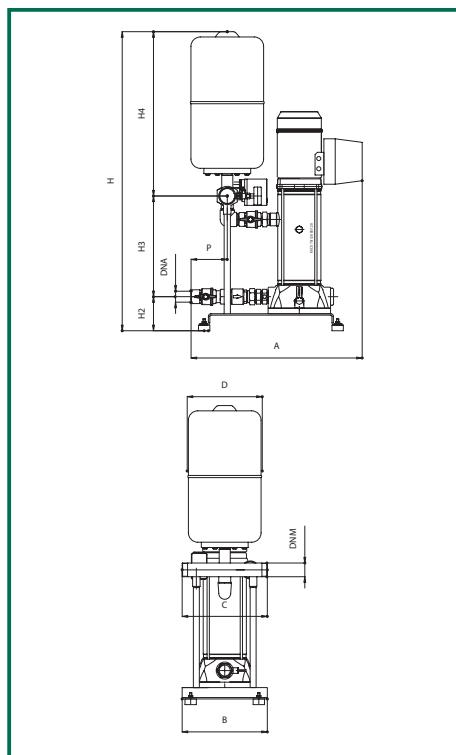
(*) Optional items available on request

The units are supplied packed in a strong cardboard box with a wooden pallet and installation/maintenance instructions complete with wiring diagram.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 KVCX 50 SETS

Liquid temperature range: from -10°C to +50°C
Maximum ambient temperature: +40°C



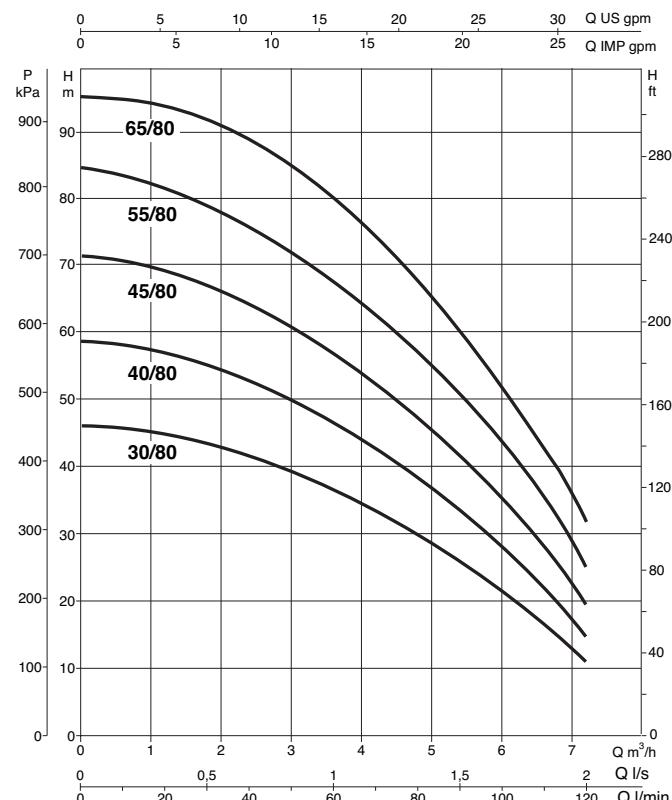
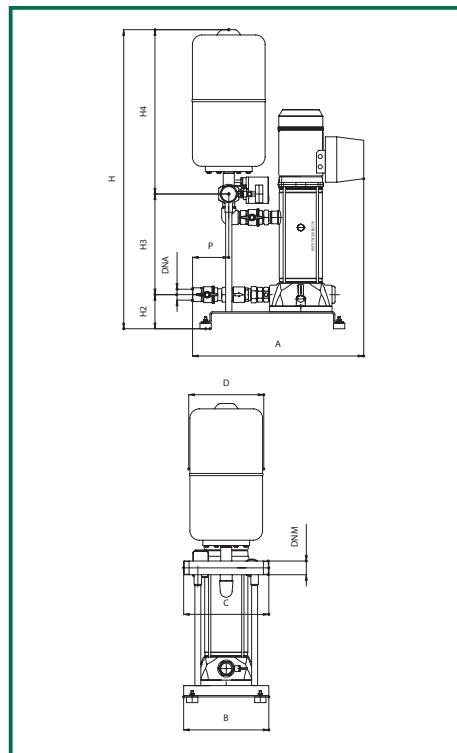
MODEL	A	B	C	D	P	H	H2	H3	H4	Ø MANIFOLD		WEIGHT Kg	
										DNA (suction)	DNM (delivery)	Single-Phase	Three-Phase
1KVCX 30/50	630	300	300	260	130	940	120	210	610	1" 1/4	1" 1/2	26	26
1KVCX 40/50	630	300	300	260	130	995	120	265	610	1" 1/4	1" 1/2	28	28
1KVCX 55/50	630	300	300	260	130	995	120	265	610	1" 1/4	1" 1/2	29	29
1KVCX 65/50	630	300	300	260	130	1085	120	355	610	1" 1/4	1" 1/2	32	32
1KVCX 75/50	630	300	300	260	130	1085	120	355	610	1" 1/4	1" 1/2	33	32

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q m ³ /h	MAX PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING IN BAR
		kW	HP				
1KVCX 30/50 M	1x 220-240 v	0,55	0,75	4	4,5 - 1	4	2,5 - 3,5
1KVCX 30/50 T	3x 400 v	0,55	0,75	1,4	4,5 - 1	4	2,5 - 3,5
1KVCX 40/50 M	1x 220-240 v	0,8	1,1	5,6	4,5 - 1	5,2	4 - 5
1KVCX 40/50 T	3x 400 v	0,8	1,1	2,2	4,5 - 1	5,2	4 - 5
1KVCX 55/50 M	1x 220-240 v	1	1,36	6,4	4,5 - 1	6,5	5 - 6
1KVCX 55/50 T	3x 400 v	1	1,36	2,6	4,5 - 1	6,5	5 - 6
1KVCX 65/50 M	1x 220-240 v	1,1	1,5	7,4	4,5 - 1	8	6,5 - 7,5
1KVCX 65/50 T	3x 400 v	1,1	1,5	3,1	4,5 - 1	8	6,5 - 7,5
1KVCX 75/50 M	1x 220-240 v	1,5	2	9	4,5 - 1	9	7,5 - 8,5
1KVCX 75/50 T	3x 400 v	1,5	2	3,6	4,5 - 1	9	7,5 - 8,5

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 KVCX 80 SETS

Liquid temperature range: from -10°C to +50°C
Maximum ambient temperature: +40°C



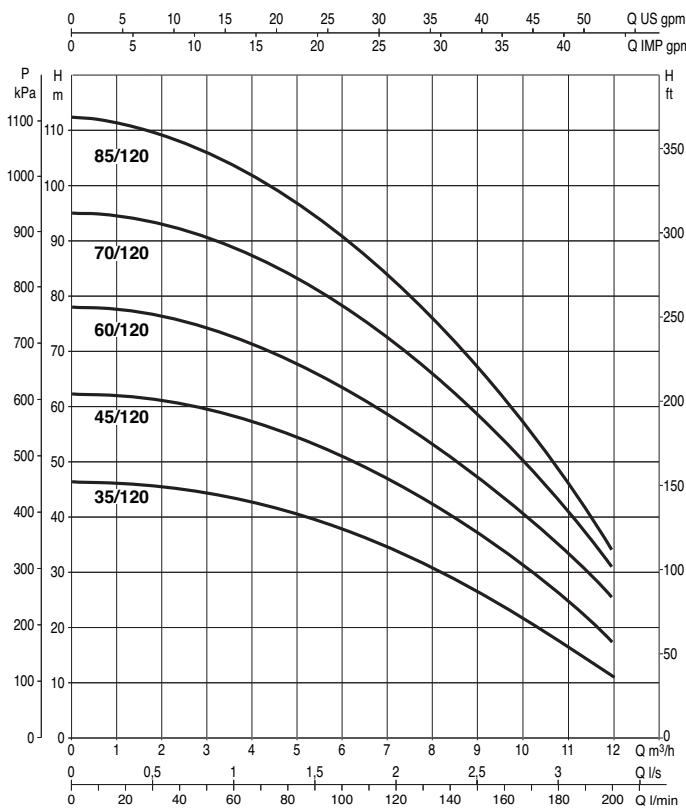
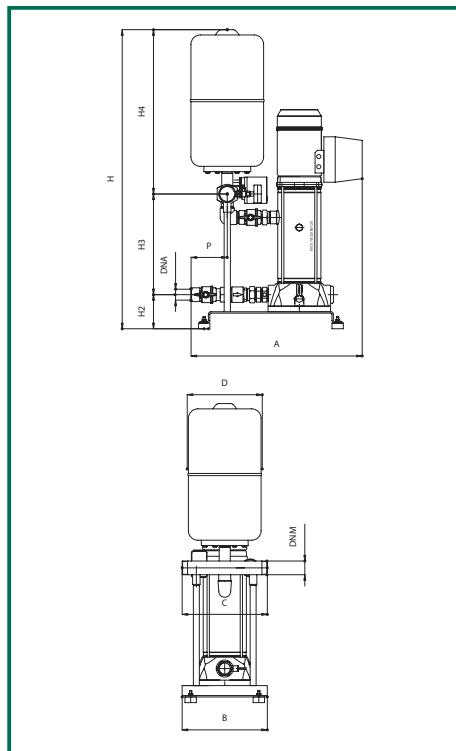
MODEL	A	B	C	D	P	H	H2	H3	H4	Ø MANIFOLD		WEIGHT Kg	
										DNA (suction)	DNM (delivery)	Single-Phase	Three-Phase
1KVCX 30/80	630	300	300	260	130	995	120	265	610	1" 1/4	1" 1/2	28	27
1KVCX 40/80	630	300	300	260	130	995	120	265	610	1" 1/4	1" 1/2	29	29
1KVCX 45/80	630	300	300	260	130	1085	120	355	610	1" 1/4	1" 1/2	32	32
1KVCX 55/80	630	300	300	260	130	1085	120	355	610	1" 1/4	1" 1/2	33	32
1KVCX 65/80	630	300	300	260	130	1185	120	385	610	1" 1/4	1" 1/2	-	34

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q m ³ /h	MAX PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING IN BAR
		kW	HP				
1KVCX 30/80 M	1x 220-240 v	0,8	1,1	5,6	7 - 2	4,5	3 - 4
1KVCX 30/80 T	3x 400 v	0,8	1,1	2,2	7 - 2	4,5	3 - 4
1KVCX 40/80 M	1x 220-240 v	1	1,36	6,5	7 - 2	5,5	4 - 5
1KVCX 40/80 T	3x 400 v	1	1,36	2,6	7 - 2	5,5	4 - 5
1KVCX 45/80 M	1x 220-240 v	1,1	1,5	7,4	7 - 2	6,8	5 - 6
1KVCX 45/80 T	3x 400 v	1,1	1,5	3,1	7 - 2	6,8	5 - 6
1KVCX 55/80 M	1x 220-240 v	1,5	2	9	7 - 2	8	6 - 7
1KVCX 55/80 T	3x 400 v	1,5	2	3,6	7 - 2	8	6 - 7
1KVCX 65/80 T	3x 400 v	2,2	3	4	7 - 2	9,2	7 - 8

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 KVCX 120 SETS

Liquid temperature range: from -10°C to +50°C
Maximum ambient temperature: +40°C



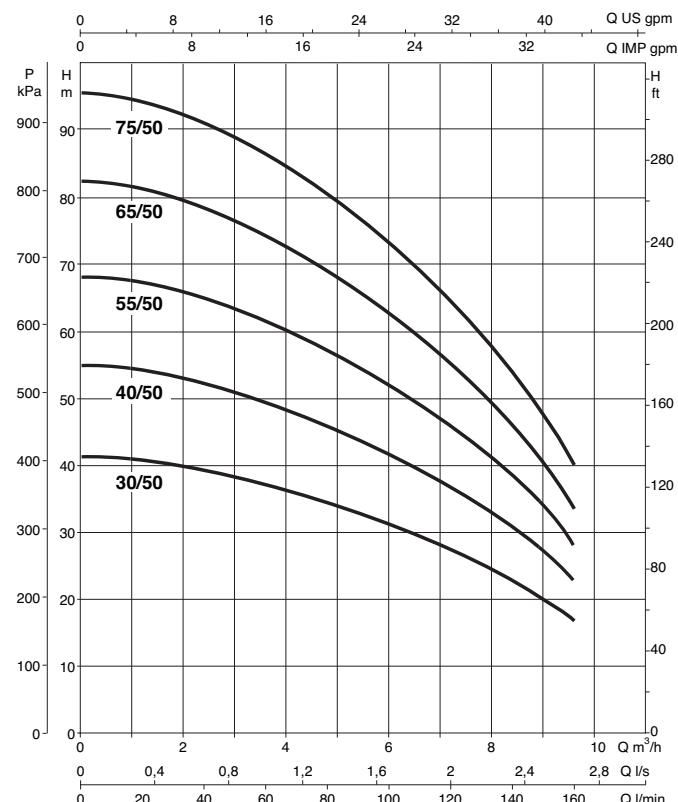
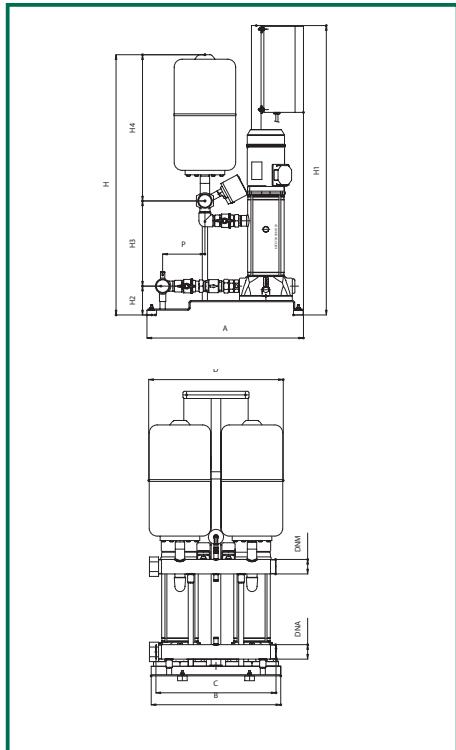
MODEL	A	B	C	D	P	H	H2	H3	H4	Ø MANIFOLD		WEIGHT Kg	
										DNA (suction)	DNM (delivery)	Single-Phase	Three-Phase
1KVCX 35/120	630	300	300	260	130	940	120	210	610	1" 1/4	1" 1/2	32	32
1KVCX 45/120	630	300	300	260	130	995	120	265	610	1" 1/4	1" 1/2	44	34
1KVCX 60/120	630	300	300	260	130	995	120	265	610	1" 1/4	1" 1/2	-	36
1KVCX 70/120	630	300	300	260	130	1085	120	355	610	1" 1/4	1" 1/2	-	38
1KVCX 85/120	630	300	300	260	130	1085	120	355	610	1" 1/4	1" 1/2	-	39

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q m ³ /h	MAX PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING IN BAR
		kW	HP				
1KVCX 35/120 M	1x 220-240 v	1,1	1,5	7,4	11 - 2	4,5	3 - 4
1KVCX 35/120 T	3x 400 v	1,1	1,5	3,5	11 - 2	4,5	3 - 4
1KVCX 45/120 M	1x 220-240 v	1,85	2,5	12	11 - 2	6	4,5 - 5,5
1KVCX 45/120 T	3x 400 v	1,85	2,5	4,6	11 - 2	6	4,5 - 5,5
1KVCX 60/120 T	3x 400 v	2,2	3	5,4	11 - 2	7,5	5,5 - 6,5
1KVCX 70/120 T	3x 400 v	3	4	6,8	11 - 2	9	7 - 8
1KVCX 85/120 T	3x 400 v	3	4	7,8	11 - 2	10,5	9 - 10

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KVCX 50 SETS

Liquid temperature range: from -10°C to +50°C
Maximum ambient temperature: +40°C



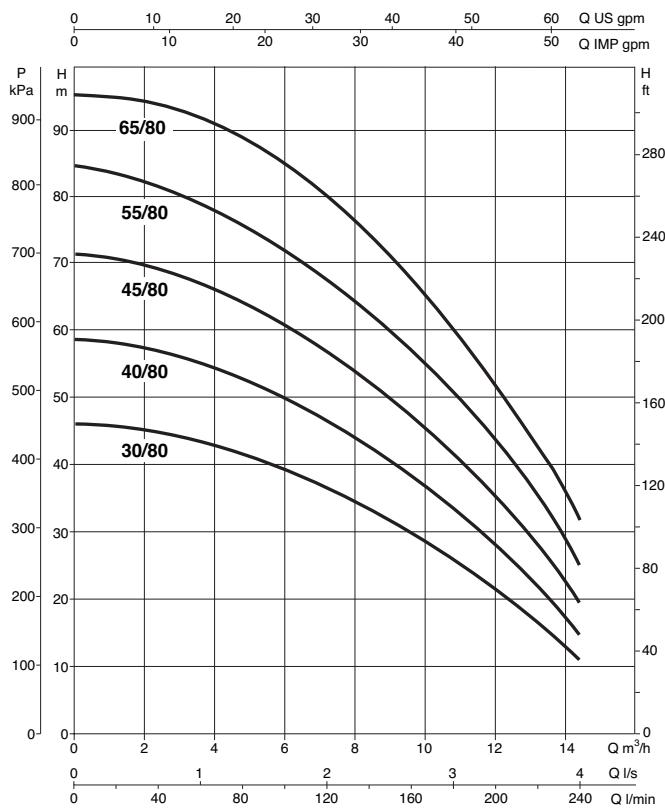
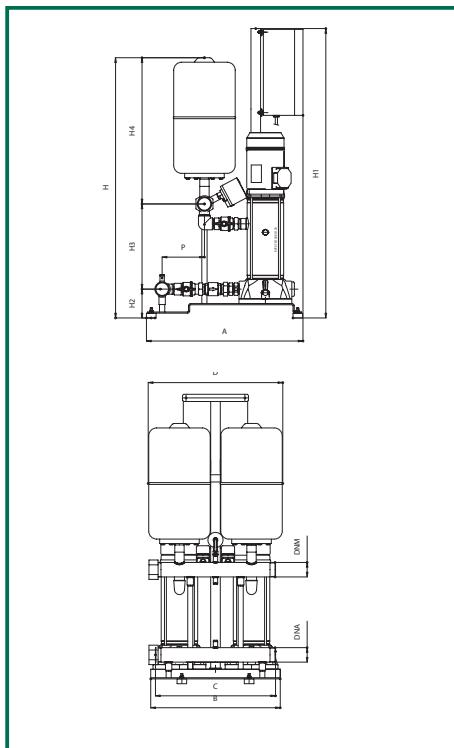
MODEL	A	B	C	D	P	H	H1	H2	H3	H4	Ø MANIFOLD		WEIGHT Kg	
											DNA (suction)	DNM (delivery)	Single-Phase	Three-Phase
2KVCX 30/50 M	655	540	500	560	175	940	1205	120	210	610	2"	2"	70	70
2KVCX 40/50 M	655	540	500	560	175	995	1205	120	265	610	2"	2"	74	74
2KVCX 55/50 M	655	540	500	560	175	995	1205	120	265	610	2"	2"	76	76
2KVCX 65/50 M	655	540	500	560	175	1085	1205	120	355	610	2"	2"	82	81
2KVCX 75/50 M	655	540	500	560	175	1085	1205	120	355	610	2"	2"	84	83

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q m ³ /h	MAX PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING IN BAR
		kW	HP				
2KVCX 30/50 M	1x 220-240 v	2x 0,55	2x 0,75	2x 4	9 - 1	4	2 - 3,5
2KVCX 30/50 T	3x 400 v	2x 0,55	2x 0,75	2x 1,4	9 - 1	4	2 - 3,5
2KVCX 40/50 M	1x 220-240 v	2x 0,8	2x 1,1	2x 5,6	9 - 1	5,2	3,5 - 5
2KVCX 40/50 T	3x 400 v	2x 0,8	2x 1,1	2x 2,2	9 - 1	5,2	3,5 - 5
2KVCX 55/50 M	1x 220-240 v	2x 1	2x 1,36	2x 6,4	9 - 1	6,5	4,5 - 6
2KVCX 55/50 T	3x 400 v	2x 1	2x 1,36	2x 2,6	9 - 1	6,5	4,5 - 6
2KVCX 65/50 M	1x 220-240 v	2x 1,1	2x 1,5	2x 7,4	9 - 1	8	6 - 7,5
2KVCX 65/50 T	3x 400 v	2x 1,1	2x 1,5	2x 3,1	9 - 1	8	6 - 7,5
2KVCX 75/50 M	1x 220-240 v	2x 1,5	2x 2	2x 9	9 - 1	9	7 - 8,5
2KVCX 75/50 T	3x 400 v	2x 1,5	2x 2	2x 3,6	9 - 1	9	7 - 8,5

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KVCX 80 SETS

Liquid temperature range: from -10°C to +50°C
Maximum ambient temperature: +40°C



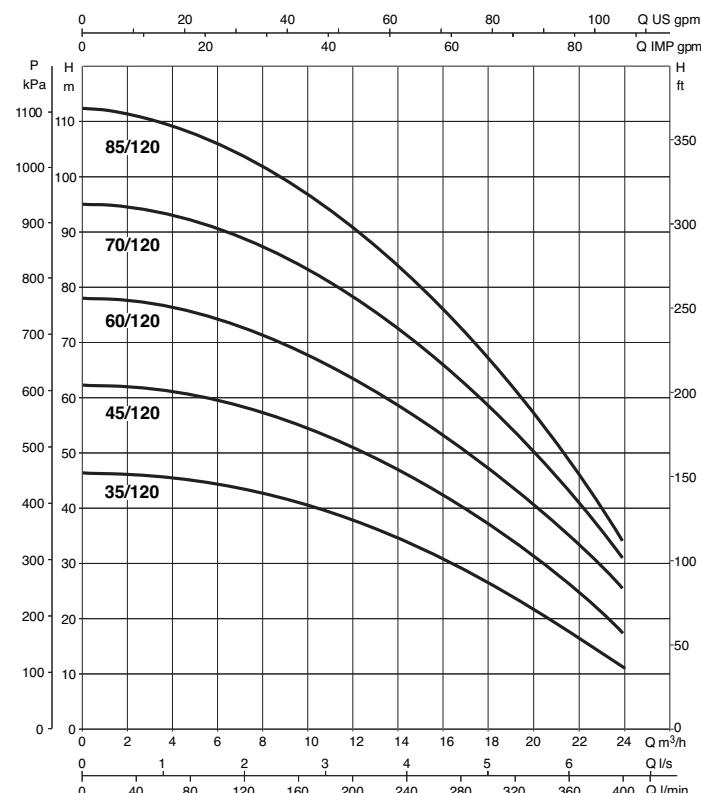
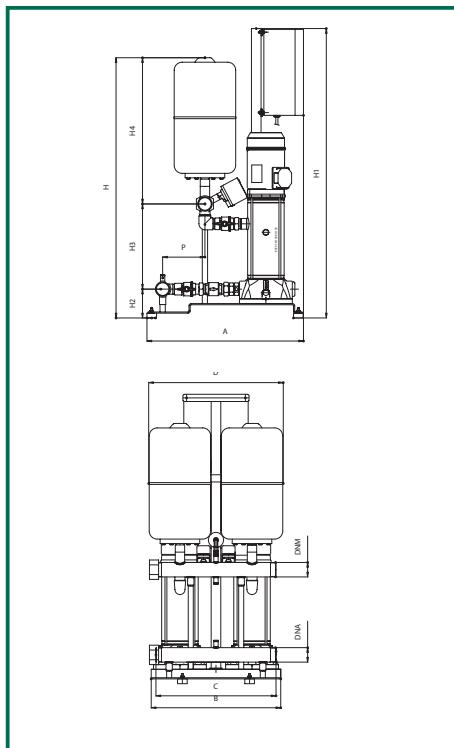
MODEL	A	B	C	D	P	H	H1	H2	H3	H4	Ø MANIFOLD		WEIGHT Kg	
											DNA (suction)	DNM (delivery)	Single-Phase	Three-Phase
2KVCX 30/80 M	655	540	500	560	175	995	1205	120	265	610	2"	2"	73	73
2KVCX 40/80 M	655	540	500	560	175	995	1205	120	265	610	2"	2"	76	76
2KVCX 45/80 M	655	540	500	560	175	1085	1205	120	355	610	2"	2"	82	82
2KVCX 55/80 M	655	540	500	560	175	1085	1205	120	355	610	2"	2"	84	82
2KVCX 65/80 T	655	540	500	560	175	1185	1205	120	385	610	2"	2"	-	85

MODEL	VOLTAGE		P2 NOMINAL		In A	Q m ³ /h	MAX PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING IN BAR
	50 Hz	kW	HP	A				
2KVCX 30/80 M	1x 220-240 v	2x 0,8	2x 1,1	2x 5,6	14 - 2	4,5	2,5 - 4	
2KVCX 30/80 T	3x 400 v	2x 0,8	2x 1,1	2x 2,2	14 - 2	4,5	2,5 - 4	
2KVCX 40/80 M	1x 220-240 v	2x 1	2x 1,36	2x 6,5	14 - 2	5,5	3,5 - 5	
2KVCX 40/80 T	3x 400 v	2x 1	2x 1,36	2x 2,6	14 - 2	5,5	3,5 - 5	
2KVCX 45/80 M	1x 220-240 v	2x 1,1	2x 1,5	2x 7,4	14 - 2	6,8	4,5 - 6	
2KVCX 45/80 T	3x 400 v	2x 1,1	2x 1,5	2x 3,1	14 - 2	6,8	4,5 - 6	
2KVCX 55/80 M	1x 220-240 v	2x 1,5	2x 2	2x 9	14 - 2	8	5,5 - 7	
2KVCX 55/80 T	3x 400 v	2x 1,5	2x 2	2x 3,6	14 - 2	8	5,5 - 7	
2KVCX 65/80 T	3x 400 v	2x 2,2	2x 3	2x 4	14 - 2	9,2	6,5 - 8	

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KVCX 120 SETS

Liquid temperature range: from -10°C to +50°C
Maximum ambient temperature: +40°C



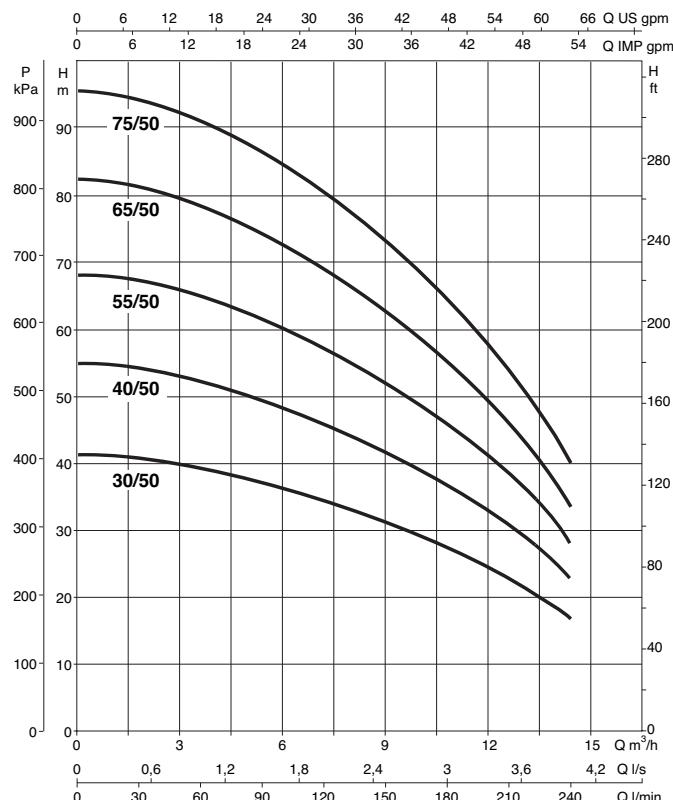
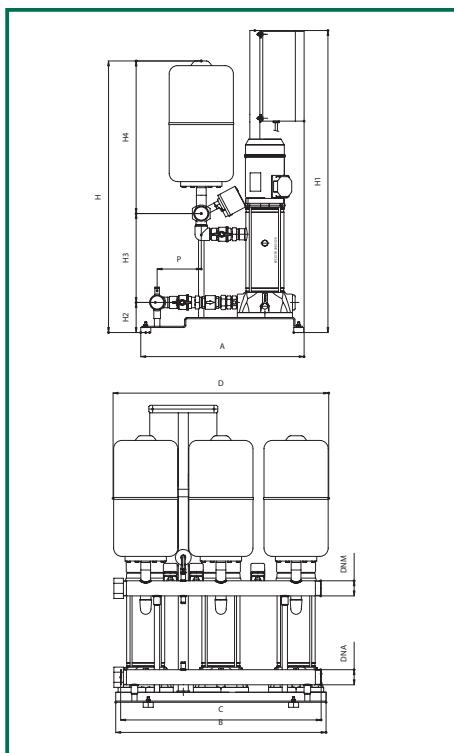
MODEL	A	B	C	D	P	H	H1	H2	H3	H4	Ø MANIFOLD		WEIGHT Kg	
											DNA (suction)	DNM (delivery)	Single-Phase	Three-Phase
2KVCX 35/120 M	655	540	500	560	175	940	1205	120	210	610	2"	2"	82	82
2KVCX 45/120 M	655	540	500	560	175	995	1205	120	265	610	2"	2"	86	86
2KVCX 60/120 T	655	540	500	560	175	995	1205	120	265	610	2"	2"	-	90
2KVCX 70/120 T	655	540	500	560	175	1085	1205	120	355	610	2"	2"	-	94
2KVCX 85/120 T	655	540	500	560	175	1085	1205	120	355	610	2"	2"	-	95

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q m ³ /h	MAX PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING IN BAR
		kW	HP				
2KVCX 35/120 M	1x 220-240 v	2x 1,1	2x 1,5	2x 7,4	22-2	4,5	2,5 - 4
2KVCX 35/120 T	3x 400 v	2x 1,1	2x 1,5	2x 3,5	22-2	4,5	2,5 - 4
2KVCX 45/120 M	1x 220-240 v	2x 1,85	2x 2,5	2x 12	22-2	6	4 - 5,5
2KVCX 45/120 T	3x 400 v	2x 1,85	2x 2,5	2x 4,6	22-2	6	4 - 5,5
2KVCX 60/120 T	3x 400 v	2x 2,2	2x 3	2x 5,4	22-2	7,5	5 - 6,5
2KVCX 70/120 T	3x 400 v	2x 3	2x 4	2x 6,8	22-2	9	6,5 - 8
2KVCX 85/120 T	3x 400 v	2x 3	2x 4	2x 7,8	22-2	10,5	8,5 - 10

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KVCX 50 SETS

Liquid temperature range: from -10°C to +50°C
Maximum ambient temperature: +40°C



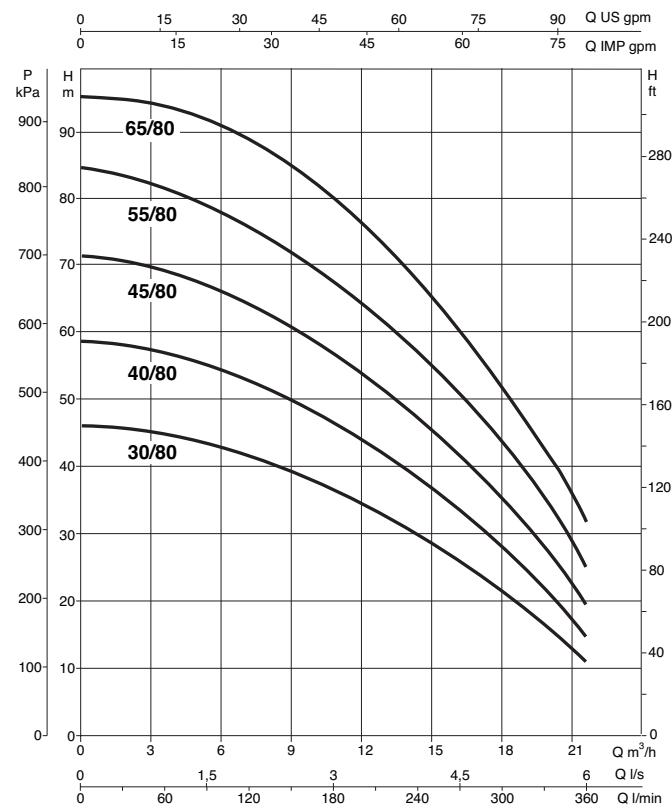
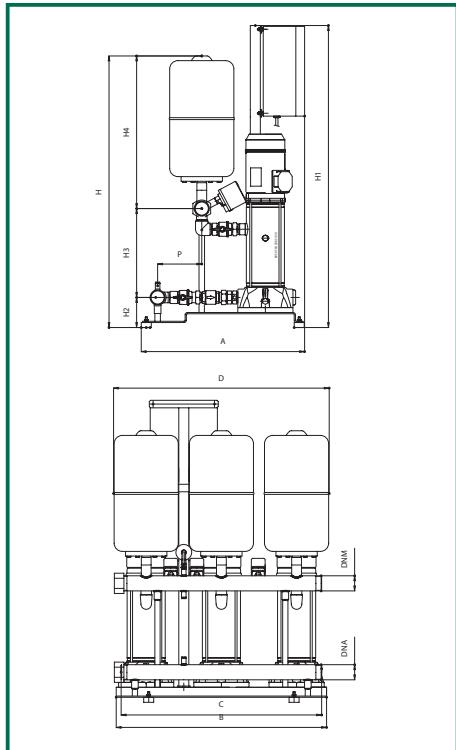
MODEL	A	B	C	D	P	H	H1	H2	H3	H4	Ø MANIFOLD		WEIGHT Kg	
											DNA (suction)	DNM (delivery)	Single-Phase	Three-Phase
3KVCX 30/50	655	840	800	860	175	940	1205	120	210	610	2" 1/2	2" 1/2	109	109
3KVCX 40/50	655	840	800	860	175	995	1205	120	265	610	2" 1/2	2" 1/2	115	115
3KVCX 55/50	655	840	800	860	175	995	1205	120	265	610	2" 1/2	2" 1/2	119	119
3KVCX 65/50	655	840	800	860	175	1085	1205	120	355	610	2" 1/2	2" 1/2	128	127
3KVCX 75/50	655	840	800	860	175	1085	1205	120	355	610	2" 1/2	2" 1/2	132	130

MODEL	VOLTAGE		P2 NOMINAL		In	Q	MAX PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING IN BAR
	50 Hz	kW	HP	A				
3KVCX 30/50 M	1x 220-240 v	3x 0,55	3x 0,75	3x 4	13,5 - 1	4	1,5 - 3,5	
3KVCX 30/50 T	3x 400 v	3x 0,55	3x 0,75	3x 1,4	13,5 - 1	4	1,5 - 3,5	
3KVCX 40/50 M	1x 220-240 v	3x 0,8	3x 1,1	3x 5,6	13,5 - 1	5,2	3 - 5	
3KVCX 40/50 T	3x 400 v	3x 0,8	3x 1,1	3x 2,2	13,5 - 1	5,2	3 - 5	
3KVCX 55/50 M	1x 220-240 v	3x 1	3x 1,36	3x 6,4	13,5 - 1	6,5	4 - 6	
3KVCX 55/50 T	3x 400 v	3x 1	3x 1,36	3x 2,6	13,5 - 1	6,5	4 - 6	
3KVCX 65/50 M	1x 220-240 v	3x 1,1	3x 1,5	3x 7,4	13,5 - 1	8	5,5 - 7,5	
3KVCX 65/50 T	3x 400 v	3x 1,1	3x 1,5	3x 3,1	13,5 - 1	8	5,5 - 7,5	
3KVCX 75/50 M	1x 220-240 v	3x 1,5	3x 2	3x 9	13,5 - 1	9	6,5 - 8,5	
3KVCX 75/50 T	3x 400 v	3x 1,5	3x 2	3x 3,6	13,5 - 1	9	6,5 - 8,5	

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KVCX 80 SETS

Liquid temperature range: from -10°C to +50°C
Maximum ambient temperature: +40°C



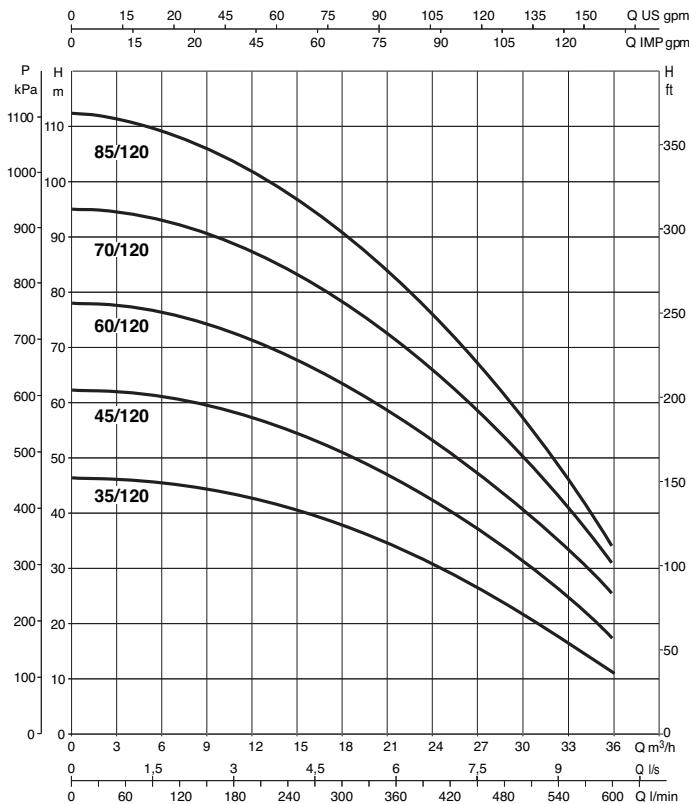
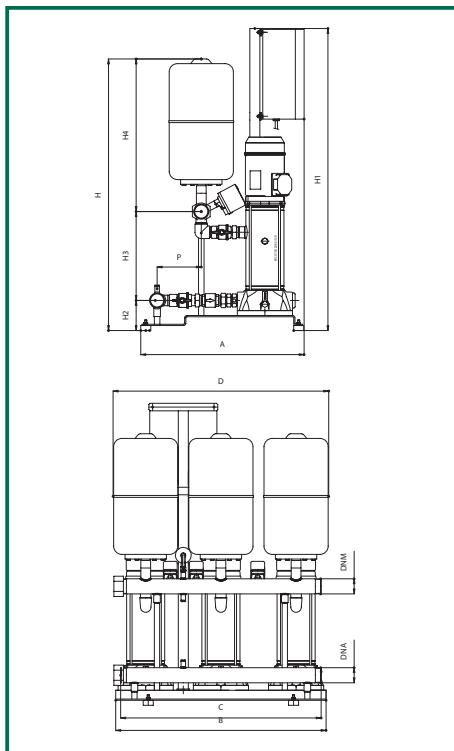
MODEL	A	B	C	D	P	H	H1	H2	H3	H4	Ø MANIFOLD		WEIGHT Kg	
											DNA (suction)	DNM (delivery)	Single-Phase	Three-Phase
3KVCX 30/80	655	840	800	860	175	995	1205	120	265	610	2" 1/2	2" 1/2	115	114
3KVCX 40/80	655	840	800	860	175	995	1205	120	265	610	2" 1/2	2" 1/2	119	119
3KVCX 45/80	655	840	800	860	175	1085	1205	120	355	610	2" 1/2	2" 1/2	128	128
3KVCX 55/80	655	840	800	860	175	1085	1205	120	355	610	2" 1/2	2" 1/2	131	128
3KVCX 65/80	655	840	800	860	175	1185	1205	120	385	610	2" 1/2	2" 1/2	-	133

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q m ³ /h	MAX PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING IN BAR
		kW	HP				
3KVCX 30/80 M	1x 220-240 v	3x 0,8	3x 1,1	3x 5,6	21 - 2	4,5	2 - 4
3KVCX 30/80 T	3x 400 v	3x 0,8	3x 1,1	3x 2,2	21 - 2	4,5	2 - 4
3KVCX 40/80 M	1x 220-240 v	3x 1	3x 1,36	3x 6,5	21 - 2	5,5	3 - 5
3KVCX 40/80 T	3x 400 v	3x 1	3x 1,36	3x 2,6	21 - 2	5,5	3 - 5
3KVCX 45/80 M	1x 220-240 v	3x 1,1	3x 1,5	3x 7,4	21 - 2	6,8	4 - 6
3KVCX 45/80 T	3x 400 v	3x 1,1	3x 1,5	3x 3,1	21 - 2	6,8	4 - 6
3KVCX 55/80 M	1x 220-240 v	3x 1,5	3x 2	3x 9	21 - 2	8	5 - 7
3KVCX 55/80 T	3x 400 v	3x 1,5	3x 2	3x 3,6	21 - 2	8	5 - 7
3KVCX 65/80 T	3x 400 v	3x 2,2	3x 3	3x 4	21 - 2	9,2	6 - 8

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KVCX 120 SETS

Liquid temperature range: from -10°C to +50°C
Maximum ambient temperature: +40°C



MODEL	A	B	C	D	P	H	H1	H2	H3	H4	Ø MANIFOLD		WEIGHT Kg	
											DNA (suction)	DNM (delivery)	Single-Phase	Three-Phase
3KVCX 35/120	655	840	800	860	175	940	1205	120	210	610	2" 1/2	2" 1/2	128	128
3KVCX 45/120	655	840	800	860	175	995	1205	120	265	610	2" 1/2	2" 1/2	134	134
3KVCX 60/120	655	840	800	860	175	995	1205	120	265	610	2" 1/2	2" 1/2	-	140
3KVCX 70/120	655	840	800	860	175	1085	1205	120	355	610	2" 1/2	2" 1/2	-	146
3KVCX 85/120	655	840	800	860	175	1085	1205	120	355	610	2" 1/2	2" 1/2	-	148

MODEL	VOLTAGE		P2 NOMINAL		In	Q	MAX PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING IN BAR
	50 Hz	kW	HP	A				
3KVCX 35/120 M	1x 220-240 v	3x 1,1	3x 1,5	3x 7,4	33 - 2	4,5	2 - 4	
3KVCX 35/120 T	3x 400 v	3x 1,1	3x 1,5	3x 3,5	33 - 2	4,5	2 - 4	
3KVCX 45/120 M	1x 220-240 v	3x 1,85	3x 2,5	3x 12	33 - 2	6	3,5 - 5,5	
3KVCX 45/120 T	3x 400 v	3x 1,85	3x 2,5	3x 4,6	33 - 2	6	3,5 - 5,5	
3KVCX 60/120 T	3x 400 v	3x 2,2	3x 3	3x 5,4	33 - 2	7,5	4,5 - 6,5	
3KVCX 70/120 T	3x 400 v	3x 3	3x 4	3x 6,8	33 - 2	9	6 - 8	
3KVCX 85/120 T	3x 400 v	3x 3	3x 4	3x 7,8	33 - 2	10,5	8 - 10	

2 EURO SETS WITH 2 CENTRIFUGAL PUMPS MULTISTAGE EURO SETS



CE

GENERAL DATA

Applications

Water lifting sets particularly suitable for domestic, small installations for civil, agricultural or industrial use. They are totally reliable, easy to use and maintenance-free.

The units are supplied:

- in the version with tanks (air connector available on request)
- in the version with air connector (tanks available on request).

Constructional characteristics

HYDRAULIC PART

- 2 multistage centrifugal EURO pumps;
- Tropicalised galvanised sheet base complete with 4 anti-vibration rubber feet;
- Threaded suction and delivery manifold in tropicalized galvanised steel;
- Ball valves on the suction and delivery pipe union of each single pump;
- Check valve on the suction side of each pump;
- 2 female manifold caps in galvanised tropicalised cast iron;
- Radial pressure gauge with shut-off valve;
- Galvanised tropicalised steel column support for electrical panel.
- 2 x 20 liters membrane tanks.

ELECTRICAL PART

Control panel in shockproof fire-resistant plastic material, IP 55 protection level.

The panel comprises a general switch, pump overload circuit breakers, starting order exchange system for pumps, low voltage circuit for control pressure switches, selectors (start buttons for single-phase panel), front of panel indicator LED's. It is installed on a column fitted to the pump support.

Pre-calibrated pump start/stop pressure switches.

The panel can be connected to:

- Float or pressure switch KIT as protection against operation without water (*)
- maximum pressure switch KIT (*)

(*) Optional items available on request

The units are supplied packed in a strong cardboard box with a wooden pallet and installation/maintenance instructions complete with wiring diagram.

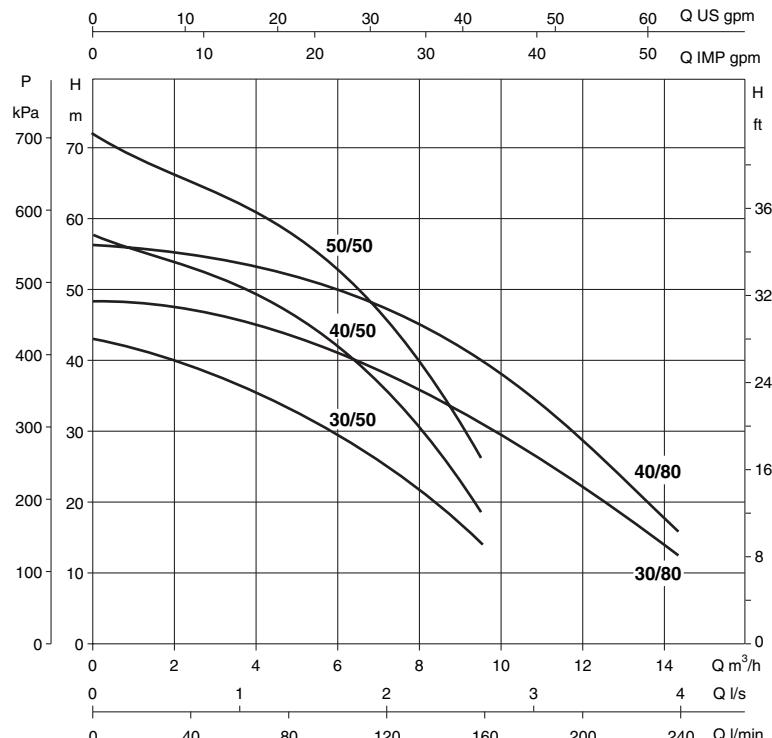
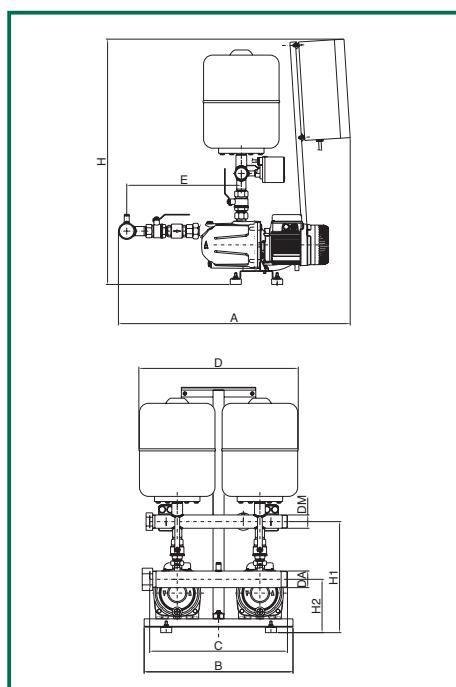
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 EURO SETS

Pumped liquid temperature range: from 0°C to +35°C (for domestic use)
from 0°C to +40°C (for other uses)

Max flow rate: 14,5 m³/h

Maximum ambient temperature: +40°C



MODEL	A	B	C	D	E	H	H1	H2	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
2 EURO 30/50 M	840	540	500	578	415	890	402	194	2"	1½"	57
2 EURO 40/50 M	840	540	500	578	415	890	402	194	2"	1½"	57
2 EURO 50/50 M	840	540	500	578	415	890	402	194	2"	1½"	56
2 EURO 30/80 M	840	540	500	578	415	890	402	194	2"	1½"	57
2 EURO 40/80 M	840	540	500	578	415	890	402	194	2"	1½"	56
2 EURO 30/50 T	840	540	500	578	415	890	402	194	2"	1½"	57
2 EURO 40/50 T	840	540	500	578	415	890	402	194	2"	1½"	57
2 EURO 50/50 T	840	540	500	578	415	890	402	194	2"	1½"	58
2 EURO 30/80 T	840	540	500	578	415	890	402	194	2"	1½"	57
2 EURO 40/80 T	840	540	500	578	415	890	402	194	2"	1½"	58

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h	MAX. PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING BAR
		kW	HP				
2 EURO 30/50 M	1x220-240 V~	2x0,55	2x0,75	2x3,9	8,0-4,4	3,8	2÷3,3
2 EURO 40/50 M	1x220-240 V~	2x0,75	2x1	2x5,3	8,0-5,2	5,3	3÷4,5
2 EURO 50/50 M	1x220-240 V~	2x1	2x1,36	2x6,3	7,6-5,2	6,5	4÷5,5
2 EURO 30/80 M	1x220-240 V~	2x0,8	2x1,1	2x5,3	11,0-7,0	4,3	2,5÷3,8
2 EURO 40/80 M	1x220-240 V~	2x1	2x1,36	2x6,3	10,0-6,0	5,5	3,8÷5,2
2 EURO 30/50 T	3x400 V~	2x0,55	2x0,75	2x1,6	8,0-4,4	3,8	2÷3,3
2 EURO 40/50 T	3x400 V~	2x0,75	2x1	2x2,2	8,0-5,2	5,3	3÷4,5
2 EURO 50/50 T	3x400 V~	2x1	2x1,36	2x2,5	7,6-5,2	6,5	4÷5,5
2 EURO 30/80 T	3x400 V~	2x0,8	2x1,1	2x2,2	11,0-7,0	4,3	2,5÷3,8
2 EURO 40/80 T	3x400 V~	2x1	2x1,36	2x2,5	10,0-6,0	5,5	3,8÷5,2

2 EUROINOX SETS WITH 2 CENTRIFUGAL PUMPS MULTISTAGE SELF-PRIMING EUROINOX SETS



CE

GENERAL DATA

Applications

Water lifting sets particularly suitable for domestic, small installations for civil, agricultural or industrial use. The multistage centrifugal EUROINOX electric pumps can also handle water containing air, gas or small amounts of sand.

They are indispensable for use in artesian wells and where suction difficulties arise.

They are totally reliable, easy to use and maintenance-free.

The units are supplied:

- in the version with tanks (air connectors available on request)
- in the version with air connector (tanks available on request)

Constructional characteristics

HYDRAULIC PART

- 2 multistage centrifugal EUROINOX pumps;
- Tropicalised galvanised sheet base complete with 4 anti-vibration rubber feet;
- Threaded suction and delivery manifolds in stainless steel AISI 304;
- Ball valves on the suction and delivery pipe union of each single pump;
- Check valve on the suction side of each pump;
- 2 female manifold caps in INOX;
- Radial pressure gauge with shut-off valve;
- Galvanised tropicalised steel column support for electrical panel.
- 2 x 20 liters membrane tanks.

ELECTRICAL PART

Control panel in shockproof fire-resistant plastic material, IP 55 protection level.

The panel comprises a general switch, pump overload circuit breakers, starting order exchange system for pumps, low voltage circuit for control pressure switches, selectors (start buttons for single-phase panel), front of panel indicator LED's. It is installed on a column fitted to the pump support.

Pre-calibrated pump start / stop pressure switches.

The panel can be connected to:

- Float or pressure switch KIT as protection against operation without water (*)
- Maximum pressure switch KIT (*)

(*) Optional items available on request

The units are supplied packed in a strong cardboard box with a wooden pallet and installation/maintenance instructions complete with wiring diagram.

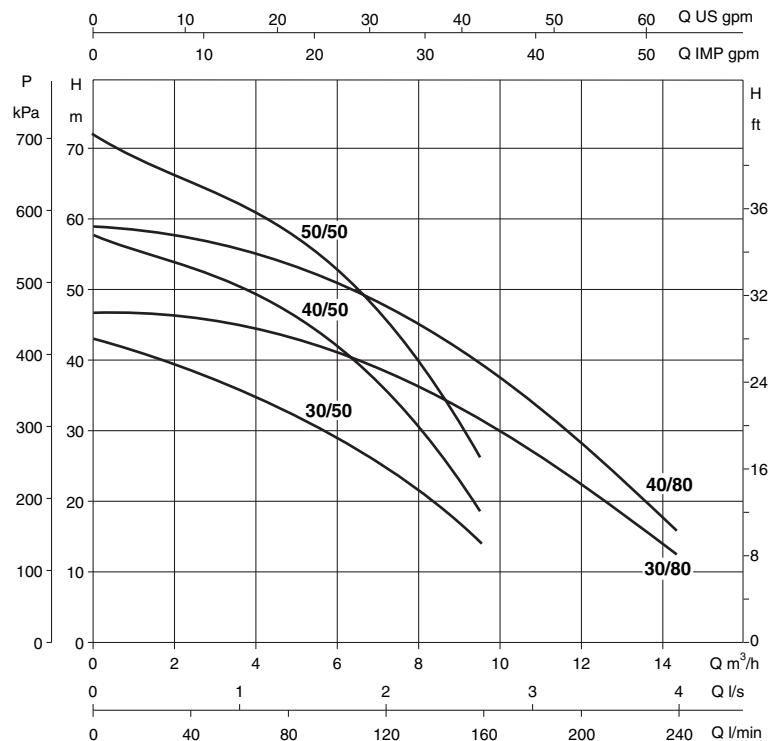
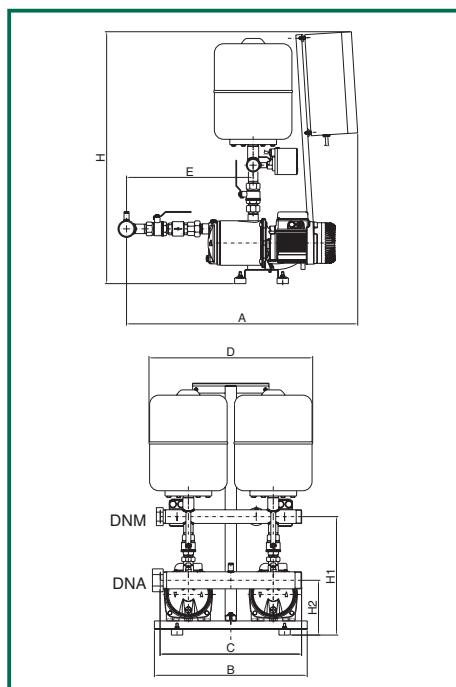
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 EUROINOX SETS

Pumped liquid temperature range: from 0°C to +35°C (for domestic use)
from 0°C to +40°C (for other uses)

Max flow rate: 14,5 m³/h

Maximum ambient temperature: +40°C



MODEL	A	B	C	D	E	H	H1	H2	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
2 EUROINOX 30/50 M	840	540	500	578	450	890	420	194	2"	1½"	57
2 EUROINOX 40/50 M	840	540	500	578	450	890	420	194	2"	1½"	57
2 EUROINOX 50/50 M	840	540	500	578	450	890	420	194	2"	1½"	57
2 EUROINOX 30/80 M	840	540	500	578	450	890	420	194	2"	1½"	57
2 EUROINOX 40/80 M	840	540	500	578	450	890	420	194	2"	1½"	57
2 EUROINOX 30/50 T	840	540	500	578	450	890	420	194	2"	1½"	57
2 EUROINOX 40/50 T	840	540	500	578	450	890	420	194	2"	1½"	57
2 EUROINOX 50/50 T	840	540	500	578	450	890	420	194	2"	1½"	58
2 EUROINOX 30/80 T	840	540	500	578	450	890	420	194	2"	1½"	57
2 EUROINOX 40/80 T	840	540	500	578	450	890	420	194	2"	1½"	58

MODEL	VOLTAGE 50 Hz	P2 NOMINAL kW	P2 NOMINAL HP	In A	FLOW RATE m ³ /h	MAX. PRESSURE OBTAINABLE BAR	PRESSURE SWITCH SETTING BAR
2 EUROINOX 30/50 M	1x220-240 V~	2x0,55	2x0,75	2x3,9	8,0-4,4	3,8	2÷3,3
2 EUROINOX 40/50 M	1x220-240 V~	2x0,75	2x1	2x5,3	8,0-5,2	5,3	3÷4,5
2 EUROINOX 50/50 M	1x220-240 V~	2x1	2x1,36	2x6,3	7,6-5,2	6,5	4÷5,5
2 EUROINOX 30/80 M	1x220-240 V~	2x0,8	2x1,1	2x5,3	11,0-7,0	4,3	2,5÷3,8
2 EUROINOX 40/80 M	1x220-240 V~	2x1	2x1,36	2x6,3	10,0-6,0	5,5	3,8÷5,2
2 EUROINOX 30/50 T	3x400 V~	2x0,55	2x0,75	2x1,6	8,0-4,4	3,8	2÷3,3
2 EUROINOX 40/50 T	3x400 V~	2x0,75	2x1	2x2,2	8,0-5,2	5,3	3÷4,5
2 EUROINOX 50/50 T	3x400 V~	2x1	2x1,36	2x2,5	7,6-5,2	6,5	4÷5,5
2 EUROINOX 30/80 T	3x400 V~	2x0,8	2x1,1	2x2,2	11,0-7,0	4,3	2,5÷3,8
2 EUROINOX 40/80 T	3x400 V~	2x1	2x1,36	2x2,5	10,0-6,0	5,5	3,8÷5,2

2 PULSAR DRY SETS WITH 2 SUBMERGED 5" PULSAR DRY PUMPS



CE

GENERAL DATA

Applications

Water lifting sets particularly suitable for domestic, small installations for civil, agricultural or industrial use. They are totally reliable, easy to use and maintenance-free.

The units are supplied:

- in the version with tanks (air connectors available on request)
- in the version with air connector (tanks available on request)

Constructional characteristics

HYDRAULIC PART

- 2 centrifugal PULSAR DRY electric pumps;
- Tropicalised galvanised sheet base complete with 4 anti-vibration rubber feet;
- Threaded suction and delivery manifold in stainless steel AISI 304;
- Ball valves on the suction and delivery pipe union of each single pump;
- Check valve on the suction side of each pump;
- 2 female manifold caps in inox;
- Radial pressure gauge with shut-off valve;
- Galvanised tropicalised steel column support for electrical panel;
- 2 x 20 liters membrane tanks.

ELECTRICAL PART

Control panel in shockproof fire-resistant plastic material, IP 55 protection level.

The panel comprises a general switch, pump overload circuit breakers, starting order exchange system for pumps, low voltage circuit for control pressure switches, selectors (start buttons for single-phase panel), front of panel indicator LED's. It is installed on a column fitted to the pump support.

Pre-calibrated pump start/stop pressure switches.

The panel can be connected to:

- Float or pressure switch KIT as protection against operation without water (*)
- Maximum pressure switch KIT (*)

(*) Optional items available on request

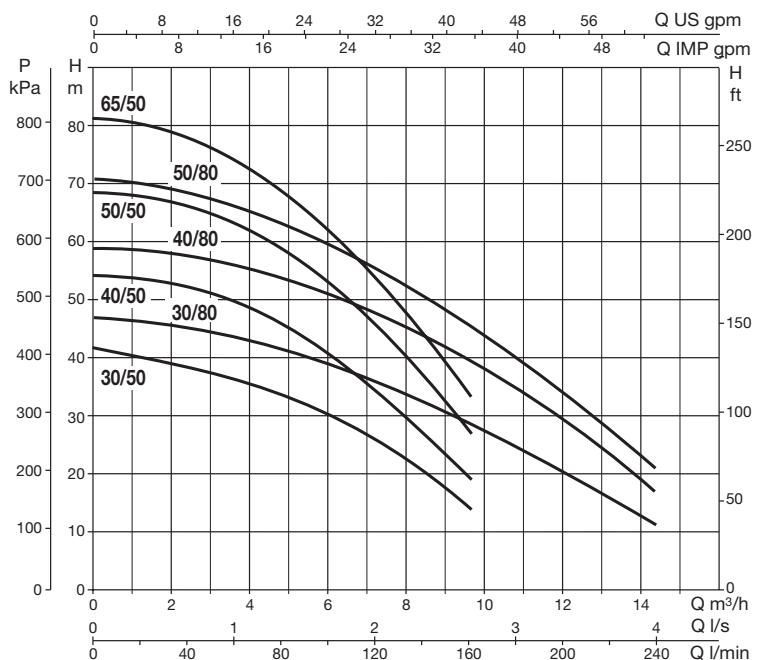
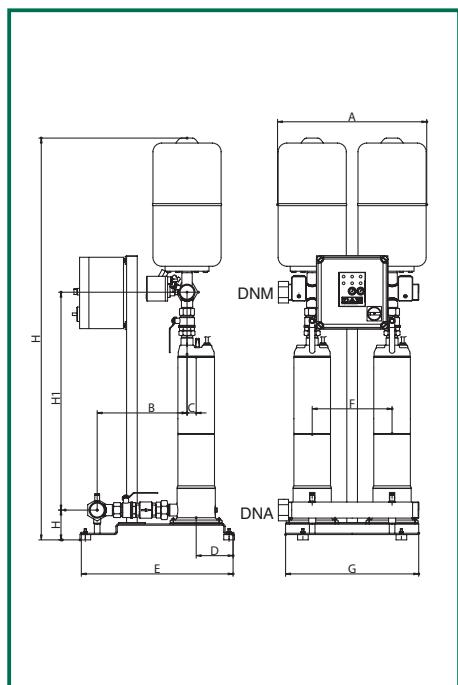
The units are supplied packed in a strong cardboard box with a wooden pallet and installation/maintenance instructions complete with wiring diagram.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 PULSAR DRY SETS

Liquid temperature range: from 0°C to +40°C (for domestic use)
Maximum ambient temperature: +40°C

Max flow rate: 14,5 m³/h

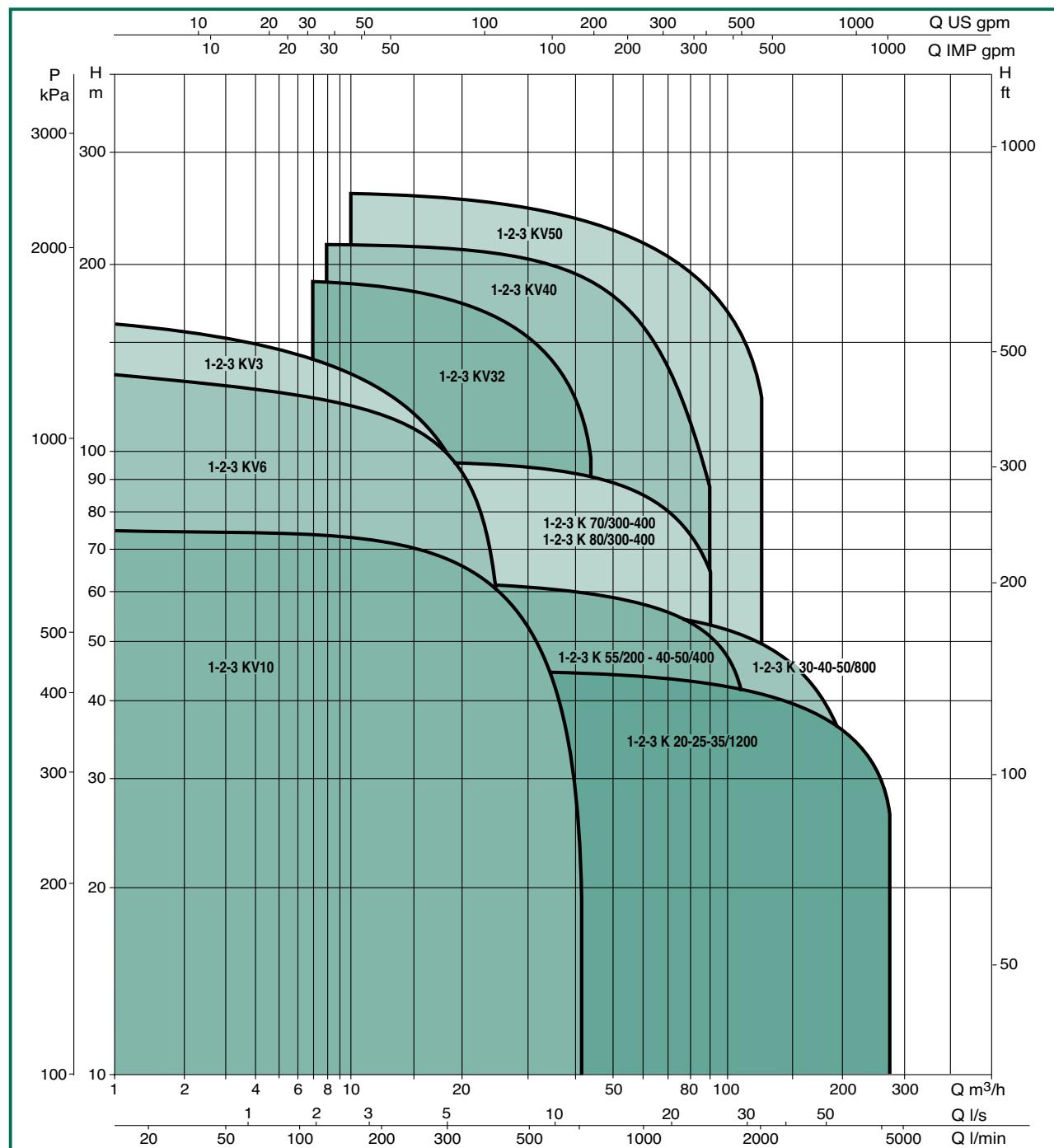


MODEL	A	B	C	D	E	F	G	H	H1	H2	Ø MANIFOLD DNA (suc.) DNM (del.)	WEIGHT Kg
2 PULSAR DRY 30/50 M	560	338	34	139	570	300	500	1415	724	112	2"	2" 67
2 PULSAR DRY 40/50 M	560	338	34	139	570	300	500	1415	724	112	2"	2" 67
2 PULSAR DRY 50/50 M	560	338	34	139	570	300	500	1482	791	112	2"	2" 66
2 PULSAR DRY 65/50 M	560	338	34	139	570	300	500	1509	818	112	2"	2" 66
2 PULSAR DRY 30/80 M	560	338	34	139	570	300	500	1415	724	112	2"	2" 67
2 PULSAR DRY 40/80 M	560	338	34	139	570	300	500	1482	791	112	2"	2" 67
2 PULSAR DRY 50/80 M	560	338	34	139	570	300	500	1509	818	112	2"	2" 66
2 PULSAR DRY 30/50 T	560	338	34	139	570	300	500	1415	724	112	2"	2" 67
2 PULSAR DRY 40/50 T	560	338	34	139	570	300	500	1415	724	112	2"	2" 67
2 PULSAR DRY 50/50 T	560	338	34	139	570	300	500	1415	791	112	2"	2" 66
2 PULSAR DRY 65/50 T	560	338	34	139	570	300	500	1509	818	112	2"	2" 66
2 PULSAR DRY 30/80 T	560	338	34	139	570	300	500	1415	724	112	2"	2" 67
2 PULSAR DRY 40/80 T	560	338	34	139	570	300	500	1482	791	112	2"	2" 67
2 PULSAR DRY 50/80 T	560	338	34	139	570	300	500	1509	818	112	2"	2" 66

MODEL	VOLTAGE		P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SETTING BAR	MAX. PRESSURE OBTAINABLE BAR
	50 Hz	kW	HP	A				
2 PULSAR DRY 30/50 M	1x220-240 V~	2x0,55	2x0,75	2x4,5		8,2-4,4	2-3,3	3,8
2 PULSAR DRY 40/50 M	1x220-240 V~	2x0,75	2x1	2x5,5		8,0-4,4	3-4,5	5
2 PULSAR DRY 50/50 M	1x220-240 V~	2x1	2x1,36	2x7		7,6-5,0	4-5,5	6,5
2 PULSAR DRY 65/50 M	1x220-240 V~	2x1,2	2x1,6	2x8		7,6-5,0	5-6,5	8
2 PULSAR DRY 30/80 M	1x220-240 V~	2x0,75	2x1	2x5,4		11,0-7,0	2,5-4	4,5
2 PULSAR DRY 40/80 M	1x220-240 V~	2x1	2x1,36	2x7		11,0-7,1	3,5-5	5,8
2 PULSAR DRY 50/80 M	1x220-240 V~	2x1,2	2x1,6	2x8,2		11,2-8,0	4-5,5	7,2
2 PULSAR DRY 30/50 T	3x400 V~	2x0,55	2x0,75	2x1,8		8,2-4,4	2-3,3	3,8
2 PULSAR DRY 40/50 T	3x400 V~	2x0,75	2x1	2x2		8,0-4,4	3-4,5	5
2 PULSAR DRY 50/50 T	3x400 V~	2x1	2x1,36	2x2,6		7,6-5,0	4-5,5	6,5
2 PULSAR DRY 65/50 T	3x400 V~	2x1,2	2x1,6	2x3,1		7,6-5,5	5-6,5	8
2 PULSAR DRY 30/80 T	3x400 V~	2x0,75	2x1	2x2		11,0-7,0	2,5-4	4,5
2 PULSAR DRY 40/80 T	3x400 V~	2x1	2x1,36	2x2,5		11,0-7,1	3,5-5	5,8
2 PULSAR DRY 50/80 T	3x400 V~	2x1,2	2x1,6	2x3		11,2-8,0	4-5,5	7,0

INDUSTRIAL AND CIVIL PRESSURE UNITS AND BOOSTER SETS

SELECTION TABLES



1K - 2K - 3K SETS WITH OPPOSED TWIN-IMPELLER CENTRIFUGAL PUMPS

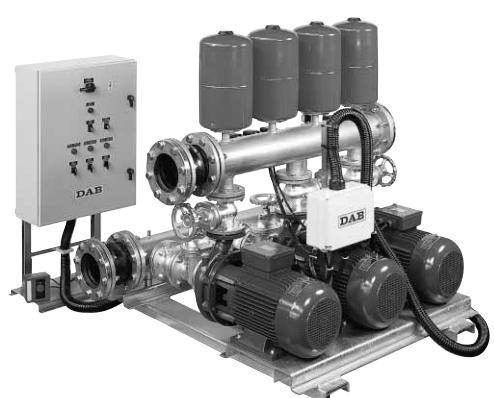
1-2-3 PUMPS



1 K sets



2 K sets



3 K sets



GENERAL DATA

Applications

Water lifting sets suitable for civil installations: condominiums, hotels, tourist facilities and industrial uses. The twin-impeller centrifugal pumps used ensure constant water flow when a high power-pressure ratio is required. They have a sturdy construction and compact dimensions, with good yield and very quiet running.

Constructional features

SETS WITH 1-2-3 PUMPS

HYDRAULIC PART

- 1-2-3 horizontal twin-impeller centrifugal electropumps
- Pump support bracket in tropicalized galvanized sheet steel complete with 4 anti-vibration rubber feet
- 1 ball valve with union and 1 non return valve on suction
- Threaded delivery manifold in tropicalized galvanized steel with female cap in tropicalized galvanized cast iron
- Ball valve with union on delivery
- Anti-vibration flexible pipe for connection to the delivery pipe
- Radial pressure gauge with interception valve
- Movable galvanized steel support for the electric control panel
- Membraned pressure vessels

ELECTRICAL PART

ELECTRICAL POWER PANEL

Direct starting for single motor inputs up to 11 kW inclusive.

Star-Delta starting for 5.5 kW single motor inputs.

IP 55 sheet steel cabinet with lever closing system and lock. Door lock switch, remote motor protector with overload relay and pump fuses, low voltage auxiliary circuit (24V) for remote motor protector control, adjustable delayed pump stopping timer (additional running), starting order swapping system for 2-3 pump units. Automatic (by pressure switches on delivery manifold) or Manual pump mode switches. Terminal board fitted for minimum pressure switch, float switch preventing the pump from working without water and remote starting.

CONTROL PRESSURE SWITCHES

Pre-calibrated pump control pressure switches installed on delivery manifold. The pressure switches use the remote motor protector to invert the pumps in a cascade sequence.

PILOT - COMPENSATION PUMP (cuts in for small deliveries of water in the system - prevents unnecessary pump starting). The units are also available with the KV 3 - KV 6 pilot pump complete with valves and connected to the suction and delivery manifolds. Pilot pump command and protection circuit inside the main pump electrical power panel for units 1-2 K. Separate electric power panel for units 3 K.

WEEKLY TEST (to be requested when ordering - it cannot be added later)

Boosters are available also with weekly test system, including a programmable timer, an acoustic alarm, an electrovalve placed on delivery manifold, an emergency push button, a minimum pressure switch.

At the end of the test, should there be any pump failure, the acoustic alarm is activated.

If these boosters are used for fire fighting system, we recommend to use weekly test.

The sets are supplied complete with sturdy cardboard packing on a wooden pallet, with instructions leaflet and wiring diagram.

1K - 2K - 3K booster sets are also available in the "easy compact version":

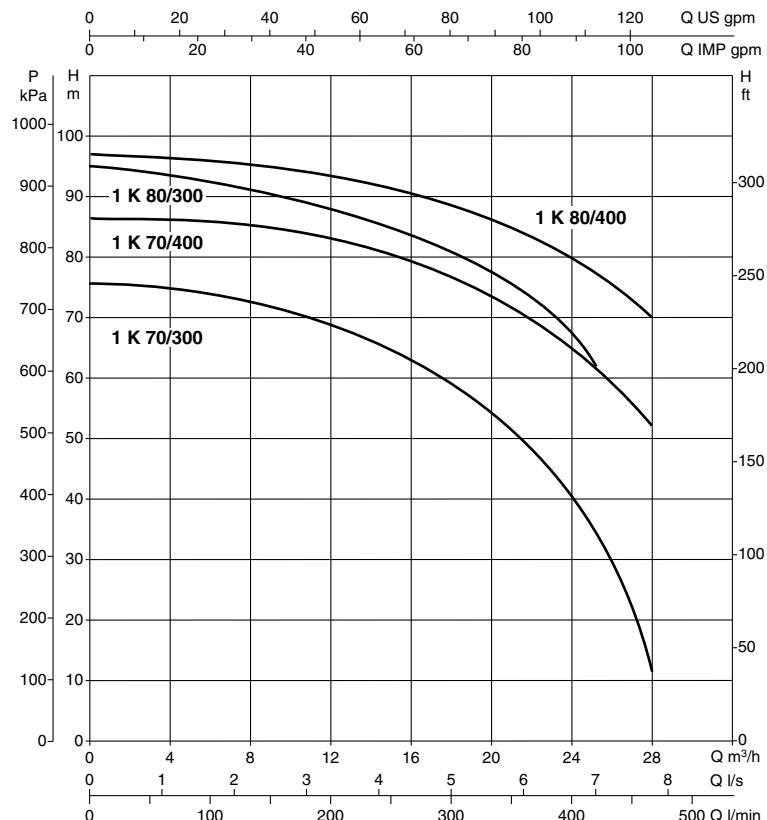
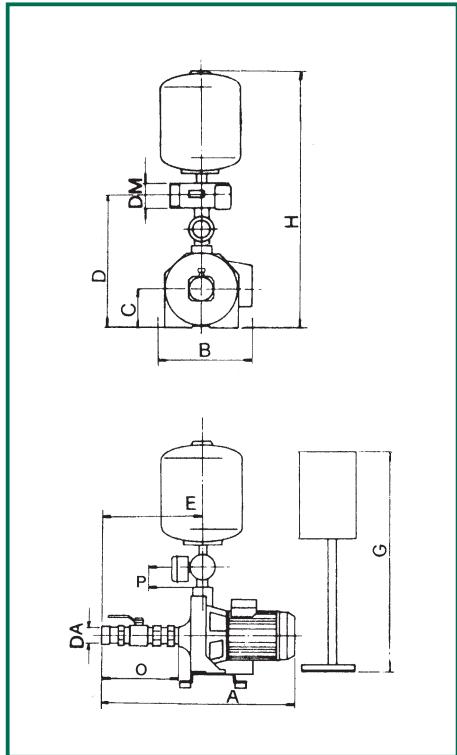
- Control panel, no timer (additional running), setted over the baseplate
- Anti-vibration flexible pipe for connection to the delivery pipe supplied as an optional.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 30 m³/h



MODEL	A	B	C	D	E	G	H	O	P	Ø MANIFOLD		WEIGHT Kg
										DA (asp.)	DNM (del.)	
1 K 70/300 T	890	530	250	610	400	1005	1200	290	200	2"	2½"	192
1 K 80/300 T	890	530	250	610	400	1005	1200	290	200	2"	2½"	198
1 K 70/400 T	930	530	250	610	400	1005	1200	290	200	2"	2½"	201
1 K 80/400 T	930	530	250	610	400	1005	1200	290	200	2"	2½"	205

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		kW	HP					TYPE	kW	HP
1 K 70/300 T	3x400 V ~	5,5	7,5	12,3	24,6-15,0	5÷7	7,6	KV 3/10 T	1,1	1,5
1 K 80/300 T	3x400 V ~	7,5	10	17,3	24,6-15,0	6,5÷8,5	9,5	KV 3/15 T	1,85	2,5
1 K 70/400 T	3x400 V ~	9,2	12,5	17,8	27,3-14,4	6÷8	8,6	KV 3/12 T	1,5	2
1 K 80/400 T	3x400 V ~	11	15	20,6	28,2-18,0	7÷9	9,7	KV 3/15 T	1,85	2,5

All data refer to groups considering the service pumps.

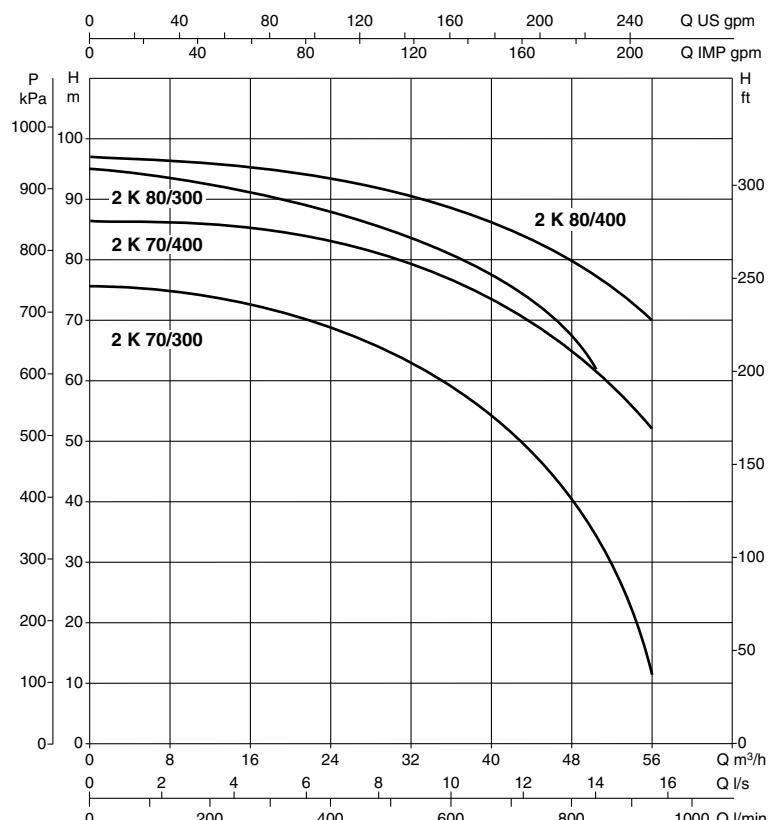
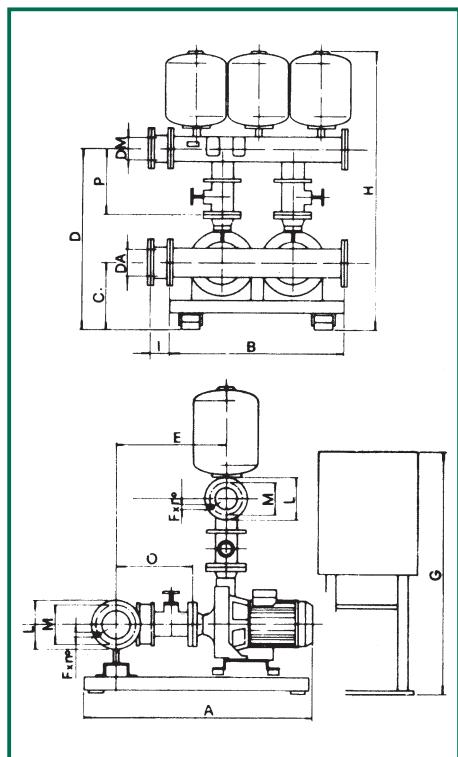
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 60 m³/h



MODEL	A	B	C	D	E	G	H	O	P	I	L	M	Fxn°	Ø MANIFOLD		WEIGHT Kg
														DNA (suc.)	DNM (del.)	
2 K 70/300 T	950	720	250	610	480	1005	1200	380	260	130	200	160	18x4	DN 80 - PN 10	DN 80 - PN 10	340
2 K 80/300 T	950	720	250	610	480	1005	1200	380	260	130	200	160	18x4	DN 80 - PN 10	DN 80 - PN 10	355
2 K 70/400 T	950	720	250	610	480	1005	1200	380	260	130	200	160	18x4	DN 80 - PN 10	DN 80 - PN 10	360
2 K 80/400 T	950	720	250	610	480	1005	1200	380	260	130	200	160	18x4	DN 80 - PN 10	DN 80 - PN 10	365

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		kW	HP					TYPE	kW	HP
2 K 70/300 T	3x400 V ~	2x5,5	2x7,5	2x12,3	49,2-30,0	5÷7	7,6	KV 3/10 T	1,1	1,5
2 K 80/300 T	3x400 V ~	2x7,5	2x10	2x17,3	49,2-30,0	6,5÷8,5	9,5	KV 3/15 T	1,85	2,5
2 K 70/400 T	3x400 V ~	2x9,2	2x12,5	2x17,8	54,6-28,8	6÷8	8,6	KV 3/12 T	1,5	2
2 K 80/400 T	3x400 V ~	2x11	2x15	2x20,6	56,4-36,0	7÷9	9,7	KV 3/15 T	1,85	2,5

All data refer to groups considering the service pumps.

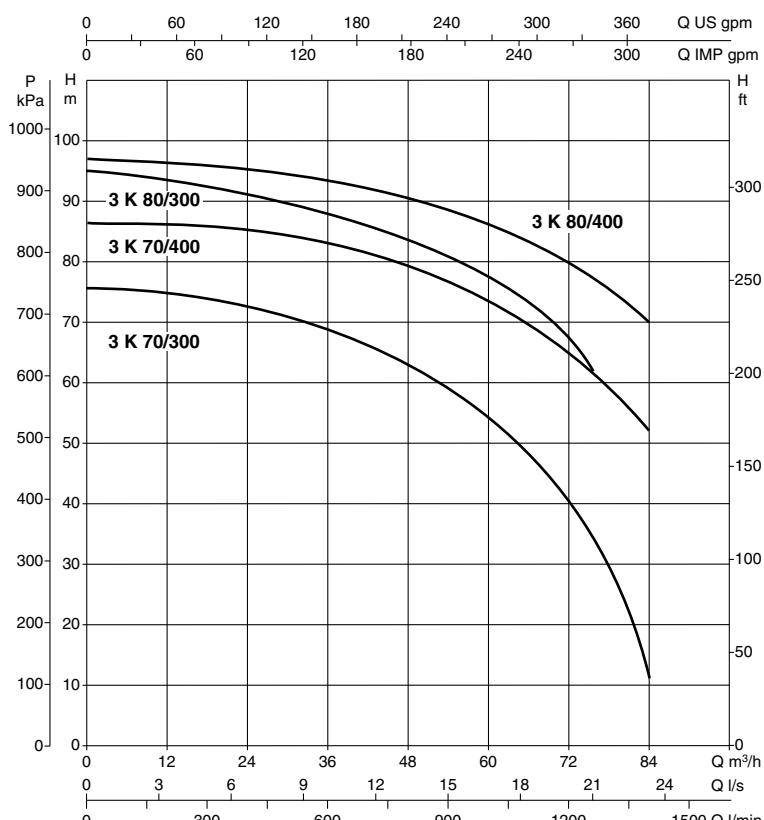
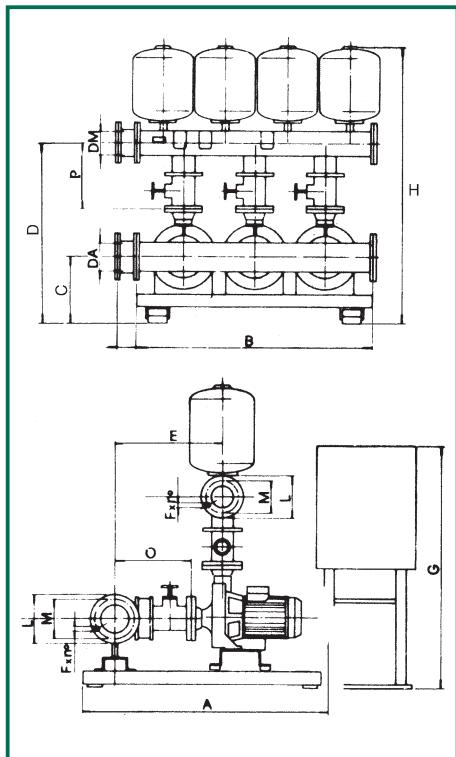
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 90 m³/h



MODEL	A	B	C	D	E	G	H	O	P	I	L	M	Fxn°	Ø MANIFOLD		WEIGHT Kg
														DNA (suc.)	DNM (del.)	
3 K 70/300 T	1000	1100	250	620	500	1005	1220	400	280	135	220	180	18x8	DN 100 - PN 10	DN 100 - PN 10	510
3 K 80/300 T	1000	1100	250	620	500	1005	1220	400	280	135	220	180	18x8	DN 100 - PN 10	DN 100 - PN 10	530
3 K 70/400 T	1000	1100	250	620	500	1005	1220	400	280	135	220	180	18x8	DN 100 - PN 10	DN 100 - PN 10	540
3 K 80/400 T	1000	1100	250	620	500	1005	1220	400	280	135	220	180	18x8	DN 100 - PN 10	DN 100 - PN 10	550

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		kW	HP					TYPE	kW	HP
3 K 70/300 T	3x400 V ~	3x5,5	3x7,5	3x12,3	73,8-45,0	5÷7	7,6	KV 3/10 T	1,1	1,5
3 K 80/300 T	3x400 V ~	3x7,5	3x10	3x17,3	73,8-45,0	6,5÷8,5	9,5	KV 3/15 T	1,85	2,5
3 K 70/400 T	3x400 V ~	3x9,2	3x12,5	3x17,8	81,9-43,2	6÷8	8,6	KV 3/12 T	1,5	2
3 K 80/400 T	3x400 V ~	3x11	3x15	3x20,6	84,6-54,0	7÷9	9,7	KV 3/15 T	1,85	2,5

All data refer to groups considering the service pumps.

* Pilot pump on request

1K - 2K - 3K SETS WITH SINGLE-IMPELLER CENTRIFUGAL PUMPS

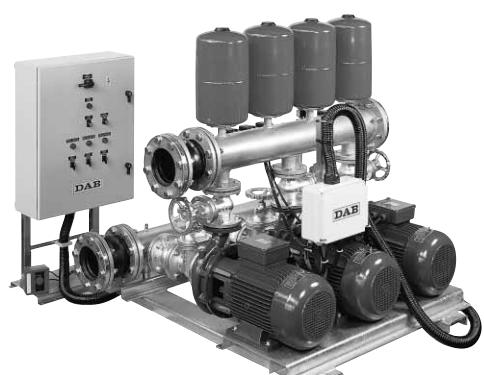
1-2-3 PUMPS



1 K sets



2 K sets



3 K sets



GENERAL DATA

Applications

Water lifting and decanting sets suitable for special industrial and agricultural processes. Built with state-of-the-art characteristics, they are noteworthy for their high technology, aimed at maximum yield. The use of single-impeller "K" electropumps for high flow rates offers simple construction, high reliability and strength. These sets are inimitable in satisfying the demand for high hydraulic performance and absolute reliability.

Constructional features

SETS WITH 1-2-3 PUMPS

HYDRAULIC PART

- 1-2-3 horizontal single-impeller centrifugal electropumps
- Pump support bracket in hot galvanized sheet steel complete with 4 anti-vibration rubber feet
- Flanged gate valve, flanged non return valve against water hammer and flanged flexible coupling on the suction side
- Flanged hot galvanized delivery manifold complete with galvanized blank flange and flanged gate valve
- Anti-vibration flexible couplings for connection to the delivery pipe
- Radial pressure gauge with interception valve
- Movable galvanized steel support for the electric control panel
- Membraned pressure vessels

ELECTRIC PART

ELECTRICAL POWER PANEL

Direct starting for single motor inputs up to 11 kW inclusive.

Star-Delta starting for 5,5 kW single motor inputs.

IP 55 sheet steel cabinet with lever closing system and lock. Door lock switch, remote motor protector with overload relay and pump fuses, low voltage auxiliary circuit (24V) for remote motor protector control, adjustable delayed pump stopping timer (additional running), starting order swapping system for 2-3 pump units. Automatic (by pressure switches on delivery manifold) or Manual pump mode switches. Terminal board fitted for minimum pressure switch, float switch preventing the pump from working without water and remote starting.

CONTROL PRESSURE SWITCHES

Pre-calibrated pump control pressure switches installed on delivery manifold. The pressure switches use the remote motor protector to invert the pumps in a cascade sequence.

PILOT - COMPENSATION PUMP (cuts in for small deliveries of water in the system - prevents unnecessary pump starting). The units are also available with the KV 3 - KV 6 pilot pump complete with valves and connected to the suction and delivery manifolds. Pilot pump command and protection circuit inside the main pump electrical power panel for units 1-2 K. Separate electric power panel for units 3 K.

WEEKLY TEST (to be requested when ordering - it cannot be added later)

Boosters are available also with weekly test system, including a programmable timer, an acoustic alarm, an electrovalve placed on delivery manifold, an emergency push button, a minimum pressure switch.

At the end of the test, should there be any pumps failure, the acoustic alarm is activated.

If these boosters are used for fire fighting system , we recommend to use weekly test.

The sets are supplied complete with sturdy cardboard packing on a wooden pallet, with instructions leaflet and wiring diagram.

1K - 2K - 3K booster sets are also available in the "easy compact version":

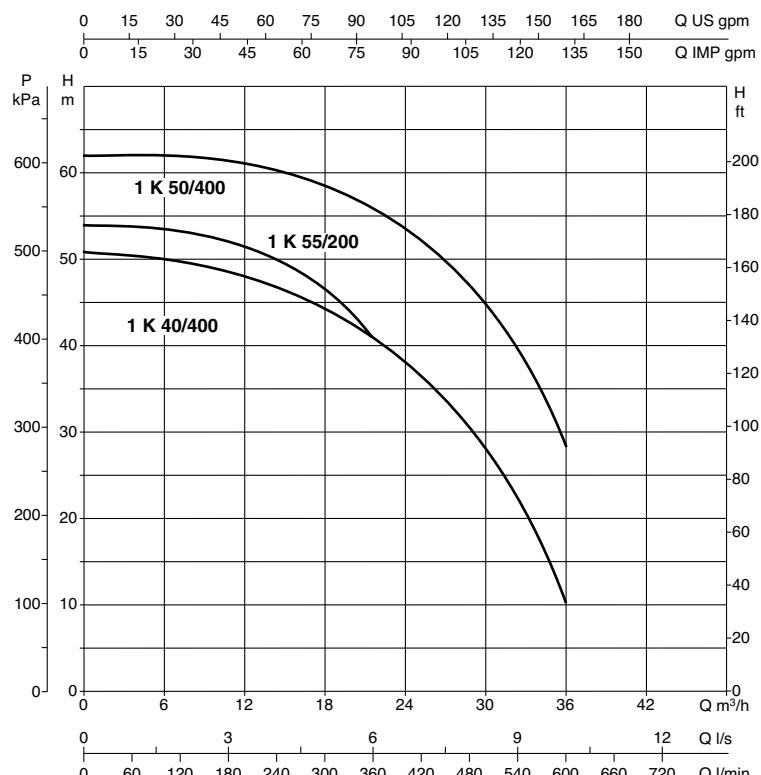
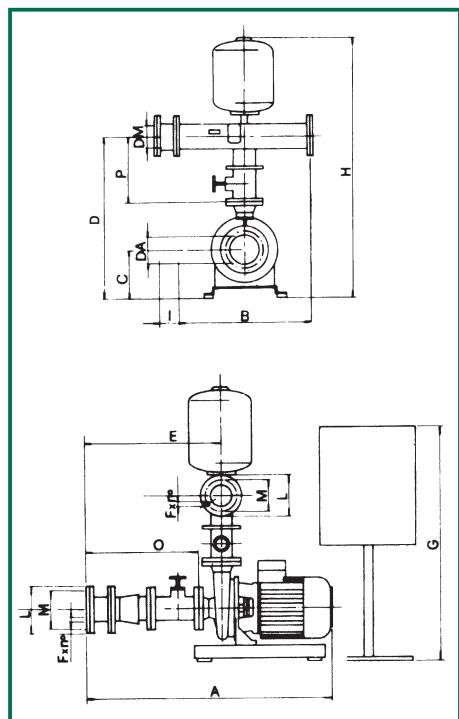
- Control panel, no timer (additional running), setted over the baseplate
- Anti-vibration flexible pipe for connection to the delivery pipe supplied as an optional.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 36 m³/h



MODEL	A	B	C	D	E	G	H	O	P	MANIFOLD DIMENSIONS								WEIGHT Kg		
										DNA (suc.)				DNM (del.)						
										Ø DA	I	L	M	Fxn°	Ø DM	I	L	M	Fxn°	
1 K 55/200 T	750	450	210	600	360	1005	1165	290	200	2"	-	-	-	-	2½"	-	-	-	-	130
1 K 40/400 T	1100	530	250	700	460	1005	1300	370	250	DN 65	115	180	140	18x4	DN 80	130	200	160	18x4	250
1 K 50/400 T	950	530	250	700	460	1005	1300	370	250	DN 65	115	180	140	18x4	DN 80	130	200	160	18x4	259

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE		PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR		PILOT PUMP *		
		50 Hz	kW		HP	A		Type	kW	HP		
1 K 55/200 T	3x400 V ~	4	5,5	16,3-9,4	17,0-8,0		4,3÷5,1	5,2	KV 6/7 T	1,1	1,5	
1 K 40/400 T	3x400 V ~	5,5	7,5	11,5	29,0-17,0		2,7÷4,6	4,9	KV 6/7 T	1,1	1,5	
1 K 50/400 T	3x400 V ~	7,5	10	15	33,5-20,0		3,6÷5,8	6,2	KV 3/10 T	1,1	1,5	

(1) All data refer to groups considering the service pumps.

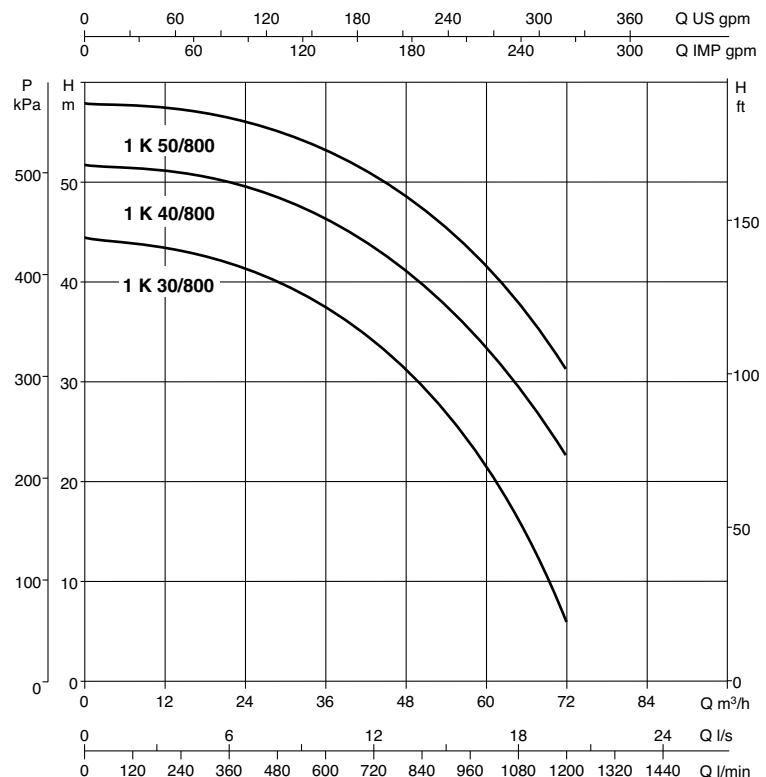
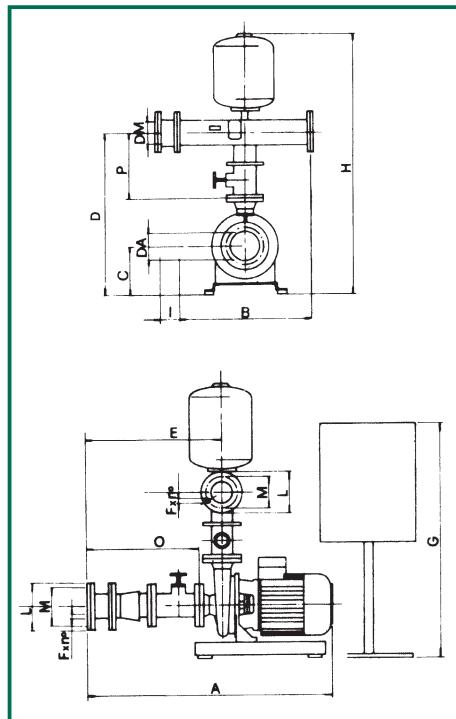
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 81 m³/h



MODEL	A	B	C	D	E	G	H	O	P	MANIFOLD DIMENSIONS				WEIGHT Kg						
										DNA (suc.)		DNM (del.)								
										Ø DA	I	L	M	Fxn°	Ø DM	I	L	M	Fxn°	
1 K 30/800 T	1120	530	250	700	490	1005	1355	500	280	DN 80	130	200	160	18x4	DN 80	130	200	160	18x4	274
1 K 40/800 T	1120	530	250	700	490	1005	1355	500	280	DN 80	130	200	160	18x4	DN 80	130	200	160	18x4	279
1 K 50/800 T	1120	530	250	700	490	1005	1355	500	280	DN 80	130	200	160	18x4	DN 80	130	200	160	18x4	284

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE m ³ /h ⁽¹⁾	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		kW	HP					Type	P2 kW	HP
1 K 30/800 T	3x400 V ~	7,5	10	14	60,0-27,5	2,2÷3,9	4,4	KV 6/7 T	1,1	1,5
1 K 40/800 T	3x400 V ~	9,2	12,5	18	66,0-36,0	2,7÷4,7	5	KV 6/7 T	1,1	1,5
1 K 50/800 T	3x400 V ~	11	15	20,5	72,0-36,0	3,2÷5,5	5,75	KV 3/10 T	1,1	1,5

(1) All data refer to groups considering the service pumps.

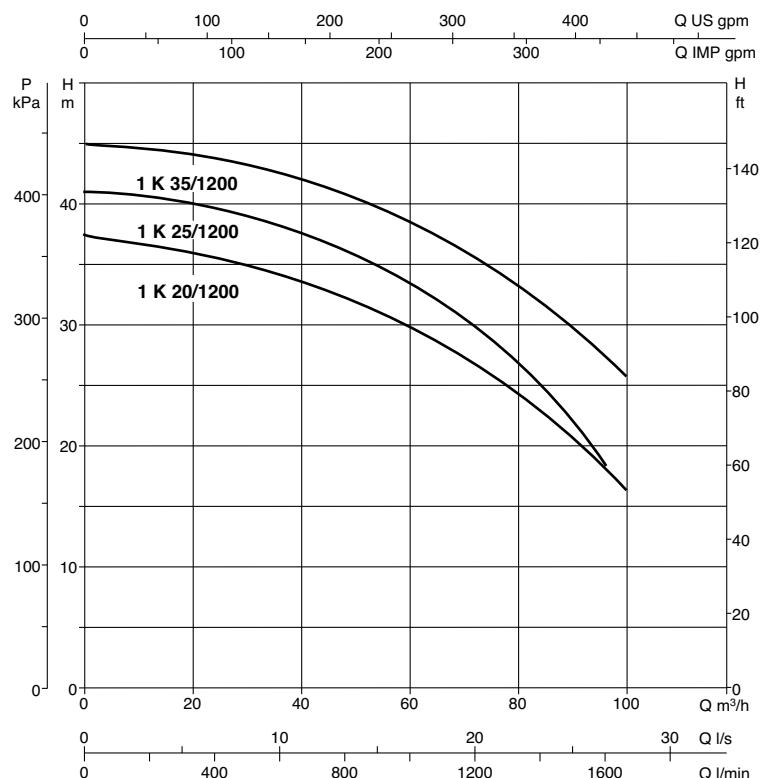
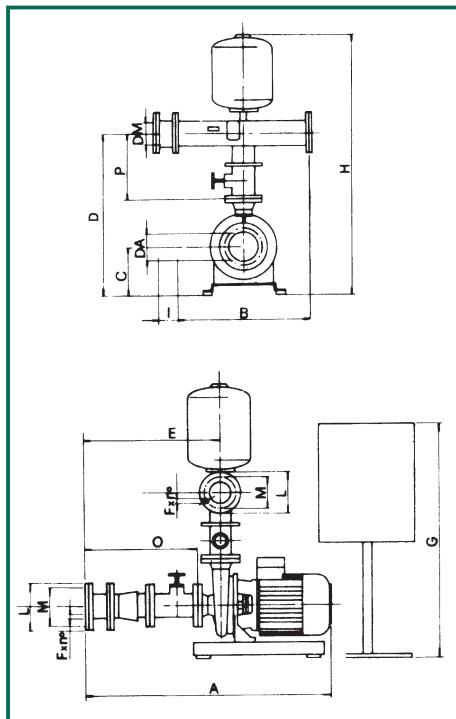
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 95 m³/h



MODEL	A	B	C	D	E	G	H	O	P	MANIFOLD DIMENSIONS						WEIGHT Kg				
										DNA (suc.)				DNM (del.)						
										Ø DA	I	L	M	Fxn°	Ø DM	I	L	M	Fxn°	
1 K 20/1200 T	1150	530	250	700	490	1005	1355	500	280	DN 80	130	200	160	18x4	DN 100	135	200	160	18x4	281
1 K 25/1200 T	1150	530	250	700	490	1005	1355	500	280	DN 80	130	200	160	18x4	DN 100	135	200	160	18x4	287
1 K 35/1200 T	1150	530	250	700	490	1005	1355	500	280	DN 80	130	200	160	18x4	DN 100	135	200	160	18x4	293

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		50 Hz	kW					Type	P2	
			HP	A	m ³ /h ⁽¹⁾			kW	HP	
1 K 20/1200 T	3x400 V ~	7,5	10	15,4	93,0-48,0	1,2÷2,7	3	KV 6/7 T	1,1	1,5
1 K 25/1200 T	3x400 V ~	9,2	12,5	18	96,0-48,0	1,7÷3,3	3,7	KV 6/7 T	1,1	1,5
1 K 35/1200 T	3x400 V ~	11	15	19,3	96,0-48,0	2,5÷3,8	4,2	KV 6/7 T	1,1	1,5

(1) All data refer to groups considering the service pumps.

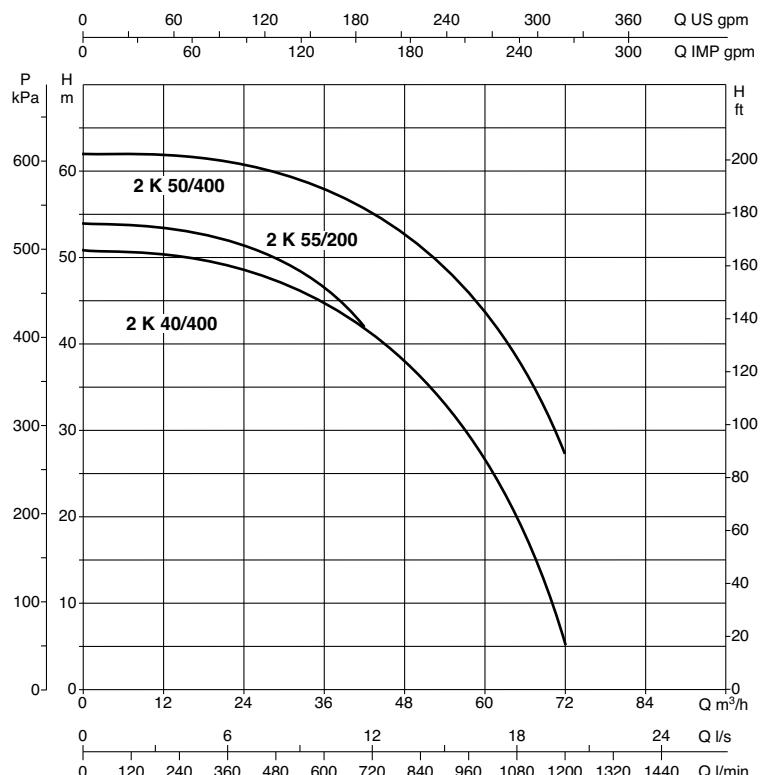
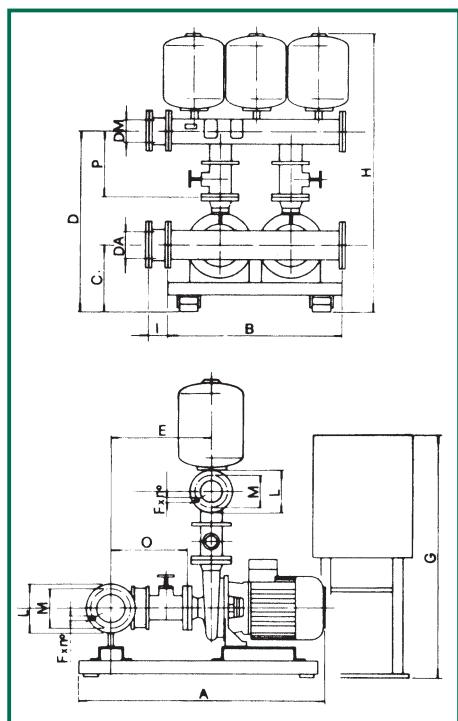
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 72 m³/h



MODEL	A	B	C	D	E	G	H	O	P	MANIFOLD DIMENSIONS								WEIGHT Kg		
										DNA (suc.)				DNM (del.)						
Ø DA	I	L	M	Fxn°	Ø DM	I	L	M	Fxn°											
2 K 55/200 T	850	720	200	585	425	1005	1165	380	260	DN 80	130	200	160	18x4	DN 80	130	200	160	18x4	242
2 K 40/400 T	1220	1000	300	770	590	1250	1300	490	260	DN 100	135	220	180	18x8	DN 100	135	220	180	18x8	513
2 K 50/400 T	1220	1000	300	770	590	1250	1300	490	260	DN 100	135	220	180	18x8	DN 100	135	220	180	18x8	525

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h ⁽¹⁾	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		kW	HP					TYPE	kW	HP
2 K 55/200 T	3x400 V ~	2x4	2x5,5	2x16,3-9,4	34,0-16,0	4,3÷5,1	5,2	KV 6/7 T	1,1	1,5
2 K 40/400 T	3x400 V ~	2x5,5	2x7,5	2x11,5	54,0-34,0	2,7÷4,6	4,9	KV 6/7 T	1,1	1,5
2 K 50/400 T	3x400 V ~	2x7,5	2x10	2x15	67,0-40,0	3,6÷5,8	6,2	KV 3/10 T	1,1	1,5

(1) All data refer to groups considering the service pumps.

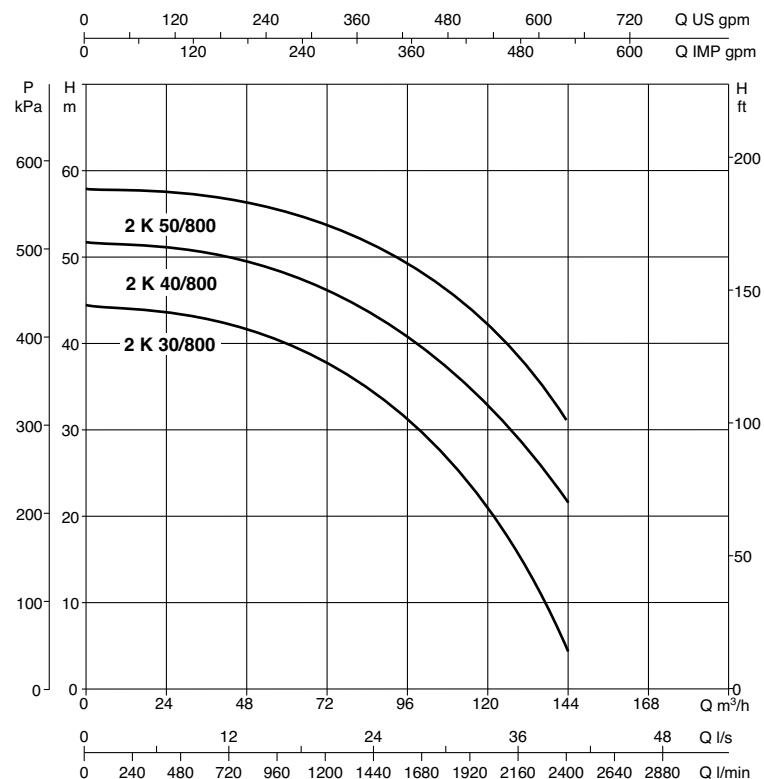
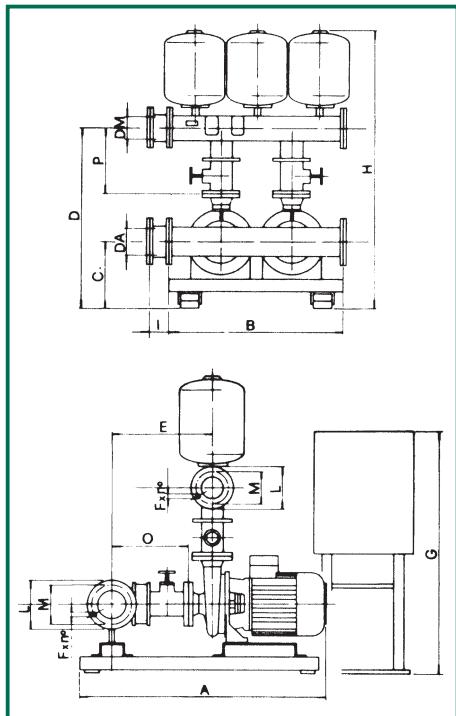
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 150 m³/h



MODEL	A	B	C	D	E	G	H	O	P	MANIFOLD DIMENSIONS								WEIGHT Kg	
										DNA (suc.)				DNM (del.)					
2 K 30/800 T	1300	1000	300	805	650	1250	1415	550	280	DN 150	180	285	240	22x8	DN 125	170	250	210	18x8 594
2 K 40/800 T	1300	1000	300	805	650	1250	1415	550	280	DN 150	180	285	240	22x8	DN 125	170	250	210	18x8 630
2 K 50/800 T	1300	1000	300	805	650	1250	1415	550	280	DN 150	180	285	240	22x8	DN 125	170	250	210	18x8 648

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE		PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		50 Hz	kW		HP	A			Type	kW	P2 HP
2 K 30/800 T	3x400 V ~	2x7,5	2x10	2x14	120,0-55,0		2,2÷3,9	4,4	KV 6/7 T	1,1	1,5
2 K 40/800 T	3x400 V ~	2x9,2	2x12,5	2x18	132,0-72,0		2,7÷4,7	5	KV 6/7 T	1,1	1,5
2 K 50/800 T	3x400 V ~	2x11	2x15	2x20,5	144,0-72,0		3,2÷5,5	5,75	KV 3/10 T	1,1	1,5

(1) All data refer to groups considering the service pumps.

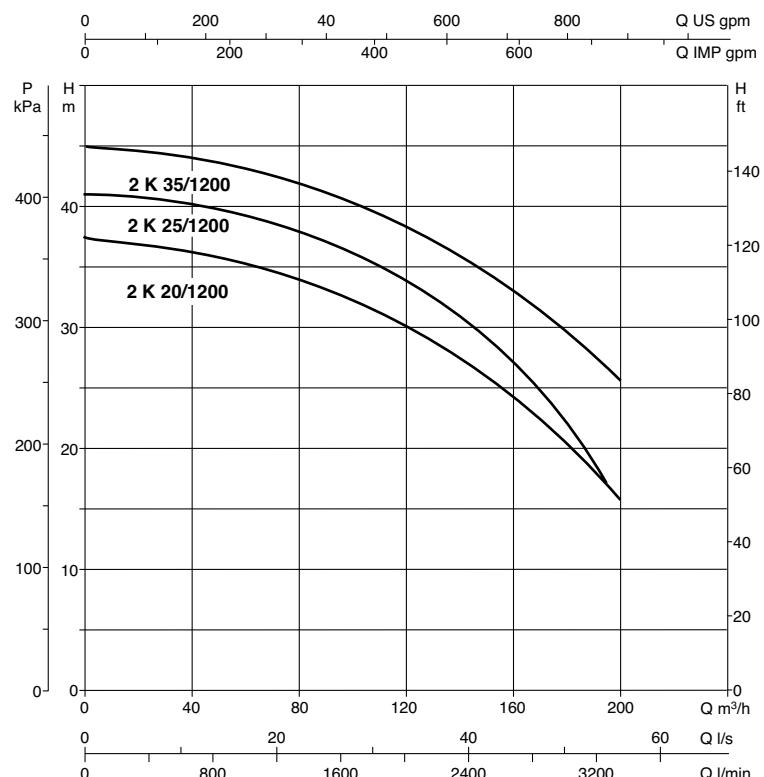
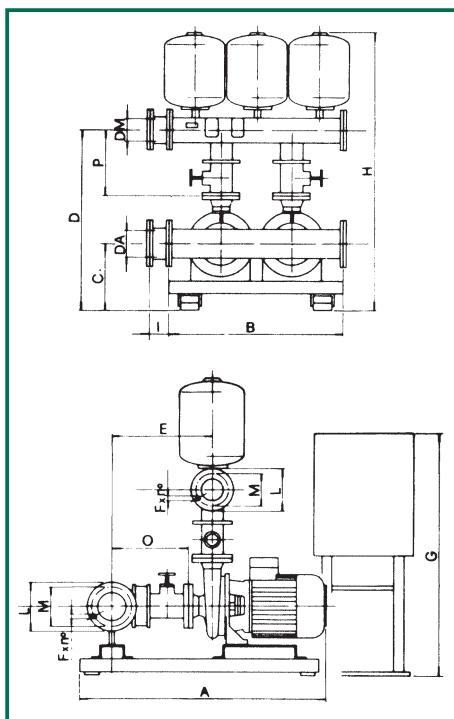
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 192 m³/h



MODEL	A	B	C	D	E	G	H	O	P	MANIFOLD DIMENSIONS								WEIGHT Kg		
										DNA (suc.)				DNM (del.)						
	Ø DA	I	L	M	Fxn°	Ø DM	I	L	M	Fxn°										
2 K 20/1200 T	1300	1000	300	805	650	1250	1415	580	280	DN 200	205	340	295	22x8	DN 150	180	285	240	18x8	610
2 K 25/1200 T	1300	1000	300	805	650	1250	1415	580	280	DN 200	205	340	295	22x8	DN 150	180	285	240	18x8	625
2 K 35/1200 T	1300	1000	300	805	650	1250	1415	580	280	DN 200	205	340	295	22x8	DN 150	180	285	240	18x8	640

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE m ³ /h ⁽¹⁾	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		50 Hz	kW					Type	P2 kW	HP
2 K 20/1200 T	3x400 V ~	2x7,5	2x10	2x15,4	186,0-96,0	1,2÷2,7	3	KV 6/7 T	1,1	1,5
2 K 25/1200 T	3x400 V ~	2x9,2	2x12,5	2x18	192,0-96,0	1,7÷3,3	3,7	KV 6/7 T	1,1	1,5
2 K 35/1200 T	3x400 V ~	2x11	2x15	2x19,3	192,0-120,0	2,5÷3,8	4,2	KV 6/7 T	1,1	1,5

(1) All data refer to groups considering the service pumps.

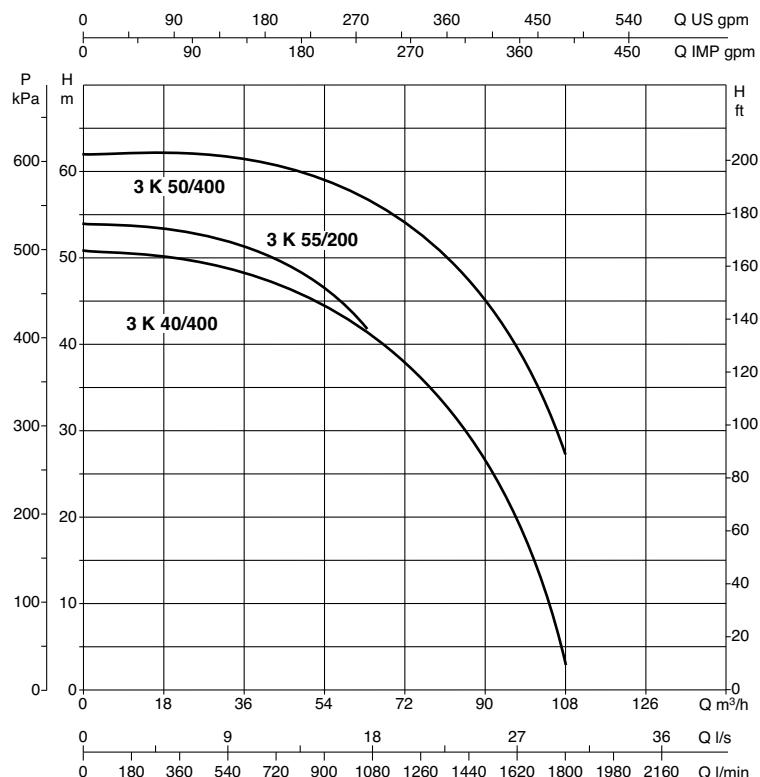
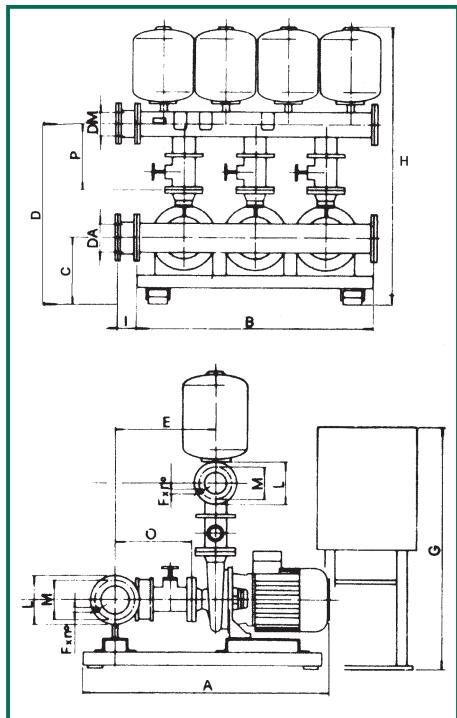
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 108 m³/h



MODEL	A	B	C	D	E	G	H	O	P	MANIFOLD DIMENSIONS								WEIGHT Kg	
										DNA (suc.)				DNM (del.)					
3 K 55/200 T	900	1100	200	595	435	1005	1185	390	260	DN 100	135	220	180	18x8	DN 100	135	220	180	18x8 365
3 K 40/400 T	1220	1200	300	770	590	1250	1300	500	260	DN 125	170	250	210	18x8	DN 125	170	250	210	18x8 725
3 K 50/400 T	1220	1200	300	770	590	1250	1300	500	260	DN 125	170	250	210	18x8	DN 125	170	250	210	18x8 743

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR		PILOT PUMP *		
		50 Hz	kW				A	m ³ /h ⁽¹⁾	TYPE	kW	HP
3 K 55/200 T	3x400 V ~	3x4	3x5,5	3x16,3-9,4	51,0-24,0	4,3-5,1	5,2		KV 6/7 T	1,1	1,5
3 K 40/400 T	3x400 V ~	3x5,5	3x7,5	3x11,5	87,0-51,0	2,7-4,65	4,9		KV 6/7 T	1,1	1,5
3 K 50/400 T	3x400 V ~	3x7,5	3x10	3x15	100,5-60,0	3,6-5,8	6,2		KV 3/10 T	1,1	1,5

(1) All data refer to groups considering the service pumps.

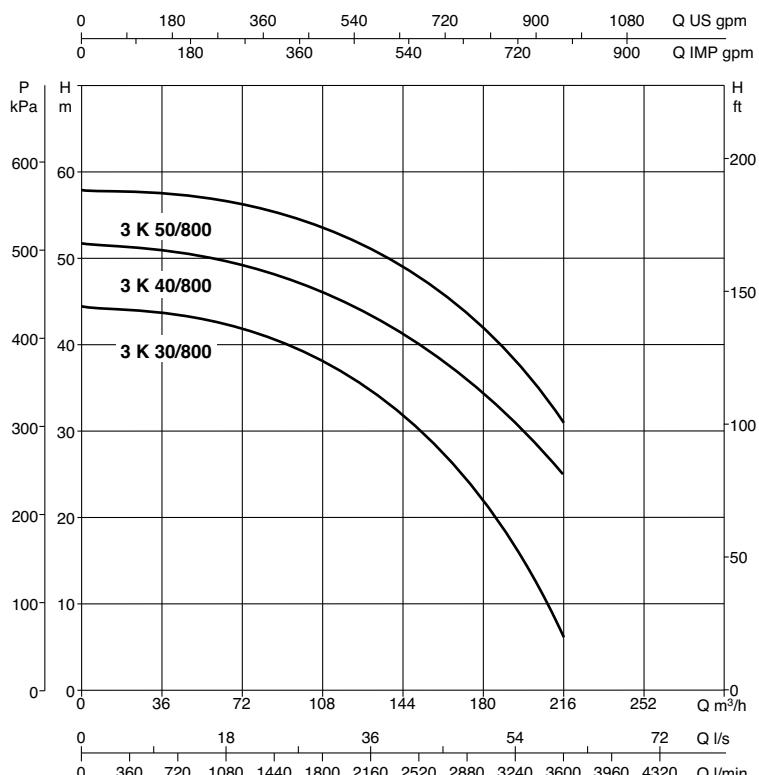
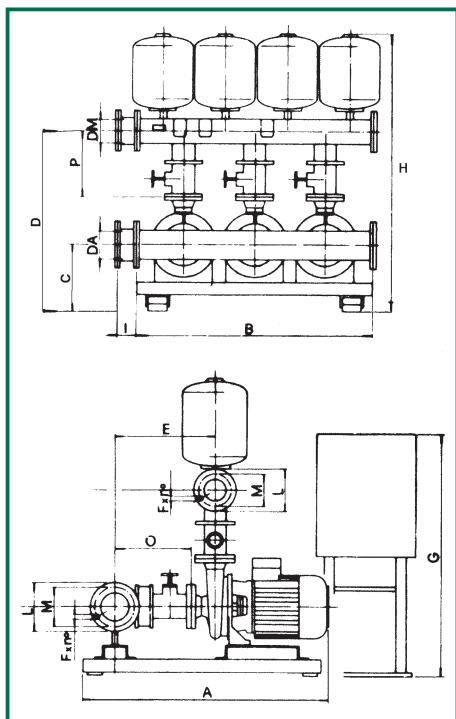
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 243 m³/h



MODEL	A	B	C	D	E	G	H	O	P	MANIFOLD DIMENSIONS								WEIGHT Kg	
										DNA (suc.)				DNM (del.)					
	Ø DA	I	L	M	Fxn°	Ø DM	I	L	M	Fxn°									
3 K 30/800 T	1300	1200	300	805	650	1250	1415	550	280	DN 150	180	285	240	22x8	DN 150	180	285	240	22x8 828
3 K 40/800 T	1300	1200	300	805	650	1250	1415	550	280	DN 150	180	285	240	22x8	DN 150	180	285	240	22x8 845
3 K 50/800 T	1300	1200	300	805	650	1250	1415	550	280	DN 150	180	285	240	22x8	DN 150	180	285	240	22x8 875

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		50 Hz	kW					TYPE	P2	
		3x400 V ~	3x7,5	3x10	3x14	180,0-82,5	2,2÷3,9	4,4	KV 6/7 T	1,1 1,5
3 K 30/800 T										
3 K 40/800 T										
3 K 50/800 T										

(1) All data refer to groups considering the service pumps.

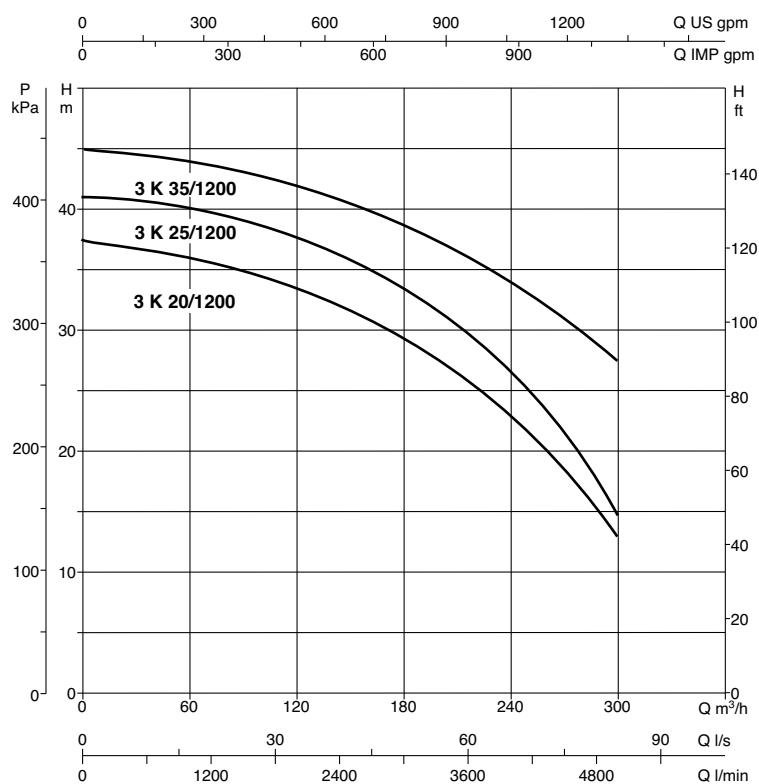
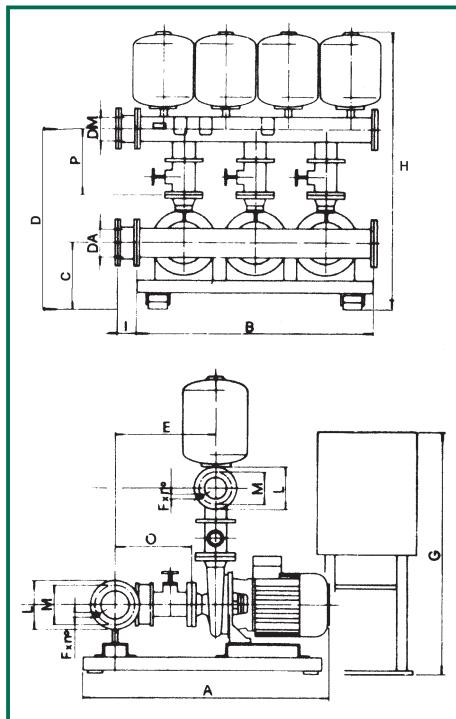
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 K SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 288 m³/h



MODEL	A	B	C	D	E	G	H	O	P	MANIFOLD DIMENSIONS								WEIGHT Kg	
										DNA (suc.)				DNM (del.)					
3 K 20/1200 T	1300	1200	300	805	650	1250	1415	580	280	DN 200	205	340	295	22x8	DN 200	205	340	295	22x8 920
3 K 25/1200 T	1300	1200	300	805	650	1250	1415	580	280	DN 200	205	340	295	22x8	DN 200	205	340	295	22x8 940
3 K 35/1200 T	1300	1200	300	805	650	1250	1415	580	280	DN 200	205	340	295	22x8	DN 200	205	340	295	22x8 958

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		50 Hz	kW					TYPE	P2	KW
3 K 20/1200 T	3x400 V ~	3x7,5	3x10	3x15,4	279,0-144,0	1,2÷2,6	3,2	KV 6/7 T	1,1	1,5
3 K 25/1200 T	3x400 V ~	3x9,2	3x12,5	3x18	288,0-144,0	1,7÷3	3,7	KV 6/7 T	1,1	1,5
3 K 35/1200 T	3x400 V ~	3x11	3x15	3x19,3	288,0-180,0	2÷3,8	4,2	KV 6/7 T	1,1	1,5

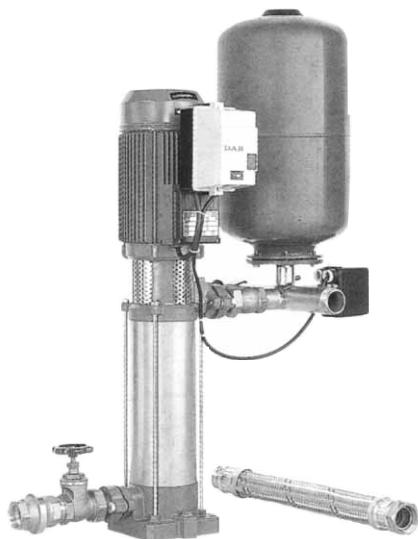
(1) All data refer to groups considering the service pumps.

* Pilot pump on request

1KV 3 - 6 - 10 SETS

WITH 1-2-3 MULTI-STAGE, VERTICAL AXIS, CENTRIFUGAL PUMPS

1 PUMP



CE

GENERAL DATA

Applications

Water lifting sets suitable for civil and industrial installations.

The use of vertical multistage centrifugal pumps ensures high performance and excellent yield. Sturdy and compact, with limited bulk, the sets are absolutely reliable and very quiet.

Constructional features

SETS WITH 1 PUMP

HYDRAULIC PART

- 1 KV3 - KV6 - KV10 vertical multistage electropump
- 1 membraned pressure vessel
- Radial pressure gauge
- Threaded delivery manifold in tropicalized galvanized steel
- Ball valves with union in the suction and delivery sides
- Non return valve on the suction side
- Radial gauge with on-off valve
- Anti-vibration flexible pipe
- Female cap in tropicalized galvanized cast iron for closing the manifold

ELECTRICAL PART

Single-phase supply

1 two-pole pressure switch with cable clamp connected to the motor, complete with power cable and plug.

Three-phase supply

Overload protection panel with reset button, fixed to the motor with a bracket of tropicalized galvanized steel and wired to the motor, complete with terminal board for connection to the power supply line - 1 two-pole pressure switch with cable clamp connected to the overload protection panel.

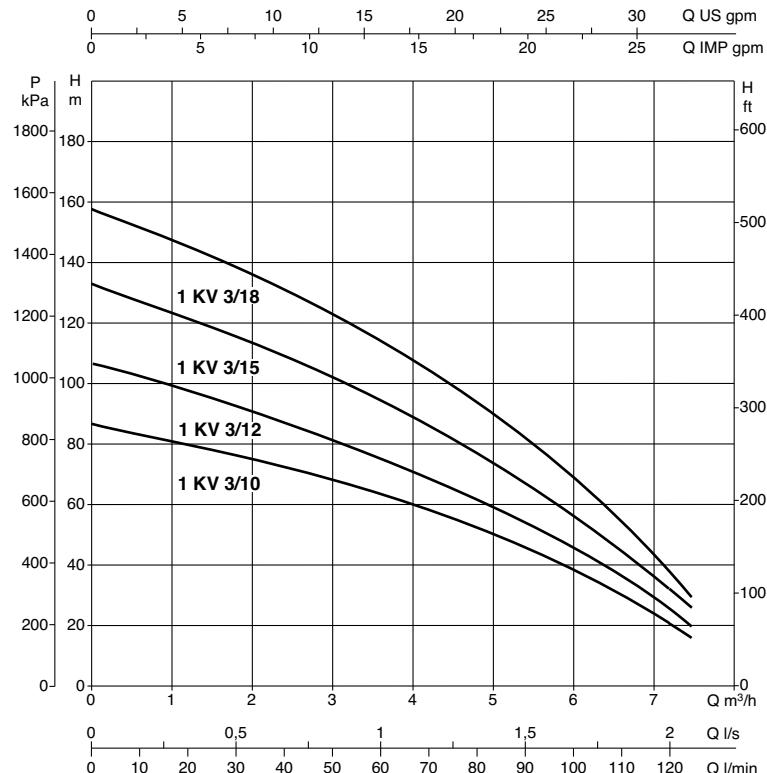
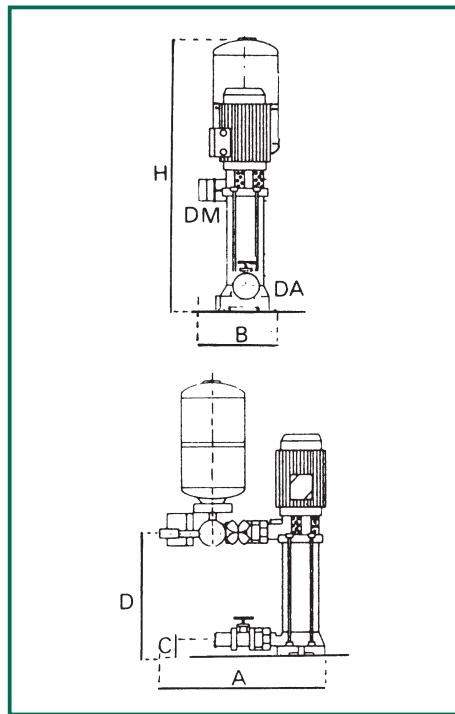
The sets are supplied complete with sturdy cardboard packing on a wooden pallet, with instructions leaflet and wiring diagram.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 KV 3 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 7,2 m³/h



MODEL	A	B	C	D	H	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
1 KV 3/10 M	760	300	120	473	993	1 1/4"	1 1/2"	39
1 KV 3/12 M	760	300	120	596	1116	1 1/4"	1 1/2"	40
1 KV 3/10 T	760	300	120	473	993	1 1/4"	1 1/2"	39
1 KV 3/12 T	760	300	120	596	1116	1 1/4"	1 1/2"	40
1 KV 3/15 T	760	300	120	692	1212	1 1/4"	1 1/2"	41
1 KV 3/18 T	760	300	120	788	1318	1 1/4"	1 1/2"	47

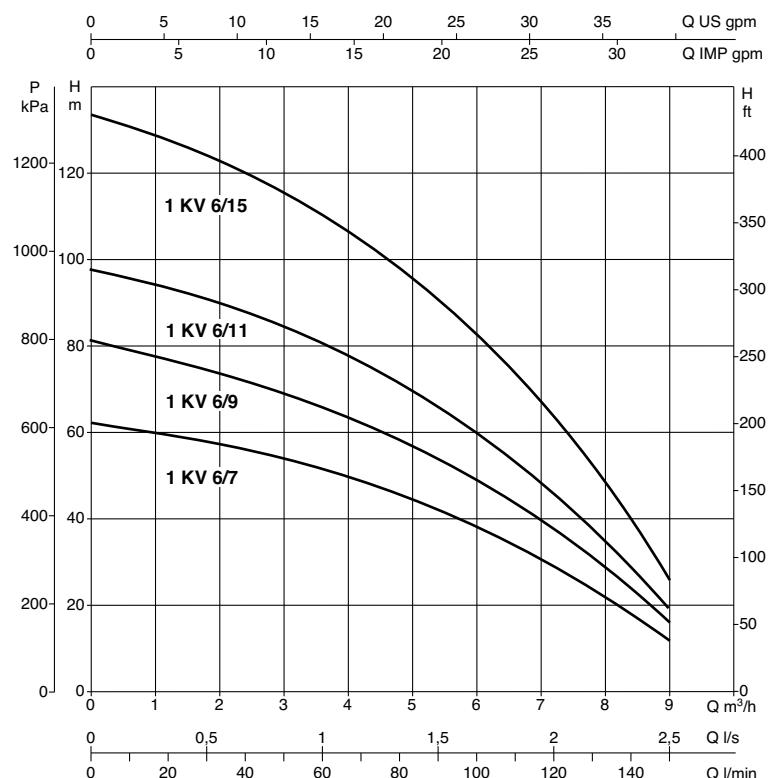
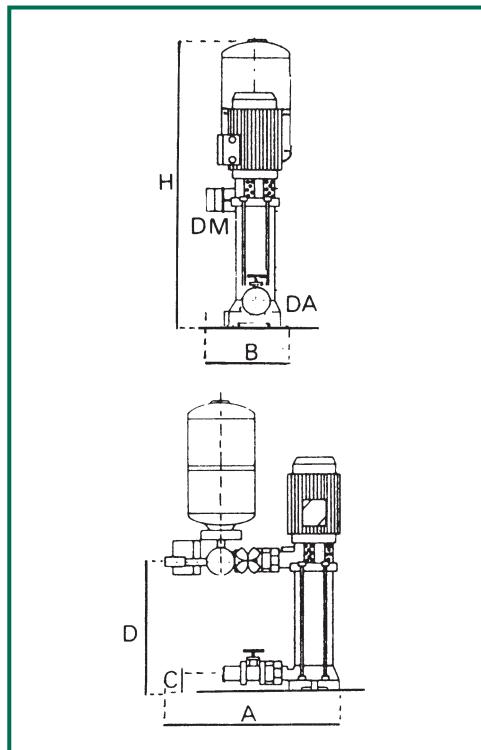
MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SETTING	MAX. PRESSURE OBTAINABLE BAR
	50 Hz	kW	HP				
1 KV 3/10 M	1x220-240 V ~	1,1	1,5	7,8	7,2-1,8	5÷6	8,2
1 KV 3/12 M	1x220-240 V ~	1,5	2	9,6	7,2-1,8	6÷1	10,2
1 KV 3/10 T	3x400 V ~	1,1	1,5	3,2	7,2-1,8	5÷6	8,2
1 KV 3/12 T	3x400 V ~	1,5	2	3,7	7,2-1,8	6÷1	10,2
1 KV 3/15 T	3x400 V ~	1,85	2,5	4,3	7,2-1,8	8÷9	13
1 KV 3/18 T	3x400 V ~	2,2	3	5,8	7,2-1,8	10÷11	15,8

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 KV 6 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 9 m³/h



MODEL	A	B	C	D	H	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
1 KV 6/7 M	760	300	120	436	956	1 1/4"	1 1/2"	37
1 KV 6/9 M	760	300	120	500	1020	1 1/4"	1 1/2"	40
1 KV 6/7 T	760	300	120	436	956	1 1/4"	1 1/2"	37
1 KV 6/9 T	760	300	120	500	1020	1 1/4"	1 1/2"	40
1 KV 6/11 T	760	300	120	564	1084	1 1/4"	1 1/2"	38
1 KV 6/15 T	760	300	120	692	1212	1 1/4"	1 1/2"	45

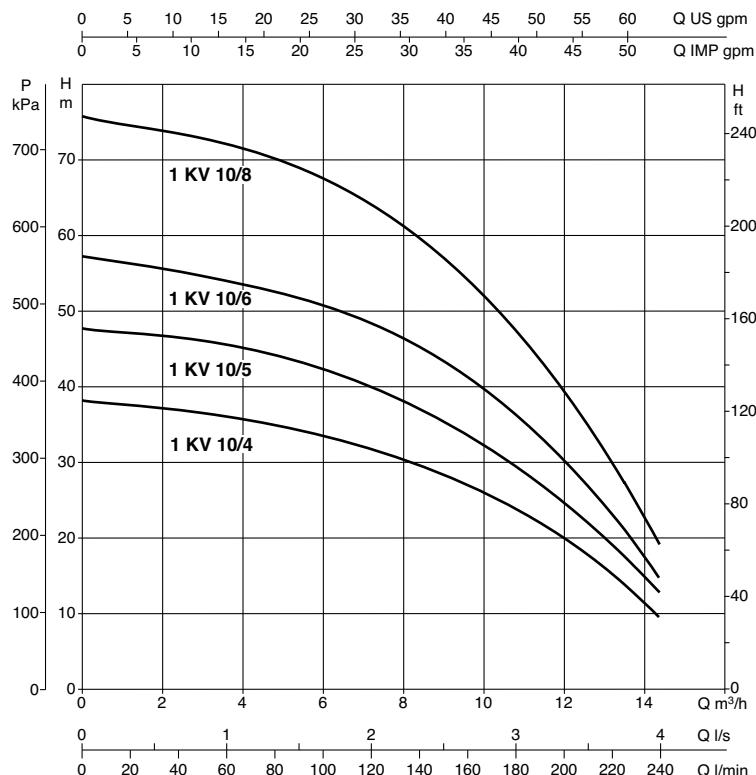
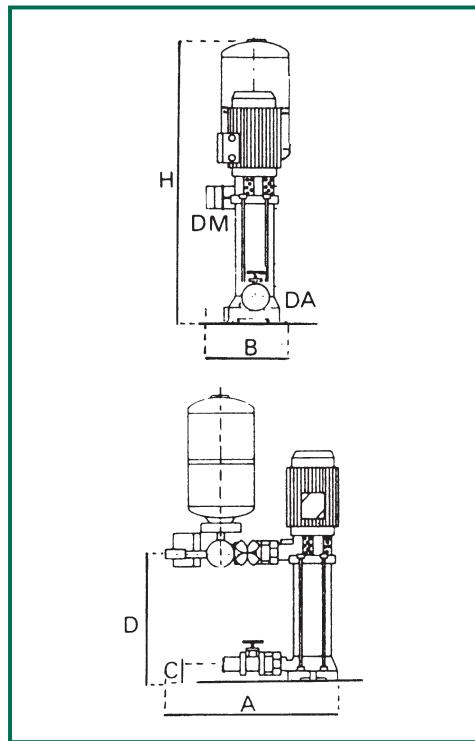
MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SETTING	MAX. PRESSURE OBTAINABLE
	50 Hz	kW	HP				
1 KV 6/7 M	1x220-240 V ~	1,1	1,5	7,5	8,5-2,4	4÷5	6
1 KV 6/9 M	1x220-240 V ~	1,5	2	9,4	8,5-2,4	5÷6	8
1 KV 6/7 T	3x400 V ~	1,1	1,5	2,9	8,5-2,4	4÷5	6
1 KV 6/9 T	3x400 V ~	1,5	2	3,6	8,5-2,4	5÷6	8
1 KV 6/11 T	3x400 V ~	1,85	2,5	4,2	8,5-2,4	6÷7	9,8
1 KV 6/15 T	3x400 V ~	2,2	3	6,3	8,5-2,4	8÷9	13

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 KV 10 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 14,5 m³/h



MODEL	A	B	C	D	H	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
1 KV 10/4 M	760	300	120	340	860	1 1/4"	1 1/2"	35
1 KV 10/5 M	760	300	120	372	892	1 1/4"	1 1/2"	40
1 KV 10/4 T	760	300	120	340	860	1 1/4"	1 1/2"	35
1 KV 10/5 T	760	300	120	372	892	1 1/4"	1 1/2"	40
1 KV 10/6 T	760	300	120	404	920	1 1/4"	1 1/2"	38
1 KV 10/8 T	760	300	120	468	988	1 1/4"	1 1/2"	43

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SETTING	MAX. PRESSURE OBTAINABLE
	50 Hz	kW	HP				
1 KV 10/4 M	1x220-240 V ~	1,1	1,5	8,3	13,2-3,0	2÷3	3,8
1 KV 10/5 M	1x220-240 V ~	1,5	2	10,4	13,2-3,0	3÷4	4,8
1 KV 10/4 T	3x400 V ~	1,1	1,5	3,5	13,2-3,0	2÷3	3,8
1 KV 10/5 T	3x400 V ~	1,5	2	3,9	13,2-3,0	3÷4	4,8
1 KV 10/6 T	3x400 V ~	1,85	2,5	5	13,2-3,0	4÷5	5,5
1 KV 10/8 T	3x400 V ~	2,2	3	6,8	13,2-3,0	5÷6	7,2

SETS 2-3 KV 3 - 6 - 10

WITH 2-3 VERTICAL MULTISTAGE CENTRIFUGAL PUMPS

2 PUMPS

3 PUMPS

CE



2 KV



3 KV

Applications

Water lifting sets suitable for domestic, small installations for civil, agricultural or industrial use.

The use of vertically-mounted multistage centrifugal electric pumps ensures outstanding performance and elevated efficiency.

They are particularly compact and strong, totally reliable and extremely silent-running.

SETS WITH 2-3 PUMPS

Constructional characteristics

HYDRAULIC PART

- 2-3 KV3 – 6 – 10 vertical multistage electric pumps
- Tropicalised galvanised sheet base complete with 4 anti-vibration rubber feet
- Suction and delivery manifold in tropicalised galvanised steel (threaded for 2 KV 3-6-10 and 3 KV 3-6 sets, flanged for 3 KV 10 sets)
- Caps or blank flanges for closing manifolds
- Ball valves with union on the suction and delivery side of each single pump
- Check valve on the suction side of each pump
- 2-3 membrane tanks
- Radial pressure gauge with shut-off valve
- Galvanised steel column support for electrical panel

ELECTRICAL PART

Control panel in shockproof fire-resistant plastic material, IP 55 protection level.

The panel comprises a general switch, pump overload circuit breakers, starting order exchange system for pumps, low voltage circuit for control pressure switches, selectors (start buttons for single-phase panel), front of panel indicator LED's. It is installed on a column fitted to the pump support.

Pre-calibrated pump start/stop pressure switches.

The panel can be connected to:

- Float or pressure switch KIT as protection against operation without water (*)
- Maximum pressure switch KIT (*)

(*) Optional items available on request

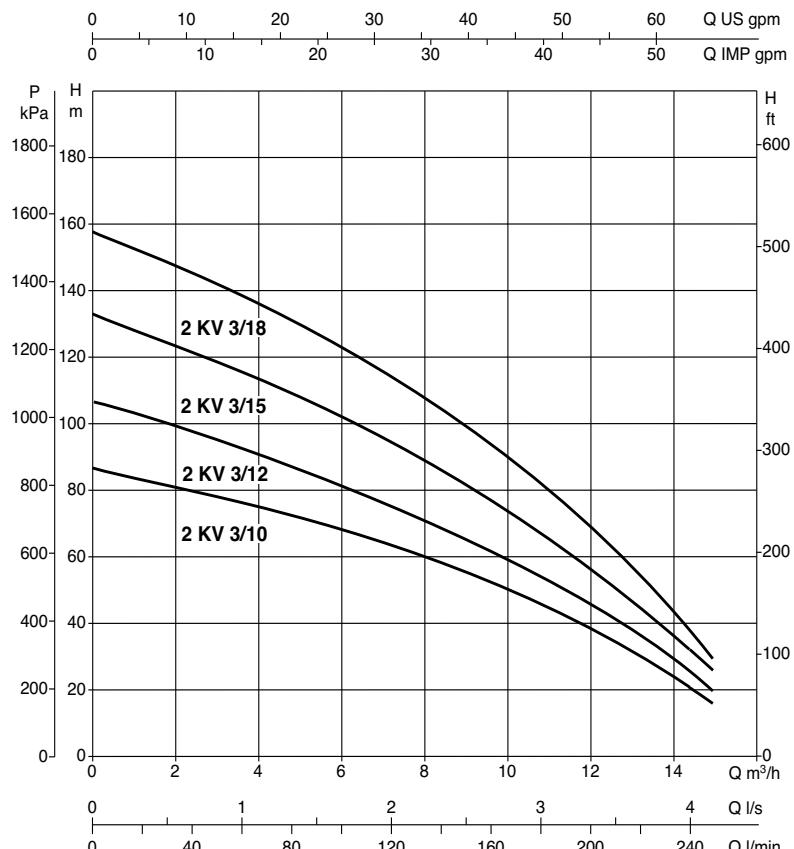
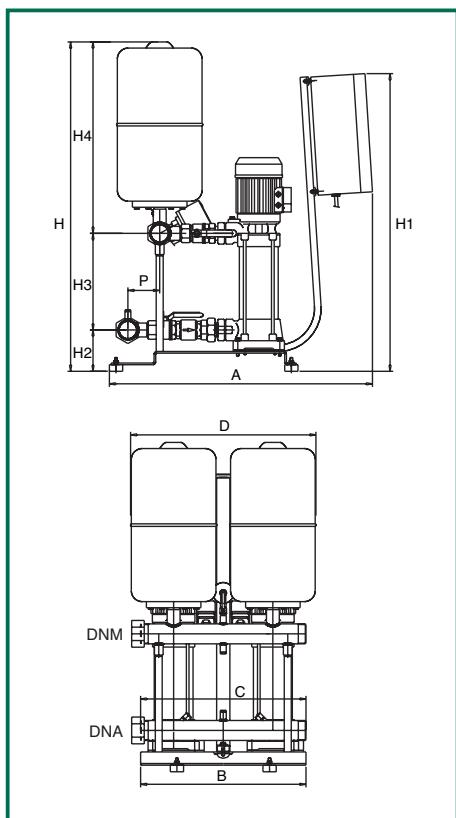
The units are supplied packed in a strong cardboard box with a wooden pallet and installation/maintenance instructions complete with wiring diagram.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KV 3 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 14,4 m³/h



MODEL	A	B	C	D	P	H	H1	H2	H3	H4	Ø MANIFOLD DNA (suc.) DNM (del.)	WEIGHT Kg	
2 KV 3/10 M	795	500	500	560	96	1117	900	125	412	580	2"	2"	118
2 KV 3/12 M	795	500	500	560	96	1181	900	125	476	580	2"	2"	124
2 KV 3/10 T	795	500	500	560	96	1117	900	125	412	580	2"	2"	123
2 KV 3/12 T	795	500	500	560	96	1117	900	125	476	580	2"	2"	129
2 KV 3/15 T	795	500	500	560	96	1277	900	125	572	580	2"	2"	134
2 KV 3/18 T	795	500	500	560	96	1373	900	125	668	580	2"	2"	141

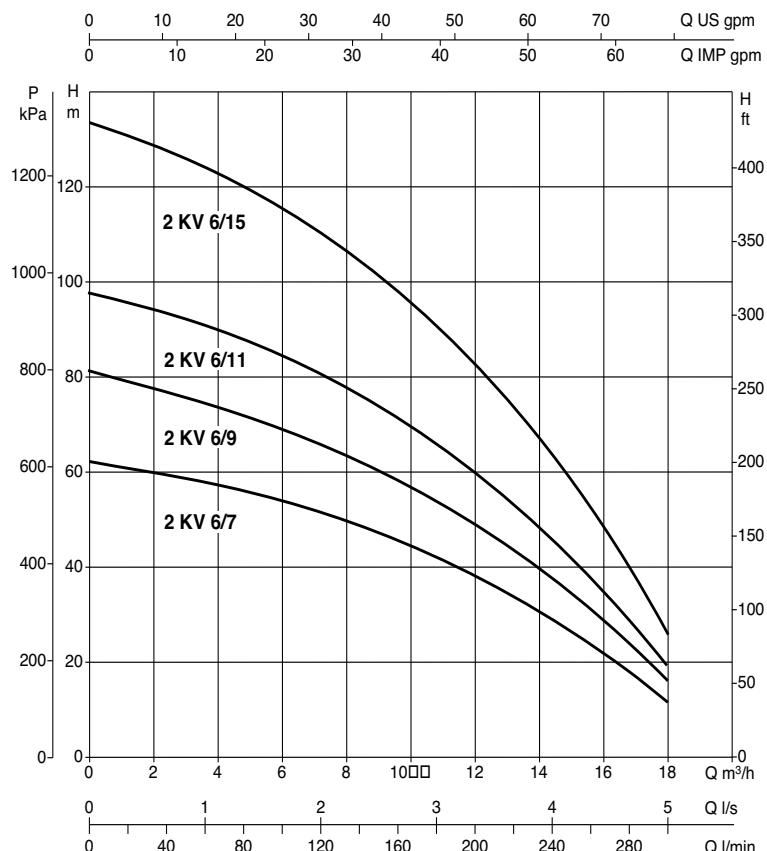
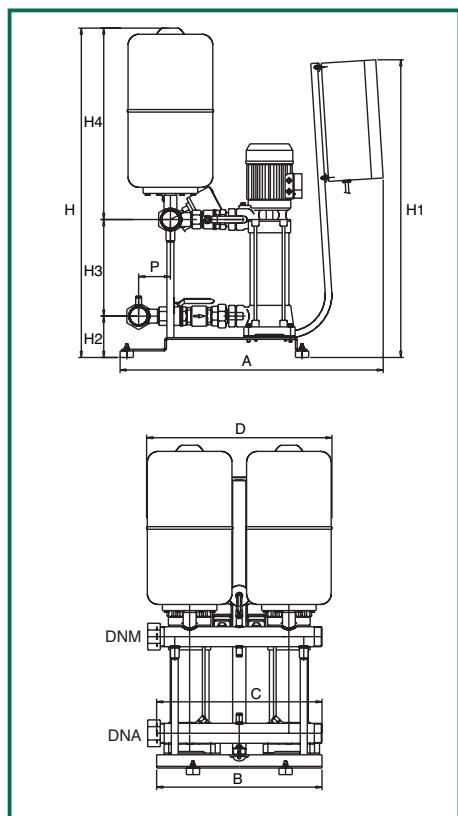
MODEL	VOLTAGE		P2 NOMINAL		In A	FLOW RATE m ³ /h	PRESSURE SWITCH SETTING BAR	MAX. PRESSURE OBTAINABLE BAR
	50 Hz	kW	HP					
2 KV 3/10 M	1x220-240 V ~	2x1,1	2x1,5	2x7,8	14,4-3,6	4,5÷6	8,2	
2 KV 3/12 M	1x220-240 V ~	2x1,5	2x2	2x9,6	14,4-3,6	5,5÷7	10,2	
2 KV 3/10 T	3x400 V ~	2x1,1	2x1,5	2x3,2	14,4-3,6	4,5÷6	8,2	
2 KV 3/12 T	3x400 V ~	2x1,5	2x2	2x3,7	14,4-3,6	5,5÷7	10,2	
2 KV 3/15 T	3x400 V ~	2x1,85	2x2,5	2x4,3	14,4-3,6	7,5÷9	13	
2 KV 3/18 T	3x400 V ~	2x2,2	2x3	2x5,8	14,4-3,6	9,5÷11	15,8	

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KV 6 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 18 m³/h



MODEL	A	B	C	D	P	H	H1	H2	H3	H4	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
2 KV 6/7 M	795	500	500	560	96	1021	900	125	316	580	2"	2"	116
2 KV 6/9 M	795	500	500	560	96	1085	900	125	380	580	2"	2"	121
2 KV 6/7 T	795	500	500	560	96	1021	900	125	316	580	2"	2"	121
2 KV 6/9 T	795	500	500	560	96	1085	900	125	380	580	2"	2"	126
2 KV 6/11 T	795	500	500	560	96	1149	900	125	444	580	2"	2"	128
2 KV 6/15 T	795	500	500	560	96	1277	900	125	572	580	2"	2"	140

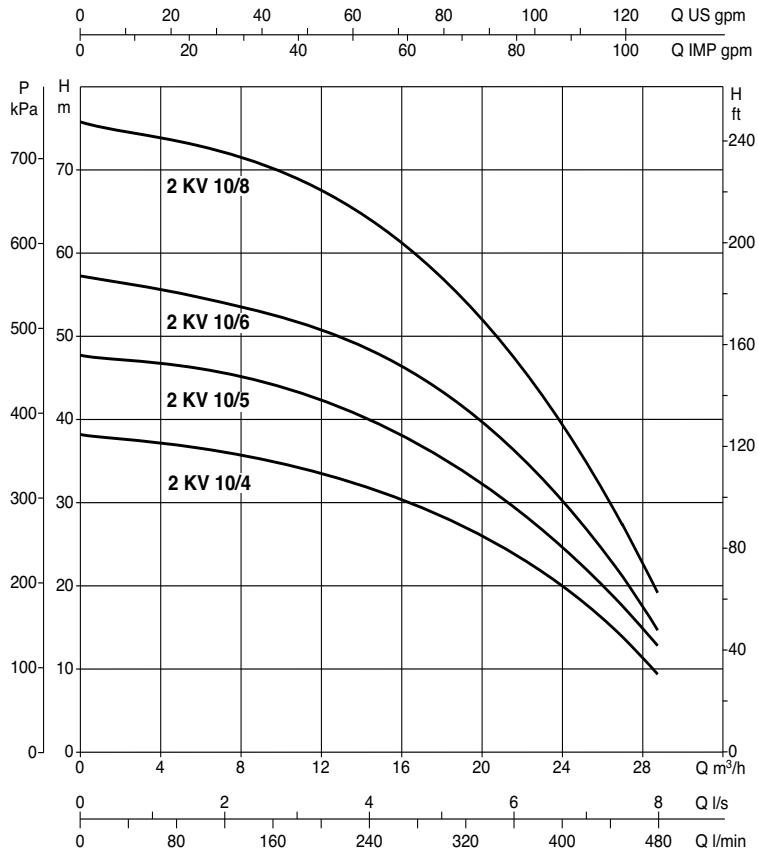
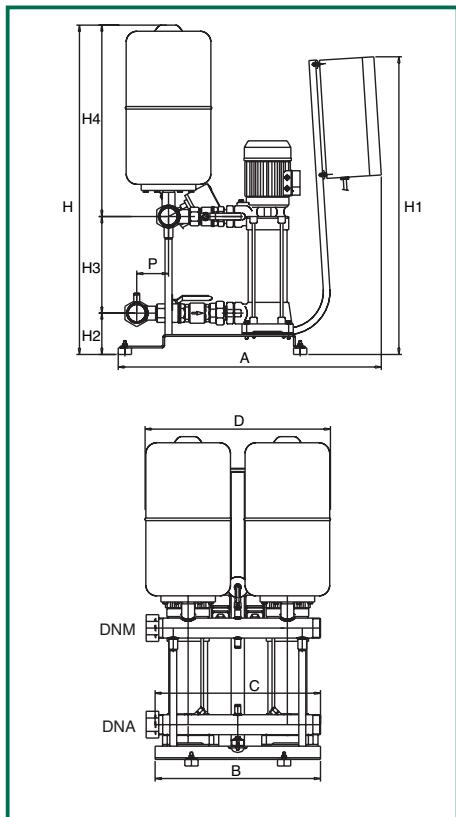
MODEL	VOLTAGE		P2 NOMINAL		In A	FLOW RATE m ³ /h	PRESSURE SWITCH SETTING BAR	MAX. PRESSURE OBTAINABLE BAR
	50 Hz	kW	HP					
2 KV 6/7 M	1x220-240 V ~	2x1,1	2x1,5	2x7,5	17,0-4,8	3,5÷5	6	
2 KV 6/9 M	1x220-240 V ~	2x1,5	2x2	2x9,4	17,0-4,8	4,5÷6	8	
2 KV 6/7 T	3x400 V ~	2x1,1	2x1,5	2x2,9	17,0-4,8	3,5÷5	6	
2 KV 6/9 T	3x400 V ~	2x1,5	2x2	2x3,6	17,0-4,8	4,5÷6	8	
2 KV 6/11 T	3x400 V ~	2x1,85	2x2,5	2x4,2	17,0-4,8	5,5÷7	9,8	
2 KV 6/15 T	3x400 V ~	2x2,2	2x3	2x6,3	17,0-4,8	7,5÷9	13	

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KV 10 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 28,5 m³/h



MODEL	A	B	C	D	P	H	H1	H2	H3	H4	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
2 KV 10/4 M	795	500	500	560	108	925	900	125	220	580	2½"	2½"	112
2 KV 10/5 M	795	500	500	560	108	957	900	125	252	580	2½"	2½"	115
2 KV 10/4 T	795	500	500	560	108	925	900	125	220	580	2½"	2½"	117
2 KV 10/5 T	795	500	500	560	108	957	900	125	252	580	2½"	2½"	120
2 KV 10/6 T	795	500	500	560	108	989	900	125	284	580	2½"	2½"	126
2 KV 10/8 T	795	500	500	560	108	1053	900	125	348	580	2½"	2½"	132

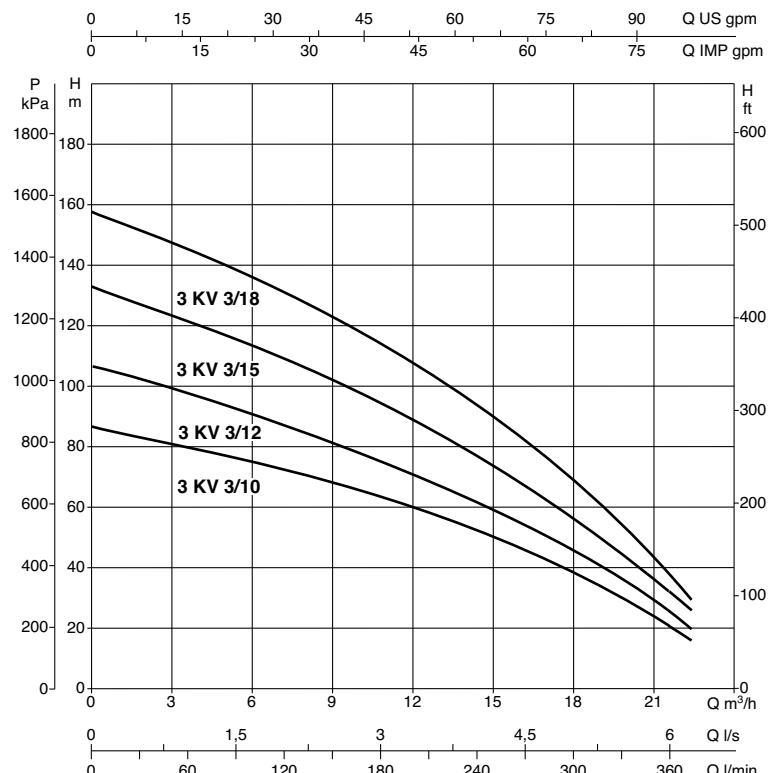
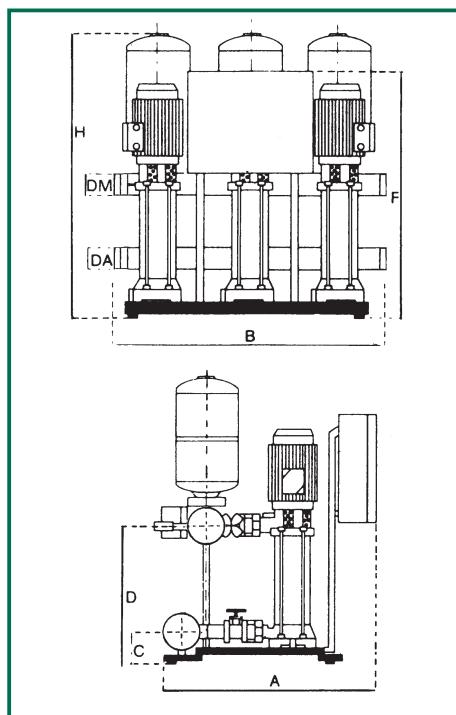
MODEL	VOLTAGE		P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SETTING	MAX. PRESSURE OBTAINABLE BAR
	50 Hz	kW	HP	A				
2 KV 10/4 M	1x220-240 V ~	2x1,1	2x1,5	2x8,3		26,4-6,0	1,5÷3	3,8
2 KV 10/5 M	1x220-240 V ~	2x1,5	2x2	2x10,4		26,4-6,0	2,5÷4	4,8
2 KV 10/4 T	3x400 V ~	2x1,1	2x1,5	2x3,5		26,4-6,0	1,5÷3	3,8
2 KV 10/5 T	3x400 V ~	2x1,5	2x2	2x3,9		26,4-6,0	2,5÷4	4,8
2 KV 10/6 T	3x400 V ~	2x1,85	2x2,5	2x5		26,4-6,0	3,5÷5	5,5
2 KV 10/8 T	3x400 V ~	2x2,2	2x3	2x6,8		26,4-6,0	4,5÷6	7,2

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KV 3 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 22 m³/h



MODEL	A	B	C	D	F	H	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
3 KV 3/10 M	710	825	120	532	847	1122	2½"	2½"	156
3 KV 3/12 M	710	825	120	596	911	1186	2½"	2½"	168
3 KV 3/10 T	785	825	120	532	847	1122	2½"	2½"	156
3 KV 3/12 T	785	825	120	596	911	1186	2½"	2½"	165
3 KV 3/15 T	785	825	120	692	1007	1282	2½"	2½"	168
3 KV 3/18 T	785	825	120	788	1181	1378	2½"	2½"	183

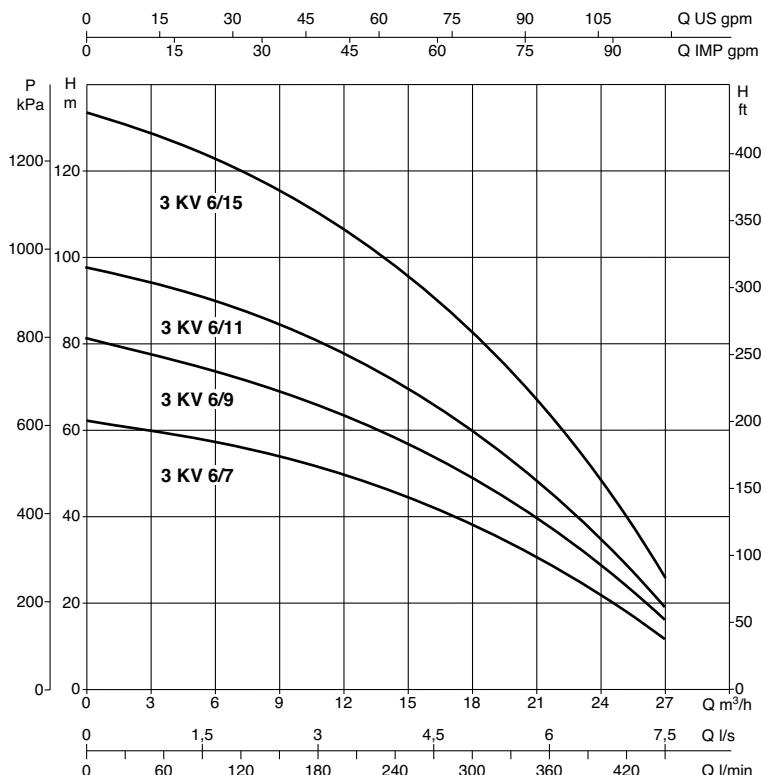
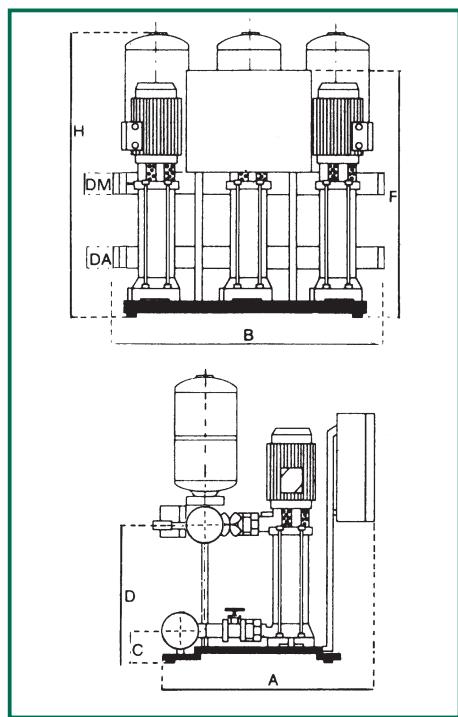
MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h	PRESSURE SWITCH SETTING BAR	MAX. PRESSURE OBTAINABLE BAR
		kW	HP				
3 KV 3/10 M	1x220-240 V ~	3x1,1	3x1,5	3x7,8	21,6-5,4	4÷6	8,2
3 KV 3/12 M	1x220-240 V ~	3x1,5	3x2	3x9,6	21,6-5,4	6÷8	10,2
3 KV 3/10 T	3x400 V ~	3x1,1	3x1,5	3x3,2	21,6-5,4	4÷6	8,2
3 KV 3/12 T	3x400 V ~	3x1,5	3x2	3x3,7	21,6-5,4	6÷8	10,2
3 KV 3/15 T	3x400 V ~	3x1,85	3x2,5	3x4,3	21,6-5,4	8÷10	13
3 KV 3/18 T	3x400 V ~	3x2,2	3x3	3x5,8	21,6-5,4	10÷12	15,8

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KV 6 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 27 m³/h



MODEL	A	B	C	D	F	H	Ø MANIFOLD DNA (suc.)	Ø MANIFOLD DNM (del.)	WEIGHT Kg
3 KV 6/7 M	710	825	120	436	750	1026	2½"	2½"	153
3 KV 6/9 M	710	825	120	500	815	1090	2½"	2½"	162
3 KV 6/7 T	785	825	120	436	750	1026	2½"	2½"	153
3 KV 6/9 T	785	825	120	500	815	1090	2½"	2½"	162
3 KV 6/11 T	785	825	120	664	880	1154	2½"	2½"	170
3 KV 6/15 T	785	825	120	692	1065	1282	2½"	2½"	177

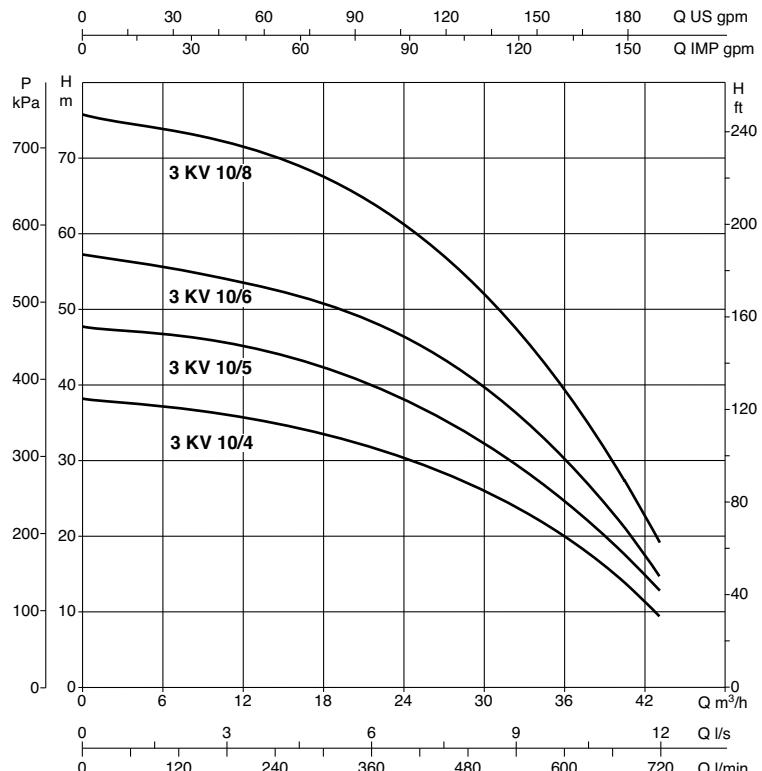
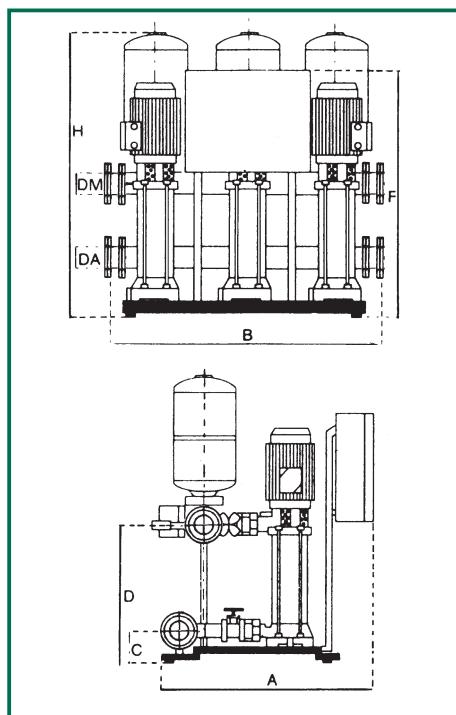
MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h	PRESSURE SWITCH SETTING		MAX. PRESSURE OBTAINABLE BAR
		kW	HP			BAR	BAR	
3 KV 6/7 M	1x220-240 V ~	3x1,1	3x1,5	3x7,5	25,5-7,2	3÷5		6
3 KV 6/9 M	1x220-240 V ~	3x1,5	3x2	3x9,4	25,5-7,2	5÷7		8
3 KV 6/7 T	3x400 V ~	3x1,1	3x1,5	3x2,9	25,5-7,2	3÷5		6
3 KV 6/9 T	3x400 V ~	3x1,5	3x2	3x3,6	25,5-7,2	5÷7		8
3 KV 6/11 T	3x400 V ~	3x1,85	3x2,5	3x4,2	25,5-7,2	6÷8		9,8
3 KV 6/15 T	3x400 V ~	3x2,2	3x3	3x6,3	25,5-7,2	8÷10		13

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KV 10 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 43 m³/h



MODEL	A	B	C	D	F	H	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
3 KV 10/4 M	740	940	120	340	655	942	DN 80	DN 80	201
3 KV 10/5 M	740	940	120	372	690	974	DN 80	DN 80	216
3 KV 10/4 T	810	940	120	340	810	942	DN 80	DN 80	201
3 KV 10/5 T	810	940	120	372	810	974	DN 80	DN 80	216
3 KV 10/6 T	810	940	120	404	810	1006	DN 80	DN 80	210
3 KV 10/8 T	810	940	120	468	855	1070	DN 80	DN 80	225

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h	PRESSURE SWITCH SETTING BAR	MAX. PRESSURE OBTAINABLE BAR
		kW	HP				
3 KV 10/4 M	1x220-240 V ~	3x1,1	3x1,5	3x8,3	39,6-9,0	2÷3	3,8
3 KV 10/5 M	1x220-240 V ~	3x1,5	3x2	3x10,4	39,6-9,0	3÷4	4,8
3 KV 10/4 T	3x400 V ~	3x1,1	3x1,5	3x3,5	39,6-9,0	2÷3	3,8
3 KV 10/5 T	3x400 V ~	3x1,5	3x2	3x3,9	39,6-9,0	3÷4	4,8
3 KV 10/6 T	3x400 V ~	3x1,85	3x2,5	3x5	39,6-9,0	4÷5	5,5
3 KV 10/8 T	3x400 V ~	3x2,2	3x3	3x6,8	39,6-9,0	5÷6	7,2

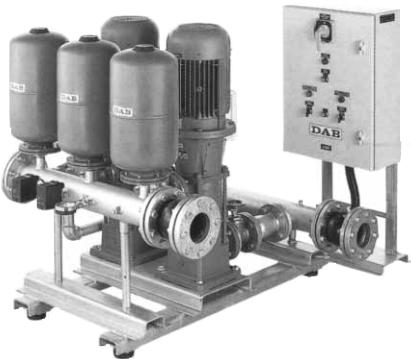
1KV - 2KV - 3KV 32 - 40 - 50 SETS

WITH VERTICAL MULTISTAGE
CENTRIFUGAL PUMPS

1-2-3 PUMPS



1 KV sets



2 KV sets



3 KV sets

Applications

These sets use "KV" vertical multi-impeller electropumps and are universally esteemed for their high performance, versatility in use and very quiet running.

Used in large civil installations, their choice must be decided by highly skilled technicians who are able to assess the real needs of the installations for which they are designed.

Constructional features

SETS WITH 1-2-3 PUMPS

HYDRAULIC PART

- 1-2-3 KV 32 - KV 40 - KV 50 vertical multi-impeller electropumps
- Pump support bracket in hot galvanized sheet steel complete with 4 anti-vibration rubber feet
- Threaded suction and delivery manifolds in tropicalized galvanized steel for KV 32 sets, flanged and complete with a blank flange for KV 40 and KV 50 sets
- Interception valves in the suction and delivery sides, threaded for KV 32 sets; flanged for KV 40 and KV 50 sets
- Non return valve on the suction side, threaded for KV 32 sets; flanged for KV 40 and KV 50 sets
- Anti-vibration flexible pipe for connection to the delivery pipe for KV 32 sets
- Anti-vibration flexible couplings for connection to the suction and delivery pipes for KV 40 and KV 50 sets
- By-pass circuit complete with interception valve and automatic safety valve
- Radial pressure gauge with interception valve
- Movable galvanized steel support for the electric control panel
- Membraned pressure vessels

ELECTRICAL PART

ELECTRICAL POWER PANEL

Direct starting for single motor inputs up to 7,5 kW inclusive.

Star-Delta starting for 9,2 kW single motor inputs.

IP 55 sheet steel cabinet with lever closing system and lock. Door lock switch, remote motor protector with overload relay and pump fuses, low voltage auxiliary circuit (24V) for remote motor protector control, adjustable delayed pump stopping timer (additional running), starting order swapping system for 2-3 pump units. Automatic (by pressure switches on delivery manifold) or Manual pump mode switches. Terminal board fitted for minimum pressure switch, float switch preventing the pump from working without water and remote starting.

CONTROL PRESSURE SWITCHES

Pre-calibrated pump control pressure switches installed on delivery manifold. The pressure switches use the remote motor protector to invert the pumps in a cascade sequence.

PILOT - COMPENSATION PUMP (cuts in for small deliveries of water in the system - prevents unnecessary pump starting).

The units are also available with the KV 3 - KV 6 pilot pump complete with valves and connected to the suction and delivery manifolds. Pilot pump command and protection circuit inside the main pump electrical power panel for units 1-2 K. Separate electric power panel for units 3 K.

WEEKLY TEST (to be requested when ordering - it cannot be added later)

Boosters are available also with weekly test system, including an programmable timer, an acoustic alarm, an electrovalve placed on delivery manifold, an emergency push button, a minimum pressure switch.

At the end of the test, should there be any pumps failure, the acoustic alarm is activated.

If these boosters are used for fire fighting system , we recommend to use weekly test.

1 KV 32/7 - 1 KV 32/8 - 1 KV 40/7 - 1 KV 40/8 - 1 KV 50/7 - 1 KV 50/8 - 1 KV 50/9 sets are supplied without membraned pressure vessels and without flexible couplings.

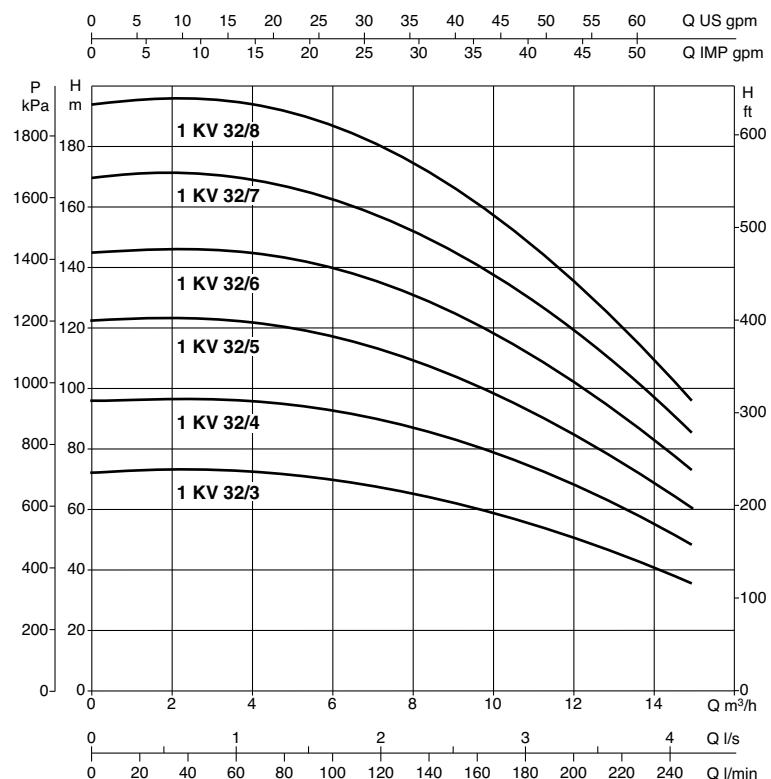
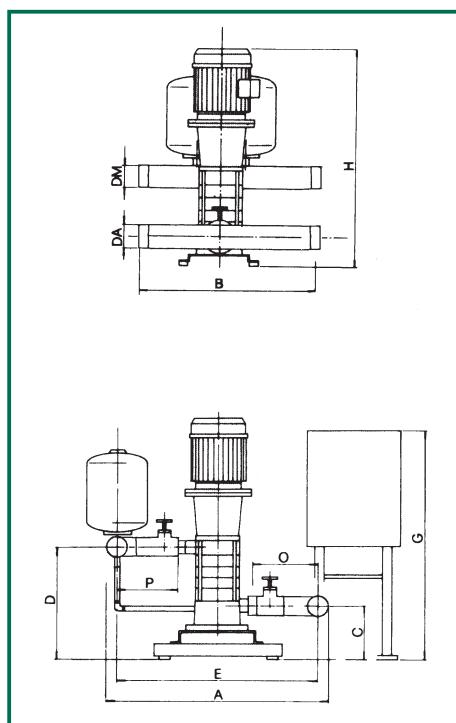
The sets are supplied complete with sturdy cardboard packing on a wooden pallet, with instructions leaflet and wiring diagram.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 KV 32 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 15 m³/h



MODEL	A	B	C	D	E	G	H	O	P	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
1 KV 32/3	1005	550	190	334	830	1005	334	310	220	1½"	2"	180
1 KV 32/4	1005	550	190	380	830	1005	920	310	220	1½"	2"	193
1 KV 32/5	1005	550	190	424	830	1005	424	310	220	1½"	2"	218
1 KV 32/6	1005	550	190	469	830	1005	469	310	220	1½"	2"	224
1 KV 32/7	1005	550	190	514	830	1005	514	310	220	1½"	2"	230
1 KV 32/8	1005	550	190	559	830	1005	559	310	220	1½"	2"	240

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h ⁽¹⁾	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		kW	HP					TYPE	kW	HP
1 KV 32/3 T	3x400 V ~	3	4	12-7	15,0-4,0	5÷6	7,1	KV 3/10 T	1,1	1,5
1 KV 32/4 T	3x400 V ~	4	5,5	16-9	15,0-4,0	7÷8	9,6	KV 3/15 T	1,85	2,5
1 KV 32/5 T	3x400 V ~	5,5	7,5	12	15,0-4,0	9÷10	12	KV 3/18 T	2,2	3
1 KV 32/6 T	3x400 V ~	7,5	10	15	15,0-4,0	11÷12	14,5	-	-	-
1 KV 32/7 T	3x400 V ~	7,5	10	15	15,0-4,0	13÷14	17	-	-	-
1 KV 32/8 T	3x400 V ~	9,2	12,5	18	15,0-4,0	15÷16	19,6	-	-	-

(1) All data refer to groups considering the service pumps.

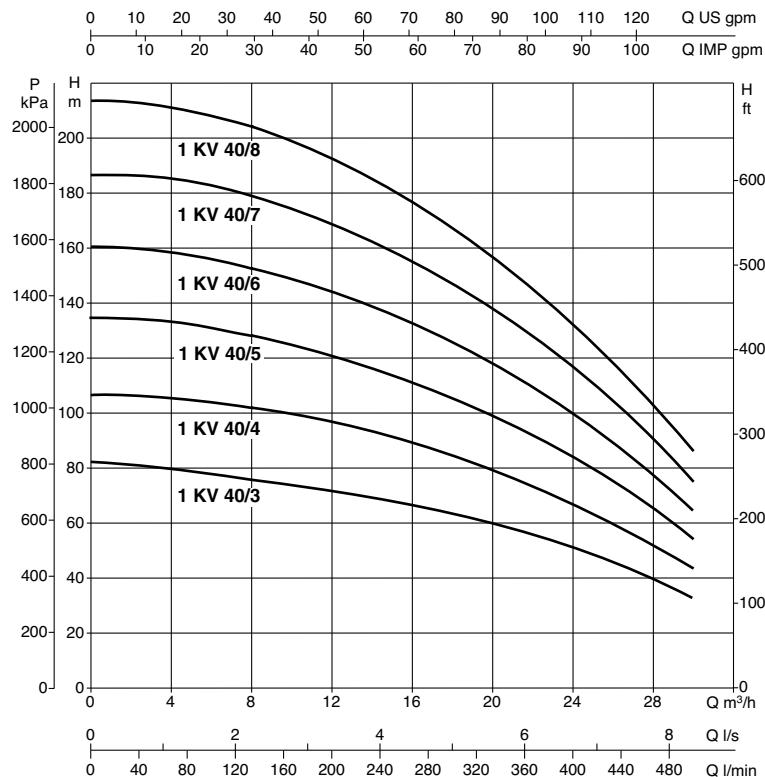
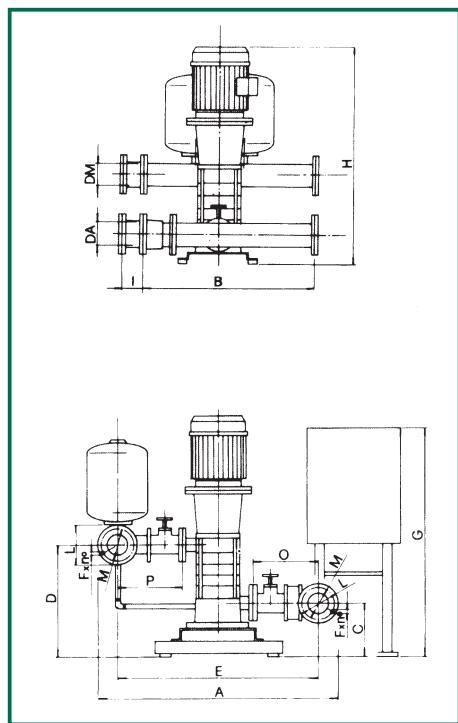
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 KV 40 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 30 m³/h



MODEL	A	B	C	D	E	G	H	O	P	I	L	M	Fxn°	Ø MANIFOLD		WEIGHT Kg
														DNA (suc.)	DNM (del.)	
1 KV 40/3	1155	550	200	455	795	1005	970	245	230	115	185	145	18x4	DN 65 - PN 16	DN 65 - PN 16	290
1 KV 40/4	1155	550	200	415	795	1005	1020	245	230	115	185	145	18x4	DN 65 - PN 16	DN 65 - PN 16	300
1 KV 40/5	1155	550	200	465	795	1005	1070	245	230	115	185	145	18x4	DN 65 - PN 16	DN 65 - PN 16	311
1 KV 40/6	1155	550	200	515	795	1005	1200	245	230	115	185	145	18x4	DN 65 - PN 16	DN 65 - PN 16	362
1 KV 40/7	1155	550	200	565	795	1005	1315	245	230	115	185	145	18x4	DN 65 - PN 25	DN 65 - PN 25	375
1 KV 40/8	1155	550	200	615	795	1005	1365	245	230	115	185	145	18x4	DN 65 - PN 25	DN 65 - PN 25	382

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *	
		50 Hz	kW					Type	P2 kW
1 KV 40/3 T	3x400 V ~	5,5	7,5	12	30,0-8,0	5÷6	7,85	KV 3/12 T	1,1
1 KV 40/4 T	3x400 V ~	7,5	10	15	30,0-8,0	7÷8	10,4	KV 3/15 T	1,85
1 KV 40/5 T	3x400 V ~	9,2	12,5	18	30,0-8,0	9÷10	13	KV 3/18 T	2,2
1 KV 40/6 T	3x400 V ~	11	15	22	30,0-8,0	12÷13	15,7	—	—
1 KV 40/7 T	3x400 V ~	15	20	30	30,0-8,0	14÷15	18,5	—	—
1 KV 40/8 T	3x400 V ~	15	20	30	30,0-8,0	16÷17	21	—	—

(1) All data refer to groups considering the service pumps.

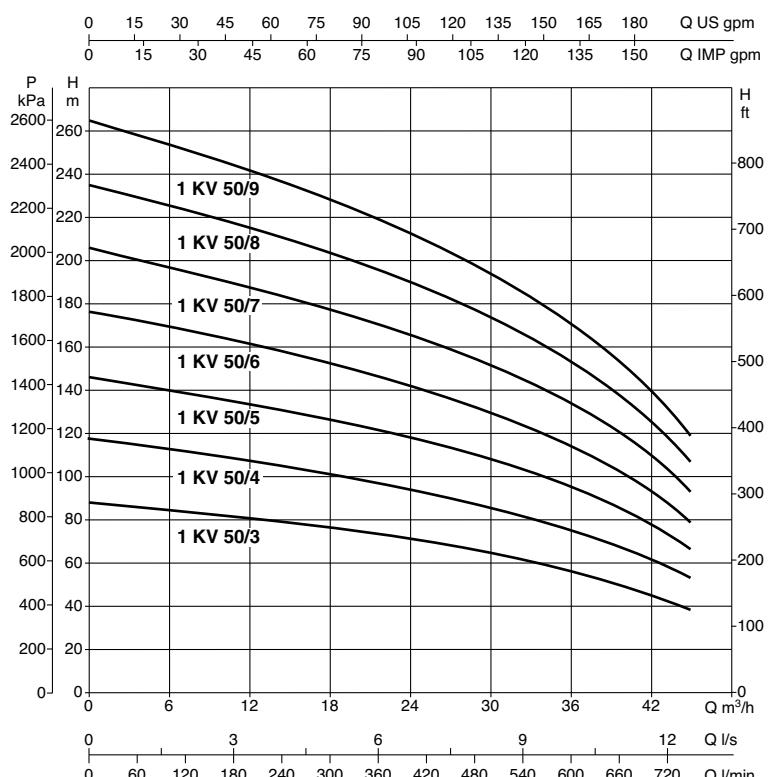
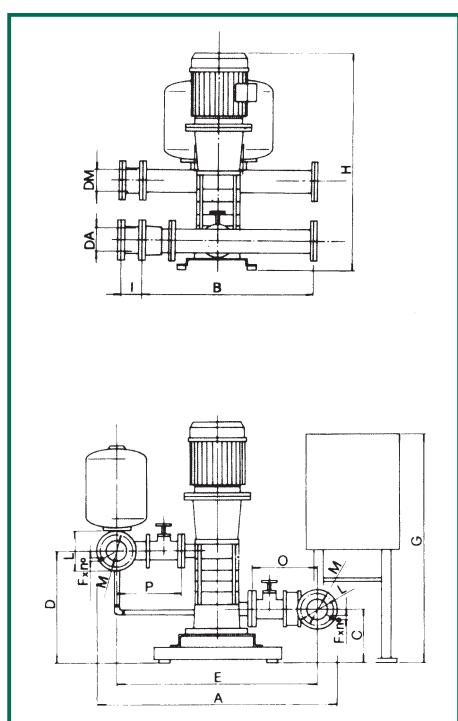
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 KV 50 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 46 m³/h



MODEL	A	B	C	D	E	G	H	O	P	I	L	M	Fxn°	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
1 KV 50/3	1175	550	233	423	855	1005	1060	250	235	130	200	160	18x4	DN 80 - PN 16	DN 80 - PN 16	390
1 KV 50/4	1175	550	233	477	855	1005	1180	250	235	130	200	160	18x4	DN 80 - PN 16	DN 80 - PN 16	418
1 KV 50/5	1175	550	233	531	855	1005	1310	250	235	130	200	160	18x4	DN 80 - PN 16	DN 80 - PN 16	470
1 KV 50/6	1175	550	233	585	855	1005	1405	250	235	130	200	160	18x4	DN 80 - PN 16	DN 80 - PN 16	485
1 KV 50/7	1175	550	233	639	855	1005	1485	250	235	130	200	160	18x4	DN 80 - PN 25	DN 80 - PN 25	503
1 KV 50/8	1175	550	233	693	855	1005	1540	250	235	130	200	160	18x4	DN 80 - PN 25	DN 80 - PN 25	513
1 KV 50/9	1175	550	233	747	855	1005	1690	250	235	130	200	160	18x4	DN 80 - PN 25	DN 80 - PN 25	650

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		50 Hz	kW					Type	kW	HP
1 KV 50/3 T	3x400 V ~	9,2	12,5	18	46,0-12,0	6÷7	8,6	KV 3/12 T	1,5	2
1 KV 50/4 T	3x400 V ~	11	15	22	46,0-12,0	8÷9	11,5	KV 3/15 T	1,85	2,5
1 KV 50/5 T	3x400 V ~	15	20	30	46,0-12,0	10÷11	14,8	KV 3/18 T	2,2	3
1 KV 50/6 T	3x400 V ~	18,5	25	36	46,0-12,0	12÷13	17,6	-	-	-
1 KV 50/7 T	3x400 V ~	22	30	40	46,0-12,0	14÷15	20,4	-	-	-
1 KV 50/8 T	3x400 V ~	22	30	40	46,0-12,0	16÷17	23	-	-	-
1 KV 50/9 T	3x400 V ~	30	40	56	46,0-12,0	18÷19	26	-	-	-

(1) All data refer to groups considering the service pumps.

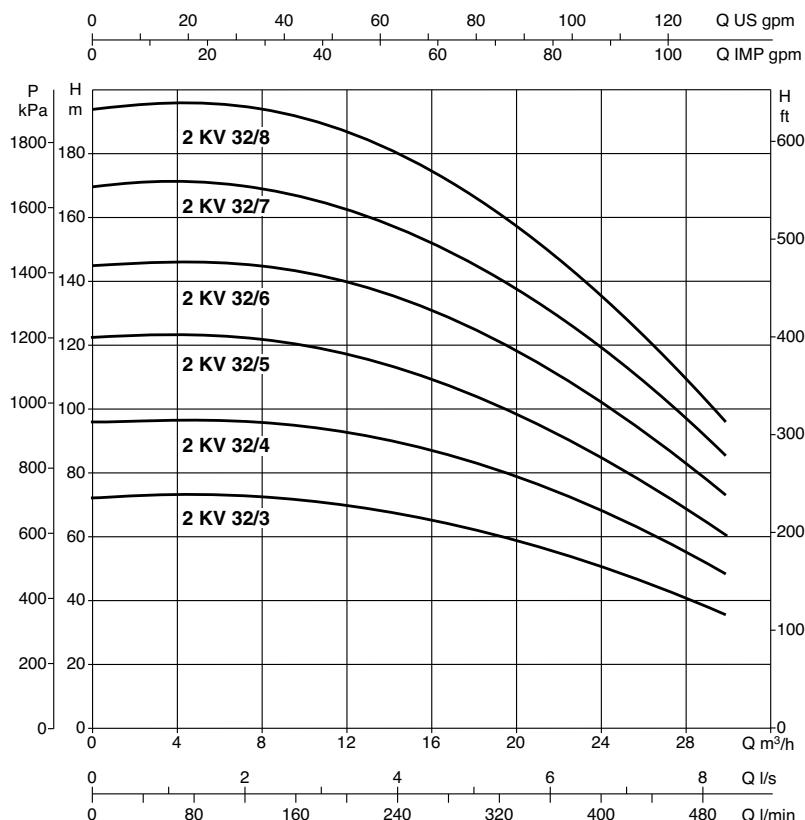
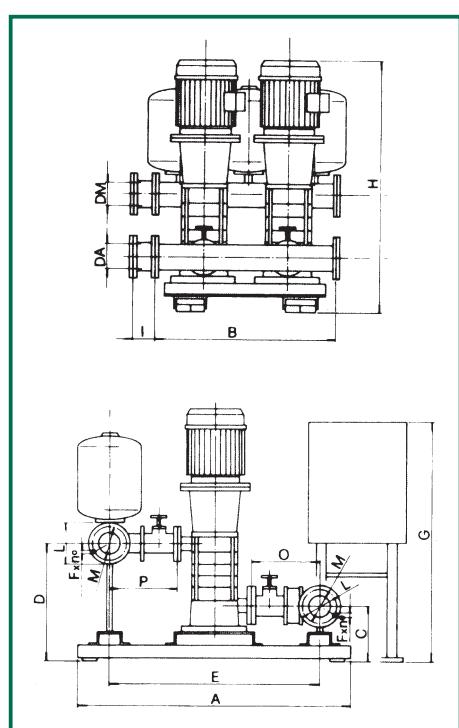
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KV 32 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 30 m³/h



MODEL	A	B	C	D	E	G	H	O	P	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
2 KV 32/3	1100	1000	245	384	830	1150	915	320	190	2½"	2½"	360
2 KV 32/4	1100	1000	245	429	830	960	915	320	190	2½"	2½"	375
2 KV 32/5	1100	1000	245	474	830	1250	1080	320	190	2½"	2½"	425
2 KV 32/6	1100	1000	245	519	830	1250	1125	320	190	2½"	2½"	446
2 KV 32/7	1100	1000	245	564	830	1250	1170	320	190	2½"	2½"	458
2 KV 32/8	1100	1000	245	609	830	1250	1215	320	190	2½"	2½"	470

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	FLOW RATE m ³ /h ⁽¹⁾	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		kW	HP					TYPE	kW	HP
2 KV 32/3 T	3x400 V ~	2x3	2x4	2x12-7	30,0-8,0	4,5÷6	7,1	KV 3/10 T	1,1	1,5
2 KV 32/4 T	3x400 V ~	2x4	2x5,5	2x16-9	30,0-8,0	6,5÷8	9,6	KV 3/15 T	1,85	2,5
2 KV 32/5 T	3x400 V ~	2x5,5	2x7,5	2x12	30,0-8,0	8,5÷10	12	KV 3/18 T	2,2	3
2 KV 32/6 T	3x400 V ~	2x7,5	2x10	2x15	30,0-8,0	10,5÷12	14,5	-	-	-
2 KV 32/7 T	3x400 V ~	2x7,5	2x10	2x15	30,0-8,0	12,5÷14	17	-	-	-
2 KV 32/8 T	3x400 V ~	2x9,2	2x12,5	2x18	30,0-8,0	14,5÷16	19,6	-	-	-

(1) All data refer to groups considering the service pumps.

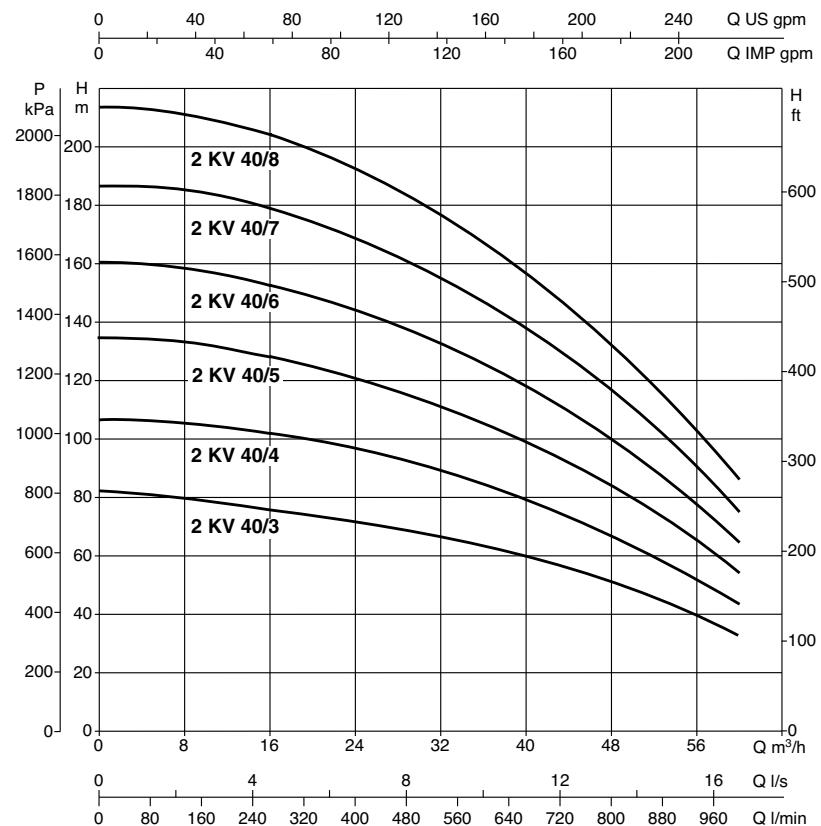
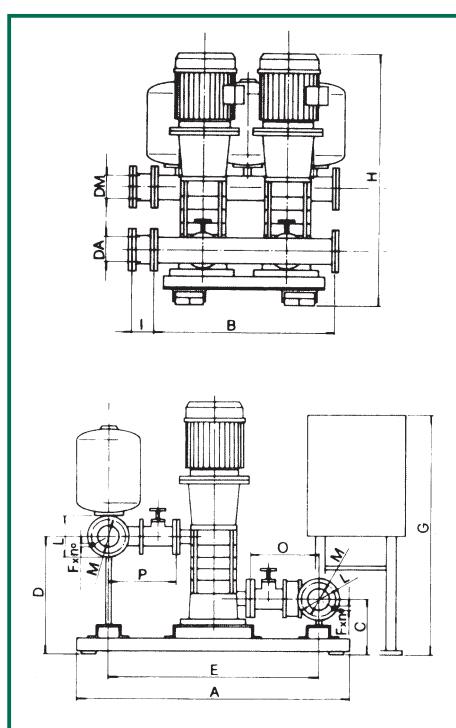
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KV 40 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 60 m³/h



MODEL	A	B	C	D	E	G	H	O	P	I	L	M	Fxn°	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
2 KV 40/3	1300	1000	260	425	1030	1140	1030	450	250	135	220	180	18x8	DN 100 - PN 16	DN 100 - PN 16	565
2 KV 40/4	1300	1000	260	470	1030	1250	1080	450	250	135	220	180	18x8	DN 100 - PN 16	DN 100 - PN 16	584
2 KV 40/5	1300	1000	260	530	1030	1250	1130	450	250	135	220	180	18x8	DN 100 - PN 16	DN 100 - PN 16	602
2 KV 40/6	1300	1000	260	575	1030	1250	1250	450	250	135	220	180	18x8	DN 100 - PN 16	DN 100 - PN 16	650
2 KV 40/7	1300	1000	260	625	1030	1250	1375	450	250	135	220	180	18x8	DN 100 - PN 25	DN 100 - PN 25	752
2 KV 40/8	1300	1000	260	675	1030	1250	1425	450	250	135	220	180	18x8	DN 100 - PN 25	DN 100 - PN 25	780

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE m ³ /h ⁽¹⁾	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		50 Hz	kW					Type	P2	
2 KV 40/3 T	3x400 V ~	2x5,5	2x7,5	2x12	60,0-16,0	4,5÷6	7,85	KV 3/12 T	1,5	2
2 KV 40/4 T	3x400 V ~	2x7,5	2x10	2x15	60,0-16,0	6,5÷8	10,4	KV 3/15 T	1,85	2,5
2 KV 40/5 T	3x400 V ~	2x9,2	2x12,5	2x18	60,0-16,0	8,5÷10	13	KV 3/18 T	2,2	3
2 KV 40/6 T	3x400 V ~	2x11	2x15	2x22	60,0-16,0	11,5÷13	15,7	-	-	-
2 KV 40/7 T	3x400 V ~	2x15	2x20	2x30	60,0-16,0	13,5÷15	18,5	-	-	-
2 KV 40/8 T	3x400 V ~	2x15	2x20	2x30	60,0-16,0	15,5÷17	21	-	-	-

(1) All data refer to groups considering the service pumps.

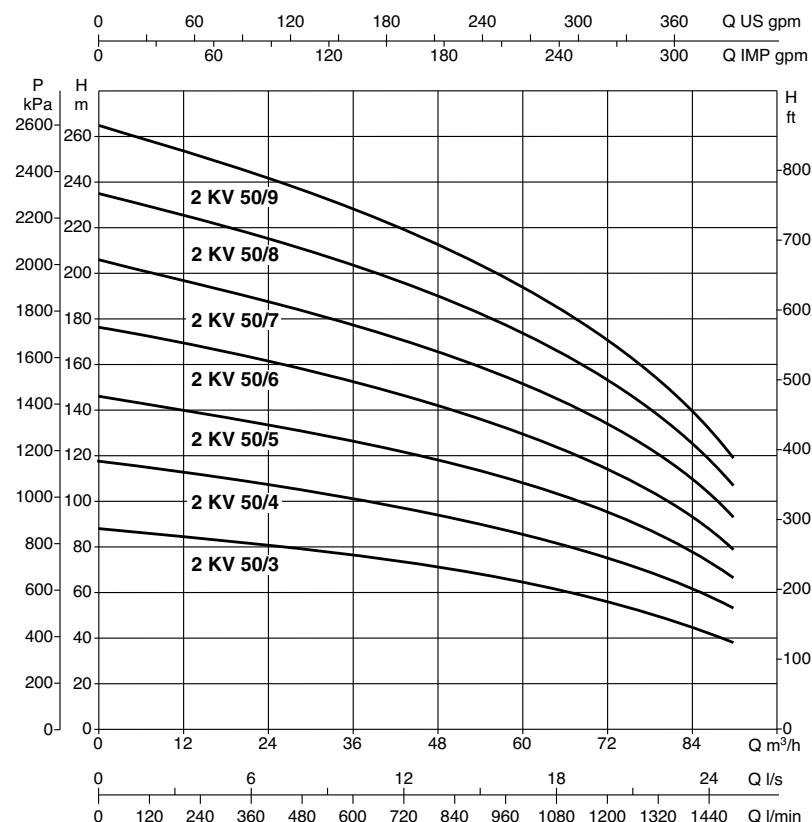
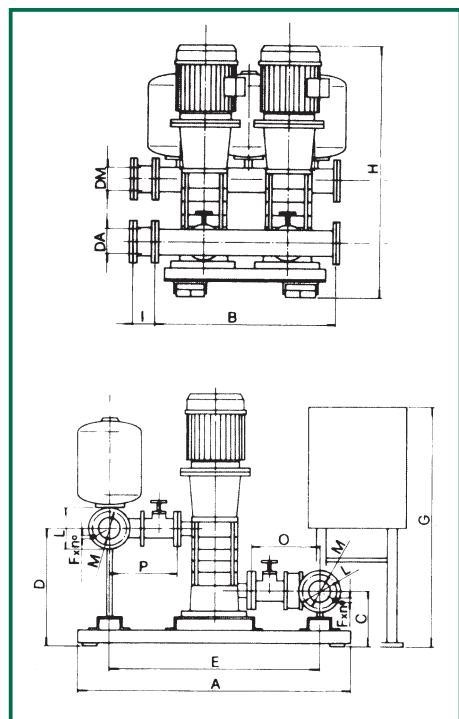
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KV 50 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 92 m³/h



MODEL	A	B	C	D	E	G	H	O	P	I	L	M	Fxn°	Ø MANIFOLD		WEIGHT Kg
														DNA (suc.)	DNM (del.)	
2 KV 50/3	1400	1000	300	483	1130	1250	1120	500	270	170	250	210	18x8	DN 125 - PN 16	DN 125 - PN 16	740
2 KV 50/4	1400	1000	300	537	1130	1250	1240	500	270	170	250	210	18x8	DN 125 - PN 16	DN 125 - PN 16	790
2 KV 50/5	1400	1000	300	591	1130	1250	1380	500	270	170	250	210	18x8	DN 125 - PN 16	DN 125 - PN 16	885
2 KV 50/6	1400	1000	300	645	1130	1250	1465	500	270	170	250	210	18x8	DN 125 - PN 16	DN 125 - PN 16	906
2 KV 50/7	1400	1000	300	699	1130	1250	1545	500	270	170	250	210	18x8	DN 125 - PN 25	DN 125 - PN 25	942
2 KV 50/8	1400	1000	300	753	1130	1250	1600	500	270	170	250	210	18x8	DN 125 - PN 25	DN 125 - PN 25	976
2 KV 50/9	1400	1000	300	807	1130	1250	1750	500	270	170	250	210	18x8	DN 125 - PN 25	DN 125 - PN 25	1200

MODEL	VOLTAGE		P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
	50 Hz	kW	HP	A					Type	P2 kW	HP
2 KV 50/3 T	3x400 V ~	2x9,2	2x12,5	2x18		92,0-24,0	5,5÷7	8,6	KV 3/12 T	1,5	2
2 KV 50/4 T	3x400 V ~	2x11	2x15	2x22		92,0-24,0	7,5÷9	11,5	KV 3/15 T	1,85	2,5
2 KV 50/5 T	3x400 V ~	2x15	2x20	2x30		92,0-24,0	9,5÷11	14,8	KV 3/18 T	2,2	3
2 KV 50/6 T	3x400 V ~	2x18,5	2x25	2x36		92,0-24,0	11,5÷13	17,6	-	-	-
2 KV 50/7 T	3x400 V ~	2x22	2x30	2x40		92,0-24,0	13,5÷15	20,4	-	-	-
2 KV 50/8 T	3x400 V ~	2x22	2x30	2x40		92,0-24,0	15,5÷17	23	-	-	-
2 KV 50/9 T	3x400 V ~	2x30	2x40	2x56		92,0-24,0	17,5÷19	26	-	-	-

(1) All data refer to groups considering the service pumps.

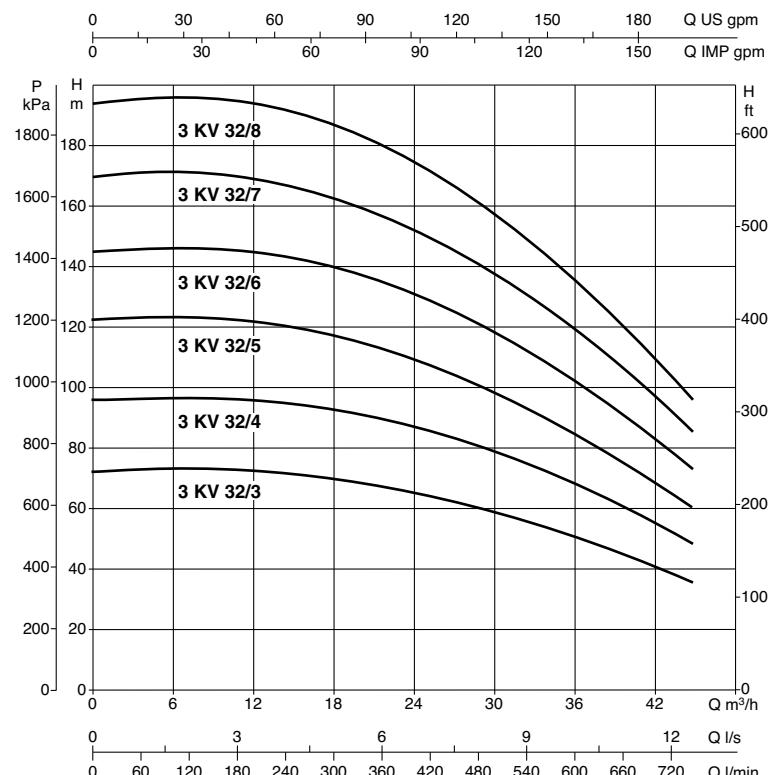
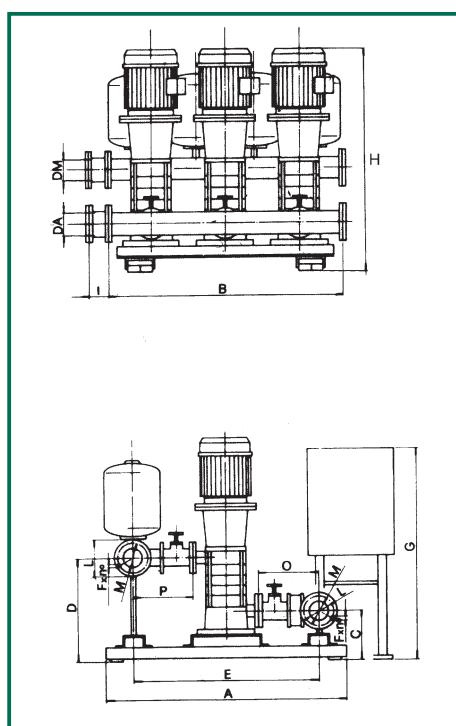
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KV 32 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 45 m³/h



MODEL	A	B	C	D	E	G	H	O	P	I	L	M	Fxn°	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
3 KV 32/3	1100	1200	245	384	840	1250	915	325	195	130	200	160	18x4	DN 80 - PN 16	DN 80 - PN 16	545
3 KV 32/4	1100	1200	245	429	840	1250	960	325	195	130	200	160	18x4	DN 80 - PN 16	DN 80 - PN 16	565
3 KV 32/5	1100	1200	245	474	840	1250	1080	325	195	130	200	160	18x4	DN 80 - PN 16	DN 80 - PN 16	643
3 KV 32/6	1100	1200	245	519	840	1250	1125	325	195	130	200	160	18x4	DN 80 - PN 16	DN 80 - PN 16	675
3 KV 32/7	1100	1200	245	564	840	1250	1170	325	195	130	200	160	18x4	DN 80 - PN 25	DN 80 - PN 25	694
3 KV 32/8	1100	1200	245	609	840	1250	1215	325	195	130	200	160	18x4	DN 80 - PN 25	DN 80 - PN 25	735

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SET.	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *		
		50 Hz	kW					TYPE	kW	HP
3 KV 32/3 T	3x400 V ~	3x3	3x4	3x12-7	45,0-12,0	4÷6	7,1	KV 3/10 T	1,1	1,5
3 KV 32/4 T	3x400 V ~	3x4	3x5,5	3x16-9	45,0-12,0	6÷8	9,6	KV 3/15 T	1,85	2,5
3 KV 32/5 T	3x400 V ~	3x5,5	3x7,5	3x12	45,0-12,0	9÷11	12	KV 3/18 T	2,2	3
3 KV 32/6 T	3x400 V ~	3x7,5	3x10	3x15	45,0-12,0	12÷14	14,5	-	-	-
3 KV 32/7 T	3x400 V ~	3x7,5	3x10	3x15	45,0-12,0	13÷15	17	-	-	-
3 KV 32/8 T	3x400 V ~	3x9,2	3x12,5	3x18	45,0-12,0	15÷17	19,6	-	-	-

(1) All data refer to groups considering the service pumps.

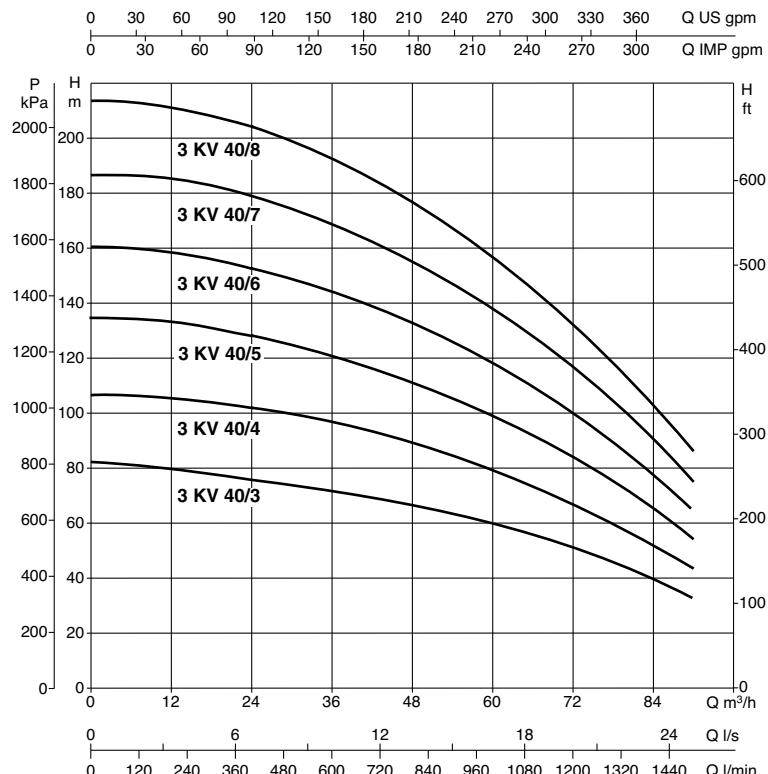
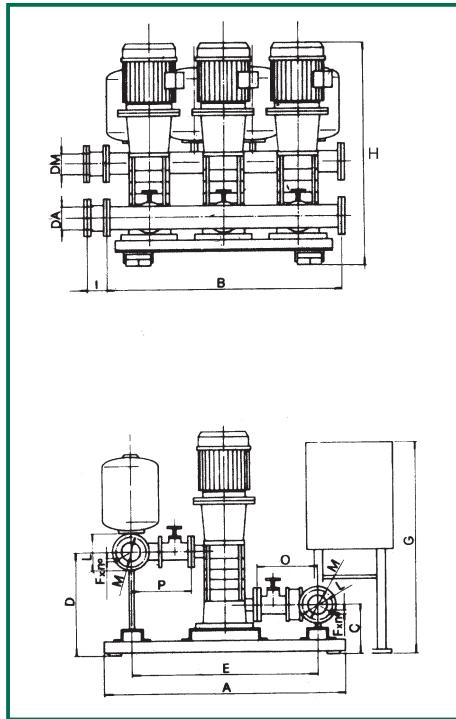
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KV 40 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 90 m³/h



MODEL	A	B	C	D	E	G	H	O	P	I	L	M	Fxn°	Ø MANIFOLD		WEIGHT Kg
														DNA (suc.)	DNM (del.)	
3 KV 40/3	1300	1200	260	425	1030	1250	1030	450	250	135	220	180	18x8	DN 100 - PN 16	DN 100 - PN 16	813
3 KV 40/4	1300	1200	260	470	1030	1250	1080	450	250	135	220	180	18x8	DN 100 - PN 16	DN 100 - PN 16	840
3 KV 40/5	1300	1200	260	530	1030	1250	1130	450	250	135	220	180	18x8	DN 100 - PN 16	DN 100 - PN 16	873
3 KV 40/6	1300	1200	260	575	1030	1250	1250	450	250	135	220	180	18x8	DN 100 - PN 16	DN 100 - PN 16	1026
3 KV 40/7	1300	1200	260	625	1030	1250	1375	450	250	135	220	180	18x8	DN 100 - PN 25	DN 100 - PN 25	1070
3 KV 40/8	1300	1200	260	675	1030	1250	1425	450	250	135	220	180	18x8	DN 100 - PN 25	DN 100 - PN 25	1090

MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *	
		50 Hz	kW	HP	A	m ³ /h ⁽¹⁾	Type	P2 kW	HP
3 KV 40/3 T	3x400 V ~	3x5,5	3x7,5	3x12	90,0-24,0	5÷7	7,85	KV 3/12 T	1,5
3 KV 40/4 T	3x400 V ~	3x7,5	3x10	3x15	90,0-24,0	7÷9	10,4	KV 3/15 T	1,85
3 KV 40/5 T	3x400 V ~	3x9,2	3x12,5	3x18	90,0-24,0	9÷11	13	KV 3/18 T	2,2
3 KV 40/6 T	3x400 V ~	3x11	3x15	3x22	90,0-24,0	11÷13	15,7	-	-
3 KV 40/7 T	3x400 V ~	3x15	3x20	3x30	90,0-24,0	13÷15	18,5	-	-
3 KV 40/8 T	3x400 V ~	3x15	3x20	3x30	90,0-24,0	15÷17	21	-	-

(1) All data refer to groups considering the service pumps.

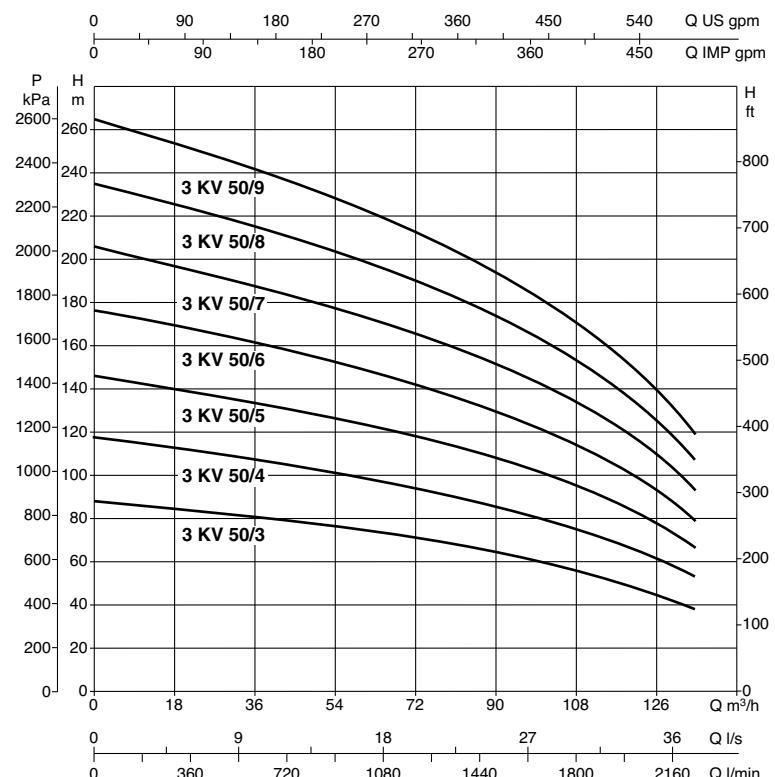
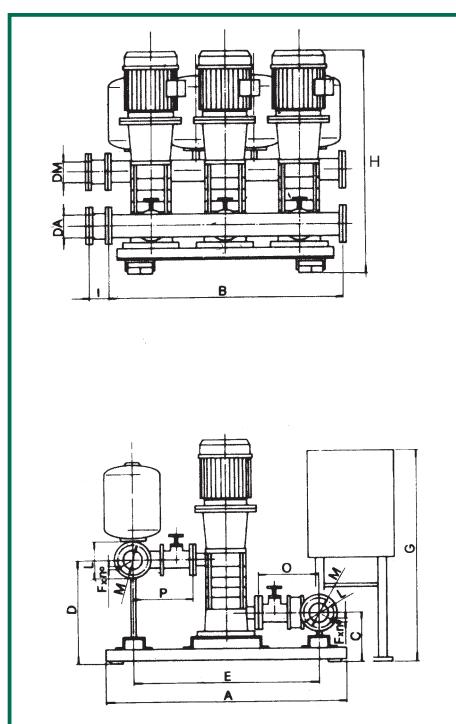
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KV 50 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 138 m³/h



MODEL	A	B	C	D	E	G	H	O	P	I	L	M	Fxn°	Ø MANIFOLD DNA (suc.)	DNM (del.)	WEIGHT Kg
3 KV 50/3	1400	1200	300	483	1160	1250	1120	510	280	180	285	240	22x8	DN 150 - PN 16	DN 150 - PN 16	1050
3 KV 50/4	1400	1200	300	536	1160	1250	1240	510	280	180	285	240	22x8	DN 150 - PN 16	DN 150 - PN 16	1156
3 KV 50/5	1400	1200	300	591	1160	1250	1380	510	280	180	285	240	22x8	DN 150 - PN 16	DN 150 - PN 16	1290
3 KV 50/6	1400	1200	300	645	1160	1250	1465	510	280	180	285	240	22x8	DN 150 - PN 16	DN 150 - PN 16	1325
3 KV 50/7	1400	1200	300	699	1160	1250	1465	510	280	180	285	240	22x8	DN 150 - PN 25	DN 150 - PN 25	1390
3 KV 50/8	1400	1200	300	753	1160	1250	1600	510	280	180	285	240	22x8	DN 150 - PN 25	DN 150 - PN 25	1450
3 KV 50/9	1400	1200	300	807	1160	1250	1750	510	280	180	285	240	22x8	DN 150 - PN 25	DN 150 - PN 25	1770

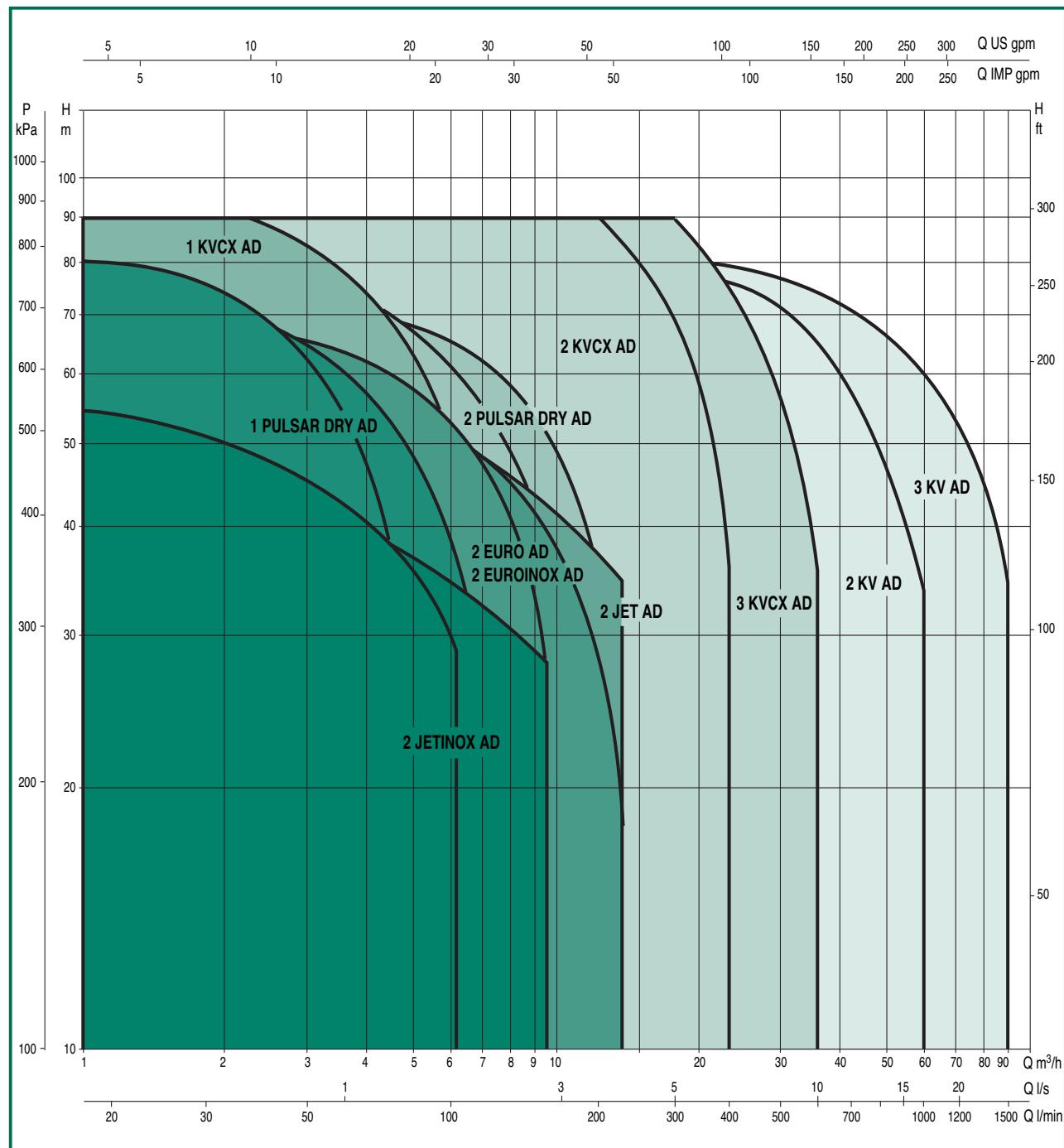
MODEL	VOLTAGE	P2 NOMINAL		In	FLOW RATE	PRESSURE SWITCH SET. BAR	MAX. PRESSURE OBTAINABLE BAR	PILOT PUMP *	
		50 Hz	kW					Type	P2 kW
3 KV 50/3 T	3x400 V ~	3x9,2	3x12,5	3x18	138,0-36,0	5÷7	8,6	KV 3/12 T	1,5
3 KV 50/4 T	3x400 V ~	3x11	3x15	3x22	138,0-36,0	7÷9	11,5	KV 3/15 T	1,85
3 KV 50/5 T	3x400 V ~	3x15	3x20	3x30	138,0-36,0	10÷12	14,8	KV 3/18 T	2,2
3 KV 50/6 T	3x400 V ~	3x18,5	3x25	3x36	138,0-36,0	12÷14	17,6	-	-
3 KV 50/7 T	3x400 V ~	3x22	3x30	3x40	138,0-36,0	13÷15	20,4	-	-
3 KV 50/8 T	3x400 V ~	3x22	3x30	3x40	138,0-36,0	16÷18	23	-	-
3 KV 50/9 T	3x400 V ~	3x30	3x40	3x56	138,0-36,0	18÷20	26	-	-

(1) All data refer to groups considering the service pumps.

* Pilot pump on request

DOMESTIC SETS WITH ACTIVE DRIVER AT CONSTANT PRESSURE

SELECTION TABLES



DOMESTIC BOOSTER SETS WITH ACTIVE DRIVER



PLUS:

- Constant pressure
- Noiselessness
- Reduced running costs
- Reduced water consumption
- Compact size (no vessels needed)
- Reduced Maintenance.
- Dry running protection

The units with Active Driver have been especially designed and manufactured to satisfy requirements for **constant pressure** in modern systems. Constant pressure-controlled systems are suitable for:

Aqueducts – Irrigation – Industry – Hotel installations – Domestic installations – Thermal baths.

The design of the system features **flexibility, reliability and user-friendliness**.

ABOUT ACTIVE DRIVER

The Active Driver unit is a comprehensive device that includes hydraulic system connections, a pressure sensor, a flow sensor and an electronic frequency converter (inverter). When fitted to the delivery of **each pump**, the Active Driver regulates the rotation speed of the electric pump to which it is connected maintaining a **constant pressure** in relation to the flow rate variation of the water. The water that flows through the Active Driver also **helps to cool** the internal electronic components.

OPERATION

When pressure drops because of a water request, only one pump runs in order to satisfy water need. The second and third pumps start operation in cascade when the first one reaches maximum velocity. The user can adjust the pressure of the pumps by means of the two + and – buttons on the Active Driver (the pumps are set as standard at the same pressure value).

The pumps cut-out under the following conditions:

- pump overcurrent
- dry running
- low supply voltage
- max. pressure value exceeded (adjustable)
- Active Driver electronic components overheating.

Two or three pump boosters with Active Driver are supplied along with a **safety control unit** with magneto-thermal cut-out and power supply input terminal board.

ACTIVE DRIVER DISPLAYED FUNCTIONS

- Pump operating frequency (Hz)
- Instantaneous pressure (bar)
- Pump absorbed current (ampere)
- Operating alarms

ACTIVE DRIVER EXTERNAL CONNECTIONS (only M/T 2,2 - T/T 3,0 - T/T 5,5 models)

Inputs: pump cut-out, pressure-switch / float against dry-running, second pressure set point.
Outputs: two potential free contacts for alarm/stop and pump running signalling.



2 JET SETS



CE

GENERAL DATA

Applications

Pressure units, particularly suitable when self-priming function is required for domestic use, small installations for civil, agricultural or industrial use (suction capacity even in the presence of air bubbles).

They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 2 Self-priming centrifugal JET electric pumps
- Galvanised steel plate complete with 4 anti-vibration rubber feet
- Suction and delivery manifold in tropicalized galvanised steel
- Ball valves on the suction and delivery pipe union of each single pump
- Check valves on the suction side of each pump
- 2 manifold caps in galvanised tropicalised cast iron
- Radial pressure gauge with shut-off valve
- 8 litres membrane tank (optimizing the number of pump start-ups)

ELECTRICAL PART

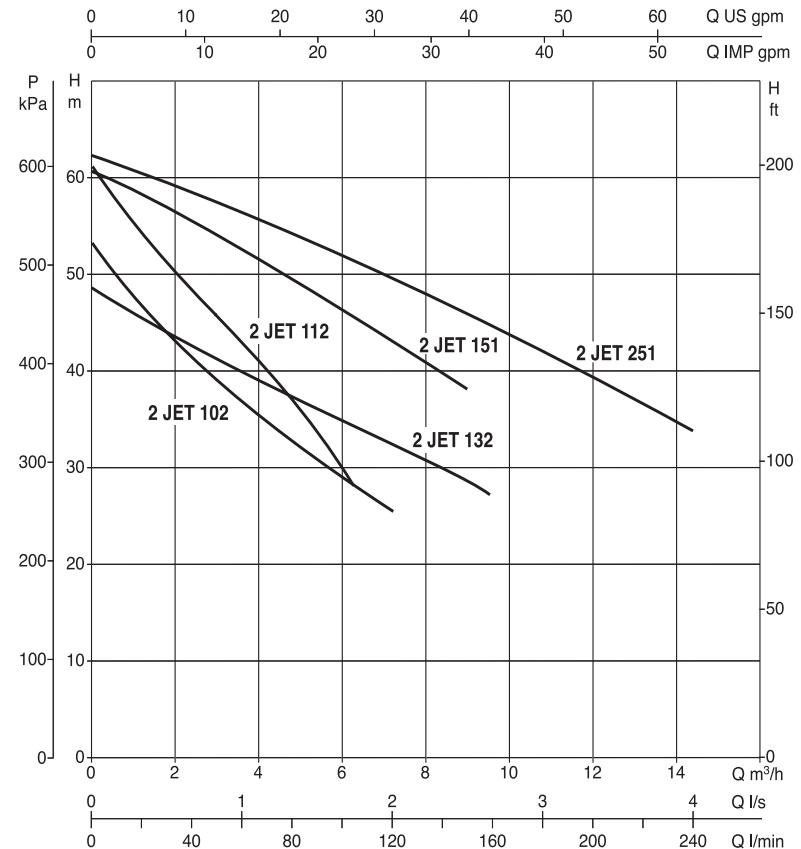
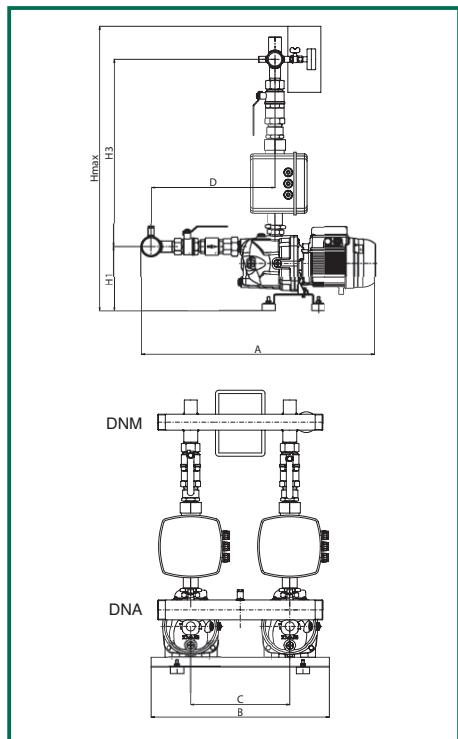
- 1 Active Driver unit on the delivery of each pump (*Active Driver characteristics are shown on page 61*)
- 1 Protection Control Unit

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 JET SETS

Liquid temperature range: from 0°C to + 35°C
Maximum ambient temperature: +40°C

Max flow rate: 14,4 m³/h



Overall performance – TWO pumps working simultaneously.

The performance of groups with smaller pumps (e.g. 2JET 92) is achieved through the setting of the Active Driver unit.

MODEL	A	B	C	D	H max	H1	H3	DNA	DNM	PACKAGING DIMENSIONS	L/A	L/B	H	VOLUME	WEIGHT
										L/A				m ³	Kg
2 JET AD 102	706	540	300	374	862	193	569	2"	1" 1/2	850	610	1000	0,52	56	
2 JET AD 112	706	540	300	374	862	193	569	2"	1" 1/2	850	610	1000	0,52	56	
2 JET AD 132	706	540	300	374	862	193	569	2"	1" 1/2	850	610	1000	0,52	56	
2 JET AD 151	706	540	300	374	862	193	569	2"	1" 1/2	850	610	1000	0,52	96	
2 JET AD 251	706	540	300	374	862	193	569	2"	1" 1/2	850	610	1000	0,52	105	

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		MODEL ACTIVE DRIVER	In (set) A	FLOW RATE m ³ /h	MAX PRESSURE BAR	STANDARD PRESSURE BAR
2 JET AD 102	1x220-240 V~	2x0,75	2x1	M/T 1,0	2x5,7	6,6-3,0	5	4
2 JET AD 112	1x220-240 V~	2x1	2x1,36	M/T 1,0	2x7,4	6,6-3,0	5,8	4,5
2 JET AD 132	1x220-240 V~	2x1	2x1,36	M/T 1,0	2x8,1	9,6-3,0	4,6	3,5
2 JET AD 151	1x220-240 V~	2x1,1	2x1,5	M/T 2,2	2x9	9,4-5,0	6	5
2 JET AD 251	3x400 V~ (3+N) *	2x1,85	2x2,5	M/T 2,2	2x12	14,4-7,2	6	5

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

* Available on request with single-phase power supply (1x220-240 V~).

2 EURO SETS



CE

GENERAL DATA

Applications

Pressure units particularly suitable for domestic, small installations for civil, agricultural or industrial use. They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 2 Multistage centrifugal EURO pumps
- Galvanised steel plate complete with 4 anti-vibration rubber feet
- Suction and delivery manifold in tropicalized galvanised steel
- Ball valves on the suction and delivery pipe union of each single pump
- Check valves on the suction side of each pump
- 2 manifold caps in galvanised tropicalised cast iron;
- Radial pressure gauge with shut-off valve
- 8 litres membrane tank (optimizing the number of pump start-ups)

ELECTRICAL PART

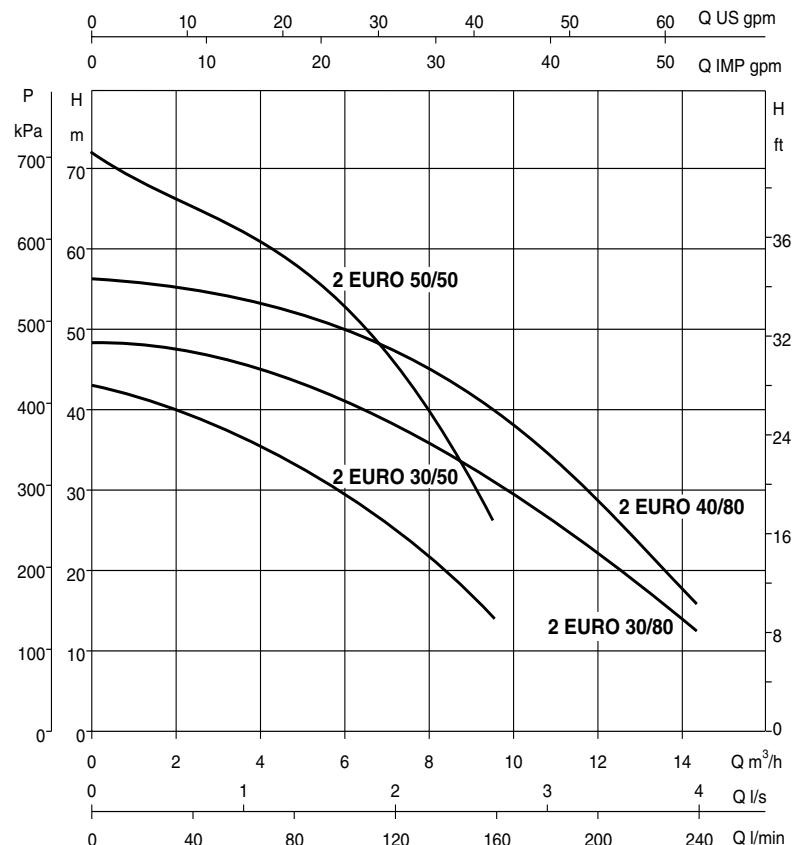
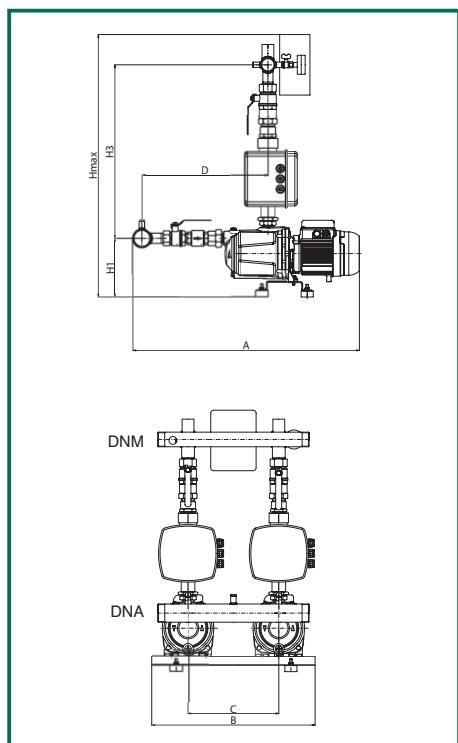
- 1 Active Driver unit on the delivery of each pump (*Active Driver characteristics are shown on page 61*)
- 1 Protection Control Unit

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 EURO SETS

Liquid temperature range: from 0°C to +35°C (domestic use)
from 0°C to +40°C (other applications)
Maximum ambient temperature: + 40°C

Max flow rate: 14,5 m³/h



Overall performance – TWO pumps working simultaneously.

The performance of groups with smaller pumps (e.g. 2EURO 40/50) is achieved through the setting of the Active Driver unit.

MODEL	A	B	C	D	H max	H1	H3	DNA	DNM	PACKING DIMENSIONS L/A	L/B	H	VOLUME m ³	WEIGHT Kg
2 EURO AD 30/50	748	540	300	416	867	194	574	2"	1" 1/2	850	610	1000	0,52	57
2 EURO AD 50/50	748	540	300	416	867	194	574	2"	1" 1/2	850	610	1000	0,52	57
2 EURO AD 30/80	748	540	300	416	867	194	574	2"	1" 1/2	850	610	1000	0,52	57
2 EURO AD 40/80	748	540	300	416	867	194	574	2"	1" 1/2	850	610	1000	0,52	57

MODEL	VOLTAGE		P2 NOMINAL		ACTIVE DRIVER	In (set) A	FLOW RATE m ³ /h	MAX PRESSURE BAR	STANDARD PRESSURE BAR
	50 Hz	kW	HP						
2 EURO AD 30/50	1x220-240 V~	2x0,55	2x0,75	M/T 1,0		2x4,8	8,0-4,4	3,8	3
2 EURO AD 50/50	1x220-240 V~	2x1	2x1,36	M/T 1,0		2x7,6	7,6-5,2	6,5	5
2 EURO AD 30/80	1x220-240 V~	2x0,8	2x1,1	M/T 1,0		2x6,5	11,0-7,0	4,3	3,5
2 EURO AD 40/80	1x220-240 V~	2x1	2x1,36	M/T 1,0		2x7,6	10,0-6,0	5,5	4,5

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

2 JETINOX SETS



CE

GENERAL DATA

Applications

Pressure units, particularly suitable when self-priming function is required for domestic use, small installations for civil, agricultural or industrial use (suction capacity even in the presence of air bubbles). They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 2 Self-priming centrifugal JETINOX electric pumps
- Galvanised steel plate complete with 4 anti-vibration rubber feet
- Suction and delivery manifolds in STAINLESS steel AISI 304
- Ball valves on the suction and delivery pipe union of each single pump
- Check valves on the suction side of each pump
- 2 AISI 304 STAINLESS steel manifold caps
- Radial pressure gauge with shut-off valve
- 8 litres membrane tank (optimizing the number of pump start-ups)

ELECTRICAL PART

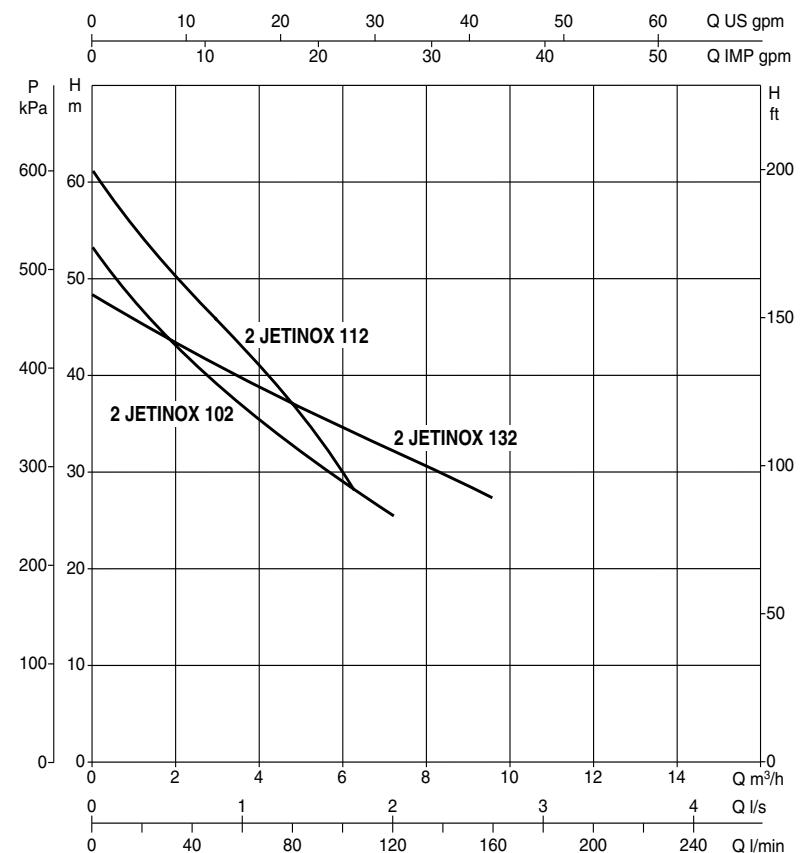
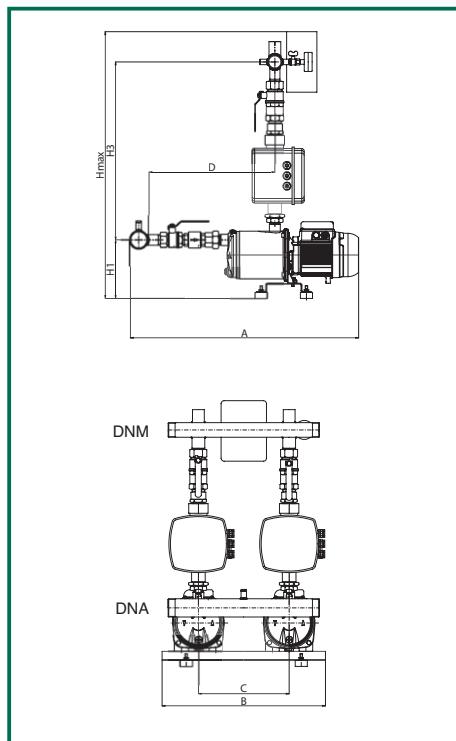
- 1 Active Driver unit on the delivery of each pump (*Active Driver characteristics are shown on page 61*)
- 1 Protection Control Unit

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 JETINOX SETS

Liquid temperature range: from 0°C to 35°C
Maximum ambient temperature: +40°C

Max flow rate: 14,4 m³/h



Overall performance – TWO pumps working simultaneously.

The performance of groups with smaller pumps (e.g. 2JETINOX 92) is achieved through the setting of the Active Driver unit.

MODEL	A	B	C	D	H max	H1	H3	DNA	DNM	PACKING DIMENSIONS			VOLUME m ³	WEIGHT Kg
										L/A	L/B	H		
2 JETINOX AD 102	755	540	300	416	882	193	588	2"	1" 1/2	850	610	1000	0,52	56
2 JETINOX AD 112	755	540	300	416	882	193	588	2"	1" 1/2	850	610	1000	0,52	56
2 JETINOX AD 132	755	540	300	416	882	193	588	2"	1" 1/2	850	610	1000	0,52	56

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		MODEL ACTIVE DRIVER	In (set) A	FLOW RATE m ³ /h	MAX PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
2 JETINOX AD 102	1x220-240 V~	2x0,75	2x1	M/T 1,0	2x5,7	6,6-3,0	5	4
2 JETINOX AD 112	1x220-240 V~	2x1	2x1,36	M/T 1,0	2x7,4	6,6-3,0	5,8	4,5
2 JETINOX AD 132	1x220-240 V~	2x1	2x1,36	M/T 1,0	2x8,1	9,6-3,0	4,6	3,5

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

2 EUROINOX SETS



CE

GENERAL DATA

Applications

Pressure units, particularly suitable when self-priming function is required for domestic use, small installations for civil, agricultural or industrial use (suction capacity even in the presence of air bubbles). They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 2 multistage centrifugal EUROINOX pumps
- Galvanised steel plate complete with 4 anti-vibration rubber feet
- Suction and delivery manifolds in STAINLESS steel AISI 304
- Ball valves on the suction and delivery pipe union of each single pump
- Check valves on the suction side of each pump
- 2 AISI 304 STAINLESS steel manifold caps
- Radial pressure gauge with shut-off valve
- 8 litres membrane tank (optimizing the number of pump start-ups)

ELECTRICAL PART

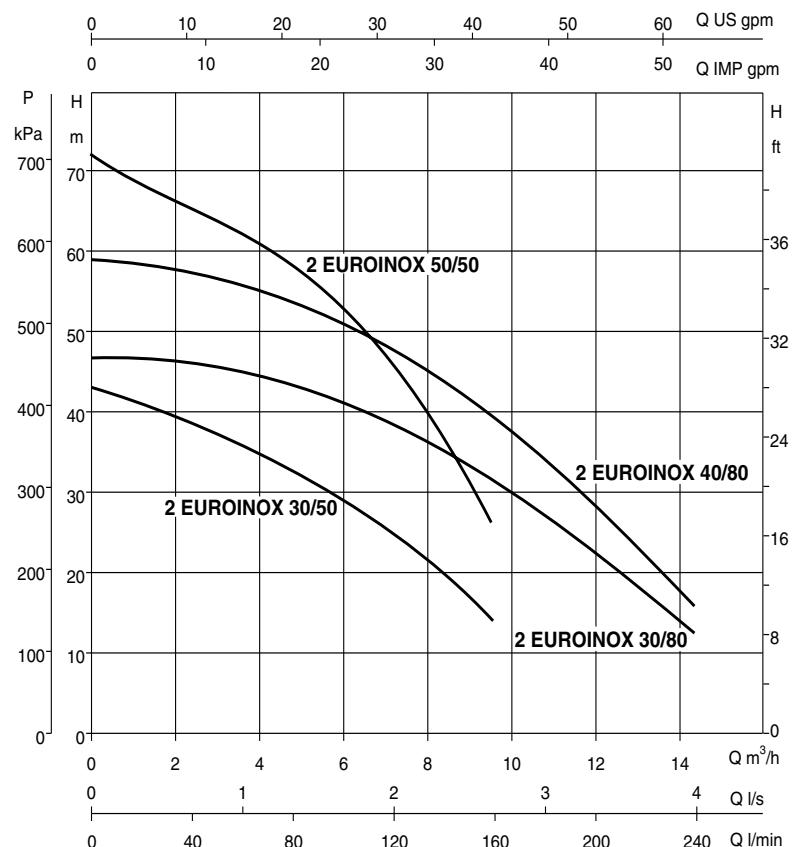
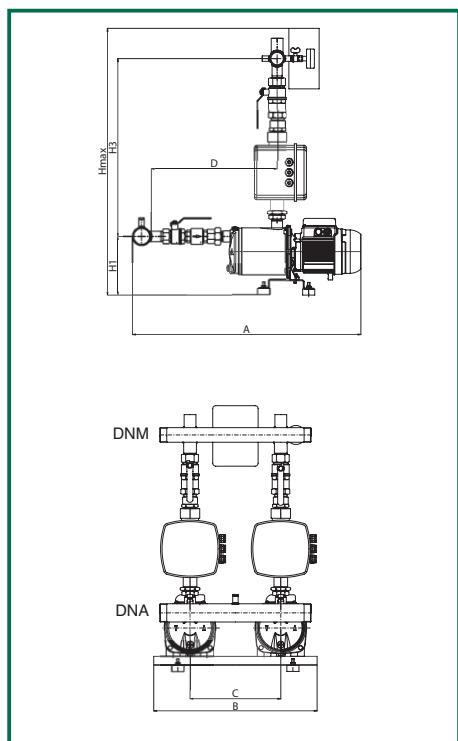
- 1 Active Driver unit on the delivery of each pump (*Active Driver characteristics are shown on page 61*)
- 1 Protection Control Unit

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 EUROINOX SETS

Liquid temperature range: from 0°C to +35°C (domestic use)
from 0°C to +40°C (other applications)
Maximum ambient temperature: +40°C

Max flow rate: 14,5 m³/h



Overall performance – TWO pumps working simultaneously.

The performance of groups with smaller pumps (e.g. 2EUROINOX 40/50) is achieved through the setting of the Active Driver 1 unit.

MODEL	A	B	C	D	H max	H1	H3	DNA	DNM	PACKAGING DIMENSIONS			VOLUME m ³	WEIGHT Kg
										L/A	L/B	H		
2 EUROINOX AD 30/50	755	540	300	416	882	193	588	2"	1" 1/2	850	610	1000	0,52	57
2 EUROINOX AD 50/50	755	540	300	416	882	193	588	2"	1" 1/2	850	610	1000	0,52	57
2 EUROINOX AD 30/80	755	540	300	416	882	193	588	2"	1" 1/2	850	610	1000	0,52	57
2 EUROINOX AD 40/80	755	540	300	416	882	193	588	2"	1" 1/2	850	610	1000	0,52	57

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		MODEL ACTIVE DRIVER	In (set) A	FLOW RATE m ³ /h	MAX PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
2 EUROINOX AD 30/50	1x220-240 V~	2x0,55	2x0,75	M/T 1,0	2x4,8	8,0-4,4	3,8	3
2 EUROINOX AD 50/50	1x220-240 V~	2x1	2x1,36	M/T 1,0	2x7,6	7,6-5,2	6,5	5
2 EUROINOX AD 30/80	1x220-240 V~	2x0,8	2x1,1	M/T 1,0	2x6,5	11,0-7,0	4,3	3,5
2 EUROINOX AD 40/80	1x220-240 V~	2x1	2x1,36	M/T 1,0	2x7,6	10,0-6,0	5,5	4,5

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

1 PULSAR DRY SETS



CE

GENERAL DATA

Applications

Pressure units particularly suitable for domestic, small installations for civil, agricultural or industrial use. They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 1 PULSAR DRY centrifugal pump
- Ball valves on the pump suction and delivery pipe union
- Check valve on the suction side of each pump
- 8 litres membrane tank (optimizing the number of pump start-ups)

ELECTRICAL PART

- 1 Active Driver unit on the delivery of each pump (*Active Driver characteristics are shown on page 61*)

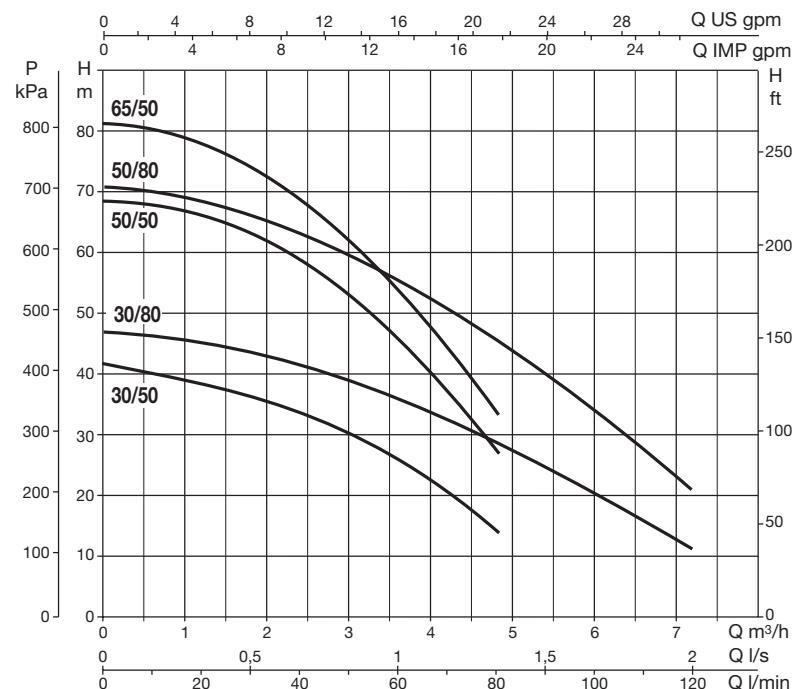
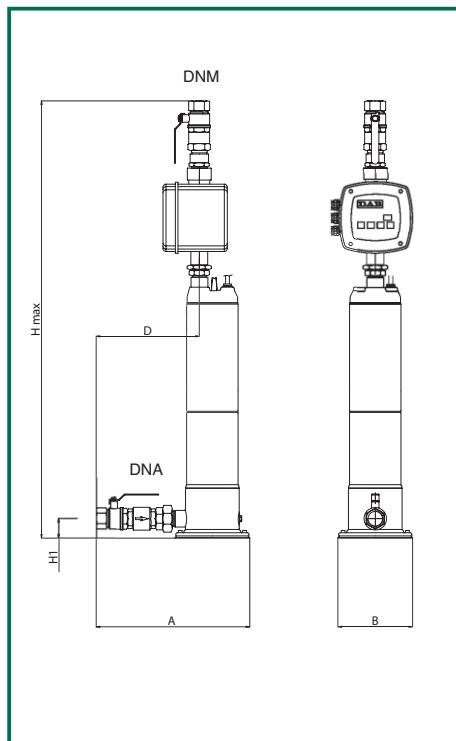
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 PULSAR DRY SETS

Liquid temperature range:

Maximum ambient temperature:

Max flow rate: 7,25 m³/h



The performance of groups with smaller pumps (e.g. 1PULSAR DRY 40/80) is achieved through the setting of the Active Driver unit.

MODEL	A	B	D	H max	H1	DNA	DNM	PACKAGING DIMENSIONS			VOLUME m ³	WEIGHT Kg
								L/A	L/B	H		
1 PULSAR DRY AD 30/50	411	200	276	1169	52	1" 1/4	1" 1/4	850	610	1000	0,52	40
1 PULSAR DRY AD 50/50	411	200	276	1169	52	1" 1/4	1" 1/4	850	610	1000	0,52	40
1 PULSAR DRY AD 65/50	411	200	276	1169	52	1" 1/4	1" 1/4	850	610	1000	0,52	40
1 PULSAR DRY AD 30/80	411	200	276	1169	52	1" 1/4	1" 1/4	850	610	1000	0,52	40
1 PULSAR DRY AD 50/80	411	200	276	1169	52	1" 1/4	1" 1/4	850	610	1000	0,52	40

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		MODEL ACTIVE DRIVER	In (set) A	FLOW RATE m ³ /h	MAX PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
1 PULSAR DRY AD 30/50	1x220-240 V~	0,55	0,75	M/T 1,0	5,3	4,1-2,2	3,8	3
1 PULSAR DRY AD 50/50	1x220-240 V~	1	1,36	M/T 1,0	7,8	3,8-2,5	6,5	5,5
1 PULSAR DRY AD 65/50	1x220-240 V~	1,2	1,6	M/T 2,2	9,2	3,8-2,5	8,2	7
1 PULSAR DRY AD 30/80	1x220-240 V~	0,75	1	M/T 1,0	6,0	5,5-3,5	4,5	4
1 PULSAR DRY AD 50/80	1x220-240 V~	1,2	1,6	M/T 2,2	9,8	5,6-4,0	7,2	6

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

2 PULSAR DRY SETS



CE

GENERAL DATA

Applications

Pressure units particularly suitable for domestic, small installations for civil, agricultural or industrial use. They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 2 centrifugal PULSAR DRY electric pumps
- Galvanised steel plate complete with 4 anti-vibration rubber feet
- Suction and delivery manifolds in STAINLESS steel AISI 304
- Ball valves on the suction and delivery pipe union of each single pump
- Check valve on the suction side of each pump
- 2 AISI 304 STAINLESS steel manifold caps
- Radial pressure gauge with shut-off valve
- 8 litres membrane tank (optimizing the number of pump start-ups)

ELECTRICAL PART

- 1 Active Driver unit on the delivery of each pump (*Active Driver characteristics are shown on page 61*)
- 1 Protection Control Panel

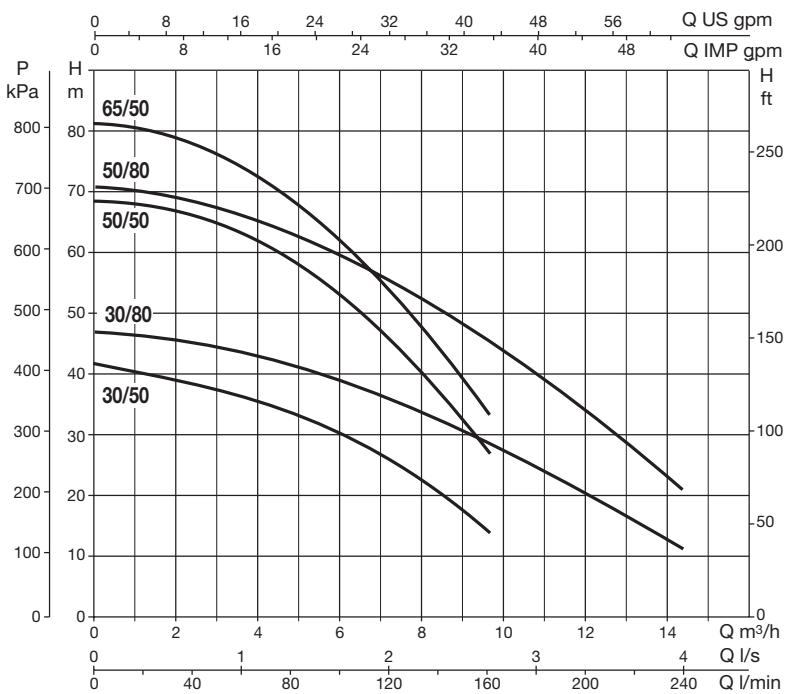
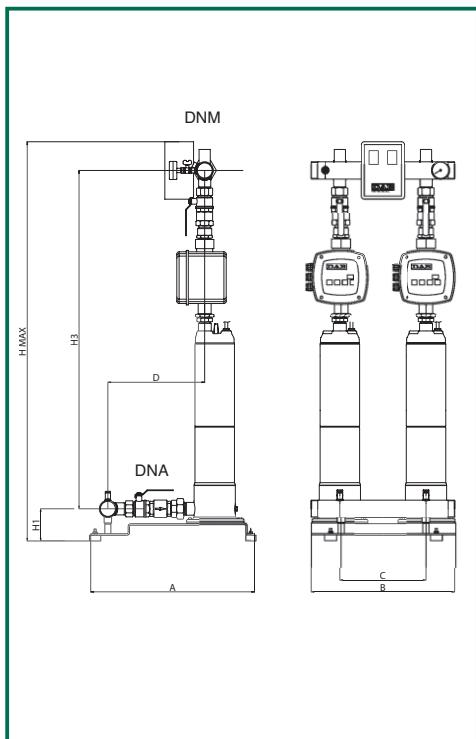
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 PULSAR DRY SETS

Liquid temperature range:

Maximum ambient temperature:

Max flow rate: 14,5 m³/h



Overall performance – TWO pumps working simultaneously.

The performance of groups with smaller pumps (e.g. 2PULSAR DRY 40/80) is achieved through the setting of the Active Driver unit.

MODEL	A	B	C	D	H max	H1	H3	DNA	DNM	PACKAGING DIMENSIONS	VOLUME	WEIGHT
	L/A	L/B	H	m ³	Kg							
2 PULSAR DRY AD 30/50	570	500	300	337	1390	112	1178	2"	2"	1150	800	1000
2 PULSAR DRY AD 50/50	570	500	300	337	1390	112	1178	2"	2"	1150	800	1000
2 PULSAR DRY AD 65/50	570	500	300	337	1390	112	1178	2"	2"	1150	800	1000
2 PULSAR DRY AD 30/80	570	500	300	337	1390	112	1178	2"	2"	1150	800	1000
2 PULSAR DRY AD 50/80	570	500	300	337	1390	112	1178	2"	2"	1150	800	1000

MODEL	VOLTAGE 50 Hz	P2 NOMINAL kW	P2 NOMINAL HP	MODEL ACTIVE DRIVER	In (set) A	FLOW RATE m ³ /h	MAX PRESSURE BAR	STANDARD PRESSURE BAR
2 PULSAR DRY AD 30/50	1x220-240 V~	2x0,55	2x0,75	M/T 1,0	2x5,3	8,2-4,4	3,8	3
2 PULSAR DRY AD 50/50	1x220-240 V~	2x1	2x1,36	M/T 1,0	2x7,8	7,6-5,0	6,5	5,5
2 PULSAR DRY AD 65/50	1x220-240 V~	2x1,2	2x1,6	M/T 2,2	2x9,2	7,6-5,0	8,2	7
2 PULSAR DRY AD 30/80	1x220-240 V~	2x0,75	2x1	M/T 1,0	2x6,0	11,0-7,0	4,5	4
2 PULSAR DRY AD 50/80	1x220-240 V~	2x1,2	2x1,6	M/T 2,2	2x9,0	11,2-8,0	7,2	6

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

1 KVCX SETS



CE

GENERAL DATA

Applications

Booster sets particularly suitable for domestic use, small civil and industrial installations and irrigating. They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 1 Multistage KVCX centrifugal electric pump on a vertical axis
- Ball valves on the suction and delivery pipe union
- Check valves on the suction side
- Radial pressure gauge with shut-off valve
- 8 litres membrane tank (optimizing the number of pump start-ups)

ELECTRICAL PART

- 1 Active Driver unit on the delivery of each pump (*Active Driver characteristics are shown on page 61*)

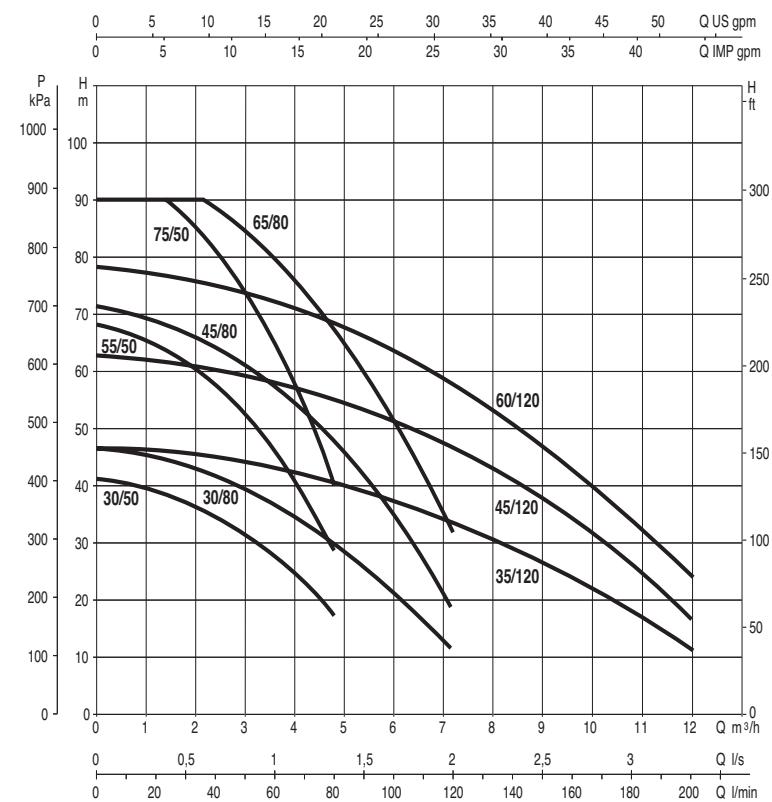
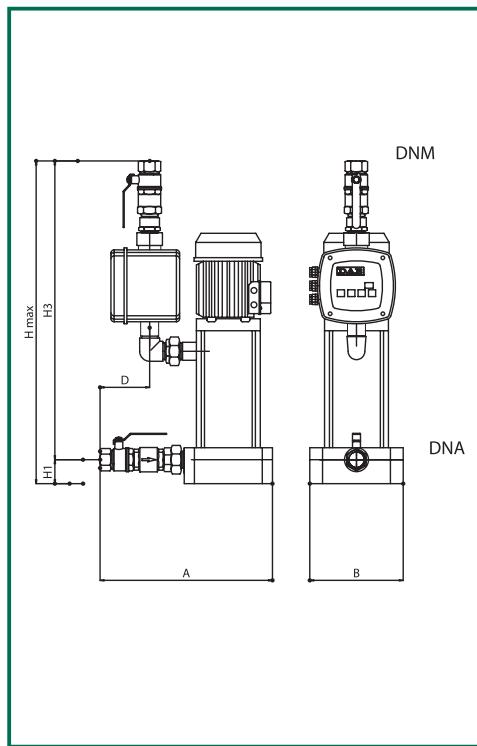
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

1 KVCX SETS

Liquid temperature range:

Maximum ambient temperature:

Max flow rate: 12 m³/h



The performance of groups with smaller pumps (e.g. 1KVCX 20/50) is achieved through the setting of the Active Driver unit.

MODEL	A	B	D	H max	H1	H3	DNA	DNM	PACKAGING DIMENSIONS			VOLUME m ³	WEIGHT Kg
									L/A	L/B	H		
1 KVCX AD 30/50	432	234	125	664	60	604	1" 1/4	1" 1/4	850	610	1000	0,52	32
1 KVCX AD 55/50	432	234	125	719	60	659	1" 1/4	1" 1/4	850	610	1000	0,52	35
1 KVCX AD 75/50	432	234	125	812	60	752	1" 1/4	1" 1/4	850	610	1000	0,52	39
1 KVCX AD 30/80	432	234	125	719	60	659	1" 1/4	1" 1/4	850	610	1000	0,52	34
1 KVCX AD 45/80	432	234	125	812	60	752	1" 1/4	1" 1/4	850	610	1000	0,52	38
1 KVCX AD 65/80	432	234	125	839	60	779	1" 1/4	1" 1/4	850	610	1000	0,52	40
1 KVCX AD 35/120	432	234	125	664	60	604	1" 1/4	1" 1/4	850	610	1000	0,52	34
1 KVCX AD 45/120	432	234	125	719	60	719	1" 1/4	1" 1/4	850	610	1000	0,52	37
1 KVCX AD 60/120	432	234	125	719	60	659	1" 1/4	1" 1/4	850	610	1000	0,52	39

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In (set) A	MODEL ACTIVE DRIVER	FLOW RATE m ³ /h	MAX PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
1 KVCX AD 30/50	1x220-240 V~	0,55	0,75	4,1	M/T 1,0	4,5-1	4	3,5
1 KVCX AD 55/50	1x220-240 V~	1	1,36	7,6	M/T 1,0	4,5-1	6,5	5,5
1 KVCX AD 75/50	1x220-240 V~	1,5	2	10,7	M/T 2,2	4,5-1	9,2	8
1 KVCX AD 30/80	1x220-240 V~	0,8	1,1	6,5	M/T 1,0	7+2	4,5	3,5
1 KVCX AD 45/80	1x220-240 V~	1,1	1,5	9,3	M/T 2,2	7+2	6,6	5,5
1 KVCX AD 65/80	1x220-240 V~	2,2	3	12	M/T 2,2	7+2	9,2	8
1 KVCX AD 35/120	1x220-240 V~	1,1	1,5	10,4	M/T 2,2	11-2	4,4	3,5
1 KVCX AD 45/120	1x220-240 V~	1,85	2,50	13,6	M/T 2,2	11-2	6,0	5,0
1 KVCX AD 60/120	3x400 V~	2,2	3	5,4	M/T 3,0	11-2	7,5	6

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

2 KVCX SETS



CE

GENERAL DATA

Applications

Booster sets particularly suitable for domestic use, small civil and industrial installations and irrigating. They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 2 Multistage KVCX centrifugal electric pumps on a vertical axis
- Galvanised steel plate complete with 4 anti-vibration rubber feet
- Suction and delivery manifold in stainless steel AISI 304
- Ball valves on the suction and delivery pipe union of each single pump
- Check valves on the suction side of each pump
- 2 AISI 304 stainless steel manifold caps
- Radial pressure gauge with shut-off valve
- 8 litres membrane tank (optimizing the number of pump start-ups)

ELECTRICAL PART

- 1 Active Driver unit on the delivery of each pump (*Active Driver characteristics are shown on page 61*)
- 1 Protection Control Unit

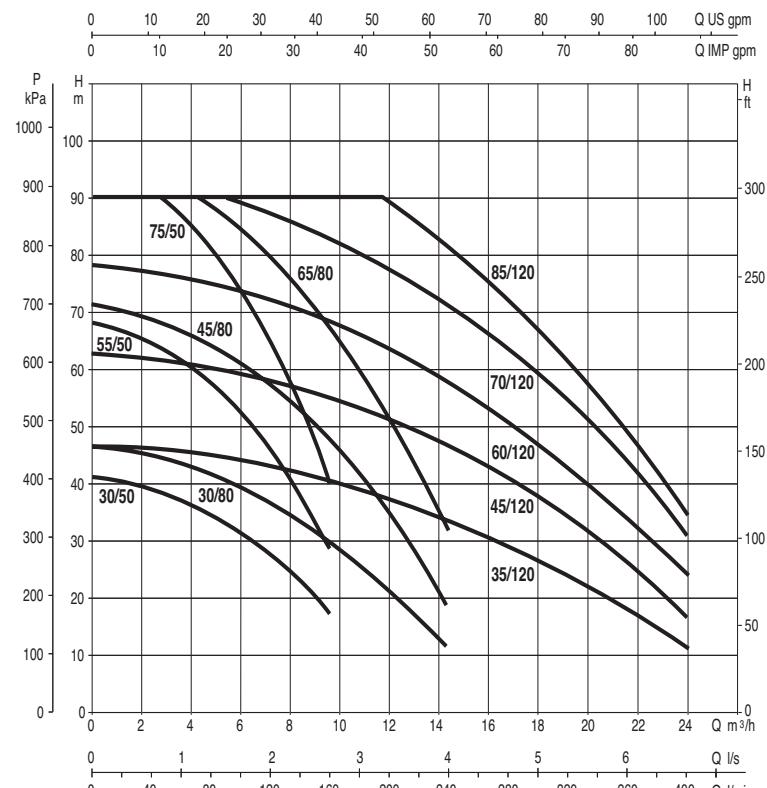
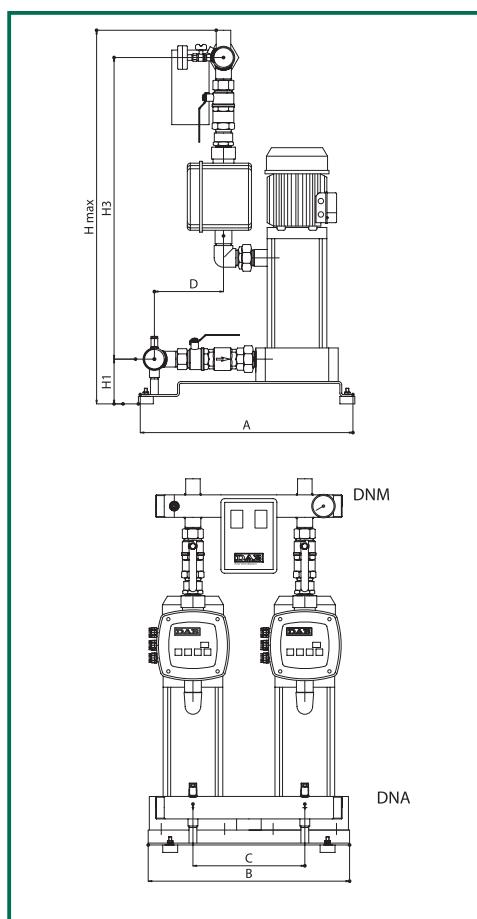
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KVCX SETS

Liquid temperature range:

Maximum ambient temperature:

Max flow rate: 24 m³/h



Overall performance – TWO pumps working simultaneously.

The performance of groups with smaller pumps (e.g. 2KVCX 20/50) is achieved through the setting of the Active Driver unit.

MODEL	A	B	C	D	H max	H1	H3	DNA	DNM	PACKAGING DIMENSIONS			VOLUME m ³	WEIGHT Kg
										L/A	L/B	H		
2 KVCX AD 30/50	655	540	300	185	857	120	664	2"	2"	1000	610	1000	0,61	76
2 KVCX AD 55/50	655	540	300	185	912	120	719	2"	2"	1000	610	1000	0,61	83
2 KVCX AD 75/50	655	540	300	185	1005	120	812	2"	2"	1000	610	1000	0,61	91
2 KVCX AD 30/80	655	540	300	185	912	120	719	2"	2"	1000	610	1000	0,61	80
2 KVCX AD 45/80	655	540	300	185	1005	120	812	2"	2"	1000	610	1000	0,61	89
2 KVCX AD 65/80	655	540	300	185	1032	120	839	2"	2"	1000	610	1000	0,61	93
2 KVCX AD 35/120	655	540	300	185	857	120	664	2" 1/2	2" 1/2	1000	610	1000	0,61	81
2 KVCX AD 45/120	655	540	300	185	912	120	719	2" 1/2	2" 1/2	1000	610	1000	0,61	85
2 KVCX AD 60/120	655	540	300	185	912	120	719	2" 1/2	2" 1/2	1000	610	1000	0,61	89
2 KVCX AD 70/120	655	540	300	185	1005	120	812	2" 1/2	2" 1/2	1000	610	1000	0,61	93
2 KVCX AD 85/120	655	540	300	185	1005	120	812	2" 1/2	2" 1/2	1000	610	1000	0,61	95

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In (set) A	MODEL ACTIVE DRIVER	FLOW RATE m ³ /h	MAX PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
2 KVCX AD 30/50	1x220-240 V~	2x0,55	2x0,75	2x4,1	M/T 1,0	9-1	4	3,5
2 KVCX AD 55/50	1x220-240 V~	2x1	2x1,36	2x7,6	M/T 1,0	9-1	6,5	5,5
2 KVCX AD 75/50	3x400 V~ + N *	2x1,5	2x2	2x10,7	M/T 2,2	9-1	9,2	8
2 KVCX AD 30/80	1x220-240 V~	2x0,8	2x1,1	2x6,5	M/T 1,0	14+2	4,5	3,5
2 KVCX AD 45/80	1x220-240 V~	2x1,1	2x1,5	2x9,3	M/T 2,2	14+2	6,6	5,5
2 KVCX AD 65/80	3x400 V~ + N *	2x2,2	2x3	2x12	M/T 2,2	14+2	9,2	8
2 KVCX AD 35/120	1x220-240 V~	2x1,1	2x1,5	2x10,4	M/T 2,2	22-2	4,4	3,5
2 KVCX AD 45/120	1x220-240 V~	2x1,85	2x2,50	2x13,6	M/T 2,2	22-2	6,0	5,0
2 KVCX AD 60/120	3x400 V~ + N *	2x2,2	2x3	2x5,4	T/T 3,0	22-2	7,5	6
2 KVCX AD 70/120	3x400 V~ + N *	2x3,0	2x4	2x6,80	T/T 3,0	22-2	9,0	7
2 KVCX AD 85/120	3x400 V~ + N *	2x3,0	2x4	2x7,80	T/T 5,5	22-2	9,0	8

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

* Available on request with single-phase power supply (1x220-240 V~).

3 KVCX SETS



CE

GENERAL DATA

Applications

Booster sets particularly suitable for domestic use, small civil and industrial installations and irrigating. They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 3 Multistage KVCX centrifugal electric pumps on a vertical axis
- Galvanised steel plate complete with 4 anti-vibration rubber feet
- Suction and delivery manifold in stainless steel AISI 304
- Ball valves on the suction and delivery pipe union of each single pump
- Check valves on the suction side of each pump
- 2 AISI 304 stainless steel manifold caps
- Radial pressure gauge with shut-off valve
- 8 litres membrane tank (optimizing the number of pump start-ups)

ELECTRICAL PART

- 1 Active Driver unit on the delivery of each pump (*Active Driver characteristics are shown on page 61*)
- 1 Protection Control Unit

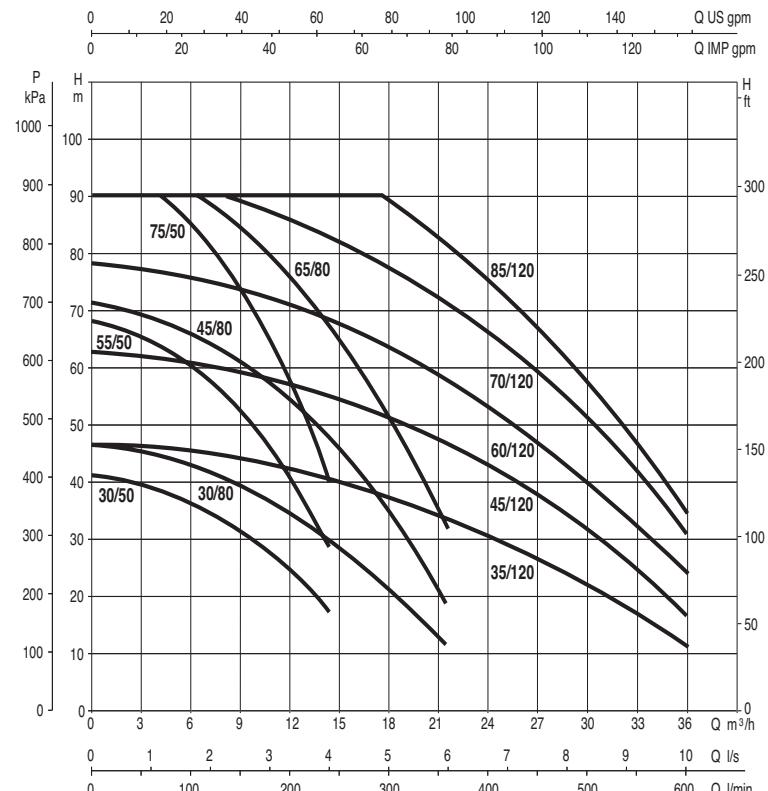
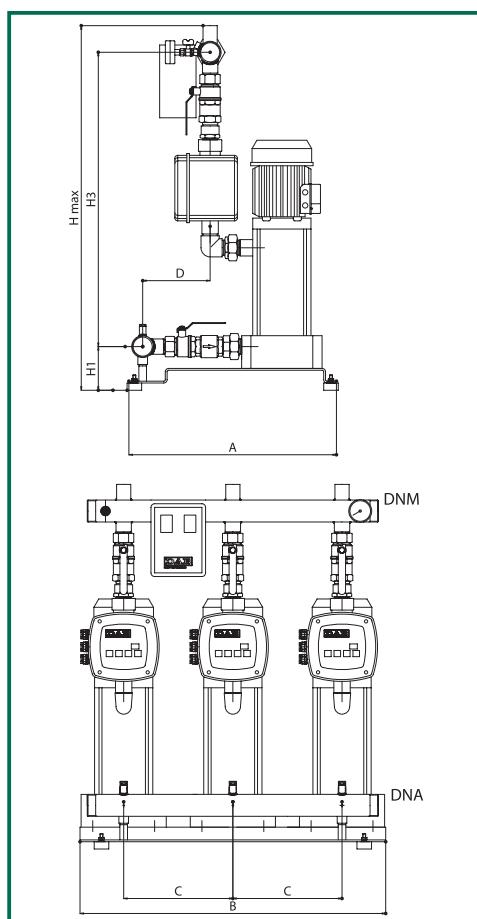
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KVCX SETS

Liquid temperature range:

Maximum ambient temperature:

Max flow rate: 36 m³/h



Overall performance – THREE pumps working simultaneously.

The performance of groups with smaller pumps (e.g. 3KVCX 20/50) is achieved through the setting of the Active Driver unit.

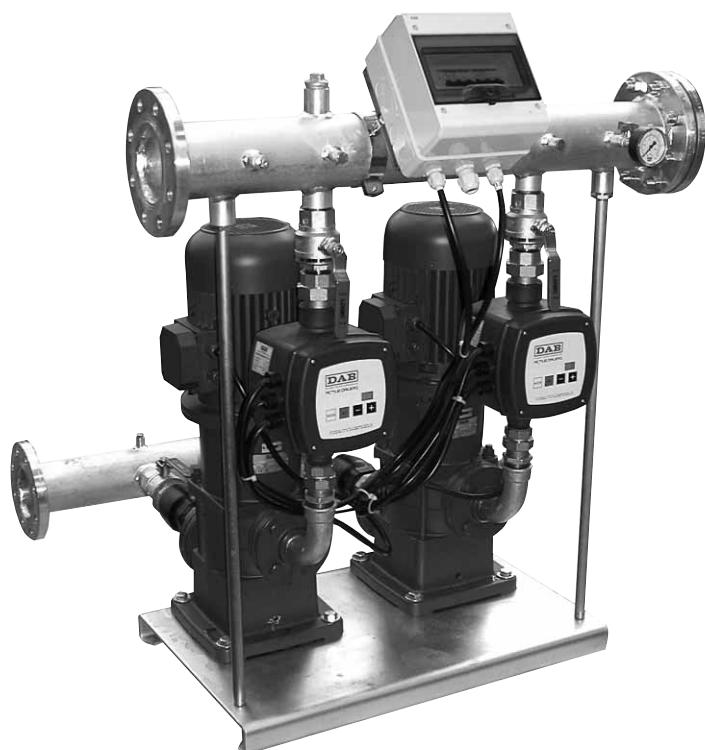
MODEL	A	B	D	H max	H1	H3	DNA	DNM	PACKAGING DIMENSIONS L/A	L/B	H	VOLUME m ³	WEIGHT Kg	
3 KVCX AD 30/50	655	840	300	185	857	120	664	2" 1/2	2" 1/2	1000	800	1400	1,2	131
3 KVCX AD 55/50	655	840	300	185	912	120	719	2" 1/2	2" 1/2	1000	800	1400	1,2	141
3 KVCX AD 75/50	655	840	300	185	1005	120	812	2" 1/2	2" 1/2	1000	800	1400	1,2	150
3 KVCX AD 30/80	655	840	300	185	912	120	719	2" 1/2	2" 1/2	1000	800	1400	1,2	136
3 KVCX AD 45/80	655	840	300	185	1005	120	812	2" 1/2	2" 1/2	1000	800	1400	1,2	150
3 KVCX AD 65/80	655	840	300	185	1032	120	839	2" 1/2	2" 1/2	1000	800	1400	1,2	156
3 KVCX AD 35/120	655	840	300	185	857	120	664	DN80	DN80	1000	800	1400	1,2	150
3 KVCX AD 45/120	655	840	300	185	912	120	719	DN80	DN80	1000	800	1400	1,2	156
3 KVCX AD 60/120	655	840	300	185	912	120	719	DN80	DN80	1000	800	1400	1,2	162
3 KVCX AD 70/120	655	840	300	185	1005	120	812	DN80	DN80	1000	800	1400	1,2	168
3 KVCX AD 85/120	655	840	300	185	1005	120	812	DN80	DN80	1000	800	1400	1,2	170

MODEL	VOLTAGE		P2 NOMINAL		In (set)	MODEL ACTIVE DRIVER	FLOW RATE m ³ /h	MAX PRESSURE BAR	STANDARD PRESSURE BAR
	50 Hz	kW	HP	A					
3 KVCX AD 30/50	1x220-240 V~	3x0,55	3x0,75	3x4,1	M/T 1,0	13,5-1	4	3,5	
3 KVCX AD 55/50	3x400 V~ + N *	3x1	3x1,36	3x7,6	M/T 1,0	13,5-1	6,5	5,5	
3 KVCX AD 75/50	3x400 V~ + N *	3x1,5	3x2	3x10,7	M/T 2,2	13,5-1	9,2	8	
3 KVCX AD 30/80	3x400 V~ + N *	3x0,8	3x1,1	3x6,5	M/T 1,0	21-2	4,5	3,5	
3 KVCX AD 45/80	3x400 V~ + N *	3x1,1	3x1,5	3x9,3	M/T 2,2	21-2	6,6	5,5	
3 KVCX AD 65/80	3x400 V~ + N *	3x2,2	3x3	3x12	M/T 2,2	21-2	9,2	8	
3 KVCX AD 35/120	3x400 V~ + N *	3x1,1	3x1,5	3x10,4	M/T 2,2	33-2	4,4	3,5	
3 KVCX AD 45/120	3x400 V~ + N *	3x1,85	3x2,5	3x13,6	M/T 2,2	33-2	6,0	5,0	
3 KVCX AD 60/120	3x400 V	3x2,2	3x3	3x5,4	T/T 3,0	33-2	7,5	6	
3 KVCX AD 70/120	3x400 V	3x3,0	3x4	3x6,80	T/T 3,0	33-2	9	7	
3 KVCX AD 85/120	3x400 V	3x3,0	3x4	3x7,80	T/T 5,5	33-2	9	8	

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

* Available on request with single-phase power supply (1x220-240 V~).

2 KV 32-40 SETS



CE

GENERAL DATA

Applications

Pressure units, particularly suitable for civil or industrial use, irrigation systems and washing plants. They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 2 Multistage KV 32 - KV 40 centrifugal electric pumps
- Galvanised steel plate complete with 4 anti-vibration rubber feet
- Galvanised suction and delivery manifolds
- Ball valves on the suction and delivery pipe union of each single pump
- Check valves on the suction side of each pump
- Galvanised end caps or galvanised blank flanges
- Radial pressure gauge with shut-off valve
- 8 litres membrane tank

ELECTRICAL PART

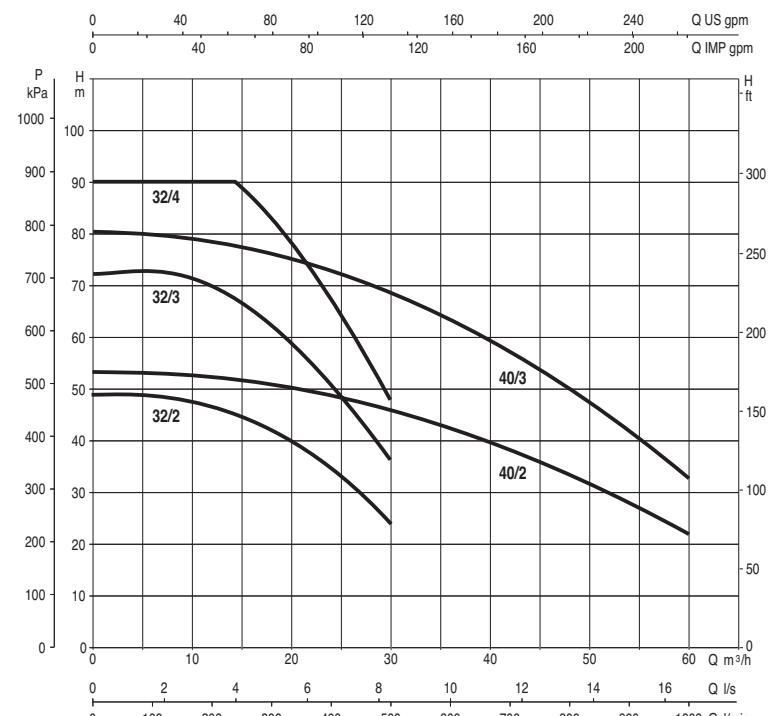
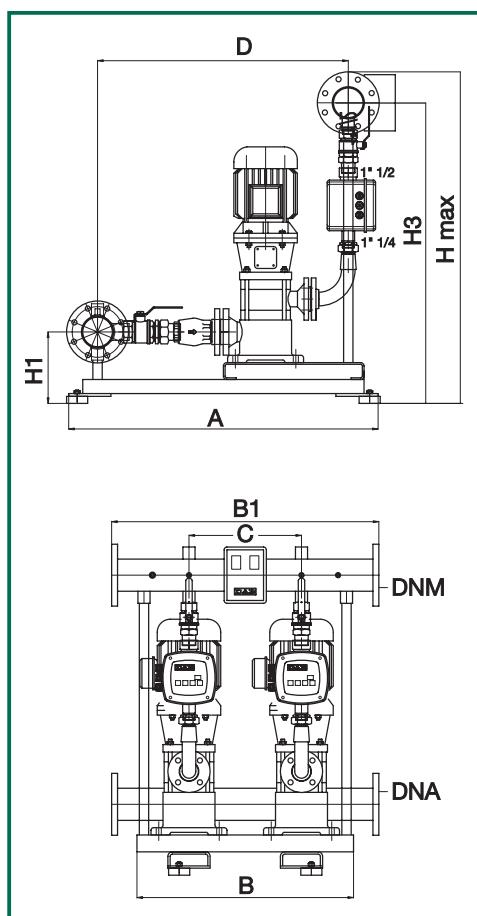
- 1 Active Driver unit on the delivery of each pump
- 1 Protection Control Unit

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KV 32-40 SETS

Liquid temperature range:

Maximum ambient temperature:



Overall performance – TWO pumps working simultaneously.

MODEL	A	B	B1	C	D	H _{max}	H1	H3	DNA	DNM	PACKAGING DIMENSIONS L/A	L/B	H	VOLUME m ³	WEIGHT Kg
2 KV AD 32/2	1100	770	950	400	800	1010	220	960	2 ¹ / ₂	2 ¹ / ₂	1200	1200	1500	2,1	265
2 KV AD 32/3	1100	770	950	400	800	1055	220	1005	2 ¹ / ₂	2 ¹ / ₂	1200	1200	1500	2,1	280
2 KV AD 32/4	1100	770	950	400	800	1100	220	1050	2 ¹ / ₂	2 ¹ / ₂	1200	1200	1500	2,1	295
2 KV AD 40/2	1100	770	950	400	890	1180	254	1070	DN 100	DN 100	1200	1200	1500	2,1	320
2 KV AD 40/3	1100	770	950	400	890	1230	254	1120	DN 100	DN 100	1200	1200	1500	2,1	360

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	MODEL ACTIVE DRIVER	FLOW RATE m ³ /h	MAX PRESSURE OBTAINABLE BAR	STANDARD PRESSURE BAR
		kW	HP					
2 KV AD 32/2	3x400 V	2x2,2	2x3,0	2x5,0	T/T 3,0	30 - 2	4,5	4,0
2 KV AD 32/3	3x400 V	2x3,0	2x4,0	2x7,0	T/T 3,0	30 - 2	7,0	6,0
2 KV AD 32/4	3x400 V	2x4,0	2x5,0	2x9,0	T/T 5,5	30 - 2	9,0	8,0
2 KV AD 40/2	3x400 V	2x4,0	2x5,5	2x9,0	T/T 5,5	60 - 4	5,0	4,0
2 KV AD 40/3	3x400 V	2x5,5	2x7,5	2x12,0	T/T 5,5	60 - 4	7,5	6,0

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

3 KV 32-40 SETS



CE

GENERAL DATA

Applications

Pressure units, particularly suitable for civil or industrial use, irrigation systems and washing plants. They are noteworthy for the absolute reliability, easy functioning and slightest maintenance.

Construction Characteristics - Components

HYDRAULIC PART

- 3 Multistage KV 32 - KV 40 centrifugal electric pumps
- Galvanised steel plate complete with 4 anti-vibration rubber feet
- Galvanised suction and delivery manifolds
- Ball valves on the suction and delivery pipe union of each single pump
- Check valves on the suction side of each pump
- Galvanised blank flanges
- Radial pressure gauge with shut-off valve
- 8 litres membrane tank

ELECTRICAL PART

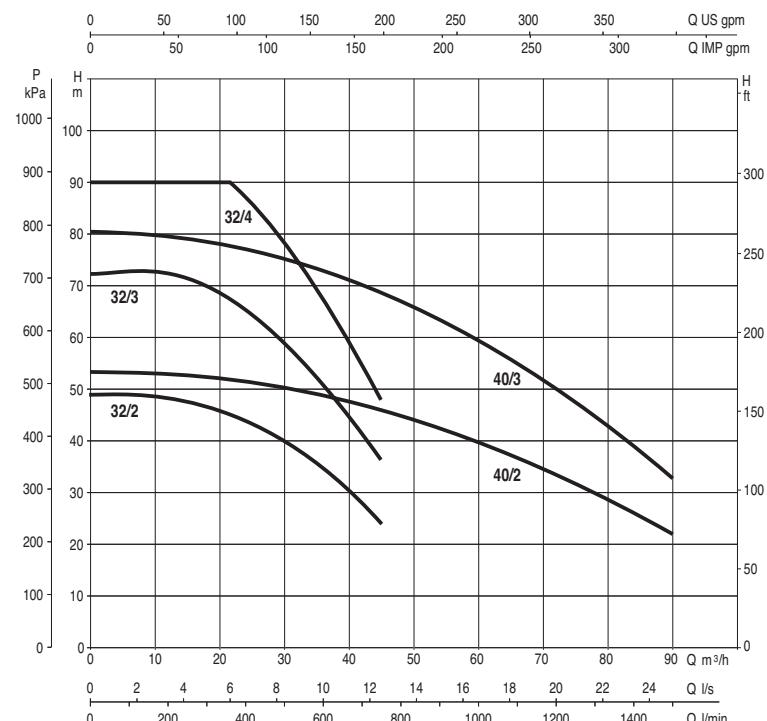
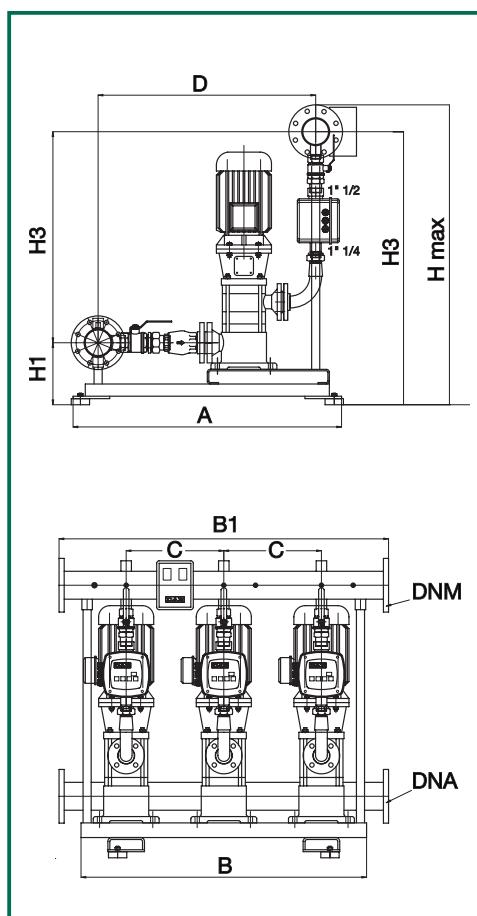
- 1 Active Driver unit on the delivery of each pump
- 1 Protection Control Unit

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KV 32-40 SETS

Liquid temperature range:

Maximum ambient temperature:



Overall performance – THREE pumps working simultaneously.

MODEL	A	B	B1	C	D	H_{max}	H1	H3	DNA	DNM	PACKAGING DIMENSIONS			VOLUME m ³	WEIGHT Kg
											L/A	L/B	H		
3 KV AD 32/2	1100	1170	1350	400	800	1010	220	960	DN 80	DN 80	1400	1800	2100	5,2	345
3 KV AD 32/3	1100	1170	1350	400	800	1055	220	1005	DN 80	DN 80	1400	1800	2100	5,2	372
3 KV AD 32/4	1100	1170	1350	400	800	1100	220	1050	DN 80	DN 80	1400	1800	2100	5,2	390
3 KV AD 40/2	1100	1170	1350	400	890	1180	254	1070	DN 100	DN 100	1400	1800	2100	5,2	416
3 KV AD 40/3	1100	1170	1350	400	890	1230	254	1120	DN 100	DN 100	1400	1800	2100	5,2	494

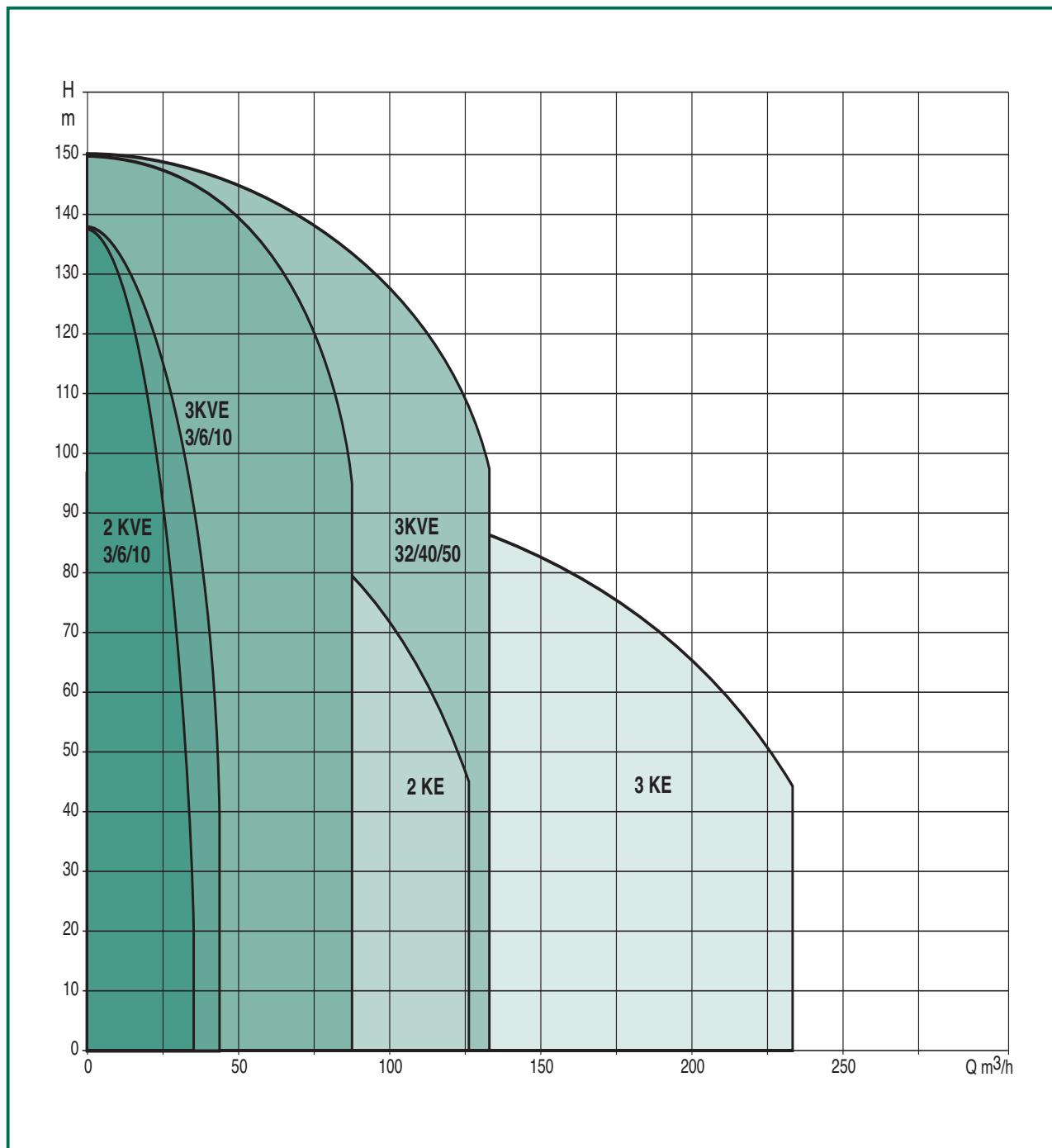
MODEL	VOLTAGE 50 HZ	P2 NOMINAL		In A	MODEL ACTIVE DRIVER	FLOW RATE m ³ /h	MAX PRESSURE OBTAINABLE BAR	STANDARD PRESSURE BAR
		kW	HP					
3 KV AD 32/2	3x400 V	3x2,2	3x3,0	3x5,0	T/T 3,0	45 - 2	4,5	4,0
3 KV AD 32/3	3x400 V	3x3,0	3x4,0	3x7,0	T/T 3,0	45 - 2	7,0	6,0
3 KV AD 32/4	3x400 V	3x4,0	3x5,0	3x9,0	T/T 5,5	45 - 2	9,0	8,0
3 KV AD 40/2	3x400 V	3x4,0	3x5,5	3x9,0	T/T 5,5	90 - 4	5,0	4,0
3 KV AD 40/3	3x400 V	3x5,5	3x7,5	3x12,0	T/T 5,5	90 - 4	7,5	6,0

The units are supplied packed in a strong cardboard box with a wooden pallet and installation and maintenance instructions.

INVERTER-CONTROLLED CONSTANT PRESSURE UNITS

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

SELECTION TABLES



INVERTER-CONTROLLED CONSTANT PRESSURE UNITS



CE

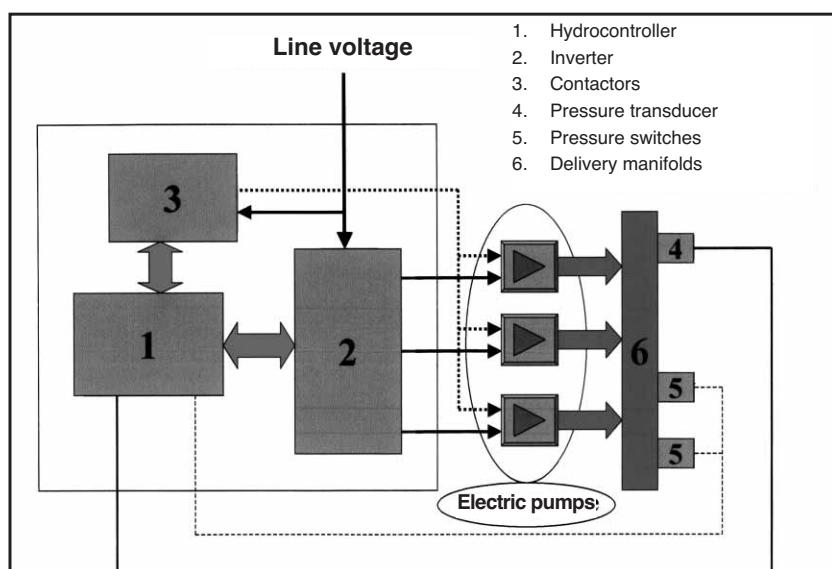
APPLICATIONS

The inverter-controlled sets have been especially designed and manufactured to satisfy requirements for constant pressure in modern system. Constant pressure-controlled systems are suitable for:

Aqueducts – Irrigation – Industry – Hotel installations – Domestic installations – Thermal baths

The design of the system features flexibility, reliability and user-friendliness.

- Aqueducts
 - Irrigation
 - Industry
- Hotel installations
- Domestic installations
 - Thermal baths





ADVANTAGES

Constant pressure – Reduced running costs – No water hammering – Compact size
Reduced maintenance - Reduced power factor correction – Reduced water consumption.

CONSTRUCTIONAL CHARACTERISTICS

The inverter-controlled units comprise two or three centrifugal pumps totally assembled on a galvanised steel bedplate that is tested and ready for fitting.

Including shut-off and non-return valves for each pump, galvanised steel suction and delivery manifolds, expansion tanks, pressure transducer, emergency pressure switches, **control panel with inverter**.

ELECTRICAL PANEL WITH INVERTER

The Inverter continuously adjusts the speed of rotation of **an electric pump** in order to maintain **constant pressure at a variable flow**.

The other electric pumps support the first by intervening **in a cascade** sequence following an increase in water requirements; during this phase, the Inverter works in the modulation mode.

HYDROCONTROLLER manages the **Inverter-commanded pump exchange system and alternates** the order in which they start in order to ensure that each pump is used as much as the others.

The exchange system can be adjusted on the HYDROCONTROLLER in the following three ways:

- 1) The Inverter commands a different pump
at the end of each operating cycle (standard setting)**
- 2) The Inverter commands a different pump
every 12 - 24 hours (adjustable)**
- 3) The Inverter always commands pump n° 1
(adjustable by the user)**

If the electronics should fail, the HYDROCONTROLLER **automatically** switches the unit to **the emergency pressure** switch mode for pumps 2 and 3 in order to ensure continuous operation, though not at constant pressure.

FEATURES OF THE ELECTRICAL PANEL

Electrical control panel housed in an IP 55 metal box and attached to the base of the electric pumps.

The panel is self-protected and protects the pumps from overloads, short-circuits and low pressure on the delivery of the pump.

The panel is supplied standard with:

- operating status display indicators (running - pumps shut-down, voltage presence) and alarm status (dry run – minimum pressure).
- HYDROCONTROLLER control unit with backlit display
- MANUAL - 0 – AUTOMATIC mode switch
- Contacts for remote alarm signalling (Inverter alarm – pump shut-down – dry run – over pressure)

The electrical panel can be connected to:

- RS 485 output for unit control and supervision on a Personal Computer (*)
- Float or pressure switch KIT as protection against operation without water (*)
- Maximum pressure switch KIT (*)

(*) **Optional items available on request**

FEATURES OF THE HYDROCONTROLLER

The easily accessible and simple programming control unit has four buttons as standard for programming the main parameters:

- the language in which the parameters are displayed (Italian-English-French-German-Spanish)
- the pressure to be constantly maintained
- unit input pressure
- correction constants (proportional and correction factor delay)
- second and third pump engagement delay
- plant load loss compensation
- inverter-controlled pump exchange system

2KE - 3KE SETS WITH BACK-TO-BACK TWIN IMPELLER CENTRIFUGAL PUMPS

2-3 PUMPS



2 KE sets



3 KE sets



GENERAL DATA

Applications

Water lifting sets suitable for installations for civil use: blocks of flats, hotels and touristic installations, industry. The use of twin impellers centrifugal K electric pumps offers a high power-pressure ratio, thereby ensuring constant flow. They are particularly compact, strong and efficient, and extremely silent-running.

Constructional characteristics

SETS WITH 2-3 PUMPS

HYDRAULIC PART

- 2-3 twin impeller centrifugal electric pumps on a horizontal axis;
- Galvanised steel plate complete with 4 anti-vibration rubber feet;
- 1 Ball valve with pipe union and 1 check valve on the suction side;
- Threaded delivery manifold in galvanised steel and female cap in galvanised tropicalised cast iron;
- Ball valve with delivery pipe union;
- Anti-vibration hose for connection to delivery pipes;
- Radial pressure gauge with shut-off valve;
- Adjustable galvanised steel column support for electrical panel;
- Membrane tanks.

ELECTRICAL PART

See electrical panel characteristics with inverter on pages 86-87

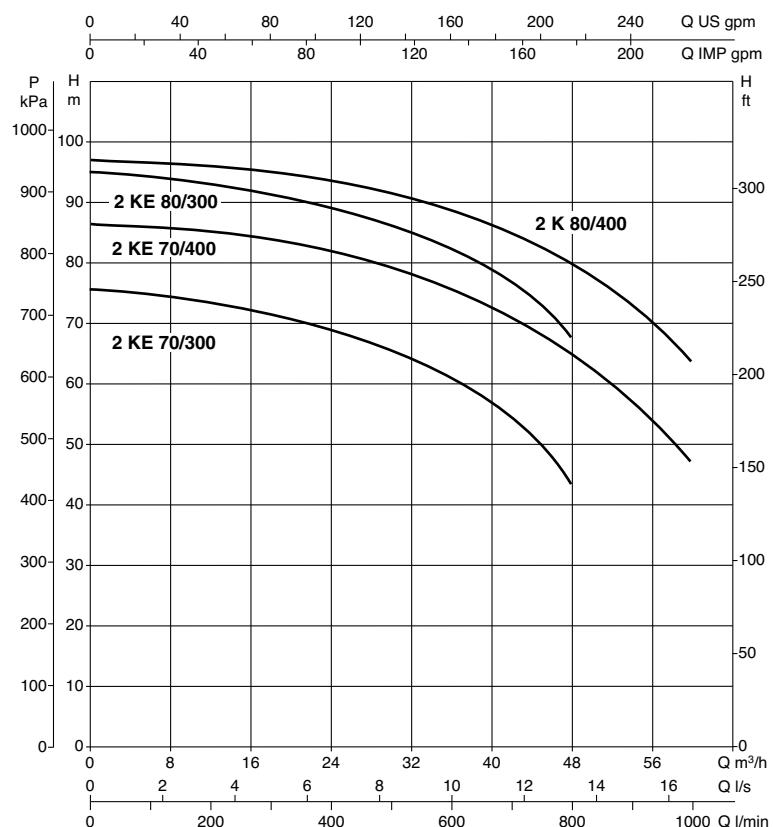
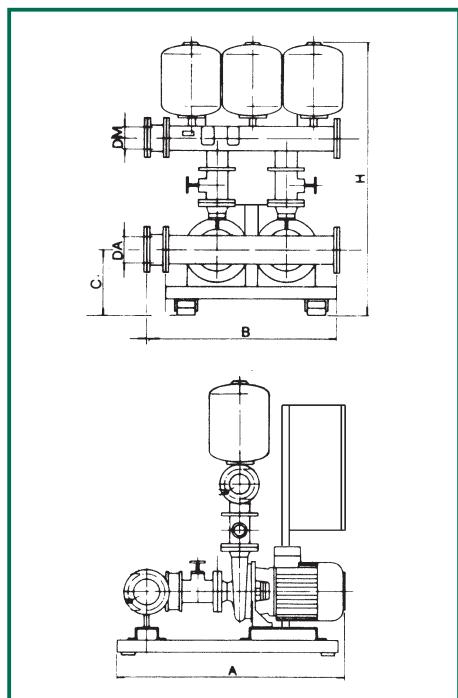
The units are supplied packed in a strong cardboard box with a wooden pallet and instructions sheet complete with wiring diagram.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KE SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 62 m³/h



MODEL	A	B	C	D	E	H	MANIFOLD		WEIGHT Kg
							DNA	DNM	
2 KE 70/300	1050	720	200	600	480	1200	DN 80 - PN 10	DN 80 - PN 10	204
2 KE 80/300	1050	720	200	600	480	1200	DN 80 - PN 10	DN 80 - PN 10	209
2 KE 70/400	1050	720	200	600	480	1200	DN 80 - PN 10	DN 80 - PN 10	209
2 KE 80/400	1050	720	200	600	480	1200	DN 80 - PN 10	DN 80 - PN 10	225

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
2 KE 70/300	3x400 V ~	2x5,5	2x7,5	2x12,3	6 - 48	7,3 - 4,5
2 KE 80/300	3x400 V ~	2x7,5	2x10	2x17,3	6 - 48	9 - 6,5
2 KE 70/400	3x400 V ~	2x9,2	2x12,5	2x17,8	9 - 62	8 - 4
2 KE 80/400	3x400 V ~	2x11	2x15	2x20,6	9 - 62	9 - 5,5

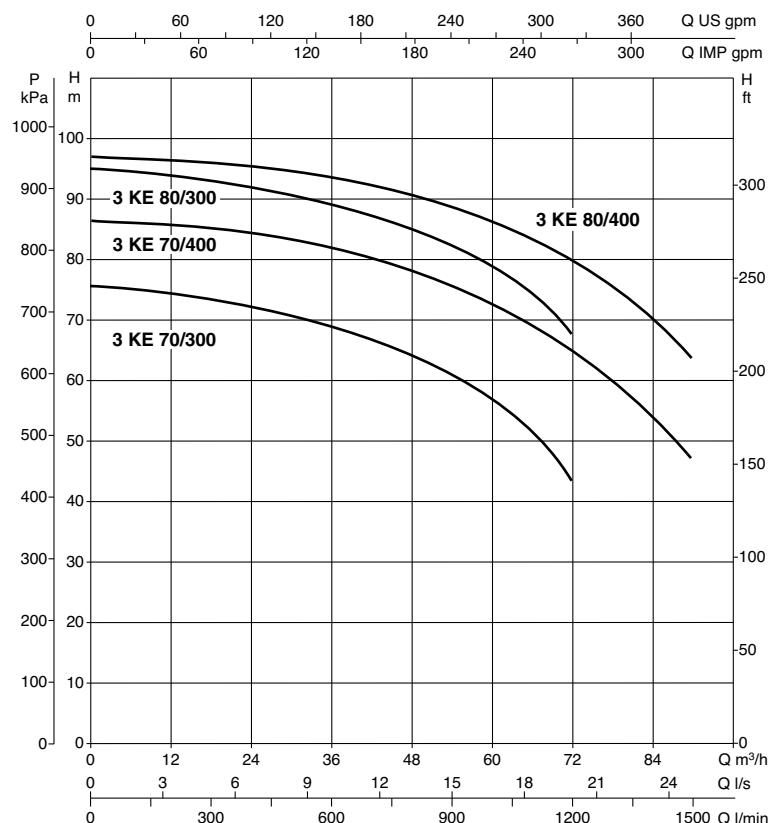
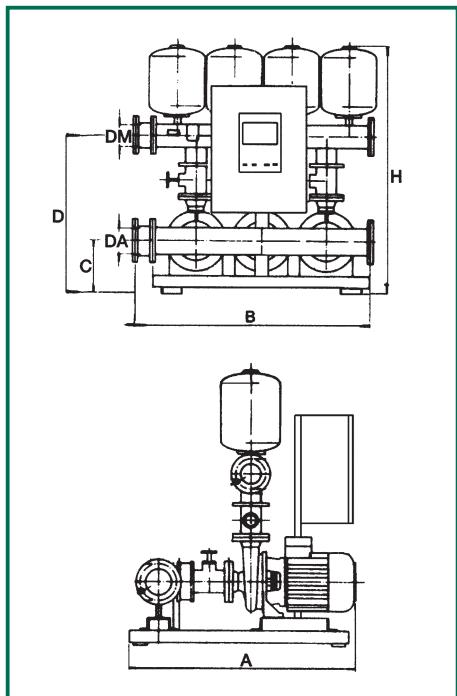
Units with unitary power over 7.5 kW: star-delta starting for second pump

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KE SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 93 m³/h



MODEL	A	B	C	D	E	H	MANIFOLD		WEIGHT Kg
							DNA	DNM	
3 KE 70/300	1220	1100	200	595	435	1185	DN 100 - PN 16	DN 100 - PN 16	328
3 KE 80/300	1220	1100	200	595	435	1185	DN 100 - PN 16	DN 100 - PN 16	404
3 KE 70/400	1220	1100	200	595	435	1185	DN 100 - PN 16	DN 100 - PN 16	353
3 KE 80/400	1220	1100	200	595	435	1185	DN 100 - PN 16	DN 100 - PN 16	428

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
3 KE 70/300	3x400 V ~	3x5,5	3x7,5	3x12,3	6 - 72	7,3 - 4,5
3 KE 80/300	3x400 V ~	3x7,5	3x10	3x17,3	6 - 72	9 - 6,5
3 KE 70/400	3x400 V ~	3x9,2	3x12,5	3x17,8	9 - 93	8 - 4
3 KE 80/400	3x400 V ~	3x11	3x15	3x20,6	9 - 93	9 - 5,5

Units with unitary power over 7.5 kW: star-delta starting for second and third pump

2KE - 3KE SETS WITH SINGLE IMPELLER CENTRIFUGAL PUMPS

2-3 PUMPS



2 KE sets



3 KE sets

CE

GENERAL DATA

Applications

Designed for lifting and transfer systems in special industrial and agricultural processes. The use of large-capacity single impeller "K" electric pumps offers a high level of reliability and strength as well as a simple layout.

Constructional characteristics

SETS WITH 2-3 PUMPS

HYDRAULIC PART

- 2 or 3 single impeller centrifugal electric pumps on a horizontal axis;
- Galvanised steel plate complete with 4 anti-vibration rubber feet;
- Flanged gate valve, flanged check valve offering protection against water hammering, flanged elastic joint on the suction side;
- Galvanised flanged delivery manifold complete with galvanised blank flange and flanged gate valve;
- Anti-vibration flexible coupling for connection to delivery pipes;
- Radial pressure gauge with shut-off valve;
- Adjustable galvanised steel column support for electrical panel;
- Membrane tanks.

ELECTRICAL PART

See electrical panel characteristics with inverter on page 86-87.

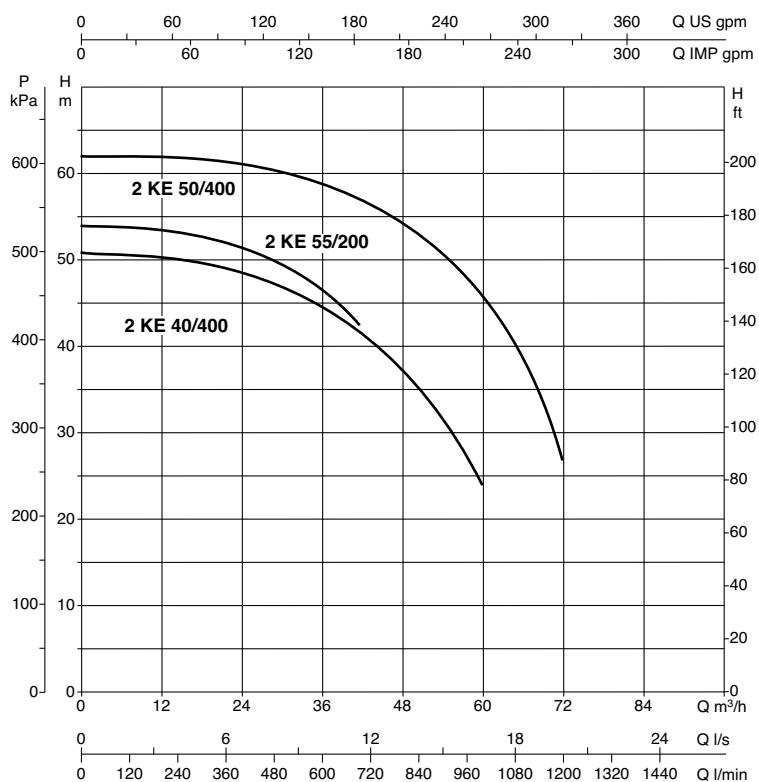
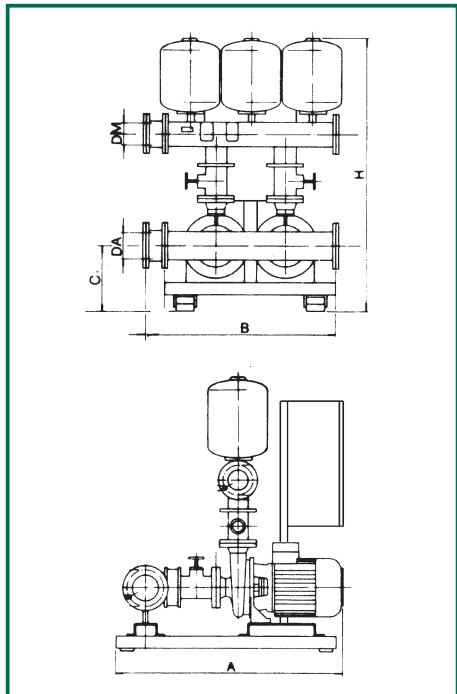
The units are supplied packed in a strong cardboard box with a wooden pallet and instructions sheet complete with wiring diagram.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KE SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 72 m³/h



MODEL	A	B	C	D	E	H	MANIFOLD		WEIGHT Kg
							DNA	DNM	
2 KE 55/200	1050	720	200	585	435	1200	DN 80 - PN 10	DN 80 - PN 10	204
2 KE 40/400	1050	720	200	585	435	1200	DN 80 - PN 10	DN 80 - PN 10	485
2 KE 50/400	1050	720	200	585	435	1200	DN 80 - PN 10	DN 80 - PN 10	485

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
2 KE 55/200	3x400 V ~	2x4	2x5,5	2x9,4	6 - 40	5 - 4
2 KE 40/400	3x400 V ~	2x5,5	2x7,5	2x11,5	12 - 60	4,8 - 2,5
2 KE 50/400	3x400 V ~	2x7,5	2x10	2x15	13 - 66	5,8 - 3,3

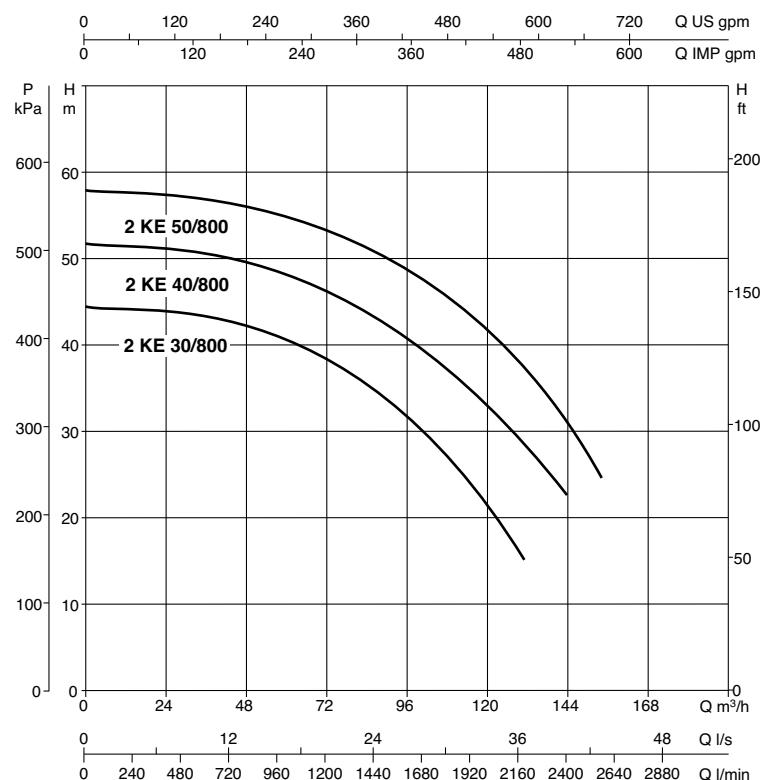
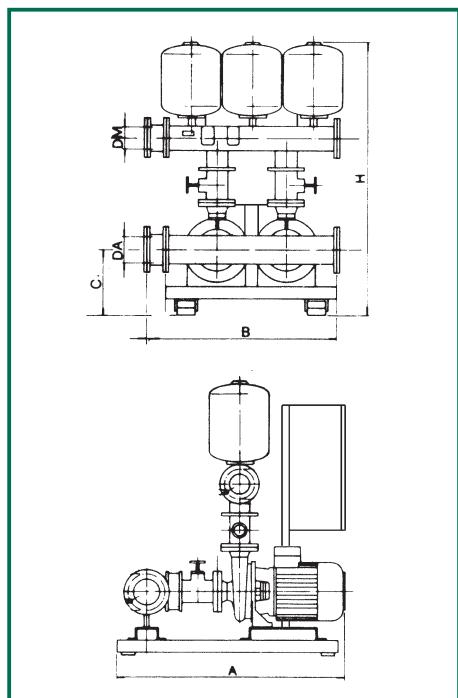
Units with unitary power over 7.5 kW: star-delta starting for second pump

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KE SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 156 m³/h



MODEL	A	B	C	D	E	H	MANIFOLD		WEIGHT Kg
							DNA	DNM	
2 KE 30/800	1300	1000	300	805	650	1450	DN 150 - PN 10	DN 125 - PN 10	543
2 KE 40/800	1300	1000	300	805	650	1450	DN 150 - PN 10	DN 125 - PN 10	551
2 KE 50/800	1300	1000	300	805	650	1450	DN 150 - PN 10	DN 125 - PN 10	572

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
2 KE 30/800	3x400 V ~	2x7,5	2x10	2x14	18 - 126	4 - 2
2 KE 40/800	3x400 V ~	2x9,2	2x12,5	2x18	24 - 132	4,8 - 2,5
2 KE 50/800	3x400 V ~	2x11	2x15	2x20,5	24 - 156	5,4 - 2,4

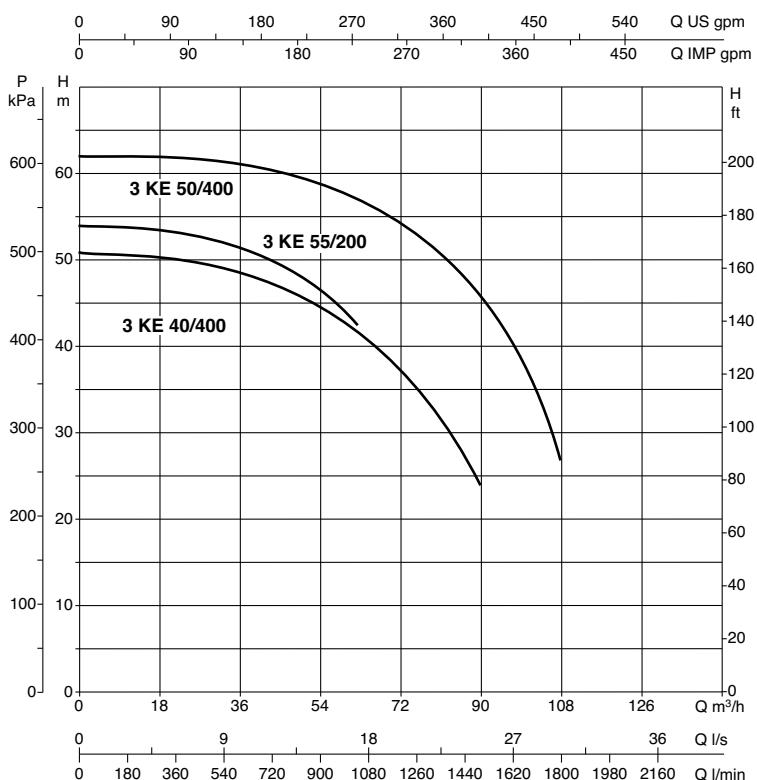
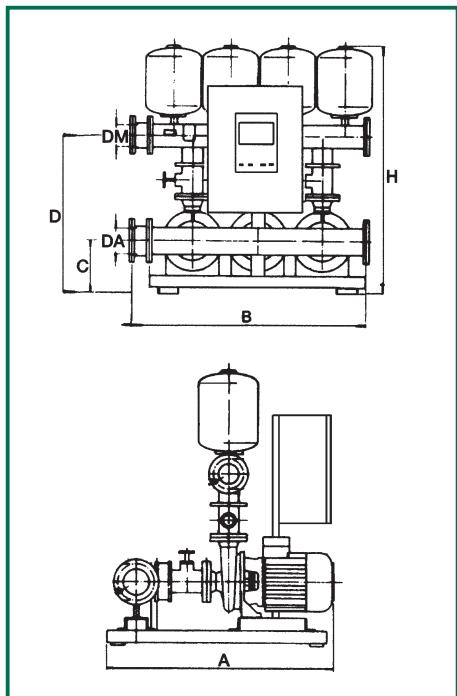
Units with unitary power over 7.5 kW: star-delta starting for second pump

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KE SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 108 m³/h



MODEL	A	B	C	D	E	H	MANIFOLD		WEIGHT Kg
							DNA	DNM	
3 KE 55/200	1220	1100	200	595	435	1185	DN 80 - PN 10	DN 80 - PN 10	328
3 KE 40/400	1220	1100	200	595	435	1185	DN 80 - PN 10	DN 80 - PN 10	695
3 KE 50/400	1220	1100	200	595	435	1185	DN 80 - PN 10	DN 80 - PN 10	717

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
3 KE 55/200	3x400 V ~	3x4	3x5,5	3x16 - 9	6 - 60	5 - 4
3 KE 40/400	3x400 V ~	3x5,5	3x7,5	3x12	12 - 90	4,8 - 2,5
3 KE 50/400	3x400 V ~	3x7,5	3x10	3x15	13 - 99	5,8 - 3,3

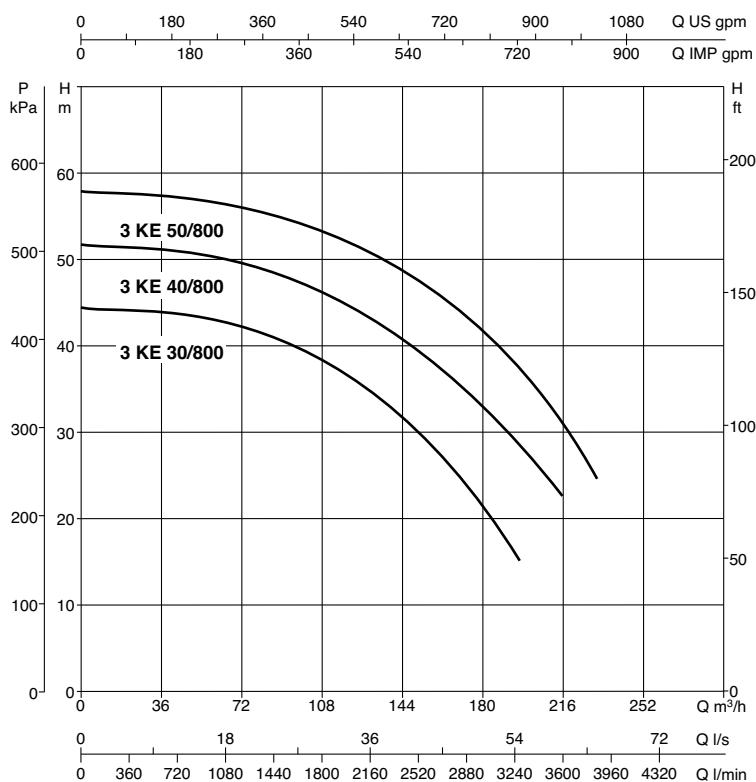
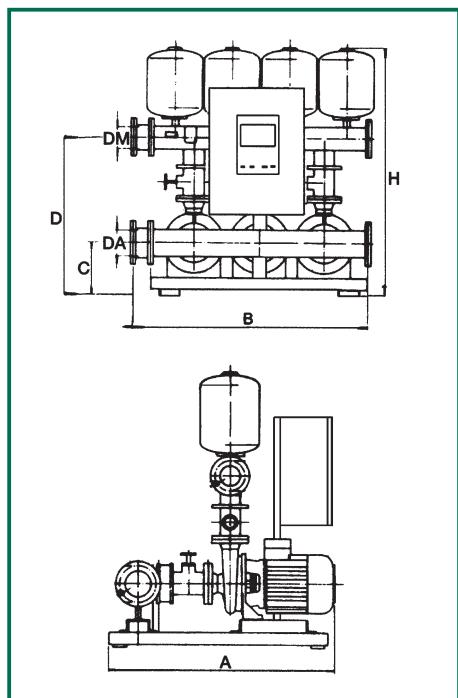
Units with unitary power over 7.5 kW: star-delta starting for second and third pump

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KE SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 234 m³/h



MODEL	A	B	C	D	E	H	MANIFOLD		WEIGHT Kg
							DNA	DNM	
3 KE 30/800	1300	1200	300	805	650	1415	DN 150 - PN 10	DN 150 - PN 10	780
3 KE 40/800	1300	1200	300	805	650	1415	DN 150 - PN 10	DN 150 - PN 10	798
3 KE 50/800	1300	1200	300	805	650	1415	DN 150 - PN 10	DN 150 - PN 10	818

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
3 KE 30/800	3x400 V ~	3x7,5	3x10	3x12	18 - 189	4 - 2
3 KE 40/800	3x400 V ~	3x9,2	3x12,5	3x15	24 - 198	4,8 - 2,5
3 KE 50/800	3x400 V ~	3x11	3x15	3x18	24 - 234	5,4 - 2,4

Units with unitary power over 7.5 kW: star-delta starting for second and third pump

2-3 KVE 3 - 6 - 10 SETS WITH 2-3 MULTISTAGE CENTRIFUGAL PUMPS ON A VERTICAL AXIS

2 PUMPS
3 PUMPS



2 KVE sets



3 KVE sets



Applications

Water lifting sets suitable for domestic, small installations for civil, agricultural or industrial use. The use of vertically-mounted multistage centrifugal electric pumps ensures outstanding performance and elevated efficiency. They are particularly compact and strong, totally reliable and extremely silent-running.

Constructional characteristics

GRUPPI CON 2-3 POMPE

HYDRAULIC PART

- 2-3 KV3 - 6 - 10 vertical multistage electric pump;
- Tropicalised galvanised sheet base complete with 4 anti-vibration rubber feet;
- Suction and delivery manifold in tropicalised galvanised steel (threaded for 2 KVE 3-6-10 and 3 KV 3-6 sets, flanged for 3 KVE 10 sets);
- Caps or blank flanges for closing manifolds;
- Ball valves on the suction and delivery pipe union of each single pump;
- Check valve on the suction side of each pump;
- 2-3 membrane tanks;
- Radial pressure gauge with shut-off valve;
- Galvanised steel column support for electrical panel;

ELECTRICAL PART

See electrical panel characteristics with inverter on page 86-87.

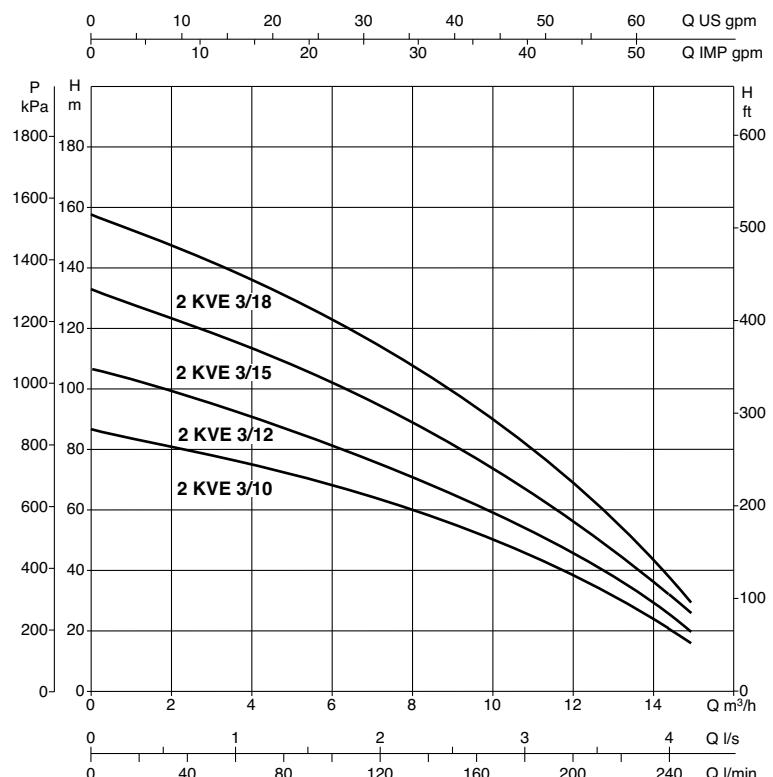
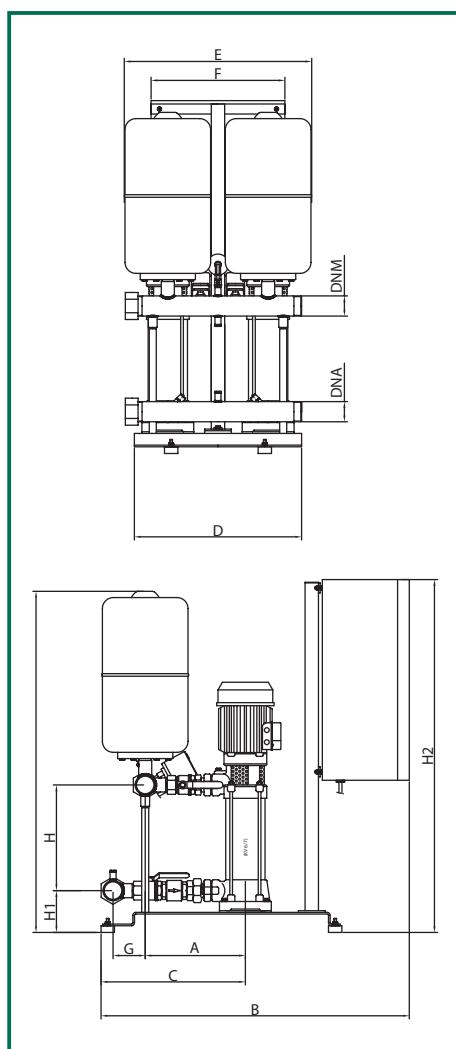
The units are supplied packed in a strong cardboard box with a wooden pallet and instructions sheet complete with wiring diagram.

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KVE 3 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 16 m³/h



MODEL	A	B	C	D	E	F	G	H	H1	H2	MANIFOLD DNA	DNM	WEIGHT Kg
2 KVE 3/10	292	922	432	500	560	400	100	1117	412	1055	2"	2"	123
2 KVE 3/12	292	922	432	500	560	400	100	1181	476	1055	2"	2"	131
2 KVE 3/15	292	922	432	500	560	400	100	1277	572	1055	2"	2"	134
2 KVE 3/18	292	922	432	500	560	400	100	1373	668	1055	2"	2"	141

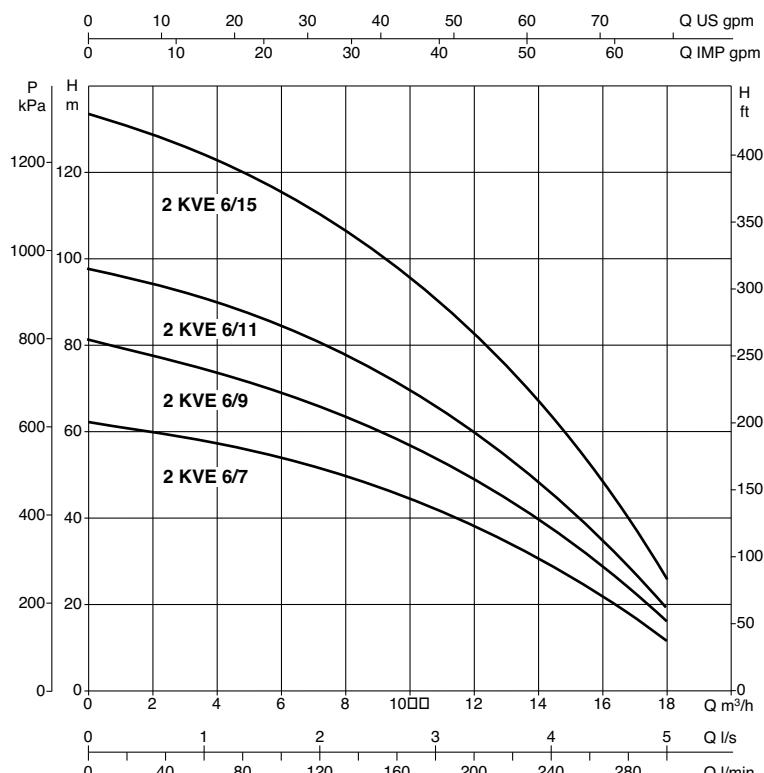
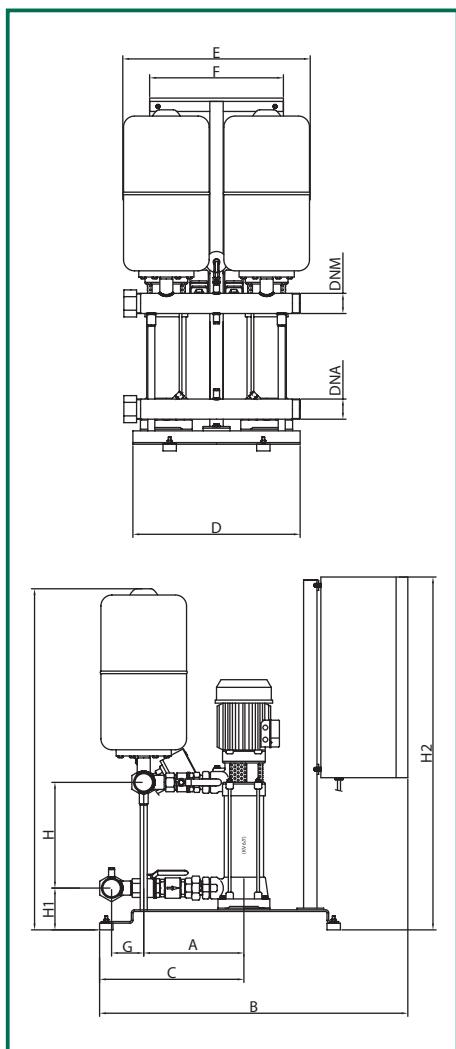
MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
2 KVE 3/10	3x400 V ~	2x1,1	2x1,5	2x3,2	2 - 16	7 - 2
2 KVE 3/12	3x400 V ~	2x1,5	2x2	2x3,7	2 - 16	9 - 2,5
2 KVE 3/15	3x400 V ~	2x1,84	2x2,5	2x4,3	2 - 16	11 - 3
2 KVE 3/18	3x400 V ~	2x2,2	2x3	2x5,8	2 - 16	13 - 4

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KVE 6 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 18 m³/h



MODEL	A	B	C	D	E	F	G	H	H1	H2	MANIFOLD DNA	DNM	WEIGHT Kg
2 KVE 6/7	292	922	432	500	560	400	100	1021	316	1055	2"	2"	125
2 KVE 6/9	292	922	432	500	560	400	100	1085	380	1055	2"	2"	121
2 KVE 6/11	292	922	432	500	560	400	100	1149	444	1055	2"	2"	127
2 KVE 6/15	292	922	432	500	560	400	100	1277	572	1055	2"	2"	147

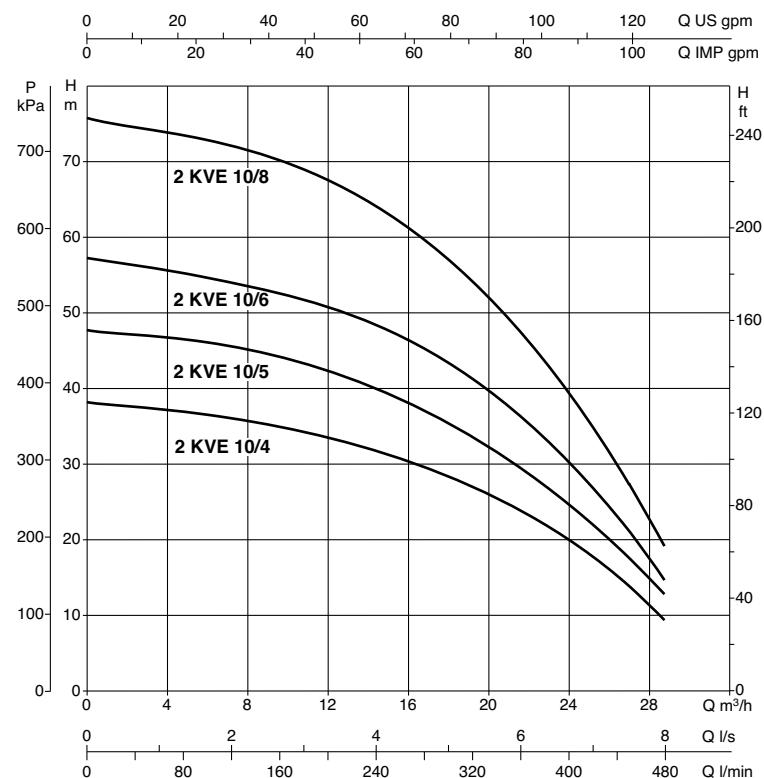
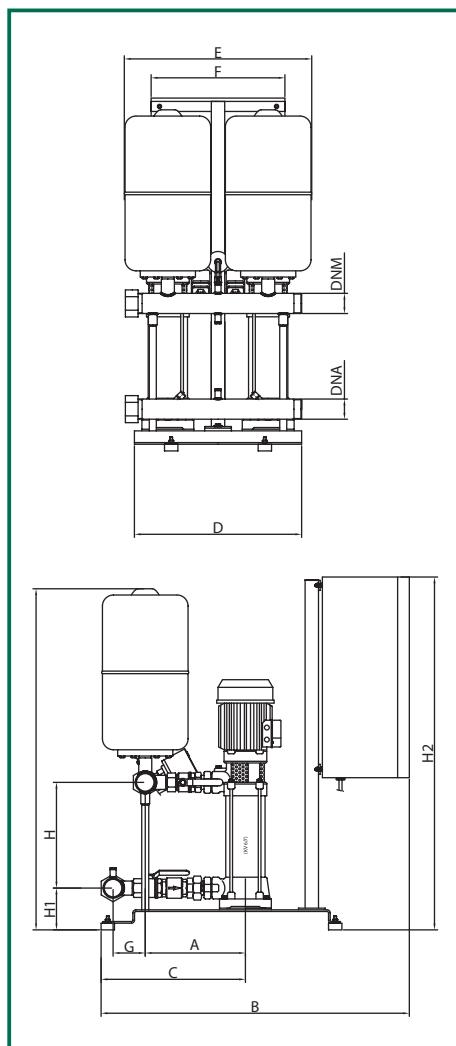
MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
2 KVE 6/7	3x400 V ~	2x1,1	2x1,5	2x2,9	2 - 18	5 - 2
2 KVE 6/9	3x400 V ~	2x1,5	2x2	2x3,6	2 - 18	7 - 2,5
2 KVE 6/11	3x400 V ~	2x1,84	2x2,5	2x4,2	2 - 18	9 - 3
2 KVE 6/15	3x400 V ~	2x2,2	2x3	2x6,3	2 - 18	12 - 4

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KVE 10 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 29 m³/h



MODEL	A	B	C	D	E	F	G	H	H1	H2	MANIFOLD DNA	DNM	WEIGHT Kg
2 KVE 10/4	300	922	432	500	560	400	100	925	220	1055	2 1/2"	2 1/2"	117
2 KVE 10/5	300	922	432	500	560	400	100	957	252	1055	2 1/2"	2 1/2"	130
2 KVE 10/6	300	922	432	500	560	400	100	989	284	1055	2 1/2"	2 1/2"	135
2 KVE 10/8	300	922	432	500	560	400	100	1053	348	1055	2 1/2"	2 1/2"	133

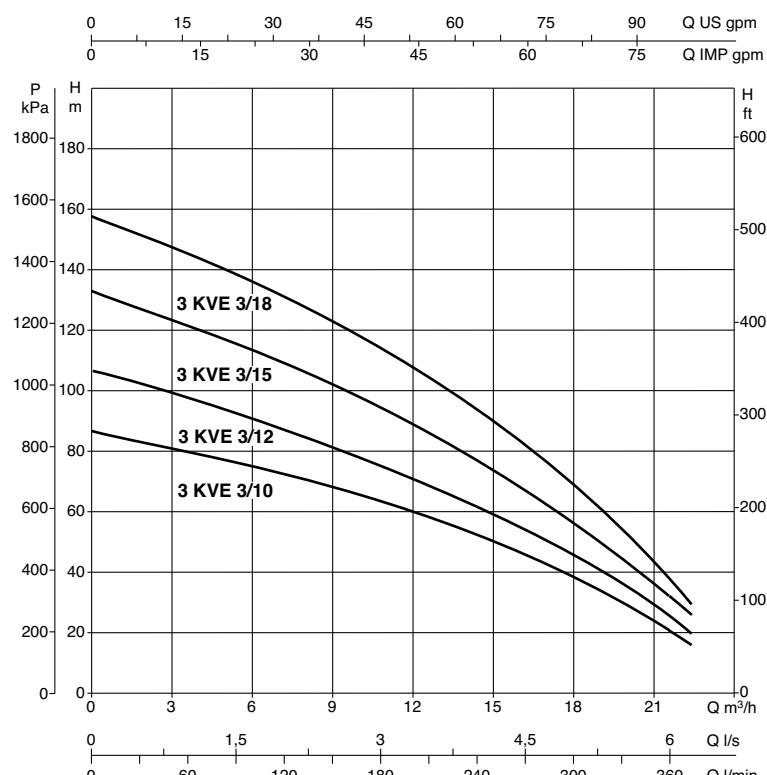
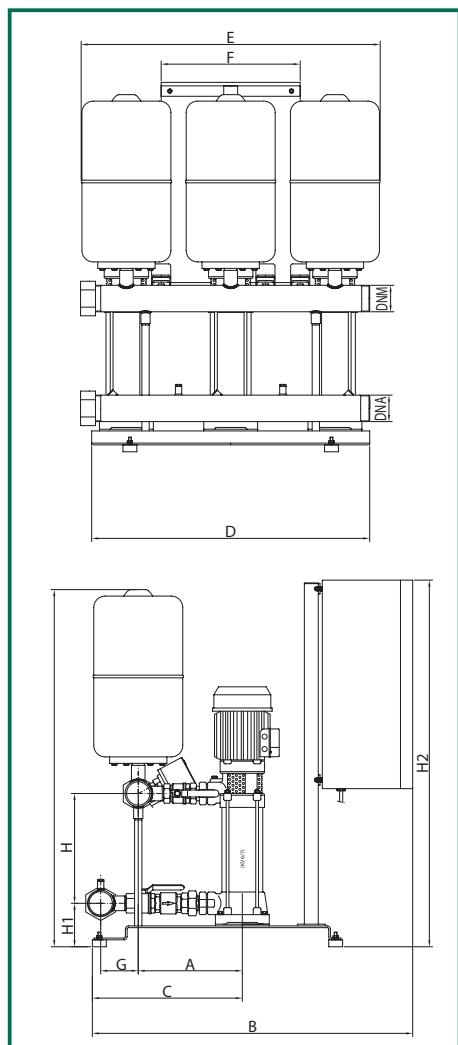
MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
2 KVE 10/4	3x400 V ~	2x1,1	2x1,5	2x3,5	3 - 29	3,5 - 1,5
2 KVE 10/5	3x400 V ~	2x1,5	2x2	2x3,9	3 - 29	4,5 - 2
2 KVE 10/6	3x400 V ~	2x1,5	2x2	2x5	3 - 29	5 - 2
2 KVE 10/8	3x400 V ~	2x2,2	2x3	2x6,8	3 - 29	7 - 3

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KVE 3 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 24 m³/h



MODEL	A	B	C	D	E	F	G	H	H1	H2	MANIFOLD DNA	WEIGHT Kg
											DNM	
3 KVE 3/10	300	922	432	800	860	400	100	1125	412	1055	2 1/2"	248
3 KVE 3/12	300	922	432	800	860	400	100	1189	476	1055	2 1/2"	250
3 KVE 3/15	300	922	432	800	860	400	100	1285	572	1055	2 1/2"	253
3 KVE 3/18	300	922	432	800	860	400	100	1381	668	1055	2 1/2"	255

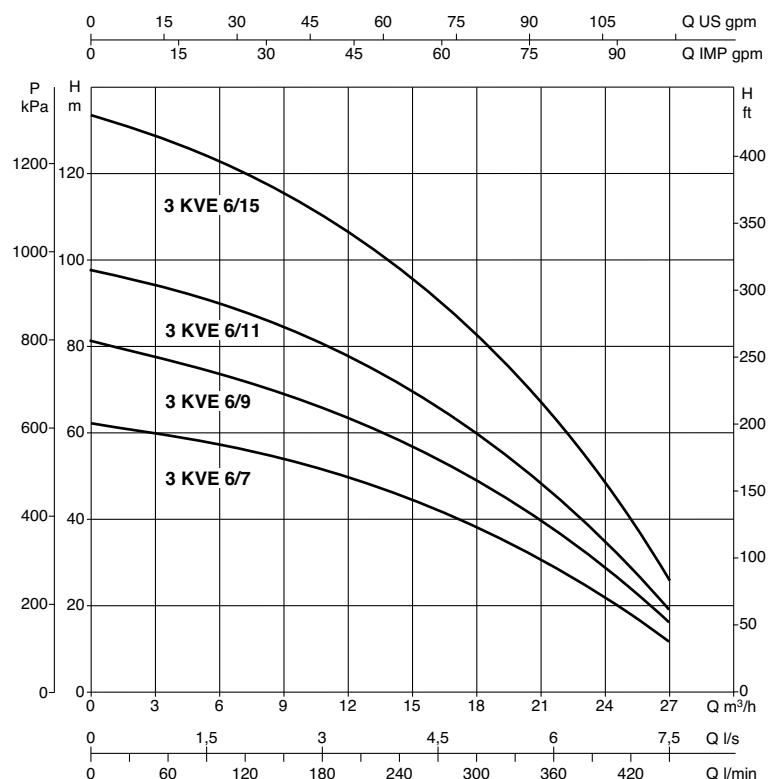
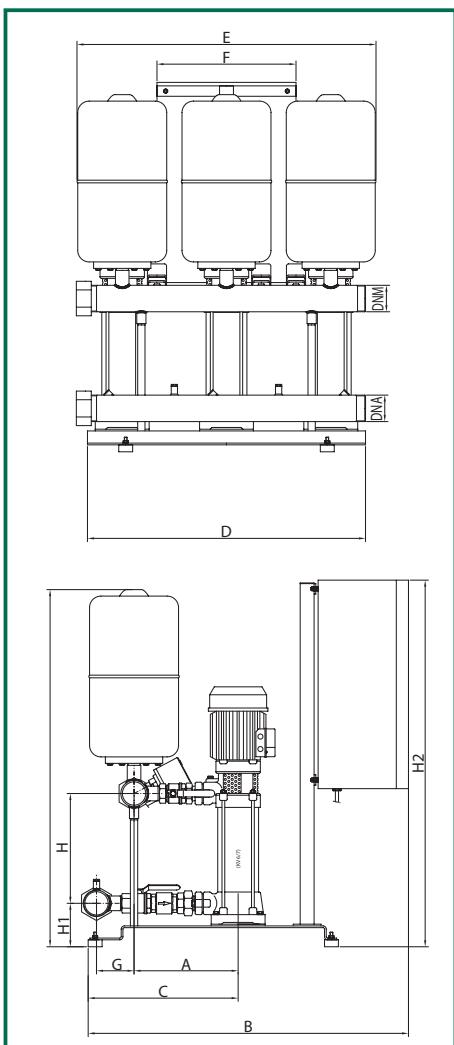
MODEL	VOLTAGE	P2 NOMINAL		In	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		50 Hz	kW			
3 KVE 3/10	3x400 V ~		3x1,1	3x1,5	3x3,2	2 - 24
3 KVE 3/12	3x400 V ~		3x1,47	3x2	3x3,7	2 - 24
3 KVE 3/15	3x400 V ~		3x1,87	3x2,5	3x4,3	2 - 24
3 KVE 3/18	3x400 V ~		3x2,2	3x3	3x5,8	2 - 24
						13 - 4

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KVE 6 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 27 m³/h



MODEL	A	B	C	D	E	F	G	H	H1	H2	MANIFOLD DNA	DNM	WEIGHT Kg
3 KVE 6/7	300	922	432	800	860	400	100	1029	316	1055	2 1/2"	2 1/2"	125
3 KVE 6/9	300	922	432	800	860	400	100	1093	380	1055	2 1/2"	2 1/2"	248
3 KVE 6/11	300	922	432	800	860	400	100	1157	444	1055	2 1/2"	2 1/2"	256
3 KVE 6/15	300	922	432	800	860	400	100	1285	572	1055	2 1/2"	2 1/2"	265

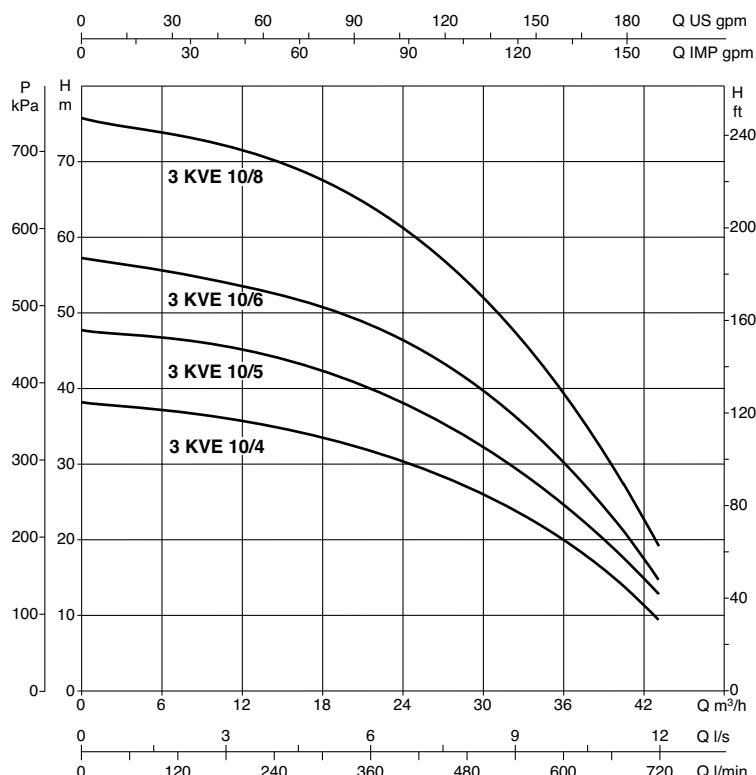
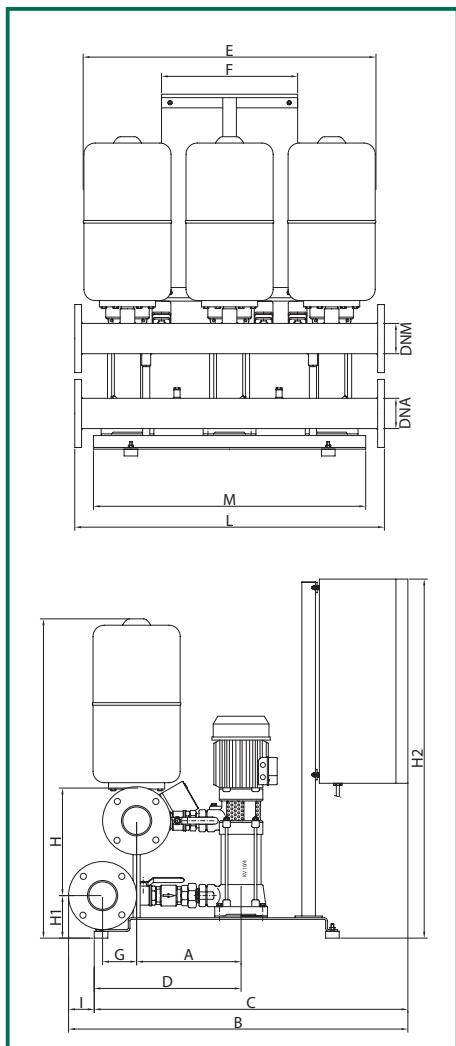
MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
3 KVE 6/7	3x400 V ~	3x1,1	3x1,5	3x2,9	2 - 27	5 - 2
3 KVE 6/9	3x400 V ~	3x1,47	3x2	3x3,6	2 - 27	7 - 2,5
3 KVE 6/11	3x400 V ~	3x1,84	3x2,5	3x4,2	2 - 27	9 - 3
3 KVE 6/15	3x400 V ~	3x2,2	3x3	3x6,3	2 - 27	12 - 4

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KVE 10 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 43 m³/h

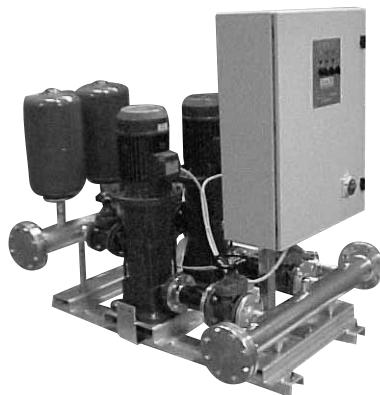


MODEL	A	B	C	D	E	F	G	H	H1	H2	I	L	M	MANIFOLD DNA	DNM	WEIGHT Kg
3 KVE 10/4	307	997	922	432	860	400	100	938	220	1055	76	910	800	DN 80	DN 80	268
3 KVE 10/5	307	997	922	432	860	400	100	970	252	1055	76	910	800	DN 80	DN 80	269
3 KVE 10/6	307	997	922	432	860	400	100	1002	284	1055	76	910	800	DN 80	DN 80	271
3 KVE 10/8	307	997	922	432	860	400	100	1066	348	1055	76	910	800	DN 80	DN 80	267

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
3 KVE 10/4	3x400 V ~	3x1,1	3x1,5	3x3,5	3 - 43	3,5 - 1,5
3 KVE 10/5	3x400 V ~	3x1,47	3x2	3x3,9	3 - 43	4,5 - 2
3 KVE 10/6	3x400 V ~	3x1,84	3x2,5	3x5	3 - 43	5 - 2
3 KVE 10/8	3x400 V ~	3x2,2	3x3	3x6,8	3 - 43	7 - 3

2KVE - 3KVE 32 - 40 - 50 SETS WITH MULTISTAGE CENTRIFUGAL PUMPS ON A VERTICAL AXIS

2-3 PUMPS



2 KVE sets



3 KVE sets



Applications

The use of vertically-mounted multistage centrifugal "KV" pumps offers high performance, versatility of use and silent-running. Used in large civil installations, they must be chosen by specialist engineers capable of assessing the real requirements of the systems in question.

Constructional characteristics

SETS WITH 2-3 PUMPS

HYDRAULIC PART

- 2-3 KV32 – KV 40 – KV 50 vertical multistage electric pumps;
- Galvanised steel plate complete with 4 anti-vibration rubber feet;
- Suction and delivery manifold in galvanised steel (threaded for KV 32, flanged and complete with blank flange for KV 40 and KV 50 sets);
- Suction and delivery shut-off valves (threaded for KV 32 sets, flanged for KV 40 and KV 50 sets);
- Suction check valve (threaded for KV 32, flanged for KV 40 and KV 50 sets);
- Anti-vibration hose for connection to delivery pipes for KV 32 sets;
- Anti-vibration flexible couplings for connection to suction and delivery pipes for KV40 and KV 50 sets;
- BY-PASS circuit complete with shut-off and automatic safety valve;
- Radial pressure gauge with shut-off valve;
- Adjustable galvanised steel column support for electrical panel;
- Membrane tanks.

ELECTRICAL PART

See electrical panel characteristics with inverter on page 86-87.

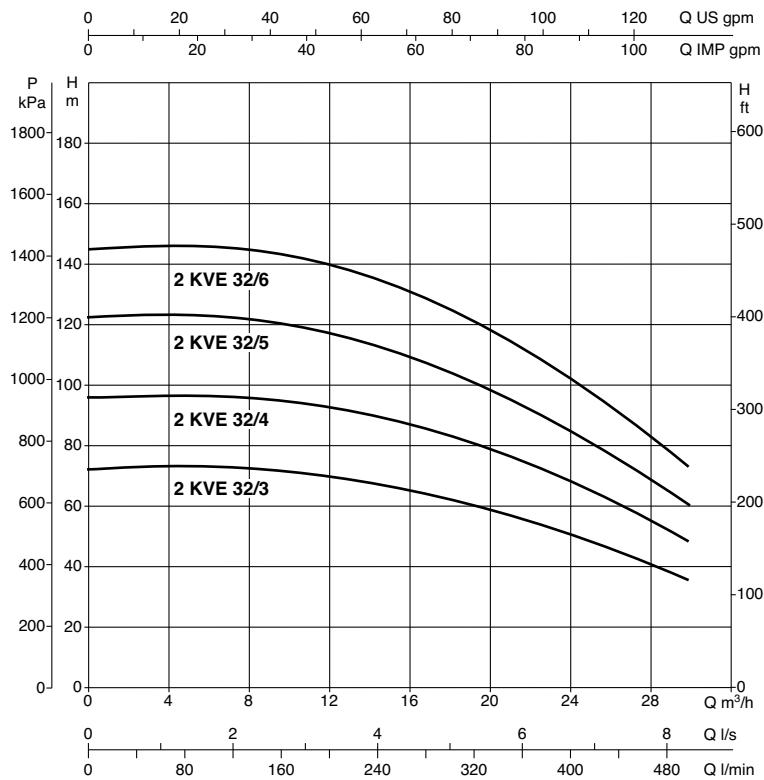
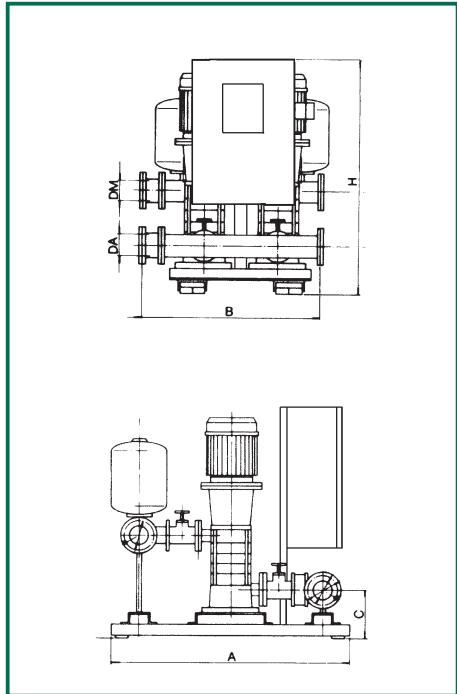
The units are supplied packed in a strong cardboard box with a wooden pallet and instructions/maintenance sheet complete with wiring diagram.

Le curve di prestazione sono basate su valori di viscosità cinematica = 1 mm²/s e densità pari a 1000 Kg/m³. Tolleranza delle curve secondo ISO 9906.

GRUPPI 2 KVE 32

Campo di temperatura del liquido pompato: da -15°C a +70°C
Massima temperatura ambiente: +40°C

Max flow rate: 30 m³/h



MODEL	A	B	C	H max	MANIFOLD		WEIGHT Kg
					DNA	DNM	
2 KVE 32/3	1100	1000	245	1300	2 1/2"	2 1/2"	325
2 KVE 32/4	1100	1000	245	1300	2 1/2"	2 1/2"	351
2 KVE 32/5	1100	1000	245	1300	2 1/2"	2 1/2"	402
2 KVE 32/6	1100	1000	245	1300	2 1/2"	2 1/2"	414

MODEL	VOLTAGE	P2 NOMINAL		In	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		50 Hz	KW	HP		
2 KVE 32/3	3x400 V ~	2x3	2x4	2x12 - 7	4 - 30	7 - 3
2 KVE 32/4	3x400 V ~	2x4	2x5,5	2x16 - 9	4 - 30	9 - 5
2 KVE 32/5	3x400 V ~	2x5,5	2x7,5	2x12	4 - 30	12 - 6
2 KVE 32/6	3x400 V ~	2x7,4	2x10	2x15	4 - 30	14 - 7

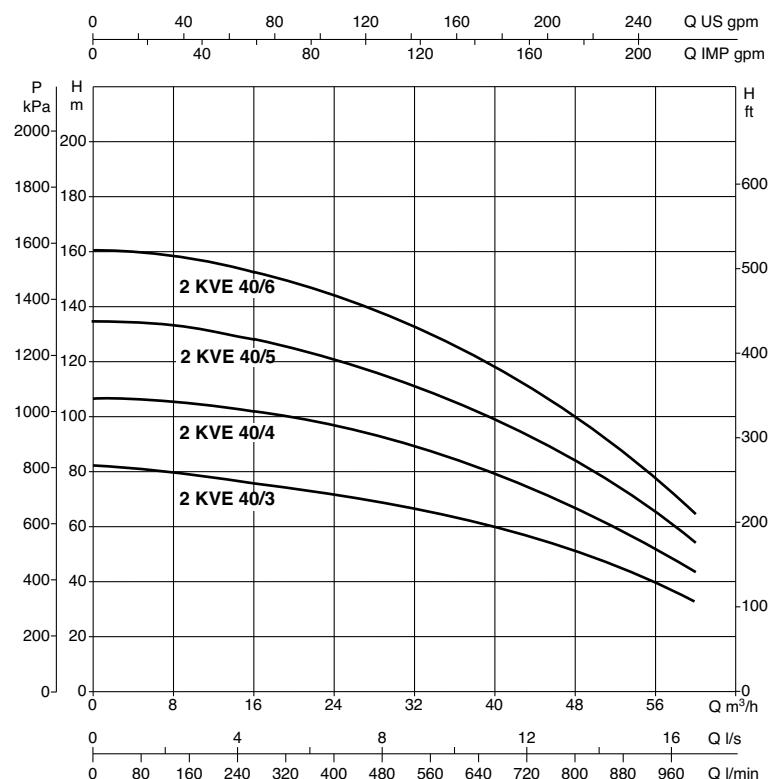
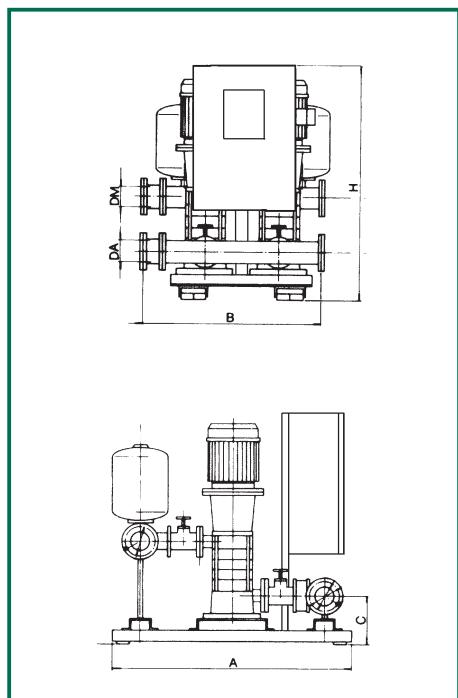
Units with unitary power over 7.5 kW: star-delta starting for second pump

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KVE 40 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 60 m³/h



MODEL	A	B	C	H max	MANIFOLD		WEIGHT Kg
					DNA	DNM	
2 KVE 40/3	1300	1000	260	1400	DN 100 - PN 10	DN 100 - PN 16	544
2 KVE 40/4	1300	1000	260	1400	DN 100 - PN 10	DN 100 - PN 16	567
2 KVE 40/5	1300	1000	260	1400	DN 100 - PN 10	DN 100 - PN 16	591
2 KVE 40/6	1300	1000	260	1400	DN 100 - PN 10	DN 100 - PN 25	695

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
2 KVE 40/3	3x400 V ~	2x5,5	2x7,5	2x12	8 - 60	7 - 3
2 KVE 40/4	3x400 V ~	2x7,4	2x10	2x15	8 - 60	10 - 4
2 KVE 40/5	3x400 V ~	2x9,2	2x12,5	2x18	8 - 60	12,5 - 5
2 KVE 40/6	3x400 V ~	2x11	2x15	2x22	8 - 60	15 - 6,5

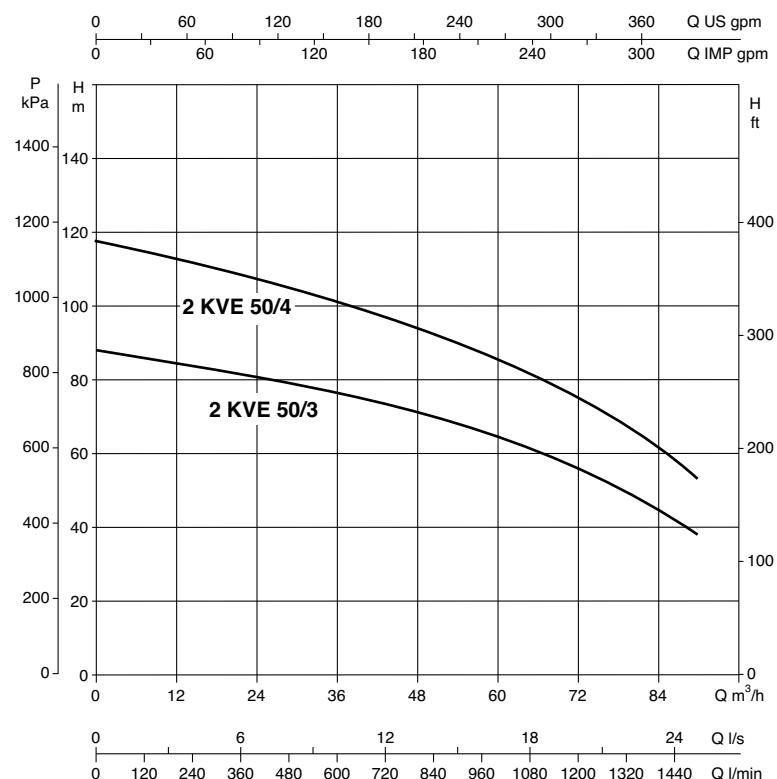
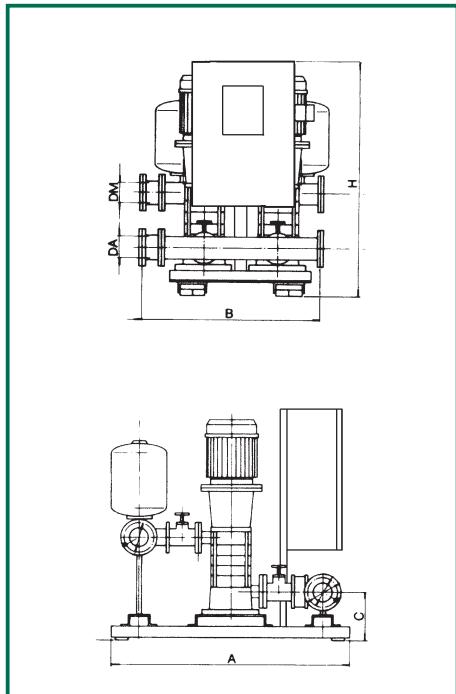
Units with unitary power over 7.5 kW: star-delta starting for second pump

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

2 KVE 50 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 90 m³/h



MODEL	A	B	C	H max	MANIFOLD		WEIGHT Kg
					DNA	DNM	
2 KVE 50/3	1400	1000	300	1400	DN 125 - PN 10	DN 125 - PN 16	677
2 KVE 50/4	1400	1000	300	1400	DN 125 - PN 10	DN 125 - PN 16	782

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
2 KVE 50/3	3x400 V ~	2x9,2	2x12,5	2x18	12 - 90	8 - 4
2 KVE 50/4	3x400 V ~	2x11	2x15	2x22	12 - 90	10 - 5

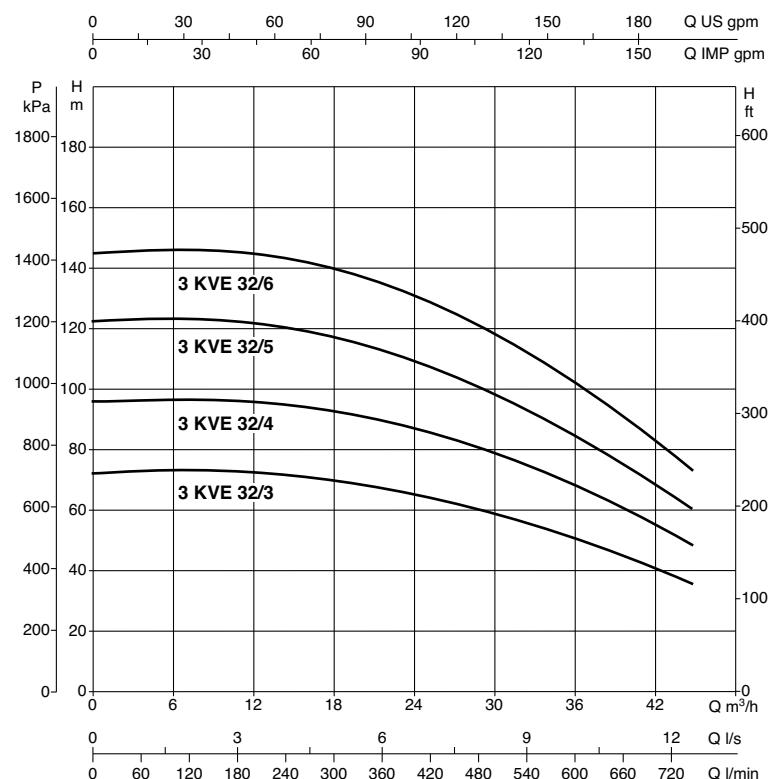
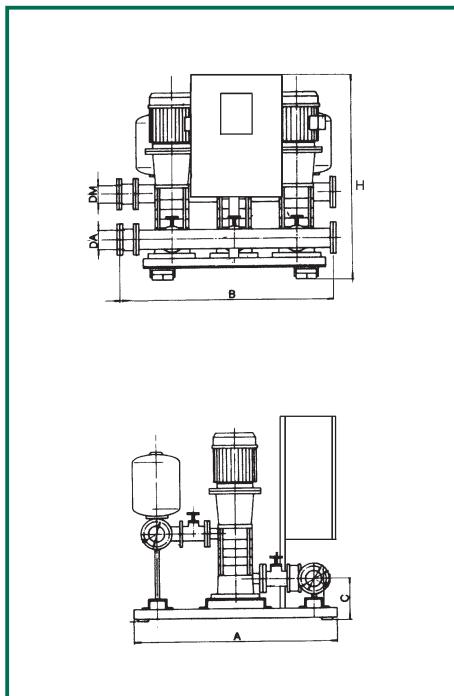
Units with unitary power over 7.5 kW: star-delta starting for second pump

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KVE 32 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 45 m³/h



MODEL	A	B	C	H max	MANIFOLD	WEIGHT
					DNA	DNM
3 KVE 32/3	1100	1200	245	1300	2 1/2"	2 1/2"
3 KVE 32/4	1100	1200	245	1300	2 1/2"	2 1/2"
3 KVE 32/5	1100	1200	245	1300	2 1/2"	2 1/2"
3 KVE 32/6	1100	1200	245	1300	2 1/2"	2 1/2"

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
3 KVE 32/3	3x400 V ~	3x3	3x4	3x12 - 7	4 - 45	7 - 3
3 KVE 32/4	3x400 V ~	3x4	3x5,5	3x16 - 9	4 - 45	9 - 5
3 KVE 32/5	3x400 V ~	3x5,5	3x7,5	3x12	4 - 45	12 - 6
3 KVE 32/6	3x400 V ~	3x7,4	3x10	3x15	4 - 45	14 - 7

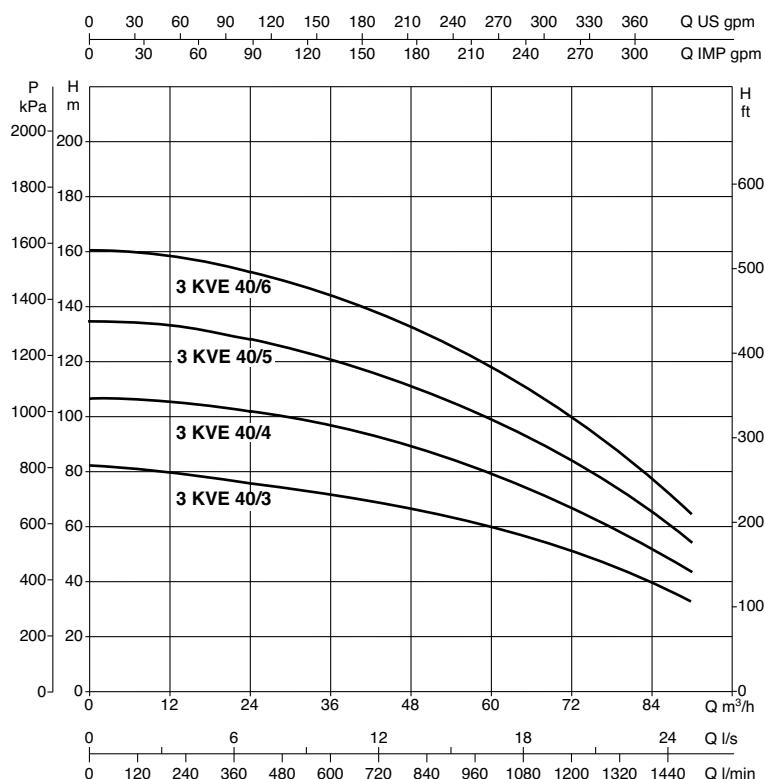
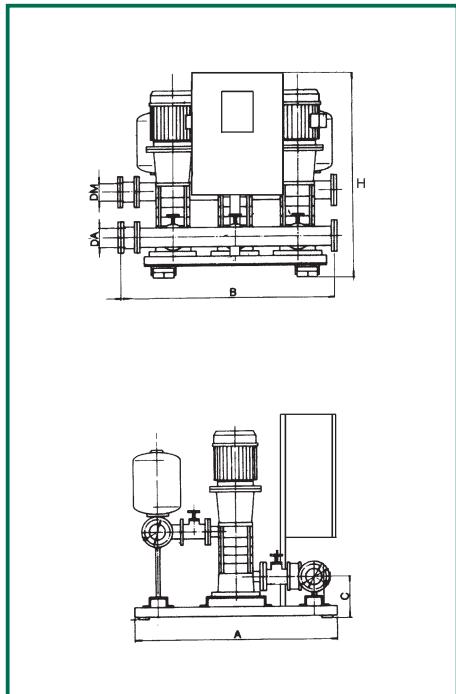
Units with unitary power over 7.5 kW: star-delta starting for second and third pump

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KVE 40 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 90 m³/h



MODEL	A	B	C	H max	MANIFOLD		WEIGHT Kg
					DNA	DNM	
3 KVE 40/3	1300	1200	260	1400	DN 100 - PN 10	DN 100 - PN 16	823
3 KVE 40/4	1300	1200	260	1400	DN 100 - PN 10	DN 100 - PN 16	850
3 KVE 40/5	1300	1200	260	1400	DN 100 - PN 10	DN 100 - PN 16	882
3 KVE 40/6	1300	1200	260	1400	DN 100 - PN 10	DN 100 - PN 25	1036

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
3 KVE 40/3	3x400 V ~	3x5,5	3x7,5	3x12	8 - 90	7 - 3
3 KVE 40/4	3x400 V ~	3x7,4	3x10	3x15	8 - 90	10 - 4
3 KVE 40/5	3x400 V ~	3x9,2	3x12,5	3x18	8 - 90	12,5 - 5
3 KVE 40/6	3x400 V ~	3x11	3x15	3x22	8 - 90	15 - 6,5

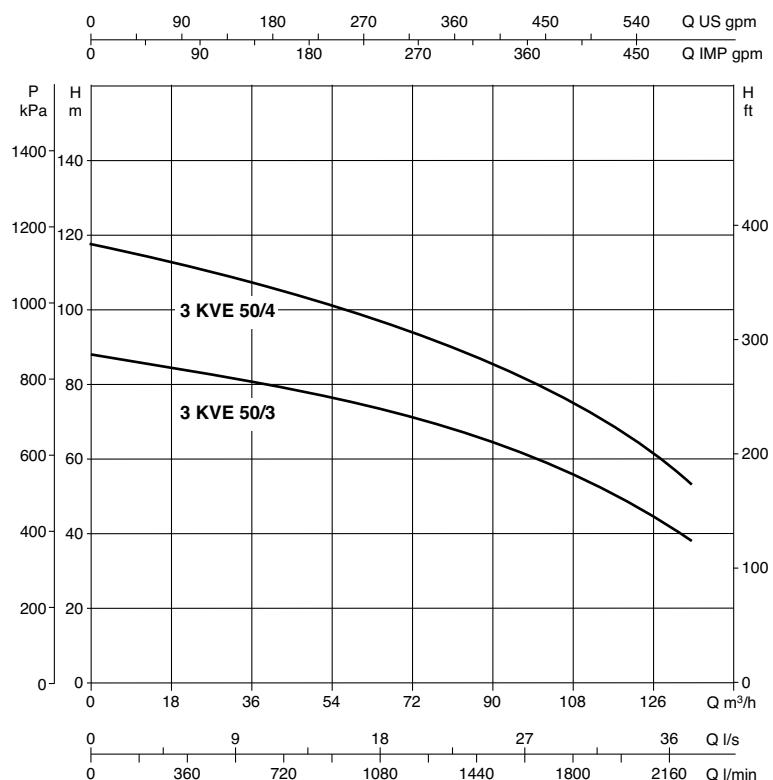
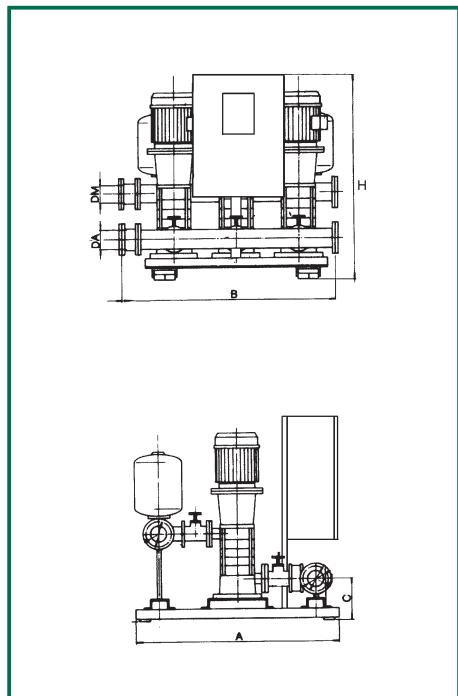
Units with unitary power over 7.5 kW: star-delta starting for second and third pump

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

3 KVE 50 SETS

Liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 135 m³/h



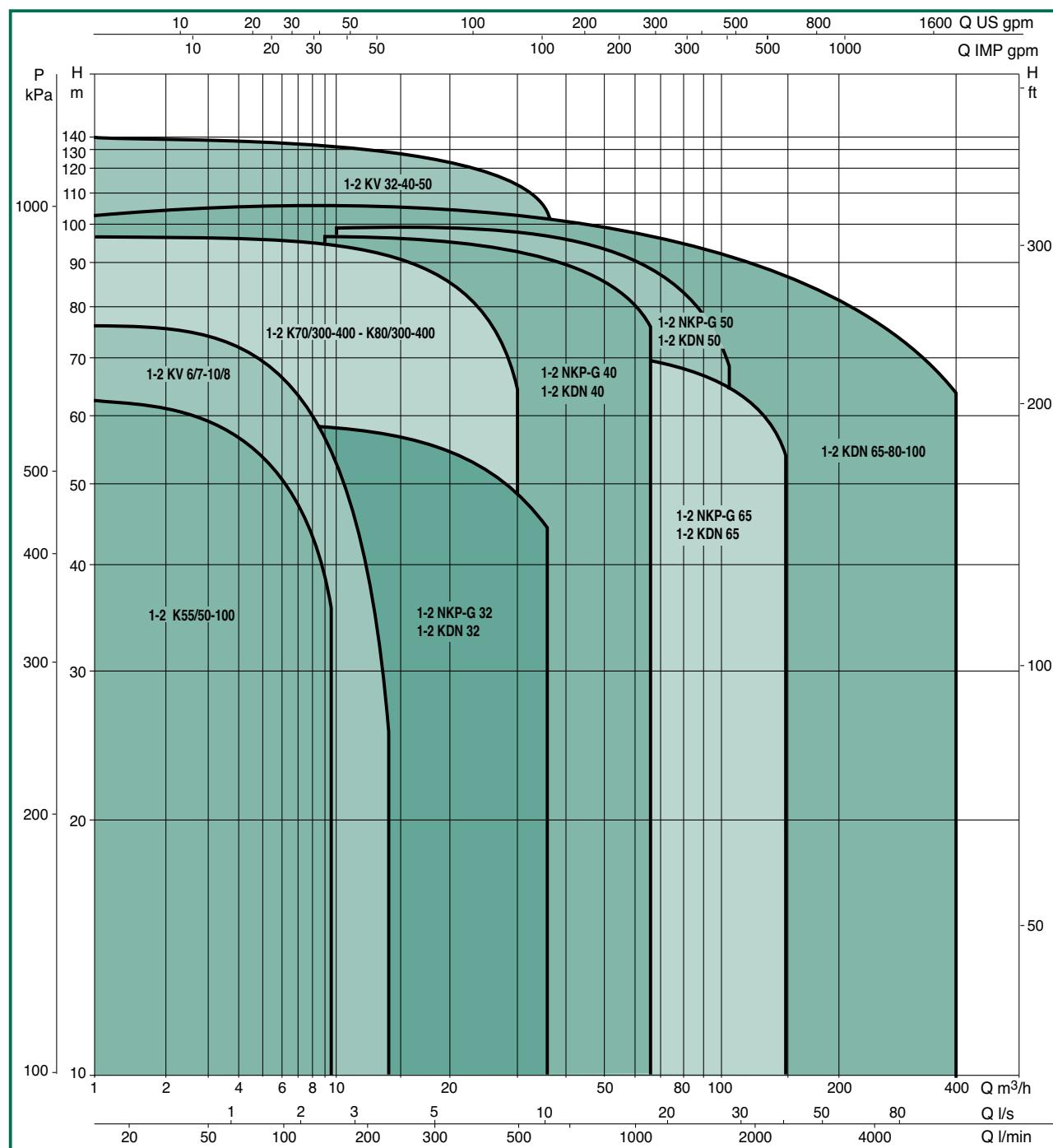
MODEL	A	B	C	H max	MANIFOLD		WEIGHT Kg
					DNA	DNM	
3 KVE 50/3	1400	1200	300	1400	DN 125 - PN 10	DN 125 - PN 16	1007
3 KVE 50/4	1400	1200	300	1400	DN 125 - PN 10	DN 125 - PN 16	1167

MODEL	VOLTAGE 50 Hz	P2 NOMINAL		In A	Q MIN - MAX m ³ /h	ADJUSTABLE PRESSURE MAX - MIN BAR
		kW	HP			
3 KVE 50/3	3x400 V ~	3x9,2	3x12,5	3x18	12 - 135	8 - 4
3 KVE 50/4	3x400 V ~	3x11	3x15	3x22	12 - 135	10 - 5

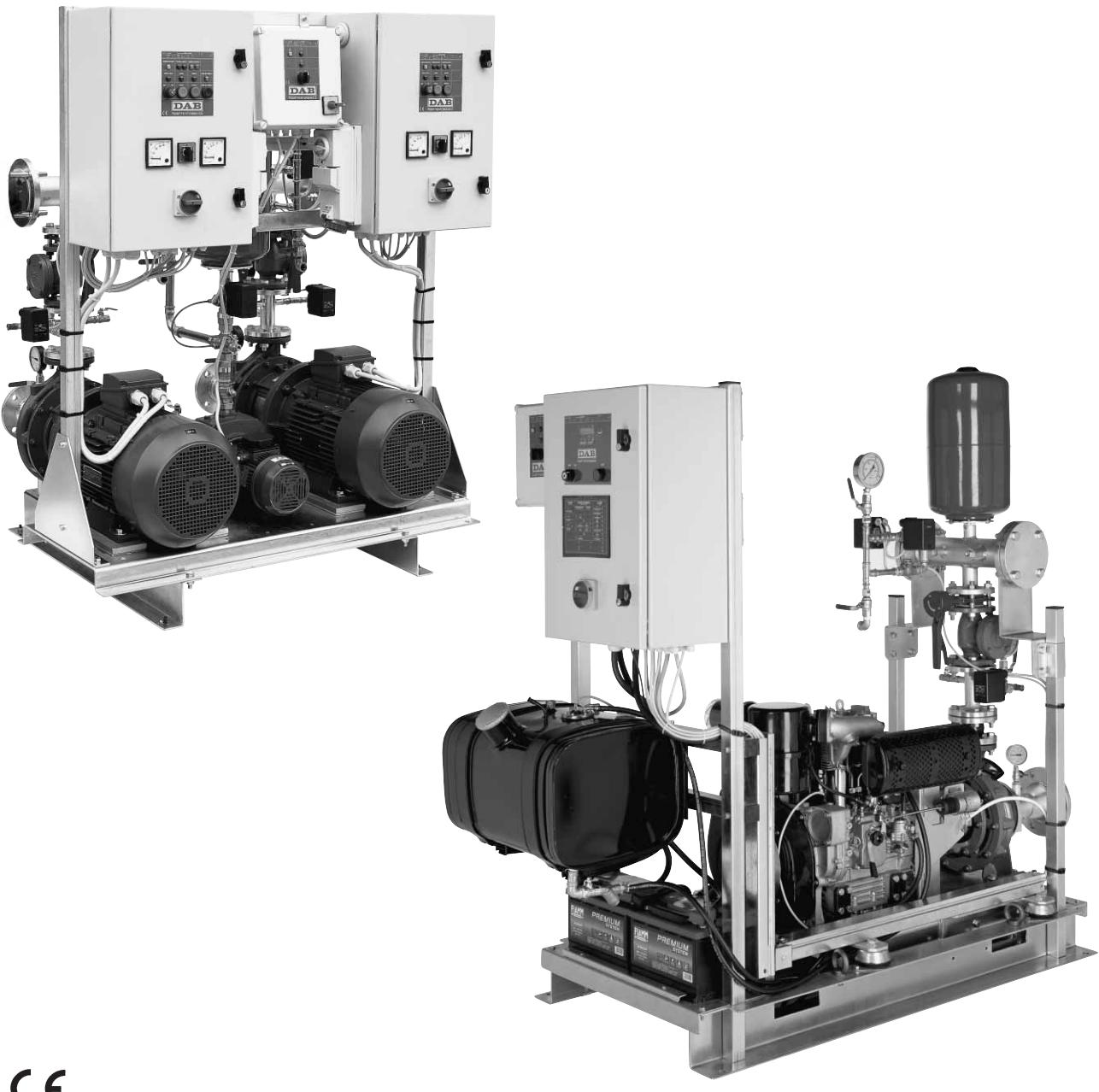
Units with unitary power over 7.5 kW: star-delta starting for second and third pump

FIRE-FIGHTING UNITS BUILT TO UNI 9490 – 10779

SELECTION TABLES



FIRE-FIGHTING UNITS BUILT TO UNI 9490 – 10779



CE

GENERAL DATA

The UNI 9490 - UNI 10779 fire-fighting pressure units are pump sets for fire fighting installations built according to the criteria of the following standards:

- 1) UNI standards 9490 "Water supply for automatic fire-fighting systems" (April 1989).
- 2) UNI 10779 "Fire fighting equipment – Hydrant systems" (May 2002).

Other references for building UNI 9490 - UNI 10779 sets are contained in UNI 9489 "Sprinkler fire extinguishing systems)".

OUT-LINE ON THE STANDARDS UNI 9490 - UNI 10779

The principles for the creation of fire-fighting systems is established by the National Unification body UNI;

- the UNI 9490 standard concerns equipment for automatic fire-fighting sprinkler systems
- the UNI 10779 standard concerns the design and installation of fire-fighting systems with hydrant networks

Other references for building fire-fighting pressure sets are contained in UNI 9489 standard

“Sprinkler fire extinguishing systems”.

The customers, designers, producers, installers, testers and public control and security bodies are bound to comply with the UNI standards.

The UNI 9490 and UNI 10779 standards describe the standards of the fire-fighting systems, regarding installation features of both automatic pumps and systems.

A pump group station must be foreseen and used exclusively for fire-fighting purposes, having at least one bordering wall with uncovered space.

The temperature within the pumping station must not be below:

- + 4°C if only electric pumps are installed
- + 10°C if Diesel motor-pumps are installed

When Diesel motor-pumps are installed, the room must have a ventilation system that prevents the temperature rising above 40°C.

COMPOSITION OF UNI 9490-10779 SETS

The units comprise:

- a) one or two main pumps operated by motors or Diesel engines (UNI 9490 4.9.2.2).

The motor-pump connection must (P1) (P2) allow the hydraulic assembly (the real and proper pump) to be dismounted from the motor.

- b) compensating pump, if present (P3).

The compensating pump, also known as the pilot pump, compensates the small pressure drops in the fire fighting system caused by dripping, leaks, etc.

- c) a control panel for each pump (1) (2).

Each electric pump has its own electrical panel (UNI 9490 4.9.4.7.) powered by separate lines

(UNI 9490 4.11.3.3.d). The diesel pump is independently fuelled (diesel tank for 60 hours autonomy) and started with two batteries, constantly charged thanks to a double battery charger.

- d) Starting device for each pump (5).

The starting device, comprising a pressure switch for each pump, must start the pump at a pressure ranging from between 75% and 85% of the pump pressure with the delivery closed (UNI 9490 4.9.3.4.).

- e) various hydraulic accessories (valves, stub pipes, manifolds, etc.)

- The shut-off valves must show whether they are open or closed (UNI 10779 6.3) and must also be lockable (UNI 9490 5.1.4.).

- The check valves on the pump delivery side are inspectable (UNI 9489 8.4.).

- The full scale of the pressure gauges must reach 150% of maximum operating pressure.

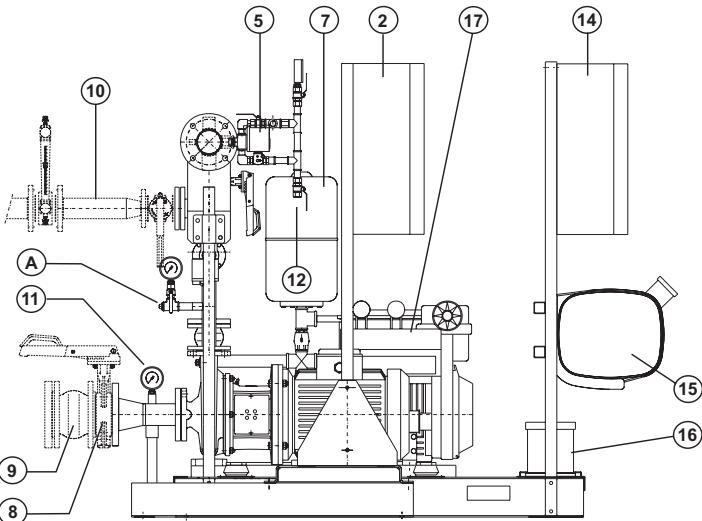
- Flow meters must comply with UNI ISO 2548 - 3555 with a tolerance of 5%.

- The rated pressure of the system components must be at least PN 12 (UNI 10779 6.1)

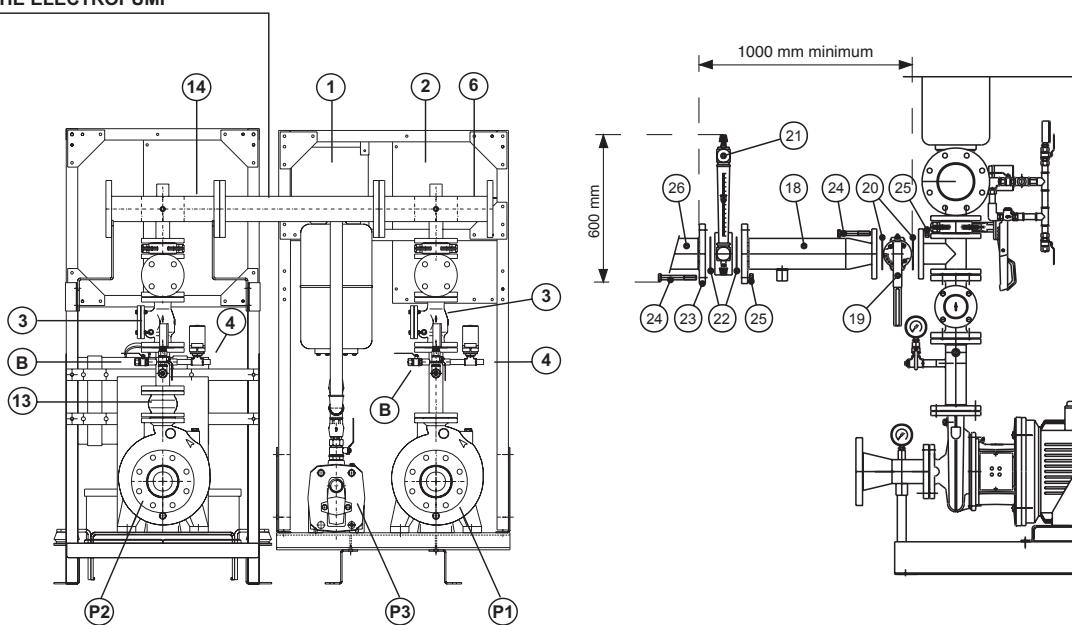
Each pump has its own suction line (UNI 4.9.3) while the same delivery manifold is used for all the pumps.

All the above is mounted on the galvanised steel base. This must:

- support and align the various components in the set



**MANIFOLD JOINING THE DIESEL MOTOR PUMP
TO THE ELECTROPUMP**



A - Attacco per serbatoio adescamento

Da collegare al fondo del serbatoio d'adescamento a mezzo valvola di ritengo.

Solo per installazioni soprabattente.

B - Rubinetto di controllo valvola di non ritorno

Da collegare allo scarico **per installazioni soprabattente e sottobattente.**

P1 - Elettropompa principale

P2 - Motopompa Diesel principale

P3 - PILOT PUMP

1 - Pilot pump electrical panel

2 - Pump electrical panel

3 - Inspectable check valve

4 - Water recirculation diaphragm connected:

- to the top of the suction tank.

for overhead installation.

- to the top of the water tank

for underhead installation.

5 - Main pump start pressure switch

6 - Delivery manifold

7 - Membrane expansion tank

8 - Suction valve (optional**)**

9 - Anti-vibration joint (optional**)**

10 - Flow Meter (optional**)**

11 - Vacuum pressure gauge

12 - Manual test tap

13 - Diesel pump vibration-damping coupling

14 - Diesel pump control panel

15 - Diesel pump tank

16 - Diesel pump starter battery

17 - Diesel motor

18 - Flow rate meter extension

19 - Butterfly valve

20 - Butterfly valve seals

21 - Flowmeter – flow rate meter

22 - Flowmeter seals

23 - Counterflange

24 - Fastening screw

25 - Nuts

26 - Discharge piping

OPERATING PRINCIPLE OF UNI 9490 UNI 10779 SETS

The pilot pump (if fitted) starts automatically whenever there is a pressure drop in the system.
If the flow rate of the water is low, the pilot pump restores the pressure in the system and stops.
If the flow rate of the water is high (hydrants – sprinklers open, etc.), the further decrease in pressure causes **the main electric pump to AUTOMATICALLY start.**
If the main electric pump does not start (black out – electrical fault), the second main electric pump or the diesel pump starts.
It is important to know that the main electric and/or diesel pumps are stopped **MANUALLY** (*) by pressing the button on the electrical panel (UNI 9490 4.9.3.4.).
(*) Only for hydrants systems which are not constantly supervised, the pumps stop AUTOMATICALLY after “*pressure remains constantly higher than the pump starting pressure for at least 20 minutes*”
(UNI 10779 A.1.2).

TECHNICAL NOTES CONCERNING THE SET-UP OF THE PUMP ROOM

The Pump Room must be exclusively used for fire-fighting purposes, unless the fire load of the Premises is lower than 5 Kg/m². The room must have an entrance door, lighting system and automatic heating system to maintain a minimum temperature of +4°C (if electric pumps are fitted) or +10°C (if diesel pumps are fitted). Consult the UNI standards for other equipment.

The size of the room must take into consideration the need for maintenance and repair operations. An adequate space must be left around the pumps to allow access for maintenance and repair operations: take into consideration that it may be necessary to dismantle the entire pump.

In any case a space of no less than 1 metre should be left between the pump unit and the walls of the room.

The floor should have a slight fall toward a drainage outlet.

For the fitting of diesel pumps, an adequate air flow is necessary for the combustion of the motor; it is also necessary to consider the circulation of air for the elimination of the heat produced by the motor. Depending on the situation, ventilators can be installed to extract the air. Fresh air can be introduced by means of fixed vents, positioned on two different levels if necessary (close to the floor and to the ceiling).

The flowmeter must be of the direct reading type, with end indicating a capacity of at least 120% of the pump maximum capacity.

The condition of the valves (open-closed) must be easily perceived; gate valves with internal screw should not be fitted.

The length of the diesel motor exhaust pipe must be as short as possible (ideally not be over 10 metres); keep bends to a minimum (no more than 6), that should have a wide radius (three times the diameter). In the event that the length of the pipe exceeds 10 metres in length and 6 bends, the pipe diameter must be increased. Refer to our technical department.

Choice of pump units / various precautions

The dimensioning of the fire-fighting pumps (that can be two, of the same capacity, one of which in reserve), is performed taking into consideration the maximum capacity of the system to which it is connected.

For groups made up of:

- two diesel pumps and one electric pump
- two electric pumps and one diesel pump

Each pair of pumps must be capable of delivering together the requested flow rate

Carefully calculate both the maximum capacity as well as the head of the pumps, strictly avoiding the use of pumps with a lower performance, even if slightly less than that required. It is preferable to use pumps that have a performance slightly greater than that required.

Ideally, the pumps should be fitted underhead; the axis of the suction pipe must be positioned at least 600 mm below the minimum water level inside the tank.

When it is necessary to use pumps overhead, make sure a trustworthy priming system is created that conforms to the UNI standards.

INSTALLATION

OF UNI 9490 UNI 10779 SETS

Where possible, pumps must be installed with UNDERHEAD (UNI 9489 7.8.3.).

Pumps are said to have a positive suction head when their suction port is located at least 60 cm below the minimum water level in the supply tank (UNI 9490 4.9.3.1.). Otherwise they are said to be OVERHEAD.

A suction pipe must be fitted for each pump, both in case of underhead and overhead installation.

The suction pipes must be such that the flow speed of the water is no greater than 1.5-2 m/s.

The UNI 9490 standard does not provide for the installation of a common suction manifold for all the pumps (*).

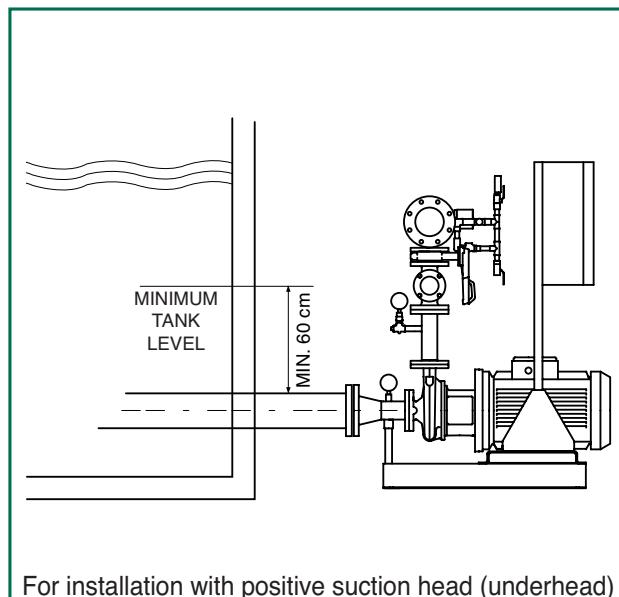
(*) Only in case of a **underhead** installation does UNI 9490 4.9.3.5. provide for "common suction", with the requirement to install a shut-off **valve on each connection**.

The shut-off valve makes it impossible to install the traditional single suction collector.

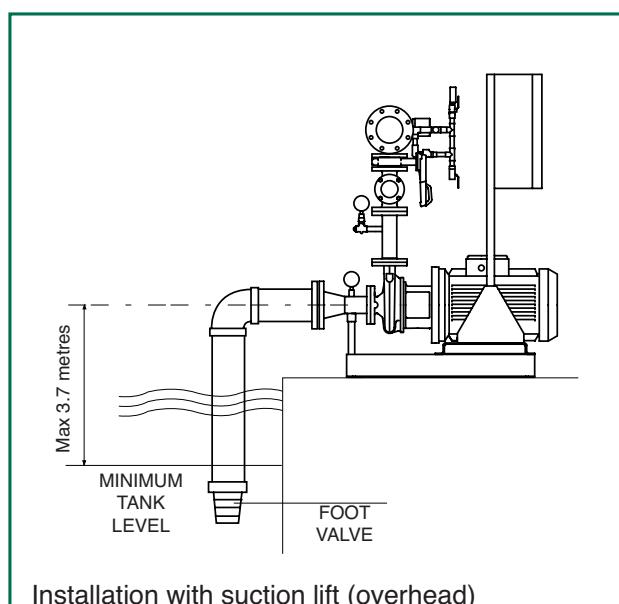
In case of installation with negative suction head, a **suction tank** must be installed for each pump:

- no less than 120 litres for class A protected Areas (UNI 9489 13.4)
- no less than 500 litres for class B protected Areas, DO and C (UNI 9489 13.5)

DAB units are suitable for underhead and overhead installation.



For installation with positive suction head (underhead)



Installation with suction lift (overhead)

WATER SUPPLY NETWORK FOR FIRE-FIGHTING SYSTEMS

Closed loop type water supply to fire-fighting systems is advisable (which ensures two supply lines).

If the closed loop type is not practicable, the open loop type can be adopted (one supply line only).

Fire-fighting systems with fire hoses / hydrants

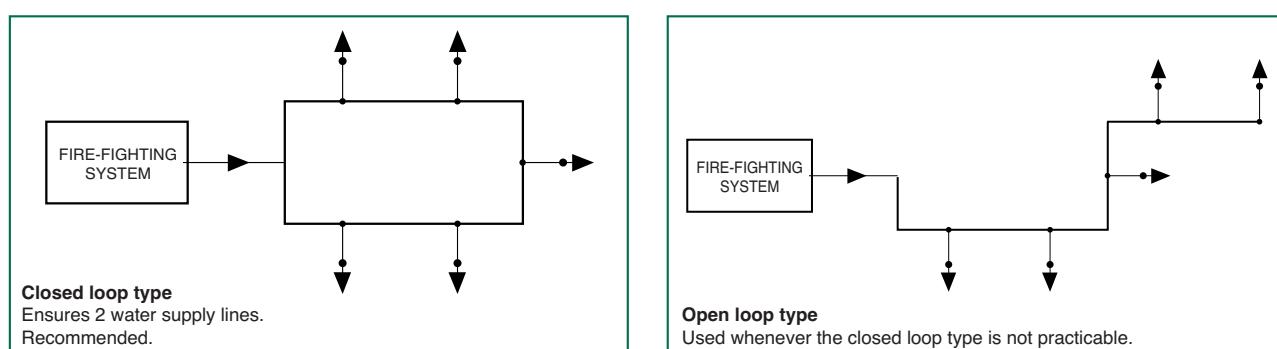
UNI 9490 is the reference standard concerning supply pump sets, while UNI 10 779 is the reference standard for the system.

In particular, UNI 10 779 allows the pumps to stop AUTOMATICALLY 20 minutes after the pressure has been restored (after the start pressure switch contacts have opened).

Automatic sprinkler type fire-fighting systems

UNI 9490 is the reference standard concerning supply pump sets, while UNI 10 779 is the reference standard for the system.

To calculate the number of fire hoses/hydrants/sprinkler heads required, the system designer must refer to the current standards. System design and technical data for the pump set (flow rate - head – pump type etc.) must be determined by the designer.



OPERATING TEST

Systems must be inspected at least twice a year (UNI 8.1.1 - 8.12.).

As well as an overall inspection of the whole system, automatic and manual starting / restarting tests are performed on the pumps.

Flow rate and head tests are also performed by means of flow meters and pressure gauges fitted to the set.

To check the UNI pump units, the DAB units are also available in a version featuring an automatic weekly testing system.

An electrovalve located on the delivery manifold opens and lowers pressure.

A PLC processes the signals of the starting pressure switches and starts / stops the pumps for a set time of about 2 minutes.

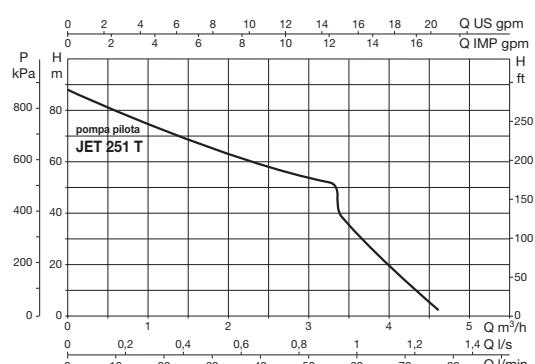
The weekly testing function periodically starts and stops the main pumps (*) in order to check they are in good working order and reports any faults with an acoustic-luminous alarm.

PILOT PUMP

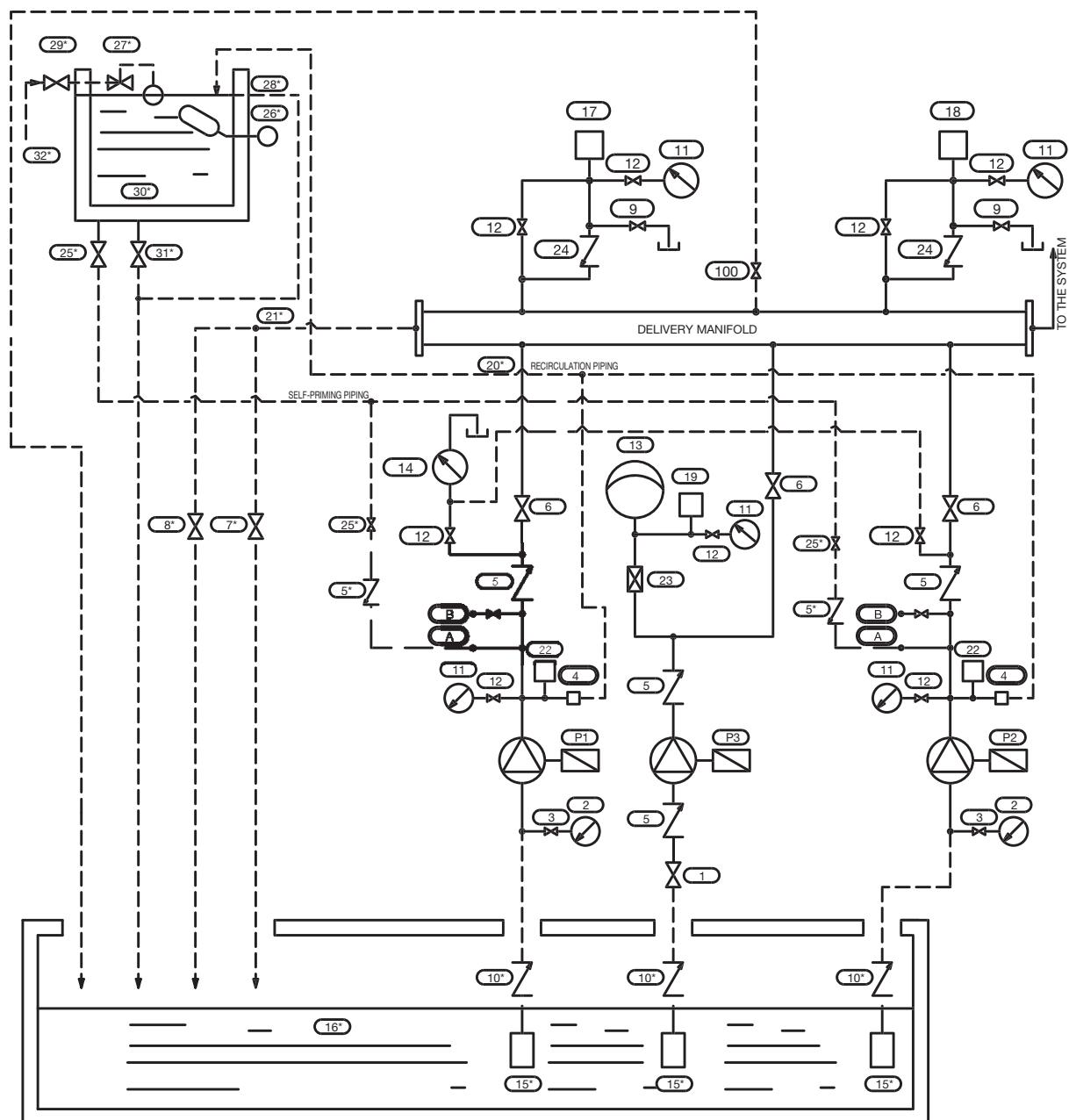
Self-priming JET 251 centrifugal pump. Body in cast iron, impeller, diffuser and venturi tube in technopolymer.

Asynchronous, closed 2-pole motor, cooled by external ventilation.

PILOT PUMP	P ₂ NOMINAL	
	kW	HP
JET 251 T	1,85	2,5



PUMPS UNIT INSTALLATION LAYOUT UNI 9490 SUCTION LIFT

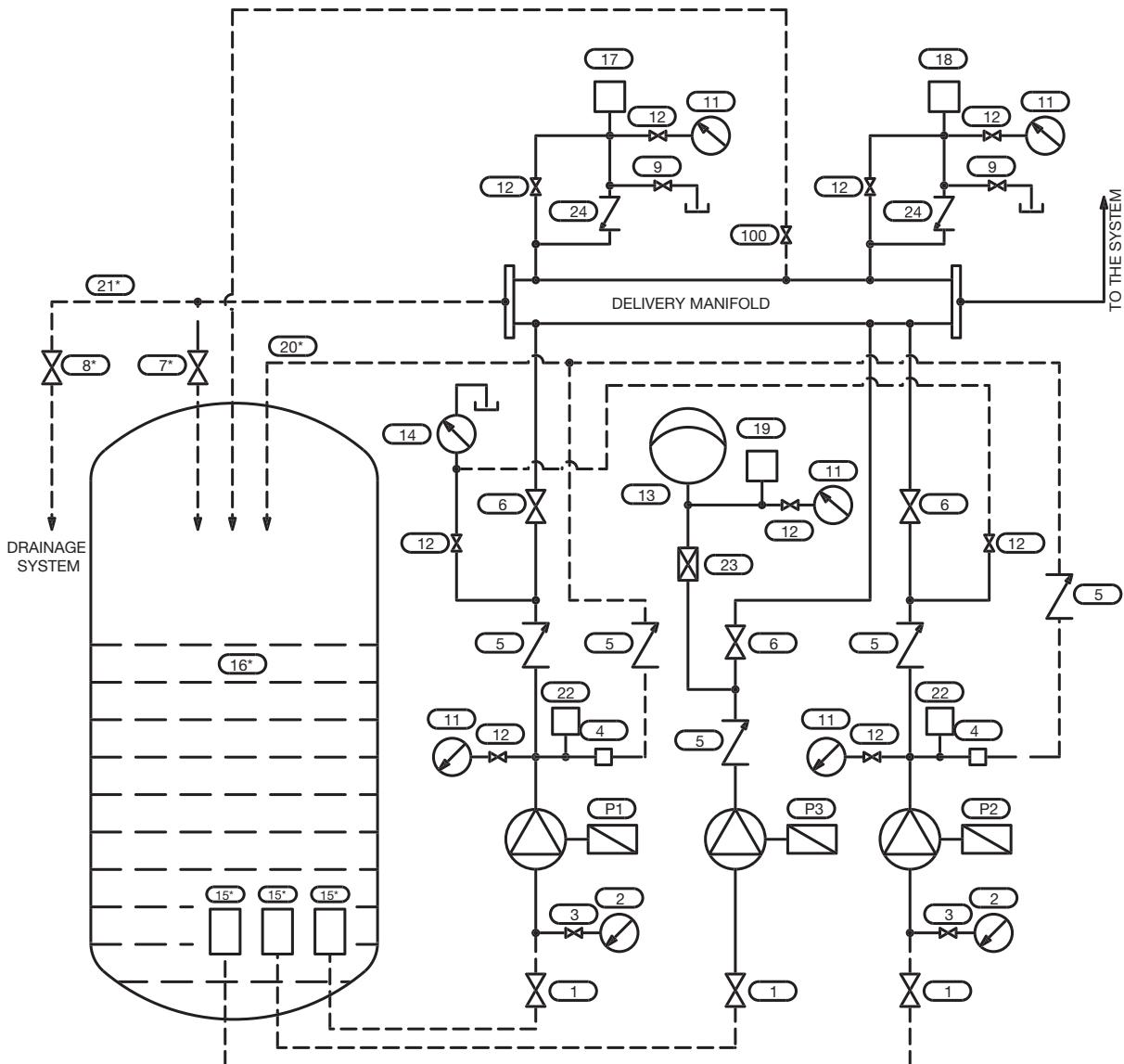


RIF	NAME
2	VACUUM PRESSURE GAUGE
3	VACUUM PRESSURE GAUGE SHUT-OFF VALVE
4	WATER RECIRCULATION DIAPHRAGM
5	INSPECTABLE CHECK VALVE
6	DELIVERY GATE
7*	SYSTEM DUMP VALVE
8*	SYSTEM DUMP VALVE
9	MANUAL TEST VALVE
10*	FOOT VALVE
11	PRESSURE-GAUGE
12	SHUT-OFF VALVE
13	MEMBRANE EXPANSION TANK
14	FLOW METER
15*	SUCTION FILTER
16*	WATER TANK
17	No.1 ELECTRIC PUMP START-UP PRESSURE SWITCH
18	No.2 ELECTRIC PUMP START-UP PRESSURE SWITCH
19	PILOT ELECTRIC PUMP PRESSURE SWITCH
20*	RECIRCULATION PIPING

21*	SYSTEM CAPACITY TEST PIPING
22	RUNNING ELECTRIC PUMP PRESSURE SWITCH
23	MEMBRANE TANK SHUT-OFF VALVE
24	MANUAL TEST CIRCUIT NON-RETURN VALVE
25*	PRIMER SHUT-OFF VALVE
26*	PRIMING TANK FLOAT
27*	FLOAT VALVE
28*	DISCHARGE TOO FULL
29*	SHUT-OFF VALVE
30*	SUCTION TANK
31*	PRIMING TANK DUMP VALVE
32*	PRIMING TANK FEED
100	DISCHARGE SOLENOID VALVE WEEKLY TEST
P1	ELECTRICAL PUMP NO. 1
P2	ELECTRICAL PUMP NO. 2
P3	PILOT PUMP

* PARTS AND MATERIALS TO BE PROVIDED BY THE FITTER

PUMPS UNIT INSTALLATION LAYOUT UNI 9490 FLOODED SUCTION



RIF	NAME
1	SUCTION GATE VALVE
2	VACUUM PRESSURE GAUGE
3	VACUUM PRESSURE GAUGE SHUT-OFF VALVE
4	WATER RECIRCULATION DIAPHRAGM
5	INSPECTABLE CHECK VALVE
6	DELIVERY GATE
7*	SYSTEM DUMP VALVE
8*	SYSTEM DUMP VALVE
9	MANUAL TEST VALVE
10	PRESSURE SWITCH SHUT-OFF VALVE
11	PRESSURE-GAUGE
12	SHUT-OFF VALVE
13	MEMBRANE EXPANSION TANK
14	FLOW METER
15*	SUCTION FILTER
16*	WATER TANK

17	No.1 ELECTRIC PUMP START-UP PRESSURE SWITCH
18	No.2 ELECTRIC PUMP START-UP PRESSURE SWITCH
19	PILOT ELECTRIC PUMP PRESSURE SWITCH
20*	RECIRCULATION PIPING
21*	SYSTEM CAPACITY TEST PIPING
22	RUNNING ELECTRIC PUMP PRESSURE SWITCH
23	MEMBRANE TANK SHUT-OFF VALVE
24	MANUAL TEST CIRCUIT NON-RETURN VALVE
100	DISCHARGE SOLENOID VALVE WEEKLY TEST
P1	ELECTRICAL PUMP NO. 1
P2	ELECTRICAL PUMP NO. 2
P3	PILOT PUMP

* PARTS AND MATERIALS TO BE PROVIDED BY THE FITTER

1-2 K - KV SETS

UNI 9490 – 10779 STANDARD FIRE-FIGHTING UNITS
WITH 1-2 PUMPS TWIN IMPELLER K 55/50 – K 55/100
MULTISTAGE ELECTRIC PUMPS KV 6/7 - KV 10/8



2 K sets



2 KV 10 sets



GENERAL DATA

These are UNI 9490-10779 compliant pressurisation units for delivering water to fire-fighting systems.

The standard version comprises:

- one or two K 55/50 k 55/100 electric pumps twin impeller.
- one or two KV 6/7 KV 10/8 centrifugal multistage electric pumps on a vertical axis.

There is no version with a compensation pilot pump.

Constructional characteristics

BASE

Galvanised steelbase supporting the electric pump/s, pilot pump and electrical panels.

ELECTRIC PUMPS

K 55/50 K 55/100 single-piece centrifugal electric pumps twin impeller.

Cast iron pump body, impeller in technopolymer, carbon/ceramic mechanical seal.

Asynchronous, closed 2-pole motor, cooled by external ventilation.

KV 6/7 KV 10/8 centrifugal multistage electric pump on a vertical axis.

Discharge and suction body in cast iron, impeller and diffuser in technopolymer.

Asynchronous, closed 2-pole motor, cooled by external ventilation.

HYDRAULIC PART

Separate suction lines for each pump, complete with vacuum pressure gauge.

Delivery of each main pump to the manifold with connections for suction tanks, pressure gauge, pump running pressure switch, inspectable check valve with upline leak test tap, connector for rate of flow indicator, shut-off ball valve, galvanised steel delivery manifold with starting pressure switches and 15 bar expansion tank.

The size of the hydraulic part is compliant with UNI 9490 - UNI 9489 - UNI 10779.

ELECTRICAL CONTROL PANELS

One IP 55 control panel for **each electric pump** with duplicated front-of-panel indicator LED's, general switch, fuses, direct starting contactors for electric pumps, 1 voltmeter and 1 ammeter, 12 Volt battery for alarm signalling with battery charger, AUT-0-MAN selector, START – STOP buttons, recessed selector for operation to UNI 10779, 1 outlet with switch. Alarm contacts inside terminal box for incorrect voltage and pressure drop are to be connected to an acoustic device (supplied with the booster set)

Connector for weekly test unit (only for the main electric pumps).

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

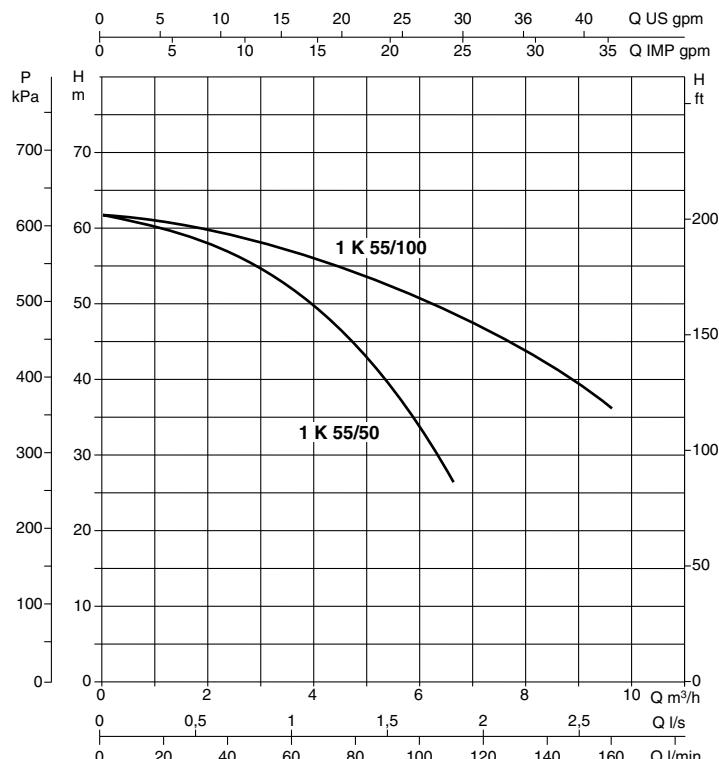
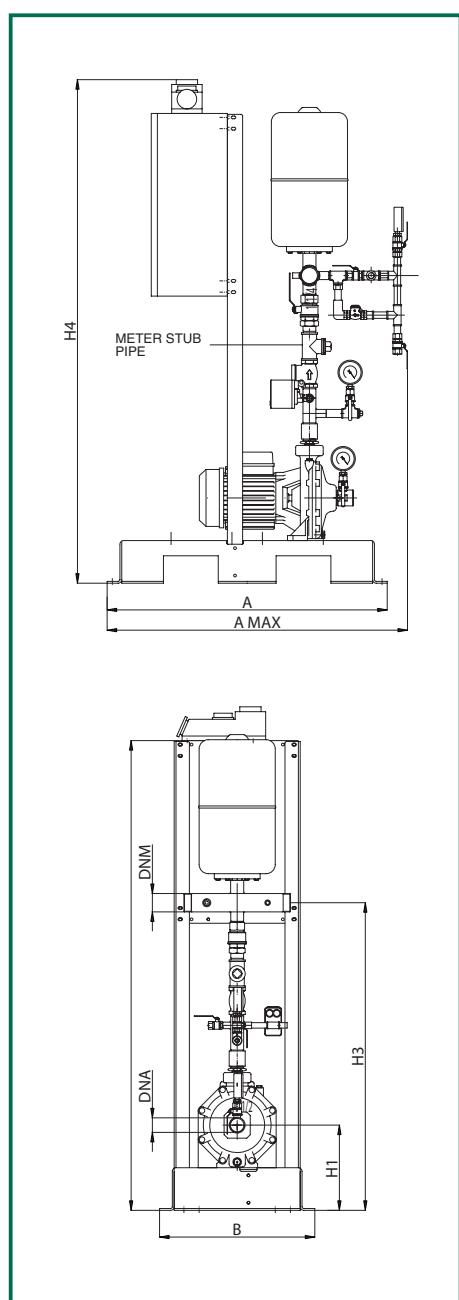
1 K 55/50 - K 55/100 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range:

from -15°C to +50°C for K 55/50
from -15°C to +70°C for K 55/100
+4°C

Max flow rate: 9,5 m³/h

Maximum ambient temperature:



MODEL	A	A MAX	B	H	H1	H3	H4	DNA	DNM	WEIGHT Kg
1 K 55/50 T	920	970	510	1555	245	975	1664	1" 1/4"	2"	315
1 K 55/100 T	920	970	510	1555	280	1010	1664	1" 1/2"	2"	315

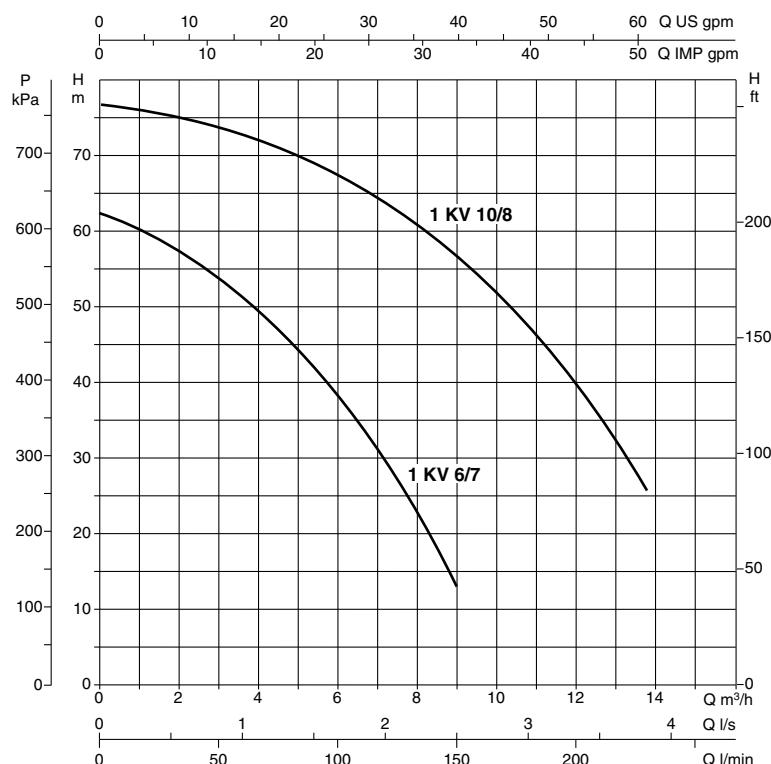
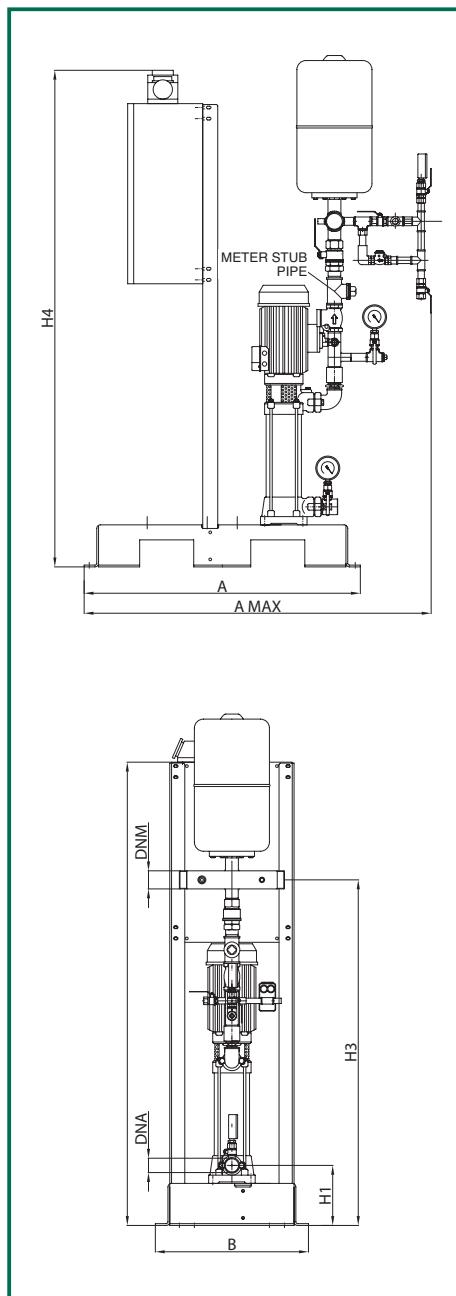
MODEL	VOLTAGE 50 Hz	P2 NOMINAL		Ø SUC.	Ø DELIVERY MANIFOLD	FLOW METER
		KW	HP			
1 K 55/50 T	3x400 V + N ~	1,85	2,5	1" 1/4"	2"	1P S. K-KV
1 K 55/100 T	3x400 V + N ~	2,2	3	1" 1/2"	2"	1P S. K-KV

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KV 6/7 - KV 10/8 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C in domestic use
Maximum ambient temperature: +40°C

Max flow rate: 13,5 m³/h



MODEL	A	A MAX	B	H	H1	H3	H4	DNA	DNM	WEIGHT Kg
1 KV 6/7 T	920	1160	510	1555	200	1120	1665	1" 1/4"	2"	315
1 KV 10/8 T	920	1160	510	1555	200	1150	1665	1" 1/4"	2"	315

MODEL	VOLTAGE		P2 NOMINAL		Ø SUC.	Ø DELIVERY MANIFOLD	FLOW METER
	50 Hz	kW	HP				
1 KV 6/7 T	3x400 V + N ~	1,1	1,5	1" 1/4"		2"	1P S. K-KV
1 KV 10/8 T	3x400 V + N ~	2,2	3	1" 1/4"		2"	1P S. K-KV

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

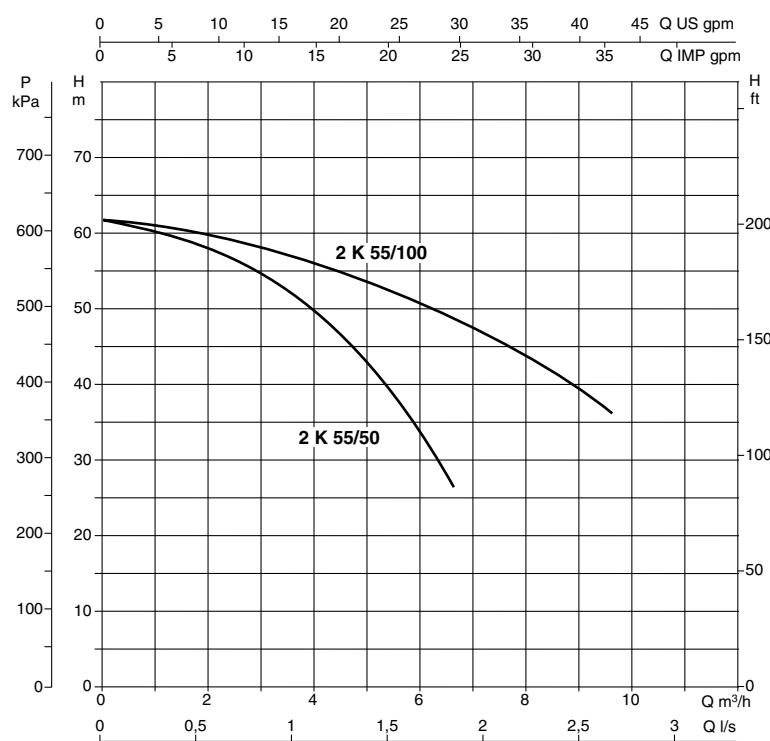
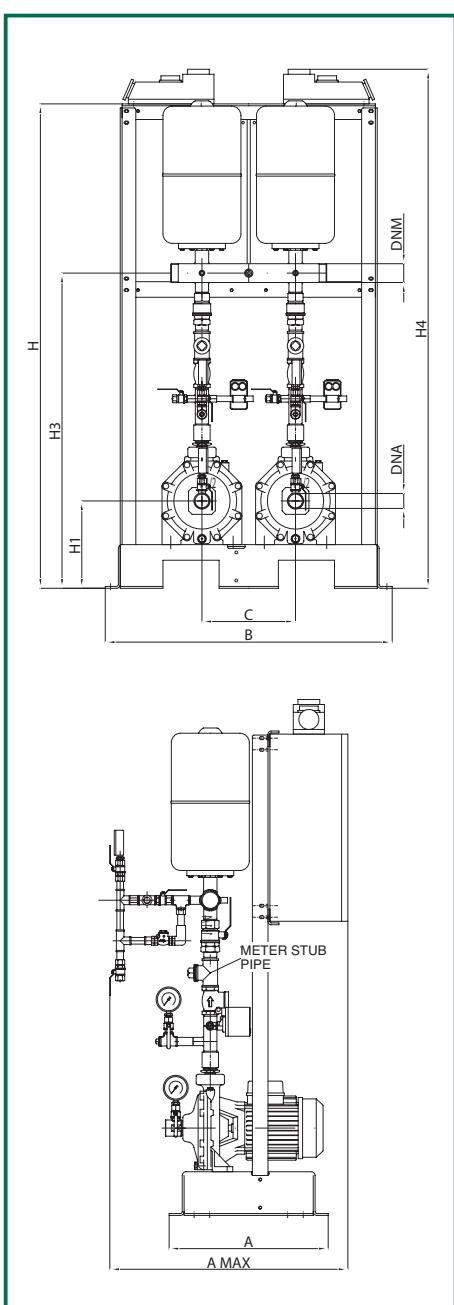
2 K 55/50 - K 55/100 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range:

from -15°C to +50°C for K 55/50
from -15°C to +70°C for K 55/100
+40°C

Max flow rate: 9,5 m³/h

Maximum ambient temperature:



Performance related to one functioning pump only.

MODEL	A	A MAX	B	C	H	H1	H3	H4	DNA	DNM	WEIGHT Kg
2 K 55/50 T	510	763	920	300	1553	245	975	1664	1" 1/4"	2"	630
2 K 55/100 T	510	763	920	300	1553	280	1010	1664	1" 1/2"	2"	630

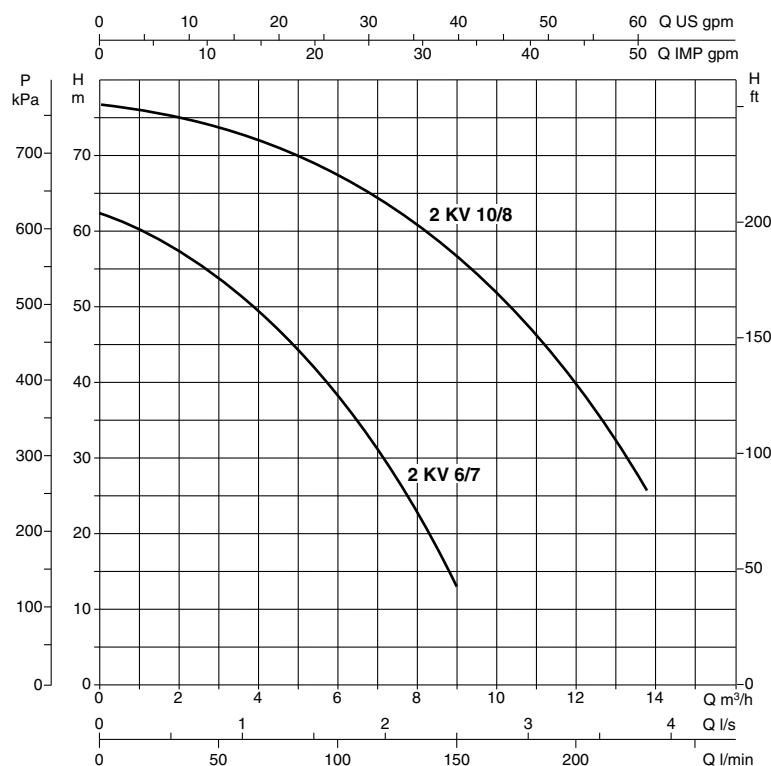
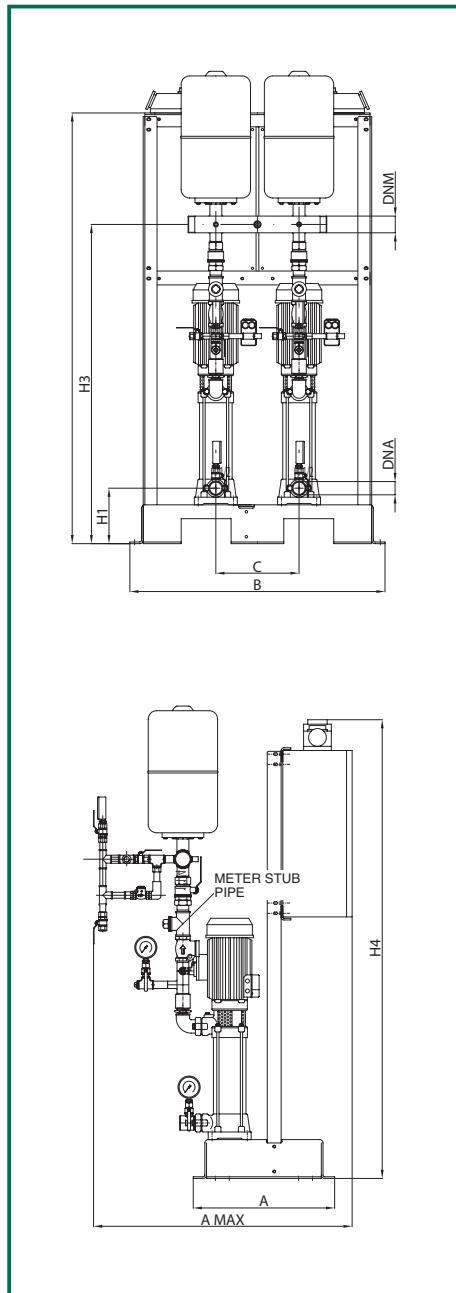
MODEL	VOLTAGE		P2 NOMINAL		Ø suc.	Ø DELIVERY MANIFOLD	FLOW METER
	50 Hz	kW	HP				
2 K 55/50 T	3x400 V + N ~	2x1,85	2x2,5		1" 1/4"	2"	2P S. K-KV
2 K 55/100 T	3x400 V + N ~	2x2,2	2x3		1" 1/2"	2"	2P S. K-KV

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KV 6/7 - KV 10/8 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: +40°C

Max flow rate: 13,5 m³/h



Performance related to one functioning pump only.

MODEL	A	A MAX	B	C	H	H1	H3	H4	DNA	DNM	WEIGHT Kg
2 KV 6/7 T	510	932	920	300	1555	200	1090	1665	1" 1/4"	2"	630
2 KV 10/8 T	510	932	920	300	1555	200	1150	1665	1" 1/4"	2"	630

MODEL	VOLTAGE		P2 NOMINAL		Ø SUC.	Ø DELIVERY MANIFOLD	FLOW METER
	50 Hz	kW	HP				
2 KV 6/7 T	3x400 V + N ~	2x1,1	2x1,5		1" 1/4"	2"	2P S. K-KV
2 KV 10/8 T	3x400 V + N ~	2x2,2	2x3		1" 1/4"	2"	2P S. K-KV

1-2 K - NKP-G SETS

UNI 9490 – 10779 STANDARD FIRE-FIGHTING UNITS WITH 1-2 PUMPS TWIN IMPELLER K 1-2 STANDARDISED NKP-G ENBLOC PUMPS



CE

GENERAL DATA

These are UNI 9490-10779 compliant pressurisation units for delivering water to fire-fighting systems.

The standard version comprises:

- one or two K centrifugal electric pumps twin impeller and compensating pump (if present)
 - one or two standardised enbloc NKP-G electric pumps with joint, plus a compensation pump (if present).
- A diesel motor pump can be installed with NHP-G pumps units, even after the installation of electric pump/pumps units.

Constructional characteristics

BASE

Galvanised steel support for the electric pump/s, pilot pump and control panels.

ELECTRIC PUMPS

Standardised enbloc NKP-G electric pumps with joint, coupled to a three-phase asynchronous motor, performance and size compliant with DIN-EN 733 (formerly DIN 24255)

Axial suction port, radial discharge port, pump body in cast iron, impeller in cast iron equilibrata dinamicamente, carbon/silicon carbide mechanical seal.

Asynchronous, closed 2-pole motor, cooled by external ventilation, construction type B3/B5

K enbloc centrifugal electric pumps twin impeller, connected to an asynchronous three-phase electric motor. Axial suction port, radial discharge port, pump body in cast iron, impeller in technopolymer, carbon/ceramic mechanical seal.

Asynchronous, closed 2-pole motor, cooled by external ventilation.

PILOT PUMP

JET 251 centrifugal self-priming pump. Cast iron pump body, impeller, diffuser and venturi tube in technopolymer.

Asynchronous, closed 2-pole motor, cooled by external ventilation.

HYDRAULIC PART

Separate suction lines for each pump, complete with vacuum pressure gauge.

Delivery of each main pump to the manifold with

connections for suction tanks, pressure gauge, pump running pressure switch, inspectable check valve with upline leak test tap, connector for rate of flow indicator, shut-off butterfly valve, galvanised steel delivery manifold with starting pressure switches and 15 bar expansion tank.

Pilot pump with ball valve on suction and delivery sides, check valve on the delivery side, starting pressure switch, hose connection to the delivery manifold of the main pumps.

The size of the hydraulic part is compliant with UNI 9490 - UNI 9489 - UNI 10779.

ELECTRICAL CONTROL PANELS

One IP 55 control panel for each electric pump with duplicated front-of-panel indicator LED's, general switch, fuses, starting contactors for electric pumps (direct up to 7,5 kW inclusive/star delta over 7,5 kW), 1 voltmeter and 1 ammeter, 12 Volt battery for alarm signalling with battery charger, AUT-0-MAN selector, START – STOP buttons, recessed selector for operation to UNI 10779. 1 outlet with switch. Alarm contacts inside terminal box for incorrect voltage and pressure drop are to be connected to an acoustic device (supplied with the booster)

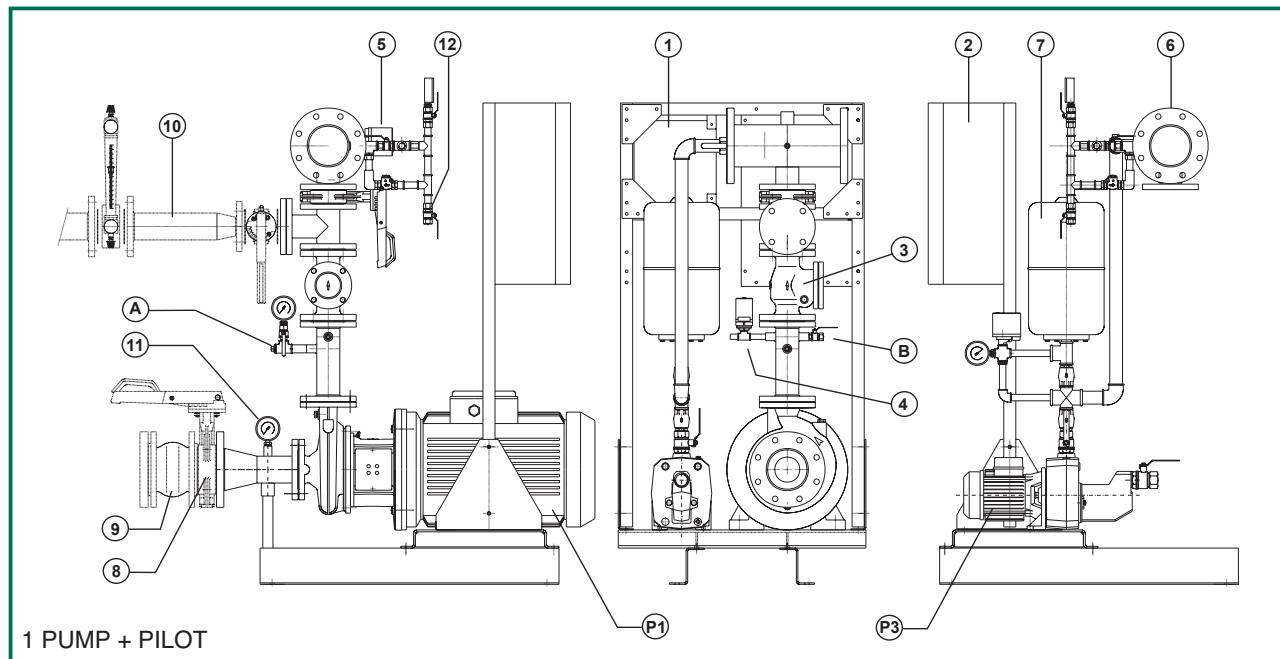
Connector for weekly test unit (only for the main electric pumps).

Control panel for pilot pump with overload cut-out, line isolator, direct starting, AUT-0-MAN selector and indicator LED's.

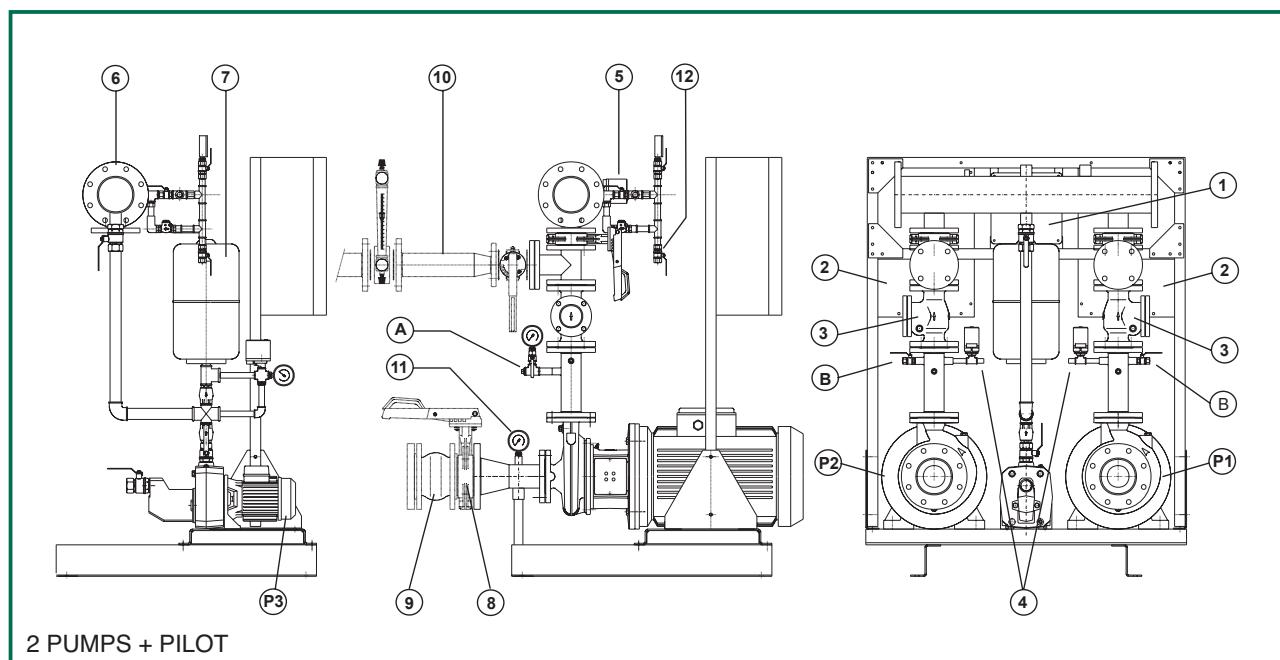
UNI 9490-10779 FIRE-FIGHTING UNITS

WITH 1-2 K-NKP-G ELECTRIC PUMPS

Main components foreseen by the UNI 9490 standard



1 PUMP + PILOT



2 PUMPS + PILOT

A - Connector for suction tank

To be connected to the bottom of the suction tank with a check valve.

Only for overhead installation.

B - Check valve control tap

To be connected to the drain **for overhead and underhead installations**.

4 - Water recirculation diaphragm to be connected:

- to the top of the suction tank **for overhead installations.**

- to the top of the water tank

for underhead installation.

P1 - Pump no. 1

P2 - Pump no. 2

P3 - Pilot Pump

1 - Pilot pump control panel

2 - Pump control panel

3 - Inspectable check valve

5 - Main pump start pressure switch

6 - Delivery manifold

7 - Membrane expansion tank

8 - Suction valve

Optional for underhead installations

9 - Anti-vibration joint (**optional**)

10 - Flow meter (**optional**)

11 - Vacuum pressure gauge

12 - Manual test tap

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

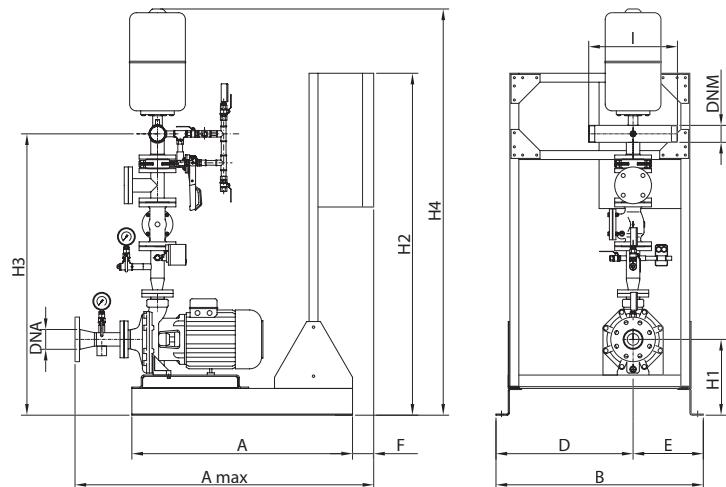
1 K SETS

FIRE-FIGHTING TO UNI 9490-10779

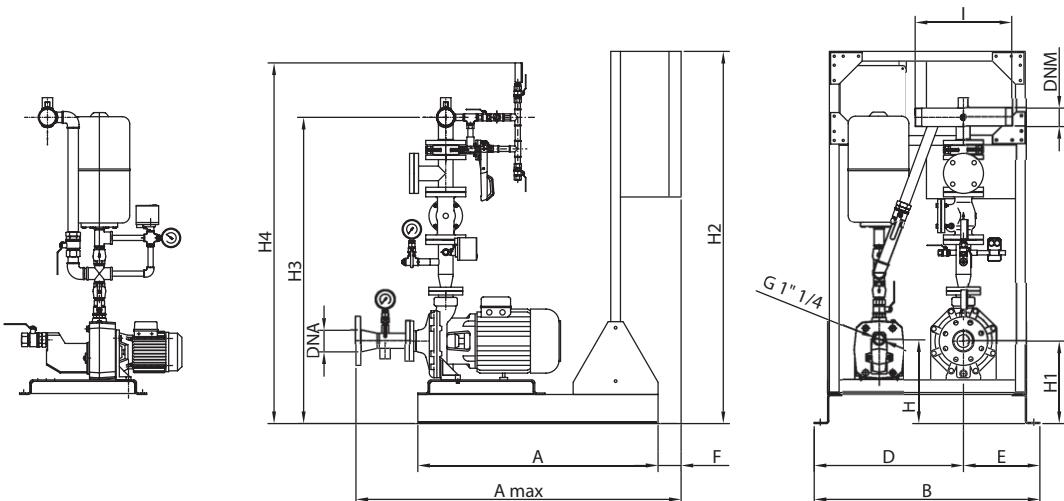
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 30 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	F	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
1 K 70/300 T	990	1340	930	615	315	95	340	1535	1265	1825	400	80	2"1/2	277
1 K 80/300 T	990	1340	930	615	315	95	340	1535	1265	1825	400	80	2"1/2	283
1 K 70/400 T	990	1340	930	615	315	95	340	1535	1265	1825	400	80	2"1/2	279
1 K 80/400 T	990	1340	930	615	315	95	340	1535	1265	1825	400	80	2"1/2	284

WITH PILOT PUMP

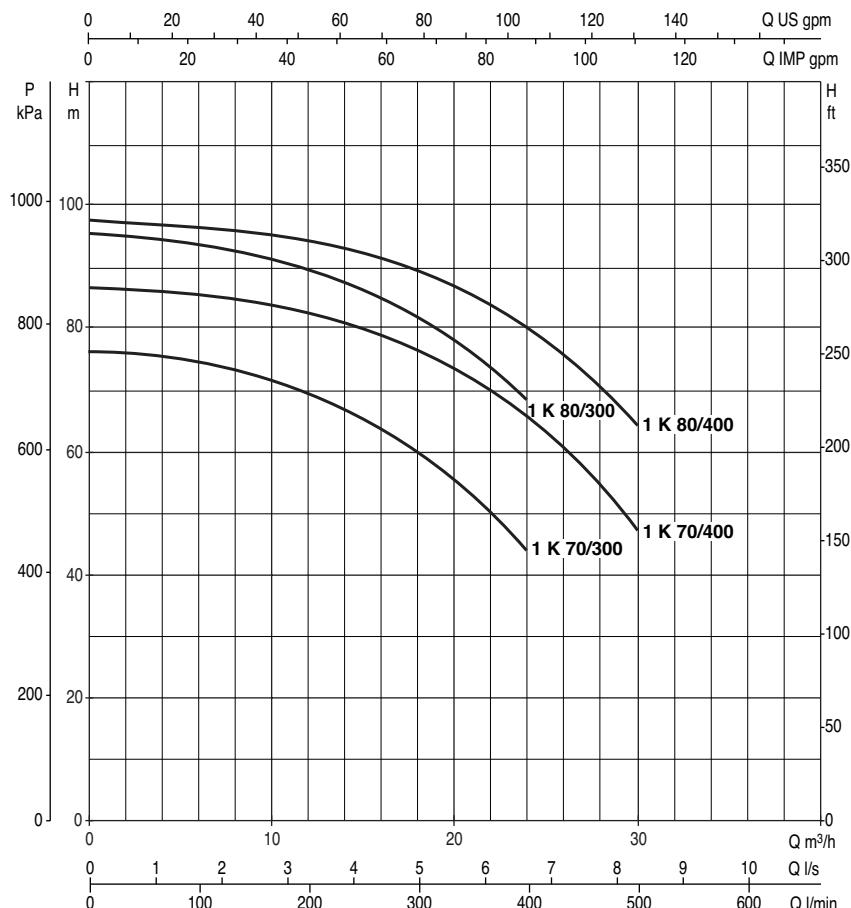
MODEL	A	A max	B	D	E	F	G	H	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
1 K 70/300 T	990	1340	930	615	315	95	1"1/4	345	340	1535	1265	1490	400	80	2"1/2	297
1 K 80/300 T	990	1340	930	615	315	95	1"1/4	345	340	1535	1265	1490	400	80	2"1/2	303
1 K 70/400 T	990	1340	930	615	315	95	1"1/4	345	340	1535	1265	1490	400	80	2"1/2	299
1 K 80/400 T	990	1340	930	615	315	95	1"1/4	345	340	1535	1265	1490	400	80	2"1/2	304

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 K SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 30 m³/h



MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMP		P2 NOMINAL PILOT PUMP		Ø DELIVERY MANIFOLD	FLOW METER
			kW	HP	kW	HP		
1 K 70/300 T	3x400 V + N ~	JET 251 T	5,5	7,5	1,85	2,5	2½"	1P S32 - DN 50
1 K 80/300 T	3x400 V + N ~	JET 251 T	7,5	10	1,85	2,5	2½"	1P S32 - DN 50
1 K 70/400 T	3x400 V + N ~	JET 251 T	9,2	12,5	1,85	2,5	2½"	1P S32 - DN 50
1 K 80/400 T	3x400 V + N ~	JET 251 T	11	15	1,85	2,5	2½"	1P S32 - DN 50

* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

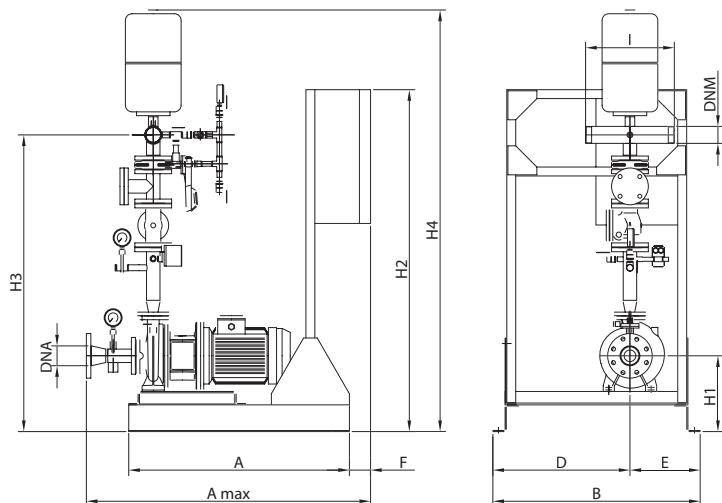
1 NKP-G 32 SETS

FIRE-FIGHTING TO UNI 9490-10779

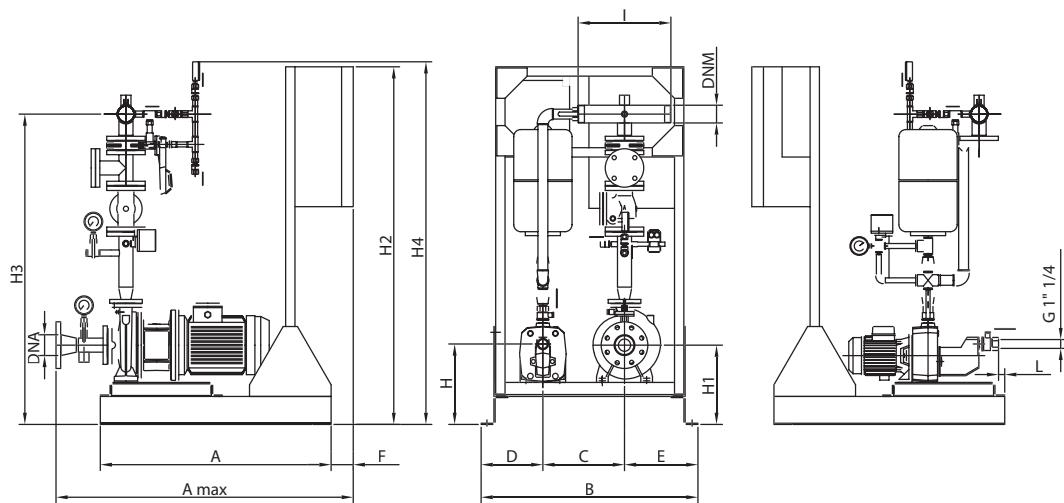
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 36 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	F	H1	H2	H3	I	H4	DNA	DNM	Weight Kg
1 NKP-G 32-200.1/188	990	1275	930	615	315	95	340	1535	1330	400	1890	80	2"1/2	300
1 NKP-G 32-200/190	990	1275	930	615	315	95	340	1535	1330	400	1890	80	2"1/2	305
1 NKP-G 32-200.1/205	990	1275	930	615	315	95	340	1535	1330	400	1890	80	2"1/2	300
1 NKP-G 32-200/210	990	1275	930	615	315	95	340	1535	1330	400	1890	80	2"1/2	300

WITH PILOT PUMP

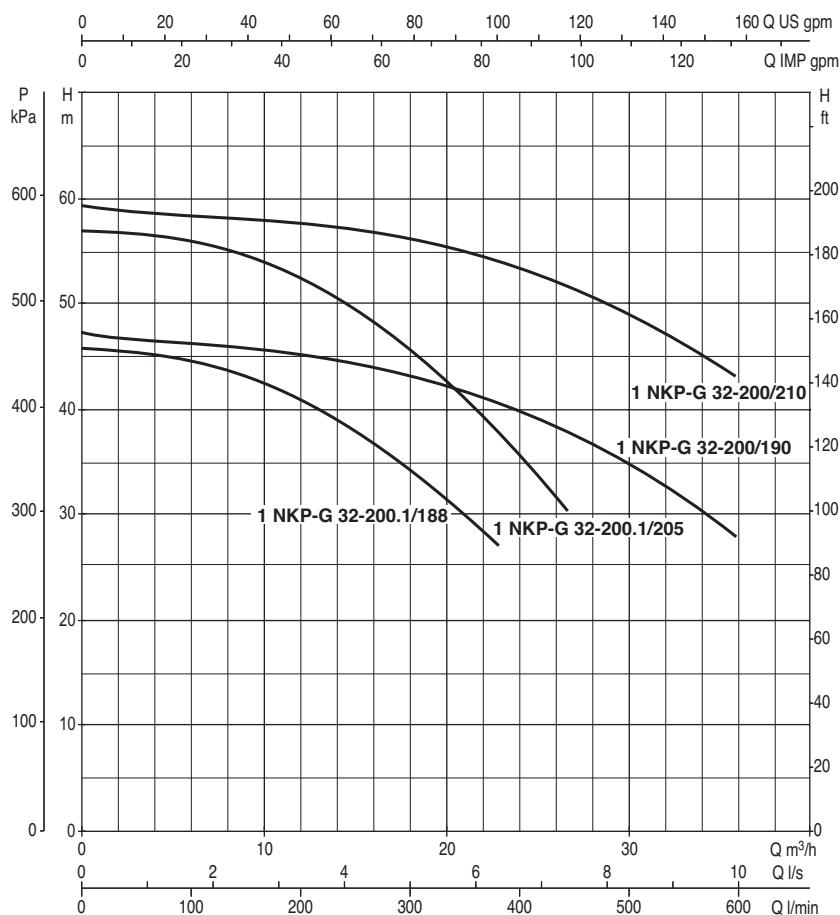
MODEL	A	A max	B	C	D	E	F	G	H	H1	H2	H3	H4	I	L	DNA	DNM	Weight Kg
1 NKP-G 32-200.1/188	990	1275	930	350	265	315	95	1"1/4	345	340	1535	1330	1550	400	27	80	2"1/2	335
1 NKP-G 32-200/190	990	1275	930	350	265	315	95	1"1/4	345	340	1535	1330	1550	400	27	80	2"1/2	340
1 NKP-G 32-200.1/205	990	1275	930	350	265	315	95	1"1/4	345	340	1535	1330	1550	400	27	80	2"1/2	335
1 NKP-G 32-200/210	990	1275	930	350	265	315	95	1"1/4	345	340	1535	1330	1550	400	27	80	2"1/2	335

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 NKP-G 32 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 36 m³/h



MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMP		P2 NOMINAL PILOT PUMP		Ø MANIFOLD	FLOW METER
			kW	HP	kW	HP		
1 NKP-G 32-200.1/188	3x400 V + N ~	JET 251 T	4	5,5	1,85	2,5	2½"	1P S.32 - DN 50
1 NKP-G 32-200/190	3x400 V + N ~	JET 251 T	5,5	7,5	1,85	2,5	2½"	1P S.32 - DN 50
1 NKP-G 32-200.1/205	3x400 V + N ~	JET 251 T	5,5	7,5	1,85	2,5	2½"	1P S.32 - DN 50
1 NKP-G 32-200/210	3x400 V + N ~	JET 251 T	7,5	10	1,85	2,5	2½"	1P S.32 - DN 50

* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

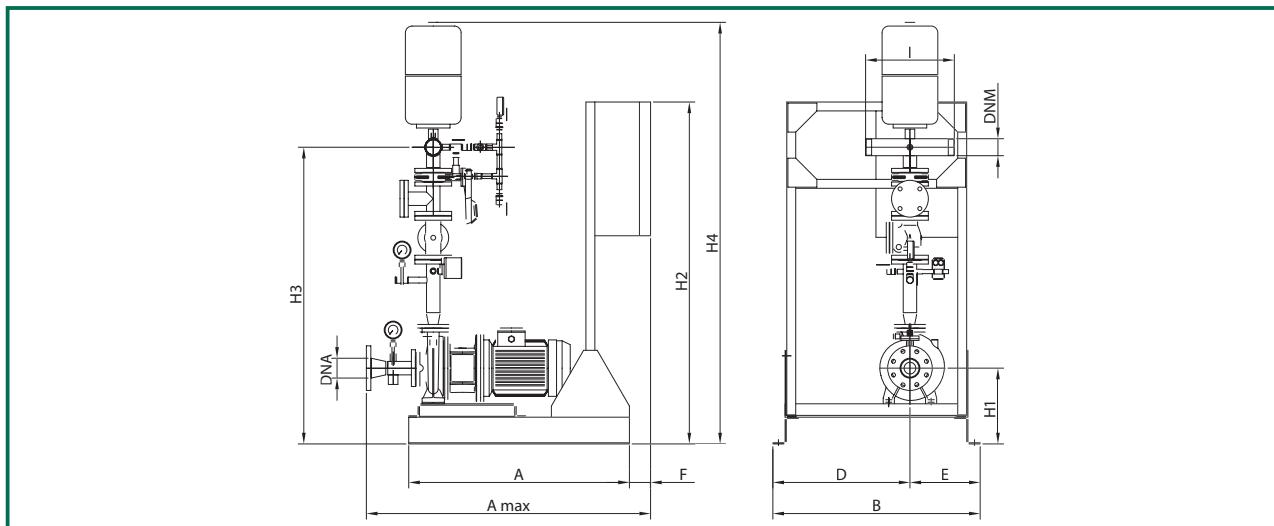
1 NKP-G 40-160 SETS

FIRE-FIGHTING TO UNI 9490-10779

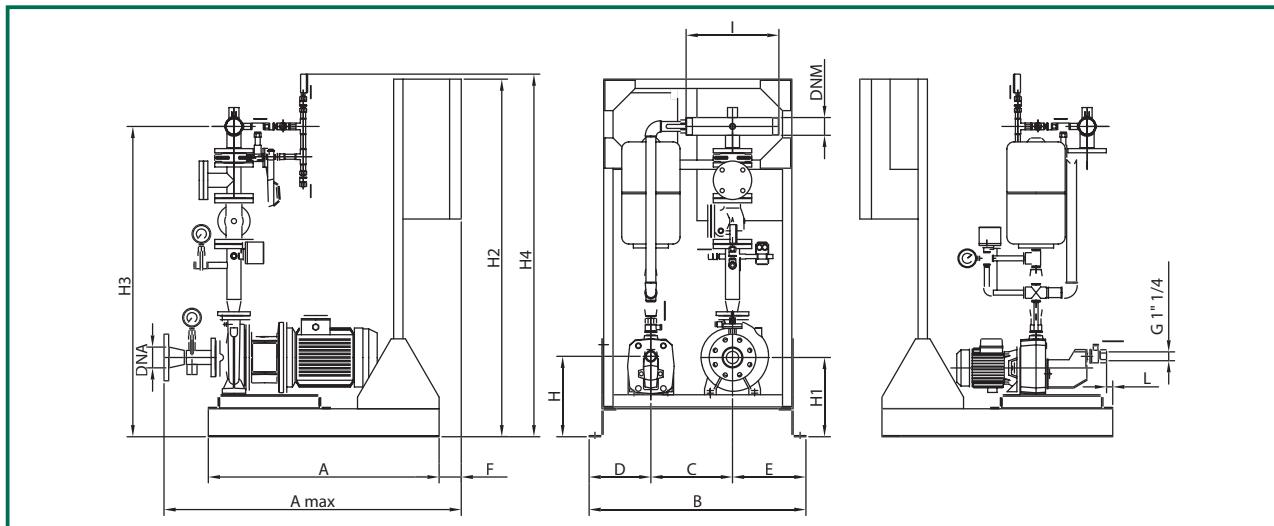
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 64,5 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
1 NKP-G 40-160/158	990	1295	930	615	315	332	1535	1375	1940	400	100	80	400
1 NKP-G 40-160/172	990	1295	930	615	315	332	1535	1375	1940	400	100	80	330

WITH PILOT PUMP

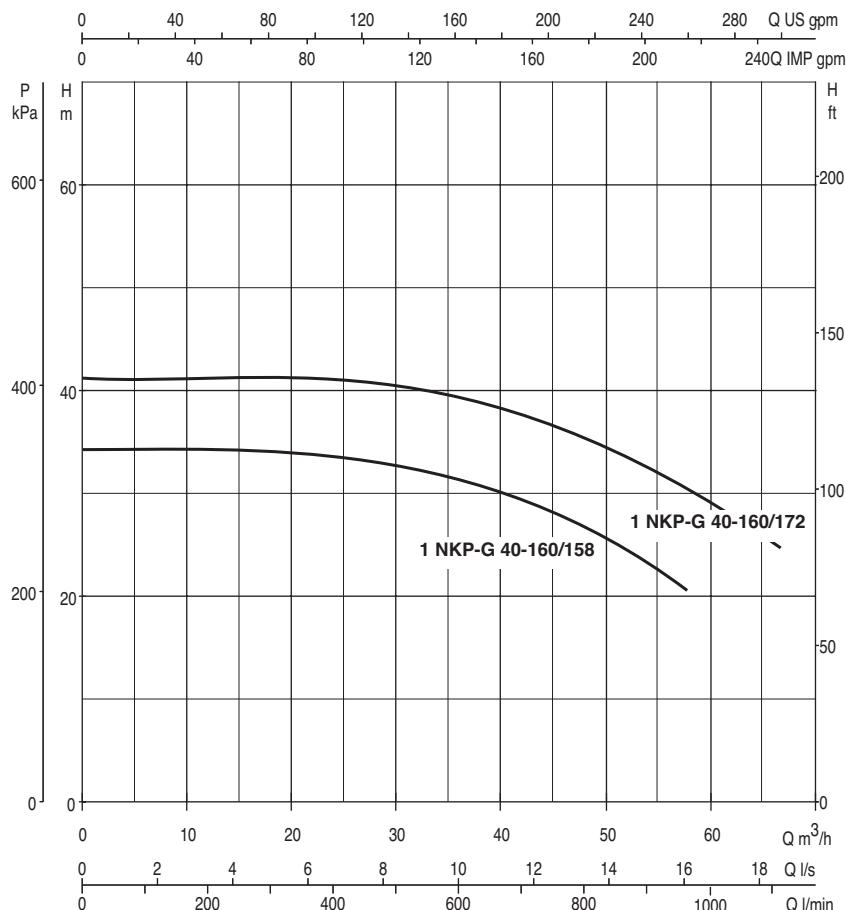
MODEL	A	A max	B	C	D	E	F	G	H	H1	H2	H3	H4	I	L	DNA	DNM	Weight Kg
1 NKP-G 40-160/158	990	1295	930	350	265	315	95	1"1/4	345	332	1535	1375	1600	400	27	100	80	435
1 NKP-G 40-160/172	990	1295	930	350	265	315	95	1"1/4	345	332	1535	1375	1600	400	27	100	80	365

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 NKP-G 40-160 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 64,5 m³/h



MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMP		P2 NOMINAL PILOT PUMP		Ø MANIFOLD	FLOW METER
			kW	HP	kW	HP		
1 NKP-G 40-160/158	3x400 V + N ~	JET 251 T	5,5	7,5	1,85	2,5	DN 80	1P S.40 - DN 65
1 NKP-G 40-160/172	3x400 V + N ~	JET 251 T	7,5	10	1,85	2,5	DN 80	1P S.40 - DN 65

* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

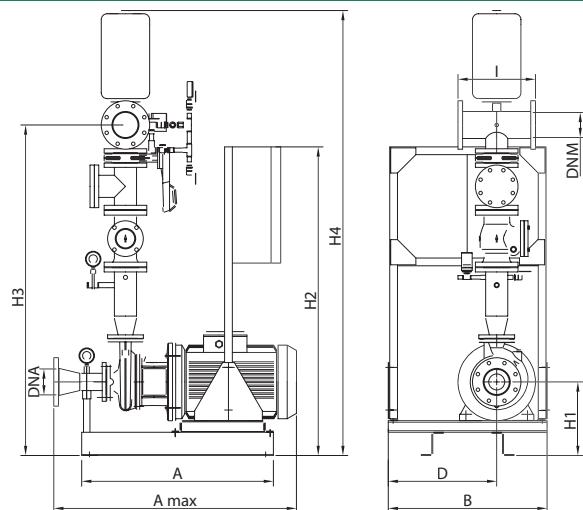
1 NKP-G 40 SETS

FIRE-FIGHTING TO UNI 9490-10779

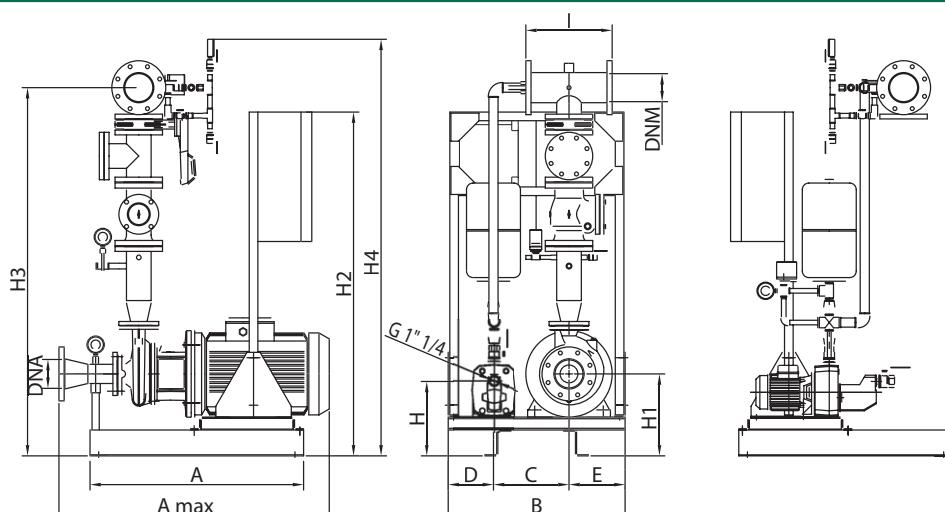
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 64,5 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
1 NKP-G 40-200/210	990	1045	820	560	360	1600	1425	1990	400	100	80	400
1 NKP-G 40-250/230	990	1045	820	560	360	1600	1470	2035	400	100	80	400
1 NKP-G 40-250/245	990	1125	820	560	360	1600	1470	2035	400	100	80	418
1 NKP-G 40-250/260	990	1165	820	560	360	1600	1470	2035	400	100	80	420

WITH PILOT PUMP

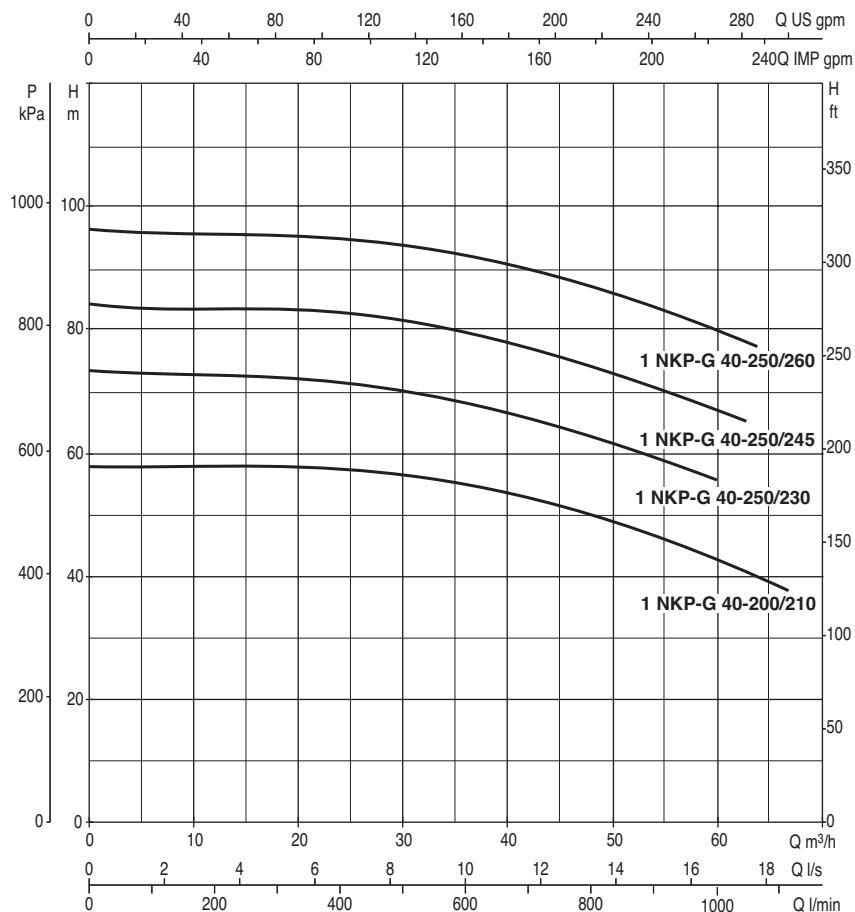
MODEL	A	A max	B	C	D	E	G	H	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
1 NKP-G 40-200/210	990	1045	820	350	210	260	1"1/4	345	360	1600	1425	1650	400	100	80	435
1 NKP-G 40-250/230	990	1045	820	350	210	260	1"1/4	345	360	1600	1470	1695	400	100	80	435
1 NKP-G 40-250/245	990	1125	820	350	210	260	1"1/4	345	360	1600	1470	1695	400	100	80	453
1 NKP-G 40-250/260	990	1165	820	350	210	260	1"1/4	345	360	1600	1470	1695	400	100	80	455

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 NKP-G 40 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 64,5 m³/h



MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMP		P2 NOMINAL PILOT PUMP		Ø MANIFOLD	FLOW METER
			kW	HP	kW	HP		
1 NKP-G 40-200/210	3x400 V + N ~	JET 251 T	11	15	1,85	2,5	DN 80	1P S.40 - DN 65
1 NKP-G 40-250/230	3x400 V + N ~	JET 251 T	15	20	1,85	2,5	DN 80	1P S.40 - DN 65
1 NKP-G 40-250/245	3x400 V + N ~	JET 251 T	18,5	25	1,85	2,5	DN 80	1P S.40 - DN 65
1 NKP-G 40-250/260	3x400 V + N ~	JET 251 T	22	30	1,85	2,5	DN 80	1P S.40 - DN 65

* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

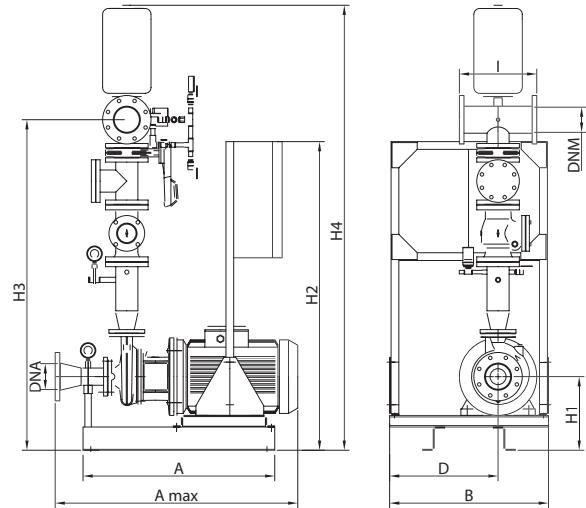
1 NKP-G 50 SETS

FIRE-FIGHTING TO UNI 9490-10779

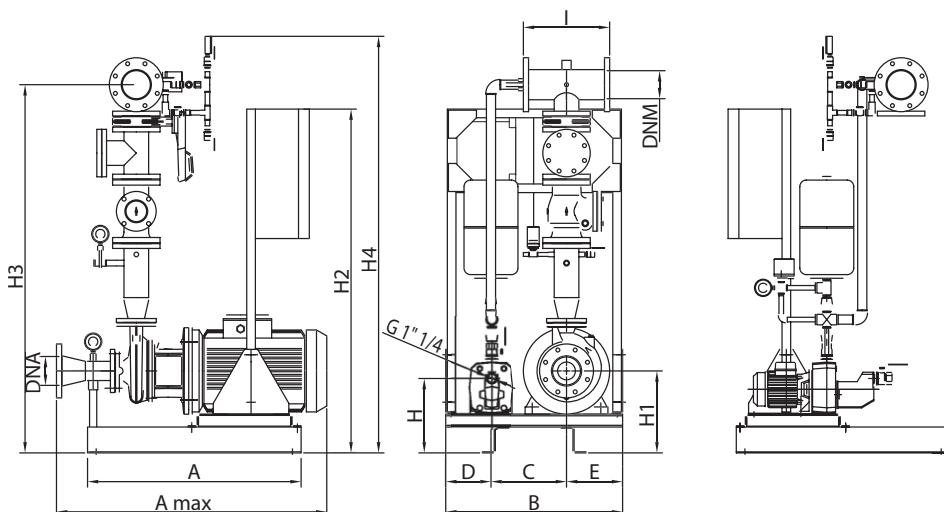
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 120 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
1 NKP-G 50-200/200	990	1045	820	560	360	1600	1515	2095	400	100	100	400
1 NKP-G 50-200/210	990	1125	820	560	360	1600	1515	2095	400	100	100	400
1 NKP-G 50-200/219	990	1165	820	560	360	1600	1515	2095	400	100	100	330
1 NKP-G 50-250/230	990	1165	820	560	360	1600	1540	2120	400	100	100	418
1 NKP-G 50-250/257	990	1225	820	560	380	1600	1560	2140	400	100	100	400

WITH PILOT PUMP

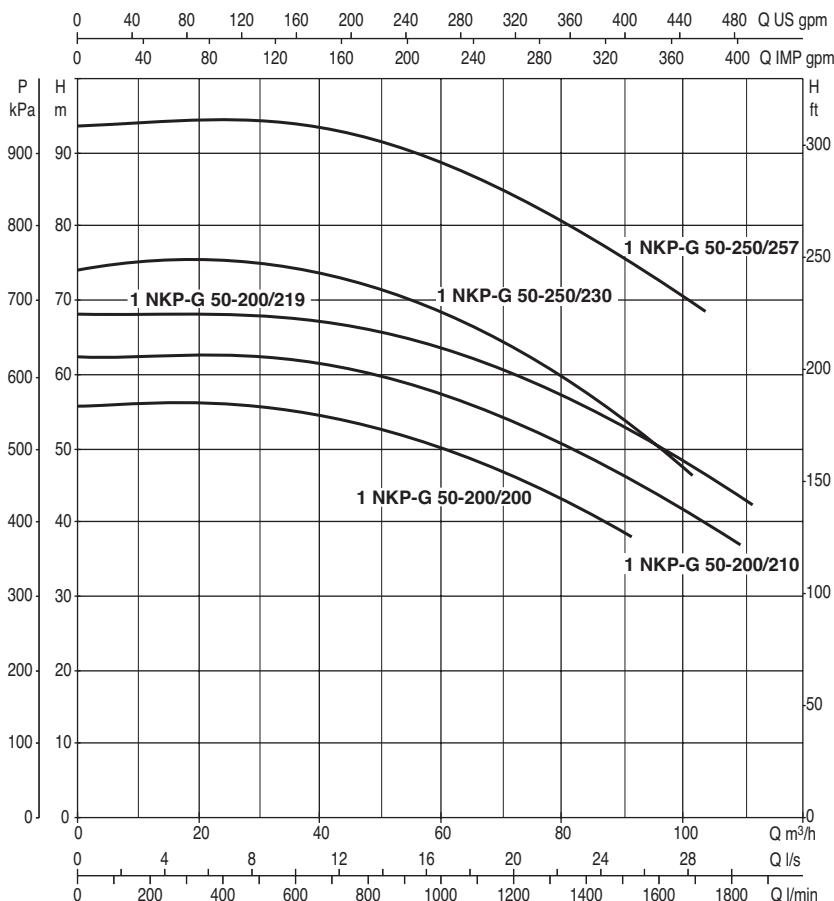
MODEL	A	A max	B	C	D	E	G	H	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
1 NKP-G 50-200/200	990	1045	820	350	210	260	1"1/4	345	360	1600	1515	1740	400	100	100	435
1 NKP-G 50-200/210	990	1125	820	350	210	260	1"1/4	345	360	1600	1515	1740	400	100	100	435
1 NKP-G 50-200/219	990	1165	820	350	210	260	1"1/4	345	360	1600	1515	1740	400	100	100	365
1 NKP-G 50-250/230	990	1165	820	350	210	260	1"1/4	345	360	1600	1540	1765	400	100	100	453
1 NKP-G 50-250/257	990	1225	820	350	210	260	1"1/4	345	380	1600	1560	1785	400	100	100	435

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 NKP-G 50 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 120 m³/h



MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMP		P2 NOMINAL PILOT PUMP		Ø MANIFOLD	FLOW METER
			kW	HP	kW	HP		
1 NKP-G 50-200/200	3x400 V + N ~	JET 251 T	15	20	1,85	2,5	DN 100	1P S.50 - DN 80
1 NKP-G 50-200/210	3x400 V + N ~	JET 251 T	18,5	25	1,85	2,5	DN 100	1P S.50 - DN 80
1 NKP-G 50-200/219	3x400 V + N ~	JET 251 T	22	30	1,85	2,5	DN 100	1P S.50 - DN 80
1 NKP-G 50-250/230	3x400 V + N ~	JET 251 T	22	30	1,85	2,5	DN 100	1P S.50 - DN 80
1 NKP-G 50-250/257	3x400 V + N ~	JET 251 T	30	40	1,85	2,5	DN 100	1P S.50 - DN 80

* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

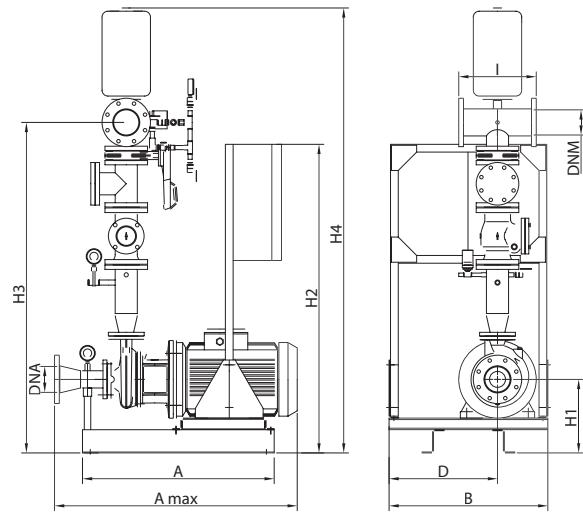
1 NKP-G 65 SETS

FIRE-FIGHTING TO UNI 9490-10779

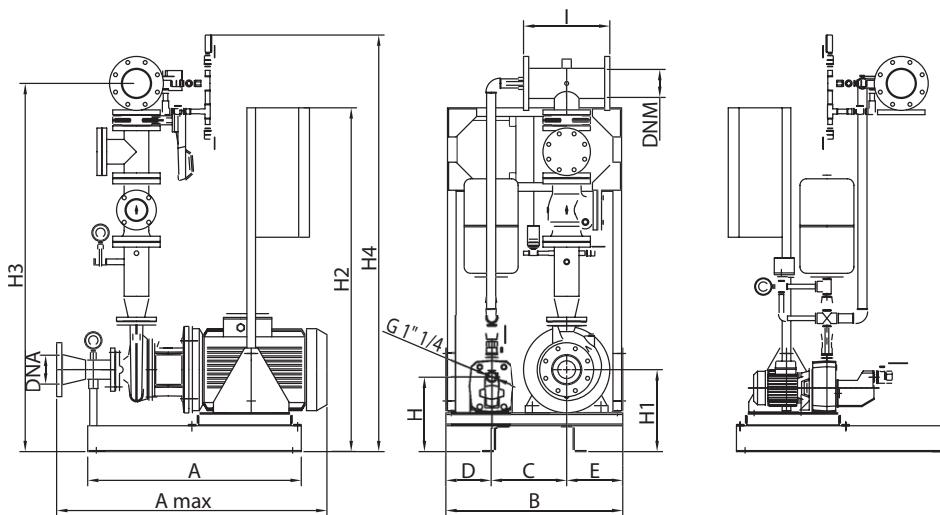
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 150 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
1 NKP-G 65-200/190	990	1155	820	560	360	1600	1690	2280	400	125	125	430
1 NKP-G 65-200/200	990	1195	820	560	360	1600	1690	2280	400	125	125	430
1 NKP-G 65-200/219	990	1255	820	560	380	1600	1710	2300	400	125	125	430

WITH PILOT PUMP

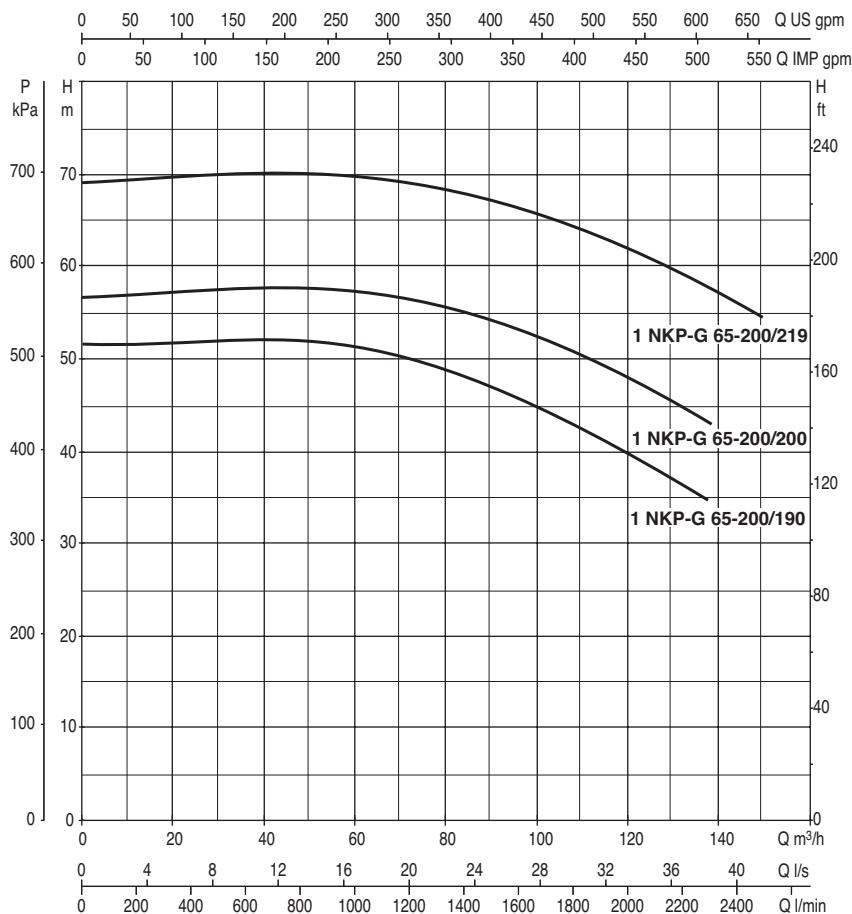
MODEL	A	A max	B	C	D	E	G	H	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
1 NKP-G 65-200/190	990	1155	820	350	210	260	1"1/4	345	360	1600	1690	1915	400	125	125	465
1 NKP-G 65-200/200	990	1195	820	350	210	260	1"1/4	345	360	1600	1690	1925	400	125	125	465
1 NKP-G 65-200/219	990	1255	820	350	210	260	1"1/4	345	380	1600	1710	1935	400	125	125	465

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 NKP-G 65 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 150 m³/h



MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMP		P2 NOMINAL PILOT PUMP		Ø MANIFOLD	FLOW METER
			kW	HP	kW	HP		
1 NKP-G 65-200/190	3x400 V + N ~	JET 251 T	18,5	25	1,85	2,5	DN 125	1P S.65 - DN 100
1 NKP-G 65-200/200	3x400 V + N ~	JET 251 T	22	30	1,85	2,5	DN 125	1P S.65 - DN 100
1 NKP-G 65-200/219	3x400 V + N ~	JET 251 T	30	40	1,85	2,5	DN 125	1P S.65 - DN 100

* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

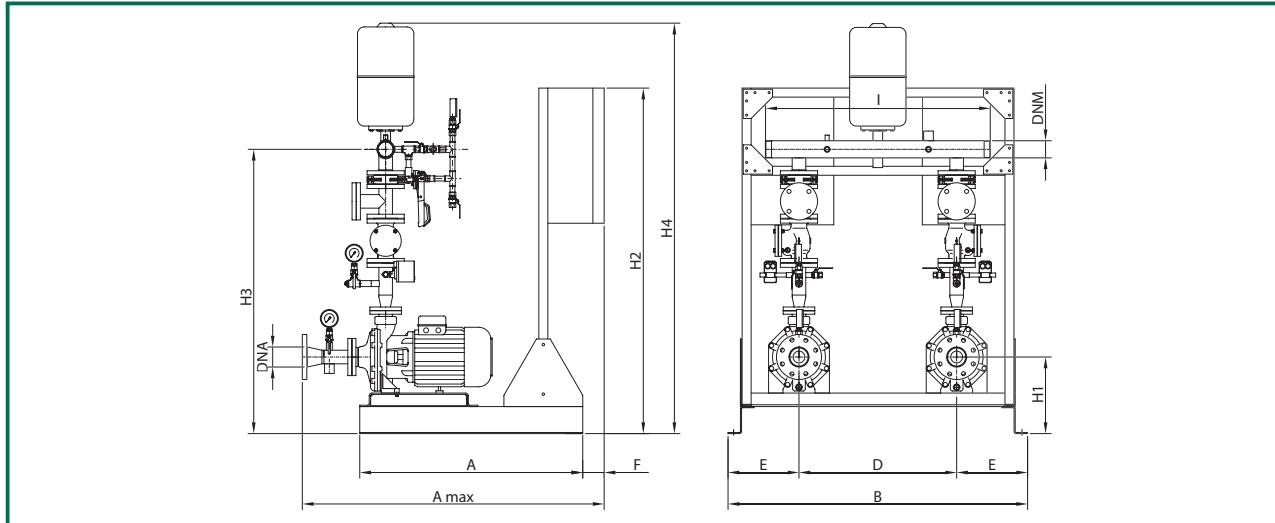
2 K SETS

FIRE-FIGHTING TO UNI 9490-10779

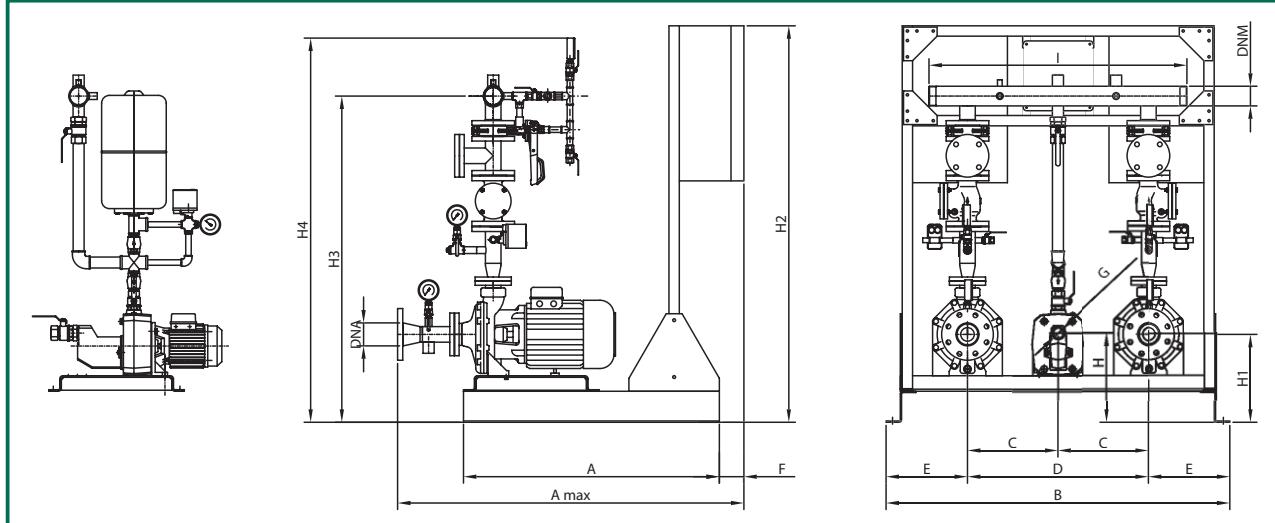
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 30 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	F	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
2 K 70/300 T	990	1340	1330	700	315	95	340	1535	1265	1825	998	80	2"1/2	514
2 K 80/300 T	990	1340	1330	700	315	95	340	1535	1265	1825	998	80	2"1/2	526
2 K 70/400 T	990	1340	1330	700	315	95	340	1535	1265	1825	998	80	2"1/2	518
2 K 80/400 T	990	1340	1330	700	315	95	340	1535	1265	1825	998	80	2"1/2	528

WITH PILOT PUMP

MODEL	A	A max	B	C	D	E	F	G	H	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
2 K 70/300 T	990	1340	1330	350	700	315	95	1"1/4	345	340	1535	1265	1490	998	80	2"1/2	534
2 K 80/300 T	990	1340	1330	350	700	315	95	1"1/4	345	340	1535	1265	1490	998	80	2"1/2	546
2 K 70/400 T	990	1340	1330	350	700	315	95	1"1/4	345	340	1535	1265	1490	998	80	2"1/2	538
2 K 80/400 T	990	1340	1330	350	700	315	95	1"1/4	345	340	1535	1265	1490	998	80	2"1/2	548

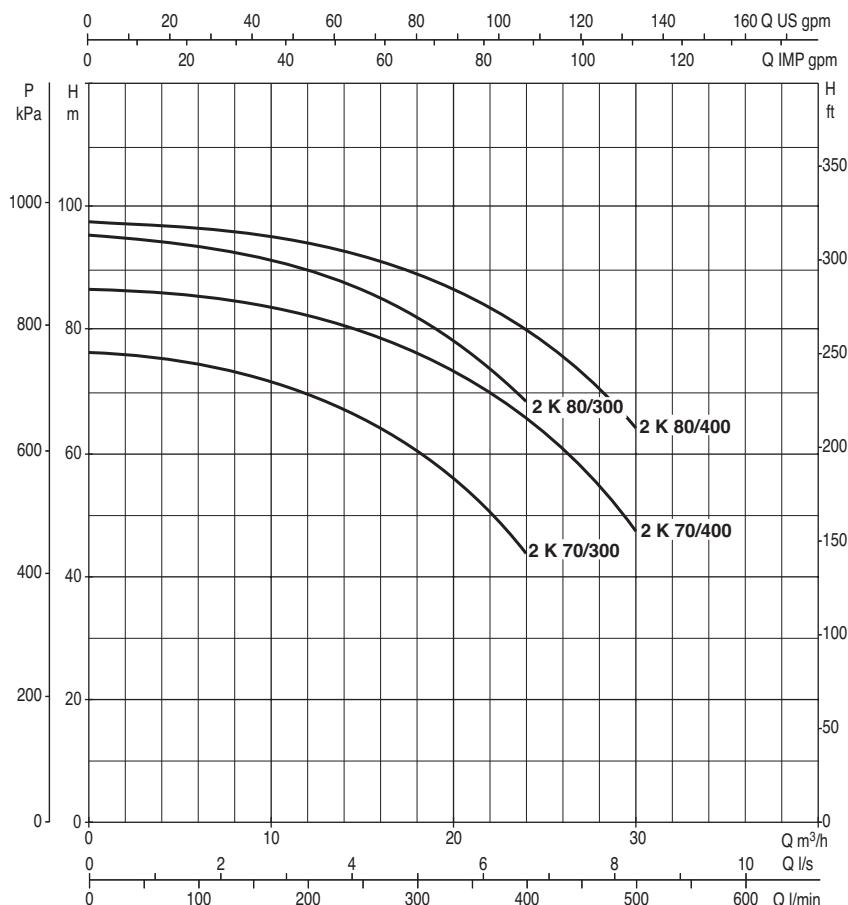
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 K SETS

FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 30 m³/h



Performance curves related to one functioning pump only.

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMPS		P2 NOMINAL PILOT PUMP		Ø DELIVERY MANIFOLD	FLOW METER
			kW	HP	kW	HP		
2 K 70/300 T	3x400 V + N ~	JET 251 T	2x5,5	2x7,5	1,85	2x2,5	2½"	2P S32 - DN 50
2 K 80/300 T	3x400 V + N ~	JET 251 T	2x7,5	2x10	1,85	2x2,5	2½"	2P S32 - DN 50
2 K 70/400 T	3x400 V + N ~	JET 251 T	2x9,2	2x12,5	1,85	2x2,5	2½"	2P S32 - DN 50
2 K 80/400 T	3x400 V + N ~	JET 251 T	2x11	2x15	1,85	2x2,5	2½"	2P S32 - DN 50

* Pilot pump on request

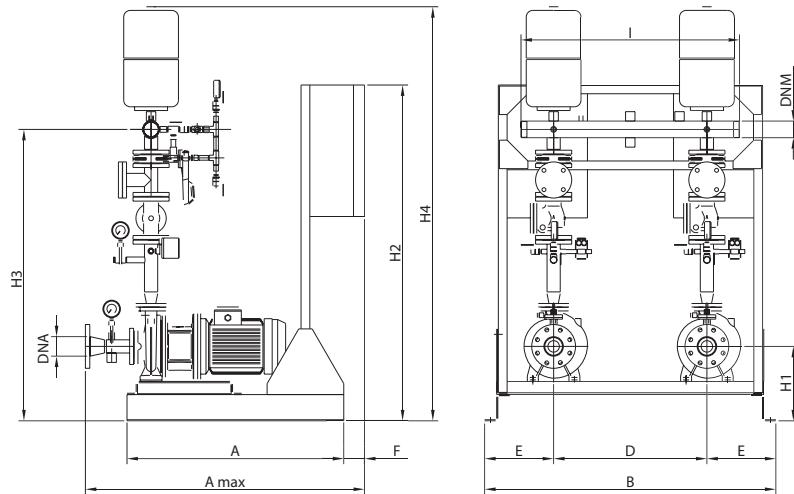
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 NKP-G 32 SETS FIRE-FIGHTING TO UNI 9490-10779

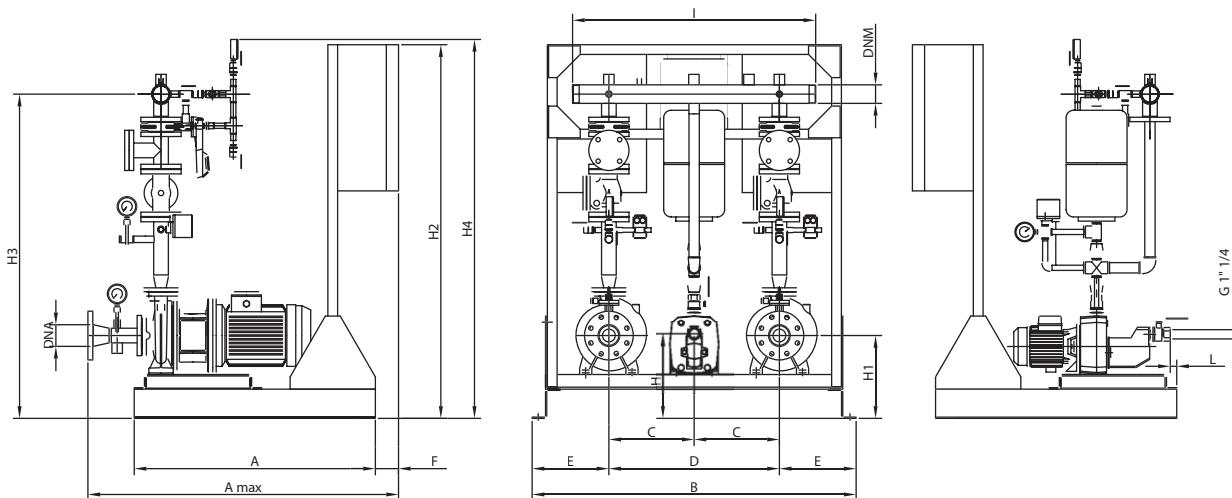
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 36 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	F	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
2 NKP-G 32-200.1/188	990	1275	1330	700	315	95	340	1535	1330	1890	998	80	2"1/2	542
2 NKP-G 32-200/190	990	1275	1330	700	315	95	340	1535	1330	1890	998	80	2"1/2	552
2 NKP-G 32-200.1/205	990	1275	1330	700	315	95	340	1535	1330	1890	998	80	2"1/2	520
2 NKP-G 32-200/210	990	1275	1330	700	315	95	340	1535	1330	1890	998	80	2"1/2	546

WITH PILOT PUMP

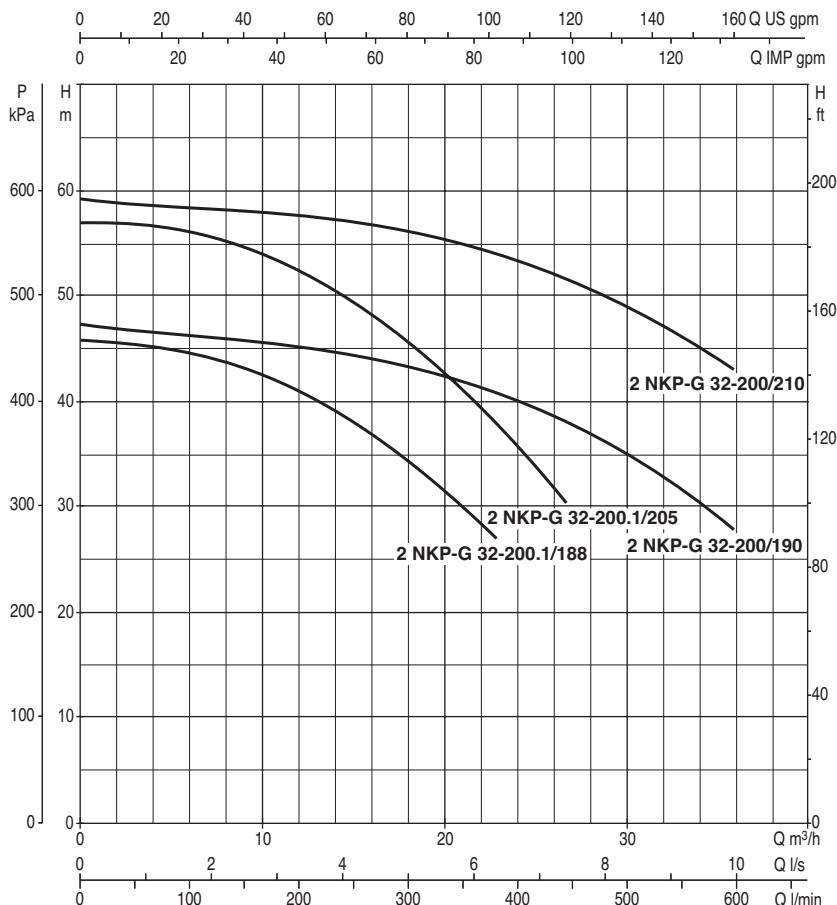
MODEL	A	A max	B	C	D	E	F	G	H	H1	H2	H3	H4	I	L	DNA	DNM	Weight Kg
2 NKP-G 32-200.1/188	990	1275	1330	350	700	315	95	1" 1/4	345	340	1535	1330	1550	998	27	80	2"1/2	562
2 NKP-G 32-200/190	990	1275	1330	350	700	315	95	1" 1/4	345	340	1535	1330	1550	998	27	80	2"1/2	572
2 NKP-G 32-200.1/205	990	1275	1330	350	700	315	95	1" 1/4	345	340	1535	1330	1550	998	27	80	2"1/2	540
2 NKP-G 32-200/210	990	1275	1330	350	700	315	95	1" 1/4	345	340	1535	1330	1550	998	27	80	2"1/2	566

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 NKP-G 32 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 36 m³/h



Performance curves related to one functioning pump only.

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMPS		P2 NOMINAL PILOT PUMP		Ø MANIFOLD	FLOW METER
			kW	HP	kW	HP		
2 NKP-G 32-200.1/188	3x400 V + N ~	JET 251 T	2x4	2x5,5	1,85	2x2,5	2½"	2P S.32 - DN 50
2 NKP-G 32-200/190	3x400 V + N ~	JET 251 T	2x5,5	2x7,5	1,85	2x2,5	2½"	2P S.32 - DN 50
2 NKP-G 32-200.1/205	3x400 V + N ~	JET 251 T	2x5,5	2x7,5	1,85	2x2,5	2½"	2P S.32 - DN 50
2 NKP-G 32-200/210	3x400 V + N ~	JET 251 T	2x7,5	2x10	1,85	2x2,5	2½"	2P S.32 - DN 50

* Pilot pump on request

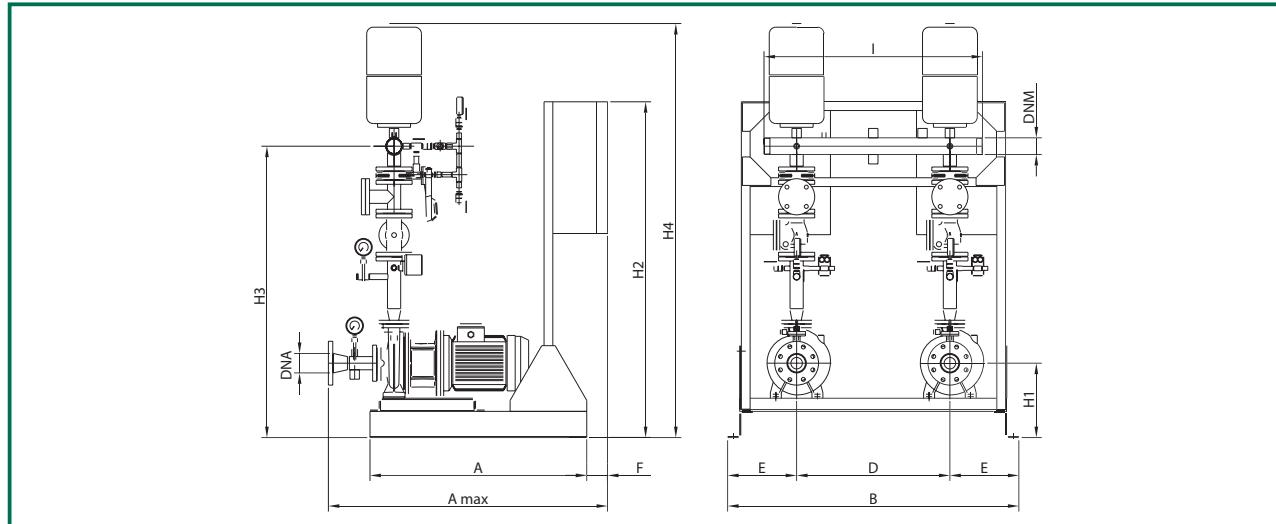
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 NKP-G 40-160 SETS FIRE-FIGHTING TO UNI 9490-10779

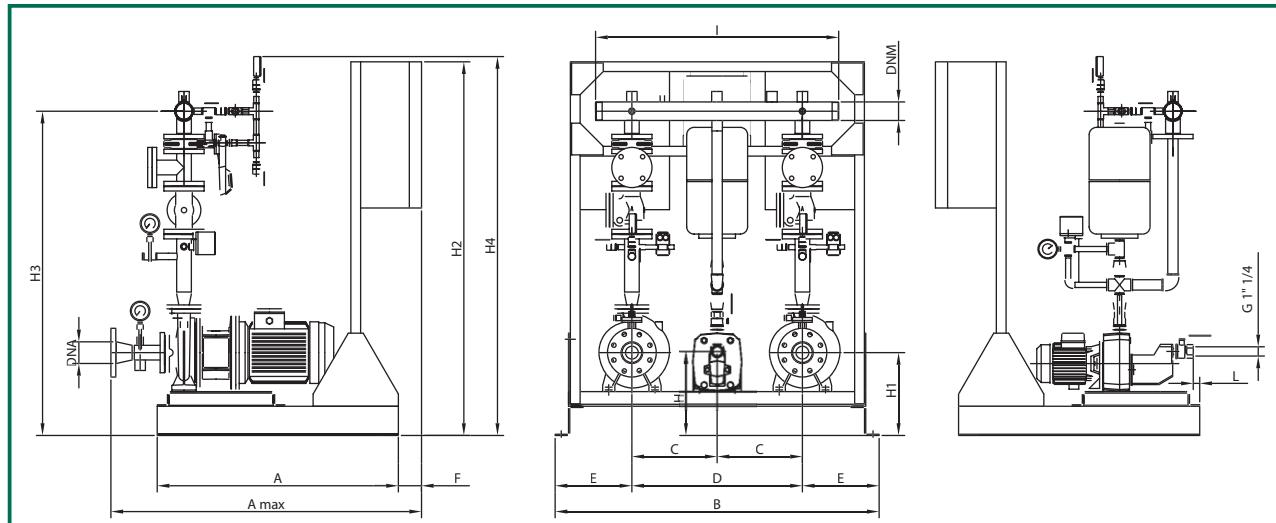
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 64,5 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	F	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
2 NKP-G 40-160/158	990	1295	1330	700	315	95	332	1535	1375	1940	998	100	80	638
2 NKP-G 40-160/172	990	1295	1330	700	315	95	332	1535	1375	1940	998	100	80	624

WITH PILOT PUMP

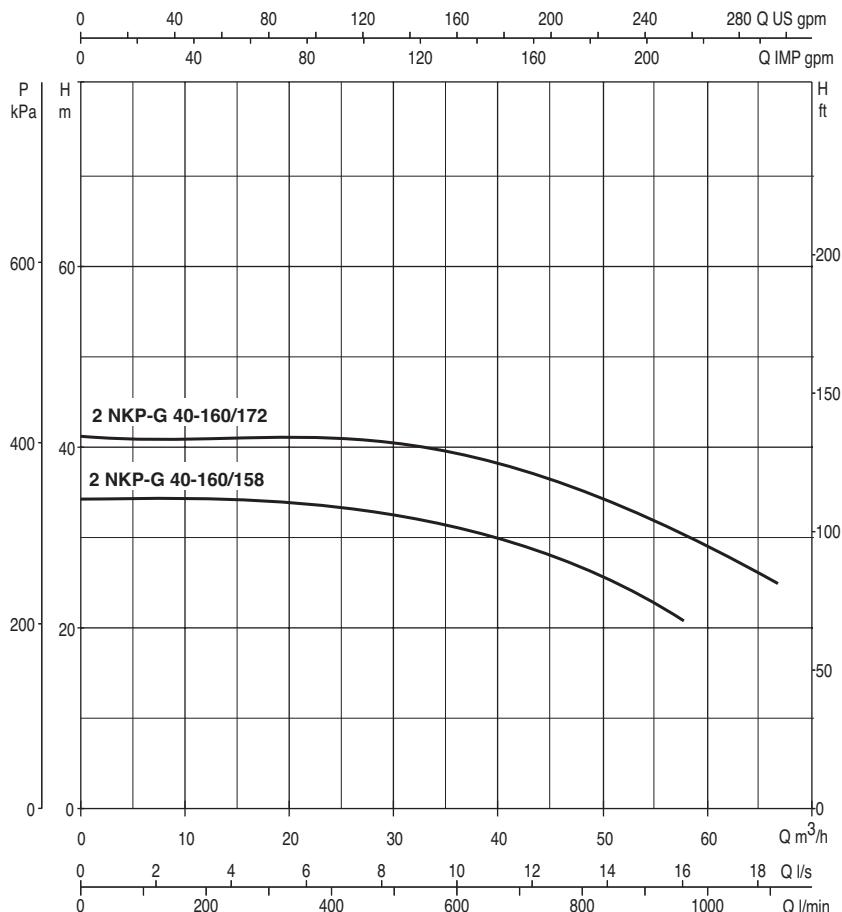
MODEL	A	A max	B	C	D	E	F	G	H	H1	H2	H3	H4	I	L	DNA	DNM	Weight Kg
2 NKP-G 40-160/158	990	1295	1330	350	700	315	95	1 1/4	345	332	1535	1375	1600	998	27	100	80	658
2 NKP-G 40-160/172	990	1295	1330	350	700	315	95	1 1/4	345	332	1535	1375	1600	998	27	100	80	644

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 NKP-G 40-160 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 64,5 m³/h



Performance curves related to one functioning pump only.

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMPS		P2 NOMINAL PILOT PUMP		Ø MANIFOLD	FLOW METER
			kW	HP	kW	HP		
2 NKP-G 40-160/158	3x400 V + N ~	JET 251 T	2x5,5	2x7,5	1,85	2x2,5	DN 80	2P S.40 - DN 65
2 NKP-G 40-160/172	3x400 V + N ~	JET 251 T	2x7,5	2x10	1,85	2x2,5	DN 80	2P S.40 - DN 65

* Pilot pump on request

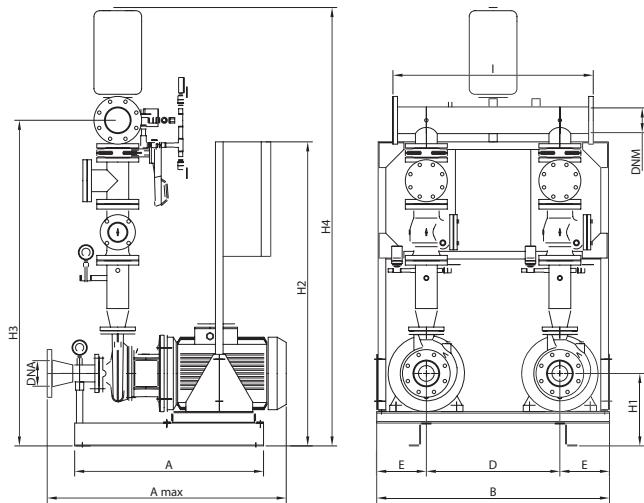
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 NKP-G 40 SETS FIRE-FIGHTING TO UNI 9490-10779

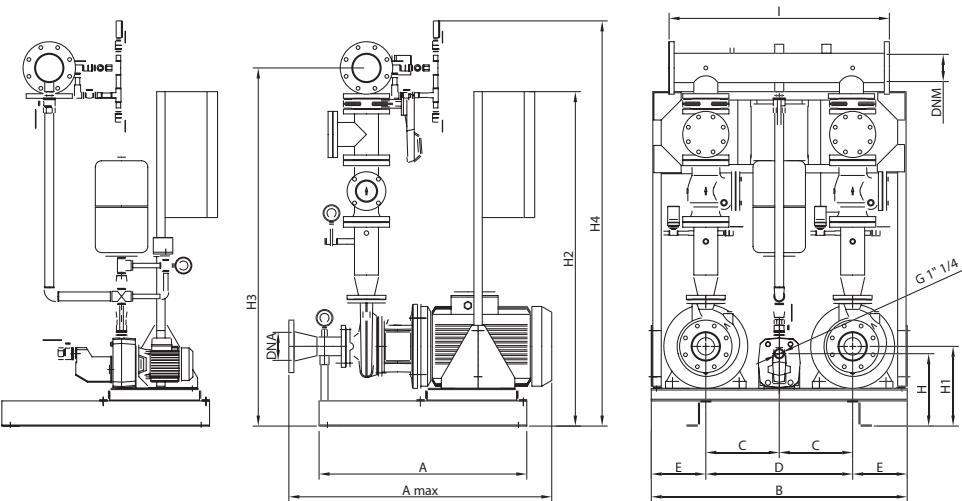
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 64,5 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
2 NKP-G 40-200/210	990	1045	1220	700	260	360	1600	1425	1990	1050	100	80	704
2 NKP-G 40-250/230	990	1045	1220	700	260	360	1600	1470	2035	1050	100	80	734
2 NKP-G 40-250/245	990	1125	1220	700	260	360	1600	1470	2035	1050	100	80	814
2 NKP-G 40-250/260	990	1165	1220	700	260	360	1600	1470	2035	1050	100	80	840

WITH PILOT PUMP

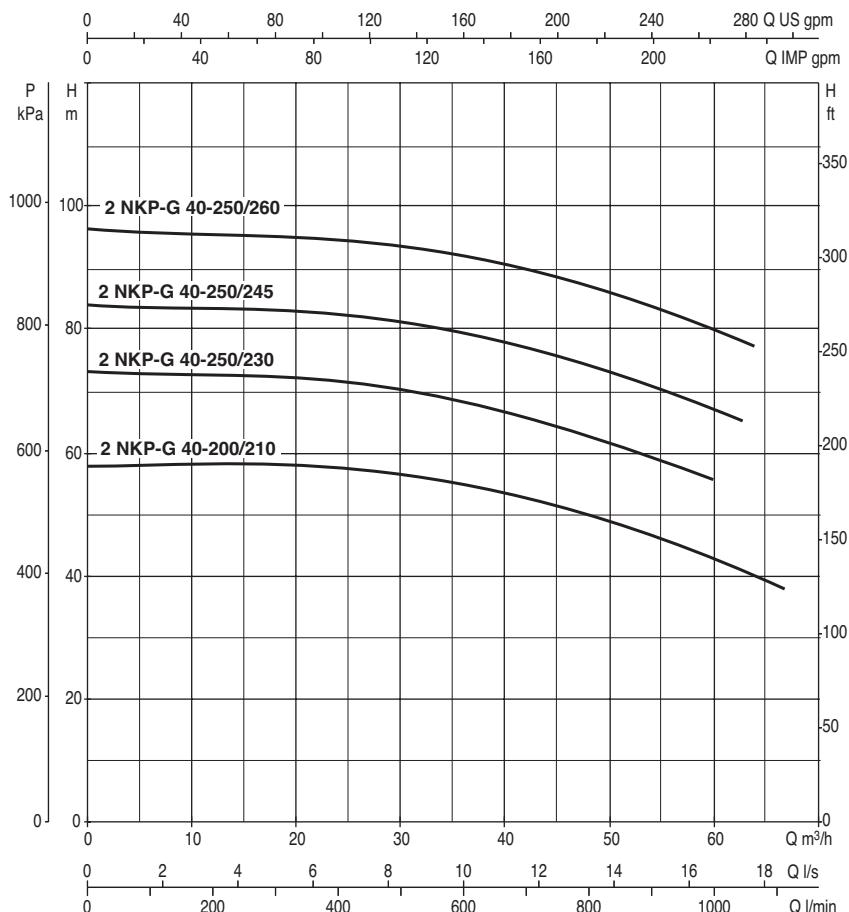
MODEL	A	A max	B	C	D	E	G	H	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
2 NKP-G 40-200/210	990	1045	1220	350	700	260	1"1/4	345	360	1600	1425	1650	1050	100	80	724
2 NKP-G 40-250/230	990	1045	1220	350	700	260	1"1/4	345	360	1600	1470	1695	1050	100	80	754
2 NKP-G 40-250/245	990	1125	1220	350	700	260	1"1/4	345	360	1600	1470	1695	1050	100	80	834
2 NKP-G 40-250/260	990	1165	1220	350	700	260	1"1/4	345	360	1600	1470	1695	1050	100	80	860

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 NKP-G 40 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 64,5 m³/h



Performance curves related to one functioning pump only.

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMPS		P2 NOMINAL PILOT PUMP		Ø MANIFOLD	FLOW METER
			kW	HP	kW	HP		
2 NKP-G 40-200/210	3x400 V + N ~	JET 251 T	2x11	2x15	1,85	2x2,5	DN 80	2P S.40 - DN 65
2 NKP-G 40-250/230	3x400 V + N ~	JET 251 T	2x15	2x20	1,85	2x2,5	DN 80	2P S.40 - DN 65
2 NKP-G 40-250/245	3x400 V + N ~	JET 251 T	2x18,5	2x25	1,85	2x2,5	DN 80	2P S.40 - DN 65
2 NKP-G 40-250/260	3x400 V + N ~	JET 251 T	2x22	2x30	1,85	2x2,5	DN 80	2P S.40 - DN 65

* Pilot pump on request

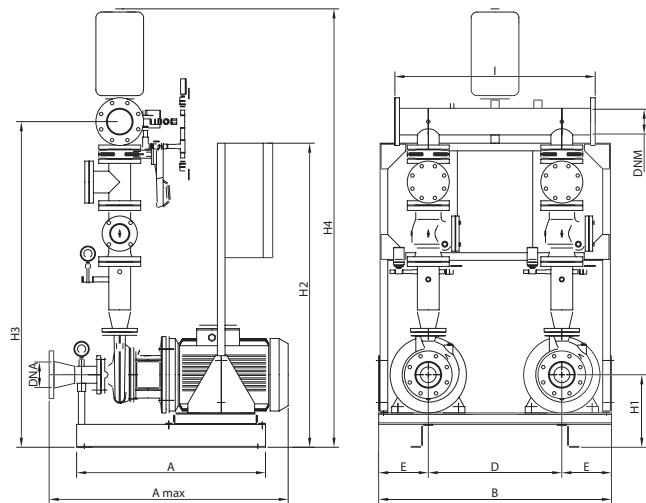
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 NKP-G 50 SETS FIRE-FIGHTING TO UNI 9490-10779

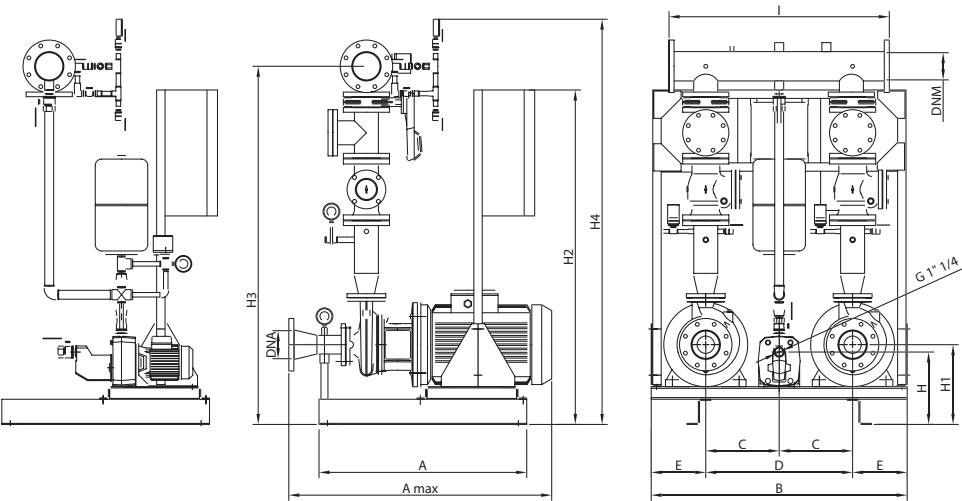
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 120 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
2 NKP-G 50-200/200	990	1045	1220	700	260	360	1600	1515	2095	1050	100	100	850
2 NKP-G 50-200/210	990	1125	1220	700	260	360	1600	1515	2095	1050	100	100	820
2 NKP-G 50-200/219	990	1165	1220	700	260	360	1600	1515	2095	1050	100	100	748
2 NKP-G 50-250/230	990	1165	1220	700	260	360	1600	1540	2120	1050	100	100	978
2 NKP-G 50-250/257	990	1225	1220	700	260	380	1600	1560	2140	1050	100	100	960

WITH PILOT PUMP

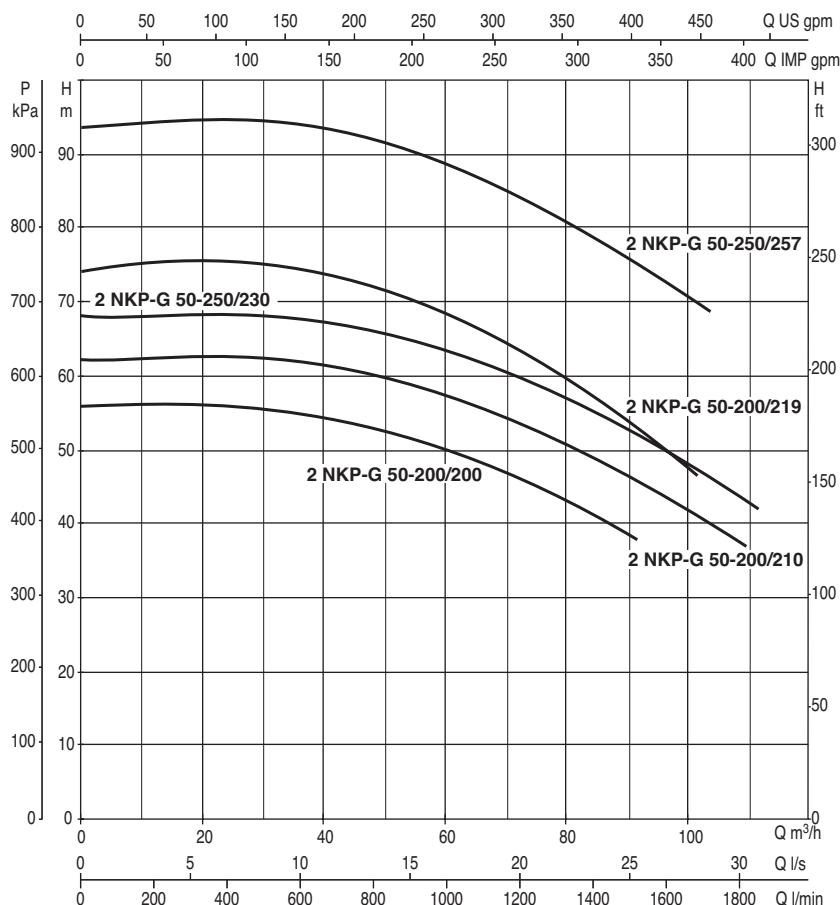
MODEL	A	A max	B	C	D	E	G	H	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
2 NKP-G 50-200/200	990	1045	1220	350	700	260	1"1/4	345	360	1600	1515	1740	1050	100	100	870
2 NKP-G 50-200/210	990	1125	1220	350	700	260	1"1/4	345	360	1600	1515	1740	1050	100	100	840
2 NKP-G 50-200/219	990	1165	1220	350	700	260	1"1/4	345	360	1600	1515	1740	1050	100	100	768
2 NKP-G 50-250/230	990	1165	1220	350	700	260	1"1/4	345	360	1600	1540	1765	1050	100	100	996
2 NKP-G 50-250/257	990	1225	1220	350	700	260	1"1/4	345	380	1600	1560	1785	1050	100	100	980

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 NKP-G 50 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 120 m³/h



Performance curves related to one functioning pump only.

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMPS		P2 NOMINAL PILOT PUMP		Ø MANIFOLD	FLOW METER
			kW	HP	kW	HP		
2 NKP-G 50-200/200	3x400 V + N ~	JET 251 T	2x15	2x20	1,85	2x2,5	DN 100	2P S.50 - DN 80
2 NKP-G 50-200/210	3x400 V + N ~	JET 251 T	2x18,5	2x25	1,85	2x2,5	DN 100	2P S.50 - DN 80
2 NKP-G 50-200/219	3x400 V + N ~	JET 251 T	2x22	2x30	1,85	2x2,5	DN 100	2P S.50 - DN 80
2 NKP-G 50-250/230	3x400 V + N ~	JET 251 T	2x22	2x30	1,85	2x2,5	DN 100	2P S.50 - DN 80
2 NKP-G 50-250/257	3x400 V + N ~	JET 251 T	2x30	2x40	1,85	2x2,5	DN 100	2P S.50 - DN 80

* Pilot pump on request

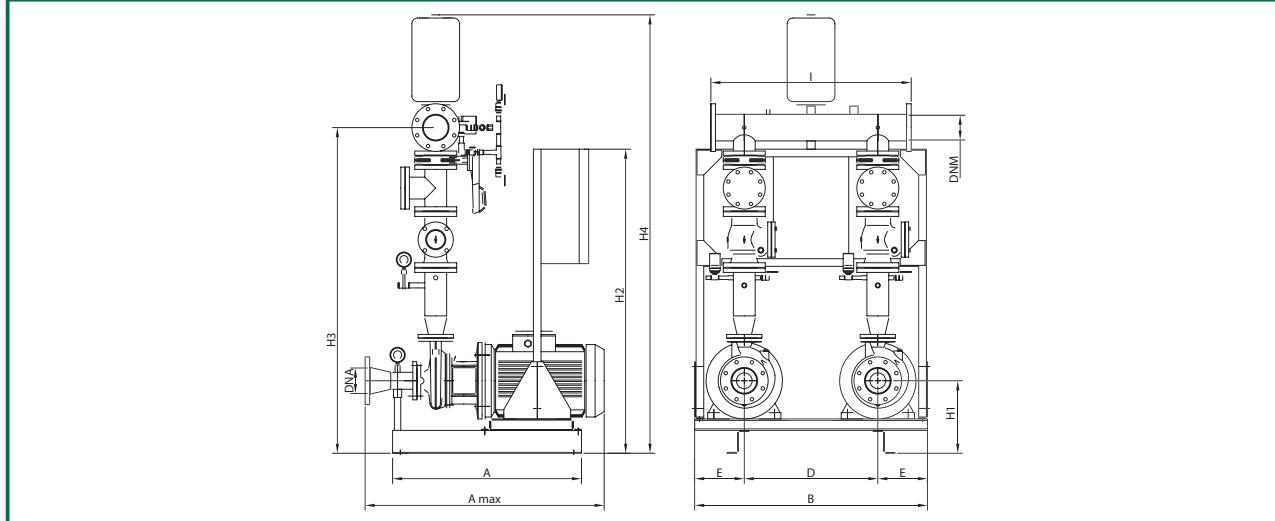
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 NKP-G 65 SETS FIRE-FIGHTING TO UNI 9490-10779

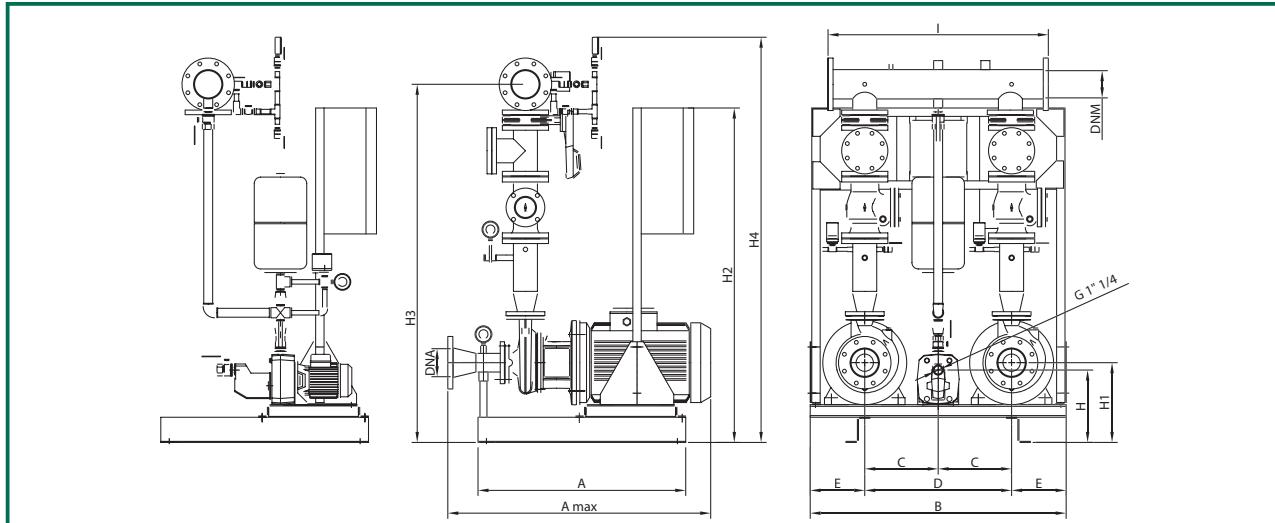
Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 150 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
2 NKP-G 65-200/190	990	1155	1220	700	260	360	1600	1690	2280	1050	125	125	990
2 NKP-G 65-200/200	990	1195	1220	700	260	360	1600	1690	2280	1050	125	125	976
2 NKP-G 65-200/219	990	1255	1220	700	260	380	1600	1710	2300	1050	125	125	878

WITH PILOT PUMP

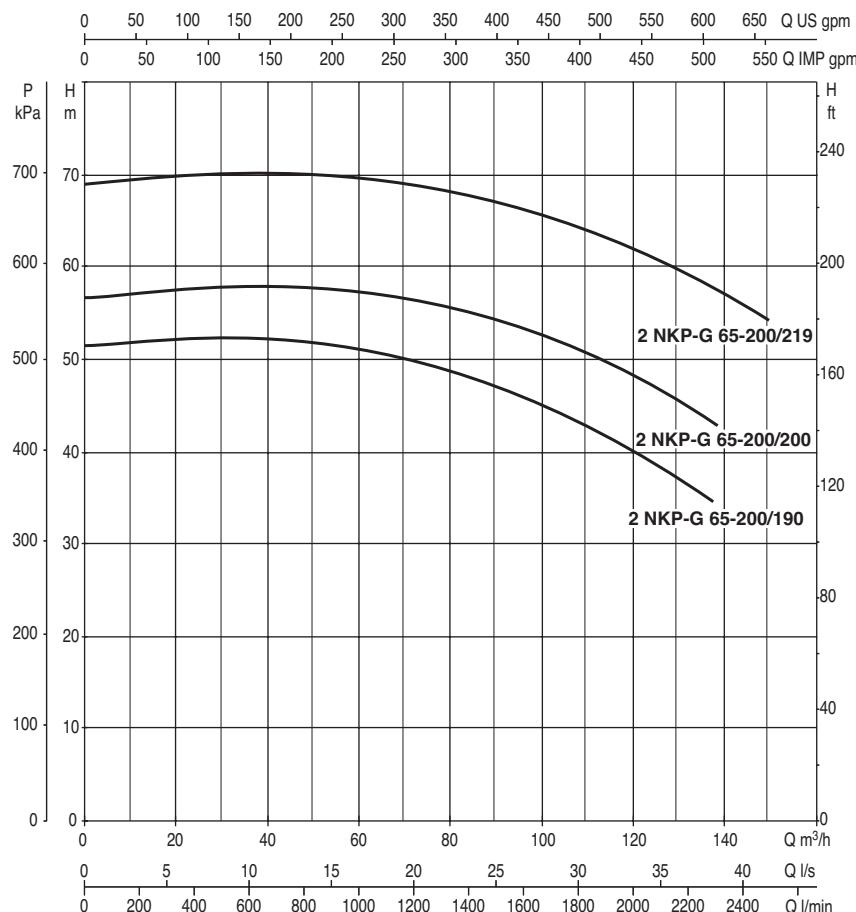
MODEL	A	A max	B	C	D	E	G	H	H1	H2	H3	H4	I	DNA	DNM	Weight Kg
2 NKP-G 65-200/190	990	1155	1220	350	700	260	1"1/4	345	360	1600	1690	1915	1050	125	125	1010
2 NKP-G 65-200/200	990	1195	1220	350	700	260	1"1/4	345	360	1600	1690	1925	1050	125	125	99
2 NKP-G 65-200/219	990	1255	1220	350	700	260	1"1/4	345	380	1600	1710	1935	1050	125	125	896

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 NKP-G 65 SETS FIRE-FIGHTING TO UNI 9490-10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 150 m³/h

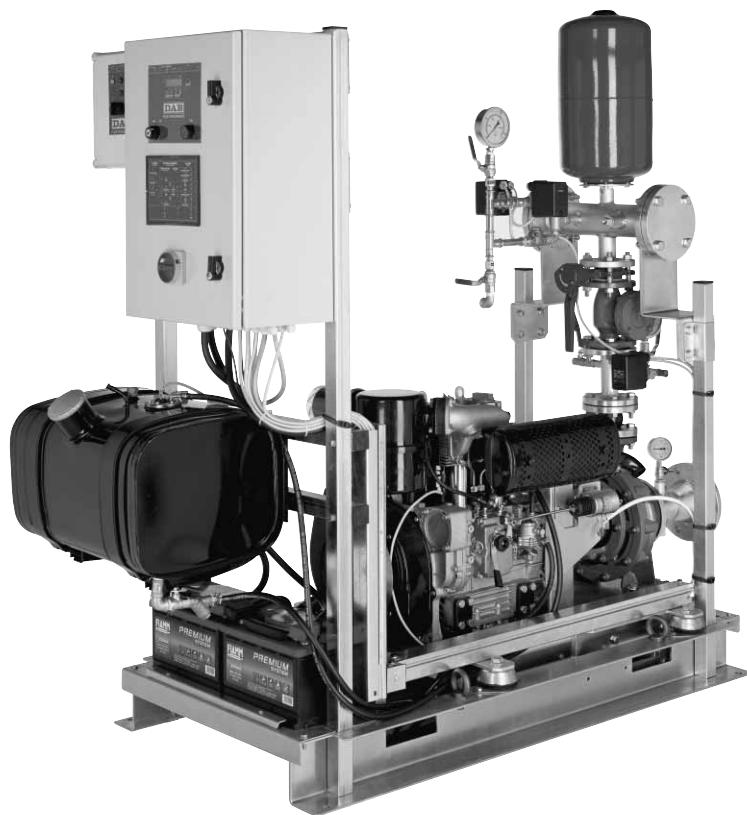


Performance curves related to one functioning pump only.

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL MAIN PUMPS		P2 NOMINAL PILOT PUMP		Ø MANIFOLD	FLOW METER
			kW	HP	kW	HP		
2 NKP-G 65-200/190	3x400 V + N ~	JET 251 T	2x18,5	2x25	1,85	2x2,5	DN 125	2P S.65 - DN 100
2 NKP-G 65-200/200	3x400 V + N ~	JET 251 T	2x22	2x30	1,85	2x2,5	DN 125	2P S.65 - DN 100
2 NKP-G 65-200/219	3x400 V + N ~	JET 251 T	2x30	2x40	1,85	2x2,5	DN 125	2P S.65 - DN 100

* Pilot pump on request

UNI 9490-10779 1-2 KDN FIRE-FIGHTING UNITS WITH 1-2 KDN DIESEL PUMPS WITH DIESEL MOTOR



CE

GENERAL DATA

These are UNI 9490-10779 compliant pressurisation units for delivering water to fire-fighting systems.

The standard version comprises:

- a diesel pump and a standardised pump plus compensating pump (if present)
- a diesel pump and a compensating pump (if present)

The units comprise **two separate and modular assemblies which can be connected together**; diesel pump assembly + electric pump assembly.

This prevents the assemblies from having to be dismounted and remounted if they are installed in restricted spaces, go through narrow doors, etc.

The diesel pump assembly can also be installed after the electric pump assembly.

CONSTRUCTIONAL CHARACTERISTICS

BASEPLATES

Galvanised steel baseplate for the electric pump, pilot pump and control panels.
Galvanised steel support for Diesel pump and control panel with anti-vibration feet.

DIESEL PUMPS

KDN standardised centrifugal pumps connected to a Diesel motor with a flexible coupling (*), performances and dimensions in accordance with DIN-EN 733 (ex DIN 24255)

Axial suction port, radial discharge port, pump body in cast iron, impeller in cast iron equilibrata dinamicamente, carbon/silicon carbide mechanical seal.

(*) Direct injection diesel engine allowing overloading up to 10% on all the curve of the pump (UNI 9490 4.9.5.1) connected with an elastic joint to the standardised pump. The fuel tank is large enough to guarantee 6 hours of operation (UNI 9489 13.6.2.5.). Air-cooled for versions up to 43 kW, water-cooled over 43 kW.

ELECTRIC PUMPS

Standardised enbloc NKP-G centrifugal electric pumps with joint, coupled to a three-phase asynchronous motor, performance and size compliant with DIN-EN 733 (formerly DIN 24255).

Axial suction port, radial discharge port, pump body in cast iron, impeller in cast iron equilibrata dinamicamente, carbon/silicon carbide mechanical seal. Asynchronous, closed 2-pole motor, cooled by external ventilation, built to B3/B5 (other type of pumps available on request).

PILOT PUMP

JET 251 centrifugal self-priming pump. Cast iron pump body, impeller, diffuser and venturi tube in technopolymer. Asynchronous, closed 2-pole motor, cooled by external ventilation.

HYDRAULIC PART

Separate suction lines for each pump, complete with vacuum pressure gauge.

Delivery of each main pump to the manifold with:

connections for suction tanks, pressure gauge, pump running pressure switch, inspectable check valve with upline leak test tap, connector for rate of flow indicator, shut-off butterfly valve, galvanised steel delivery manifold with starting pressure switches and 15 bar expansion tank.

Pilot pump with ball valve on suction and delivery sides, check valve on the delivery side, starting pressure switch, hose connection to the delivery manifold of the main pumps.

The two manifolds of the diesel pump assembly and the electric pump assembly **can be joined together** with a single manifold supplied with the unit.

The size of the hydraulic part is compliant with UNI 9490 - UNI 9489 - UNI 10779.

ELECTRICAL CONTROL PANELS

One IP 55 control panel for diesel pump with control unit with front-of-panel indicator LED's, general switch, rev counter, hour counter, 2 voltmeters and 2 ammeters for battery chargers, two 12 Volt starting batteries with 2 battery chargers for holding charge, AUT-0-MAN selector, STOP button, recessed selector for operation to UNI 10779.

One IP 55 control panel for main electric pump with front-of-panel indicator LED's, general switch, fuses, starting contactors for electric pumps (direct up to 7.5 kW - star delta over 7.5 kW), voltmeter and ammeter, AUT-0-MAN selector, STOP button, recessed selector for operation to UNI 10779 (*), 1 outlet with switch.

Alarm contacts inside terminal box for pressure drop, manual selector, motor fault, battery fault are to be connected to an acoustic device (supplied with the booster set)

Connector for weekly test unit (only for electric pumps).

(*) Only for hydrants systems which are not constantly supervised, the pumps stop AUTOMATICALLY after "pressure remains constantly higher than the pump starting pressure for at least 20 minutes"
(UNI 10779 A.1.2).

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

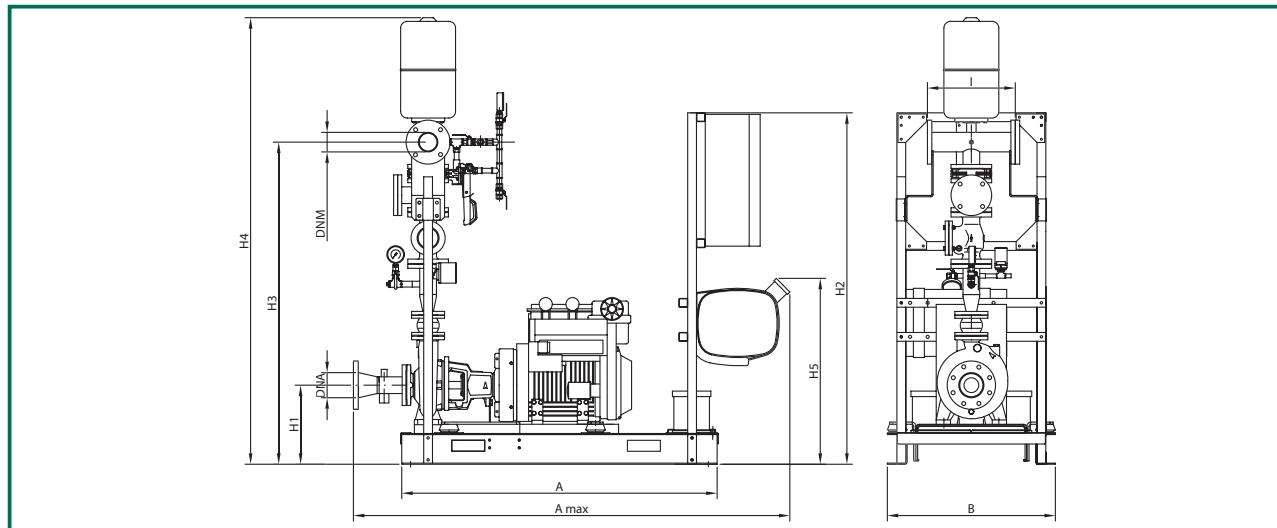
1 KDN 32 SETS

FIRE-FIGHTING TO UNI 9490-10779 WITH 1 DIESEL MOTOR PUMP

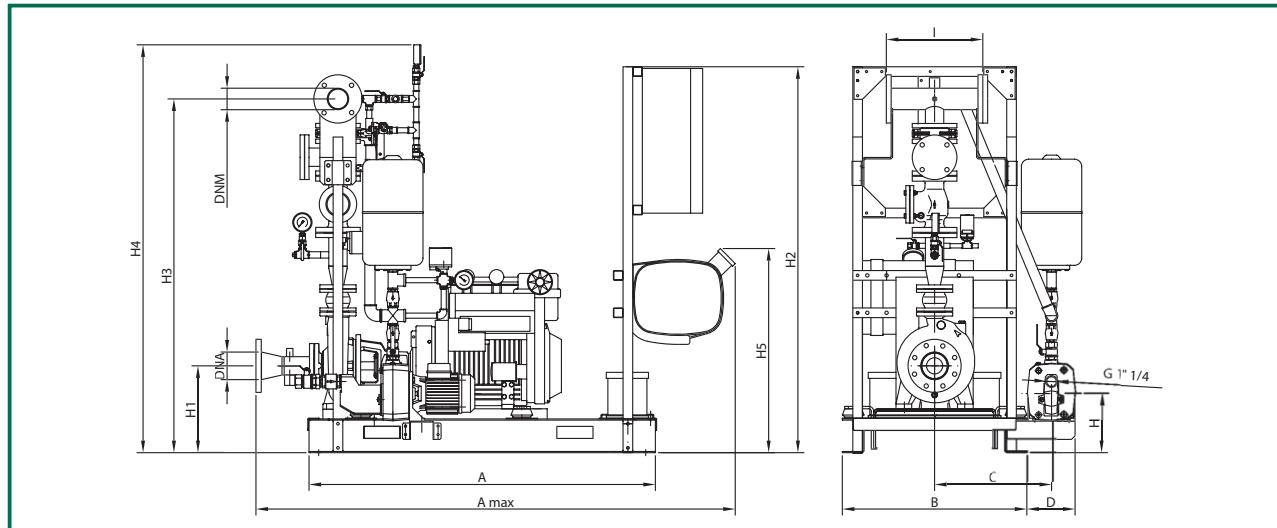
Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 45 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	H1	H2	H3	H4	H5	I	DNA	DNM	WEIGHT Kg
1 KDN 32-200/190	1436	1945	765	340	1600	1330	1890	846	400	80	2" 1/2	550
1 KDN 32-200/210	1436	1945	765	340	1600	1330	1890	846	400	80	2" 1/2	550

WITH PILOT PUMP

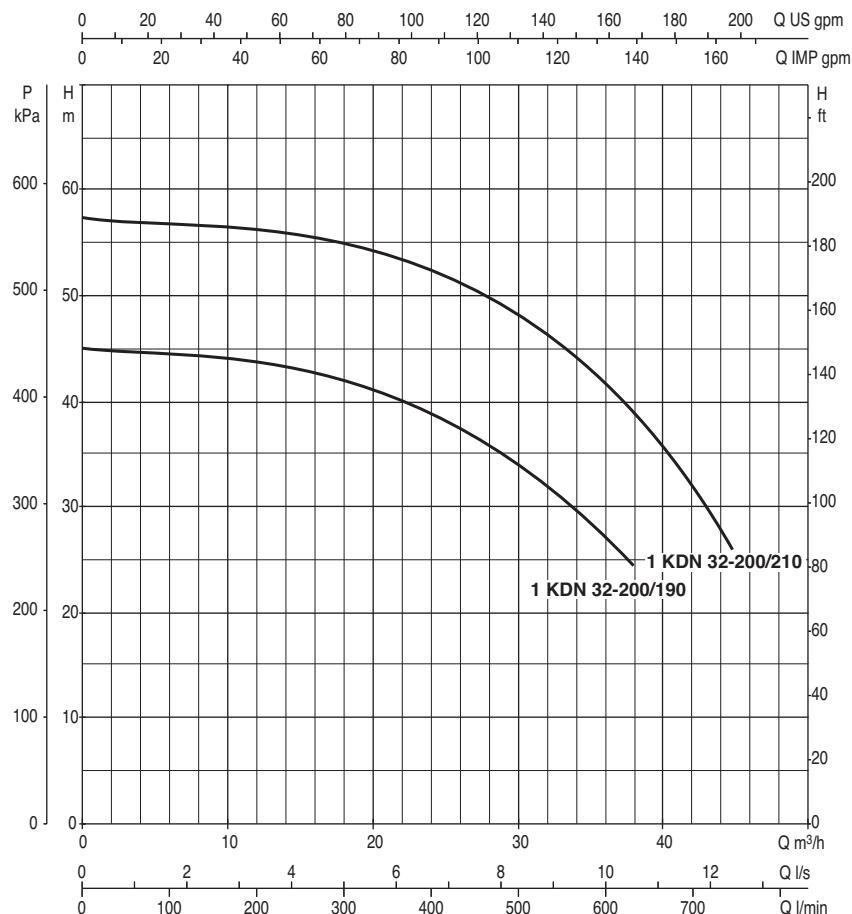
MODEL	A	A max	B	C	D	G	H	H1	H2	H3	H4	H5	I	DNA	DNM	WEIGHT Kg
1 KDN 32-200/190	1436	1945	765	485	200	1" 1/4	245	340	1600	1330	1550	846	400	80	2" 1/2	600
1 KDN 32-200/210	1436	1945	765	485	200	1" 1/4	245	340	1600	1330	1550	846	400	80	2" 1/2	600

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KDN 32 SETS FIRE-FIGHTING TO UNI 9490-10779 WITH 1 DIESEL MOTOR PUMP

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 45 m³/h



MODEL	MOTOR PUMP BATTERY CHARGER SUPPLY 50 Hz	TYPE PILOT PUMP *	VOLTAGE PILOT PUMP 50 Hz	** P2 NOMINAL MOTOR PUMP		P2 NOMINAL PILOT PUMP		FLOW METER
				kW	HP	kW	HP	
1 KDN 32-200/190	1x220-240 V ~	JET 251 T	3x400 V ~	8,6	12	1,85	2,5	1P S.32 - DN 50
1 KDN 32-200/210	1x220-240 V ~	JET 251 T	3x400 V ~	8,6	12	1,85	2,5	1P S.32 - DN 50

* Pilot pump on request

** Continuous power (NA ISO 3046 ICXN). The motor can supply +10% of the continuous power (UNI 9490 4.9.5.1.).

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KDN 40 SETS

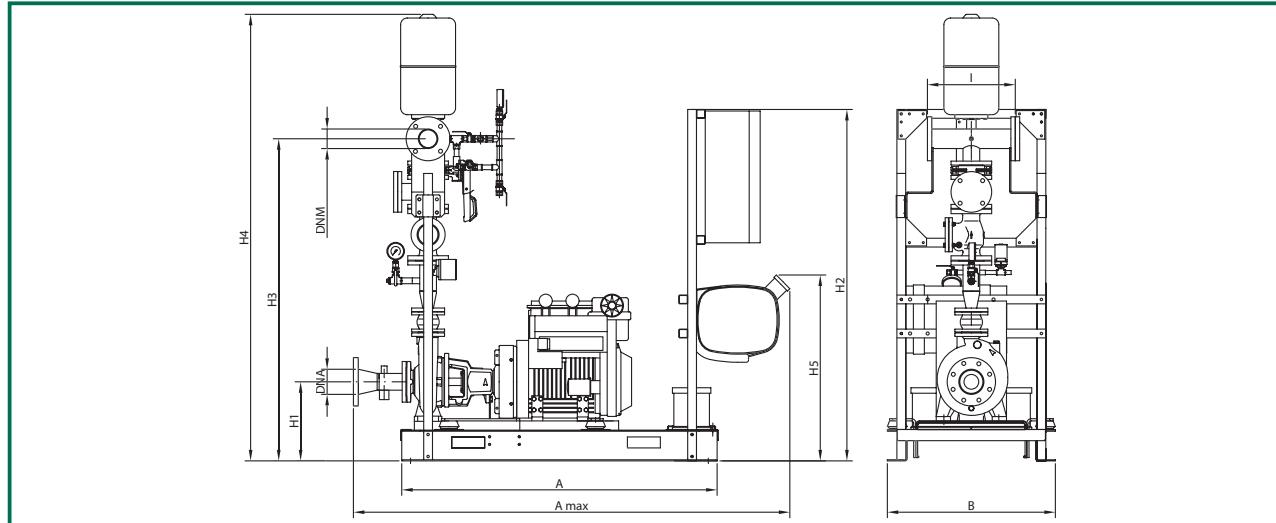
FIRE-FIGHTING TO UNI 9490-10779 WITH 1 DIESEL MOTOR PUMP

Pumped liquid temperature range: from -10°C to +70°C

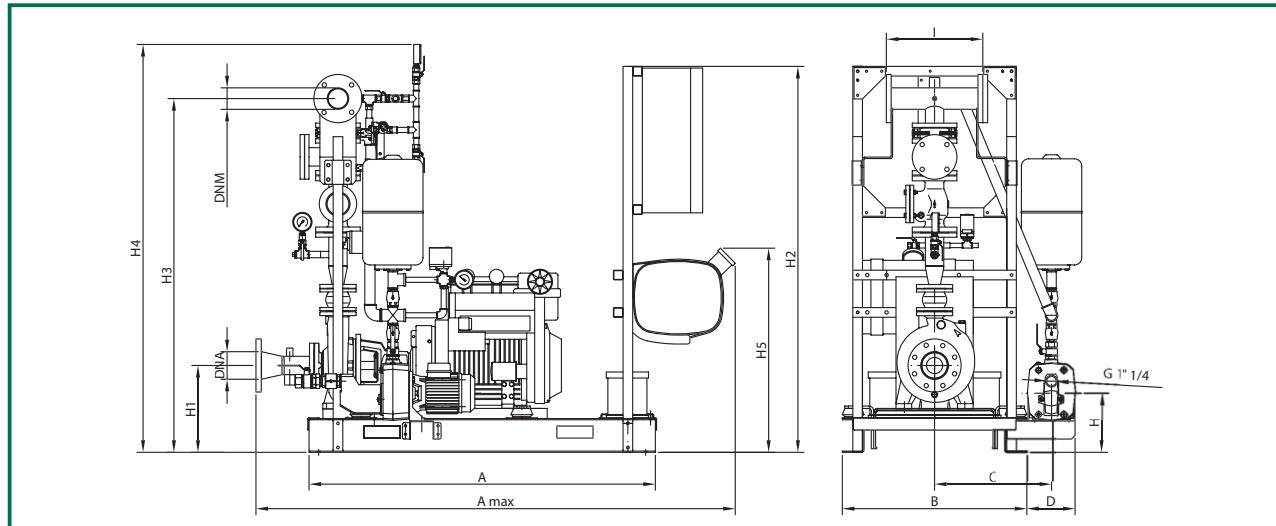
Maximum ambient temperature: from +4°C a +40°C

Max flow rate: 68 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	H1	H2	H3	H4	H5	I	DNA	DNM	WEIGHT Kg
1 KDN 40-160/172	1436	1965	765	332	1600	1375	1940	846	400	100	80	550
1 KDN 40-200/210	1436	1985	765	360	1600	1425	1990	846	400	100	80	550
1 KDN 40-250/230	1436	1985	765	360	1600	1470	2035	846	400	100	80	650
1 KDN 40-250/245	1436	1985	765	360	1600	1470	2035	846	400	100	80	650
1 KDN 40-250/260	1436	1985	765	360	1600	1470	2035	846	400	100	80	680

WITH PILOT PUMP

MODEL	A	A max	B	C	D	G	H	H1	H2	H3	H4	H5	I	DNA	DNM	WEIGHT Kg
1 KDN 40-160/172	1436	1965	765	485	200	1" 1/4	245	332	1600	1375	1600	846	400	100	80	600
1 KDN 40-200/210	1436	1985	765	485	200	1" 1/4	245	360	1600	1425	1650	846	400	100	80	600
1 KDN 40-250/230	1436	1985	765	485	200	1" 1/4	245	360	1600	1470	1695	846	400	100	80	700
1 KDN 40-250/245	1436	1985	765	485	200	1" 1/4	245	360	1600	1470	1695	846	400	100	80	700
1 KDN 40-250/260	1436	1985	765	485	200	1" 1/4	245	360	1600	1470	1695	846	400	100	80	755

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

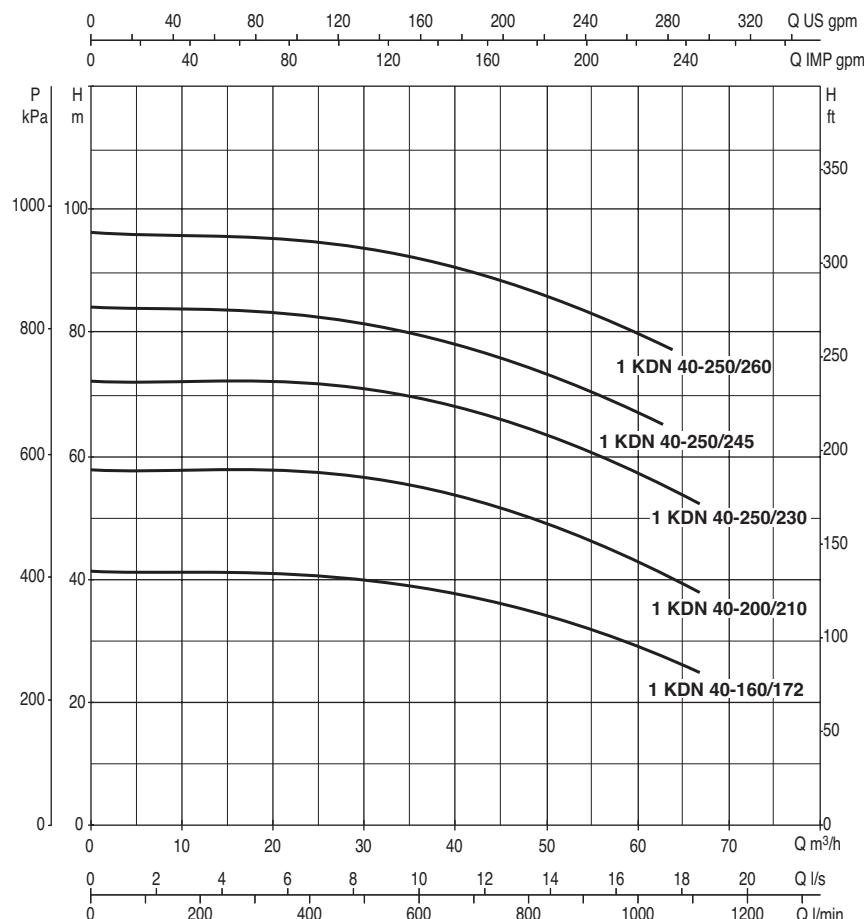
1 KDN 40 SETS

FIRE-FIGHTING TO UNI 9490-10779 WITH 1 DIESEL MOTOR PUMP

Pumped liquid temperature range: from -10°C to +70°C

Maximum ambient temperature: from +4°C a +40°C

Max flow rate: 68 m³/h



MODEL	MOTOR PUMP BATTERY CHARGER SUPPLY 50 Hz	TYPE PILOT PUMP *	VOLTAGE PILOT PUMP	** P2 NOMINAL MOTOR PUMP		P2 NOMINAL PILOT PUMP		FLOW METER
				50 Hz	50 Hz	kW	HP	
1 KDN 40-160/172	1x220-240 V ~	JET 251 T	3x400 V ~	8,6	12	1,85	2,5	1P S.40 - DN 65
1 KDN 40-200/210	1x220-240 V ~	JET 251 T	3x400 V ~	13,5	18	1,85	2,5	1P S.40 - DN 65
1 KDN 40-250/230	1x220-240 V ~	JET 251 T	3x400 V ~	17,7	24	1,85	2,5	1P S.40 - DN 65
1 KDN 40-250/245	1x220-240 V ~	JET 251 T	3x400 V ~	17,7	24	1,85	2,5	1P S.40 - DN 65
1 KDN 40-250/260	1x220-240 V ~	JET 251 T	3x400 V ~	26	35	1,85	2,5	1P S.40 - DN 65

* Pilot pump on request

** Continuous power (NA ISO 3046 ICXN). The motor can supply +10% of the continuous power (UNI 9490 4.9.5.1.).

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KDN 50 SETS

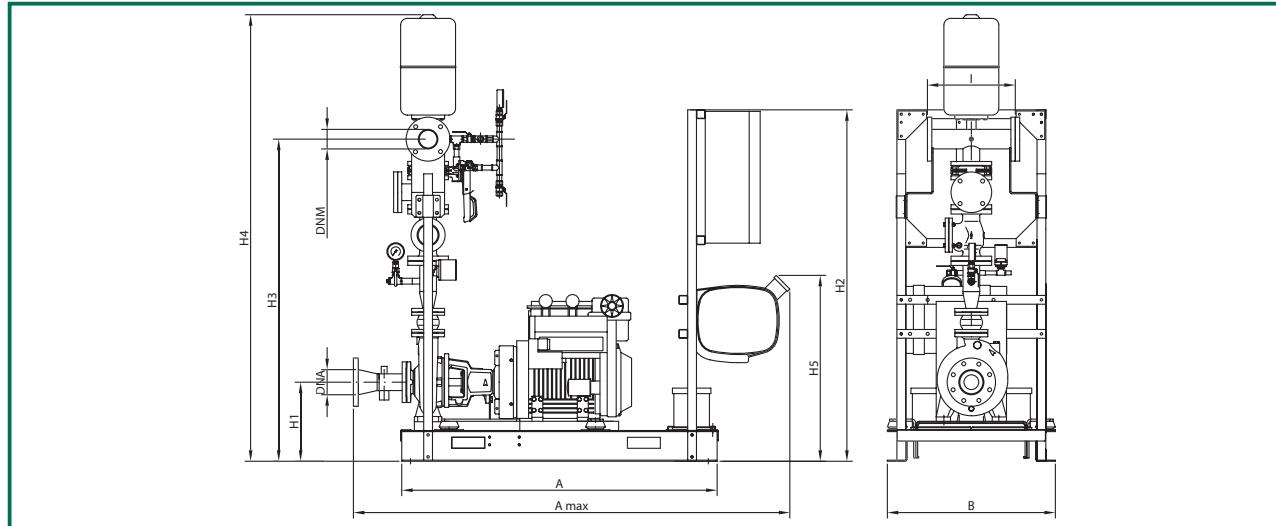
FIRE-FIGHTING TO UNI 9490-10779 WITH 1 DIESEL MOTOR PUMP

Pumped liquid temperature range: from -10°C to +70°C

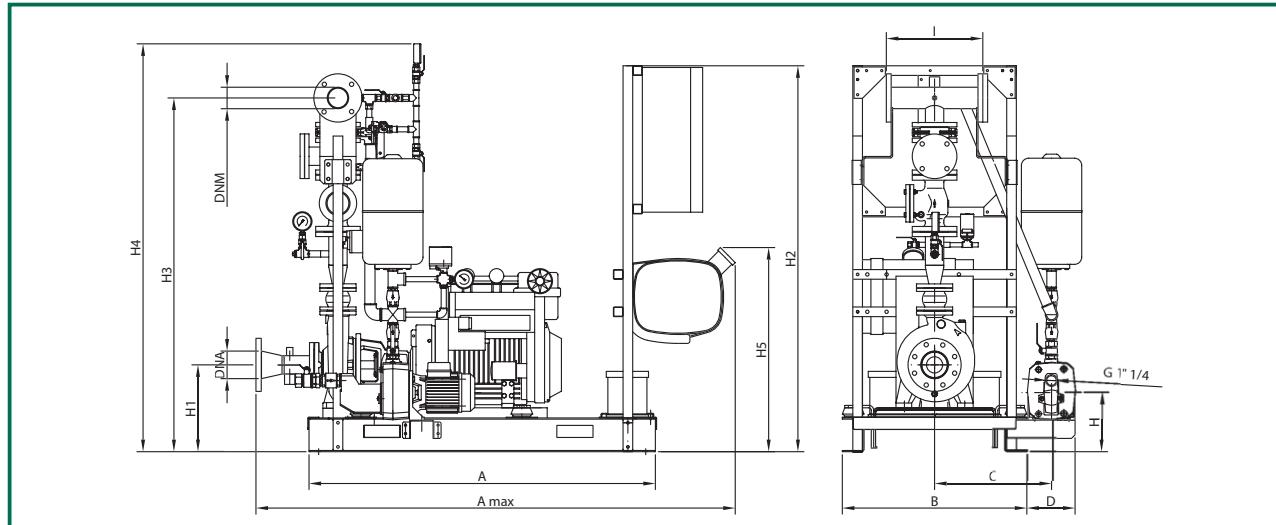
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 110 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	H1	H2	H3	H4	H5	I	DNA	DNM	WEIGHT Kg
1 KDN 50-200/200	1436	1985	765	360	1600	1515	2095	846	400	100	100	605
1 KDN 50-200/210	1436	1985	765	360	1600	1515	2095	846	400	100	100	605
1 KDN 50-200/219	1436	1985	765	360	1600	1515	2095	846	400	100	100	680
1 KDN 50-250/230	1436	1985	765	360	1600	1540	2120	846	400	100	100	680
1 KDN 50-250/257	1436	1985	765	380	1600	1560	2140	846	400	100	100	725

WITH PILOT PUMP

MODEL	A	A max	B	C	D	G	H	H1	H2	H3	H4	H5	I	DNA	DNM	WEIGHT Kg
1 KDN 50-200/200	1436	1985	765	485	200	1" 1/4	245	360	1600	1515	1740	846	400	100	100	655
1 KDN 50-200/210	1436	1985	765	485	200	1" 1/4	245	360	1600	1515	1740	846	400	100	100	655
1 KDN 50-200/219	1436	1985	765	485	200	1" 1/4	245	360	1600	1515	1740	846	400	100	100	735
1 KDN 50-250/230	1436	1985	765	485	200	1" 1/4	245	360	1600	1540	1765	846	400	100	100	735
1 KDN 50-250/257	1436	1985	765	485	200	1" 1/4	245	380	1600	1560	1785	846	400	100	100	770

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

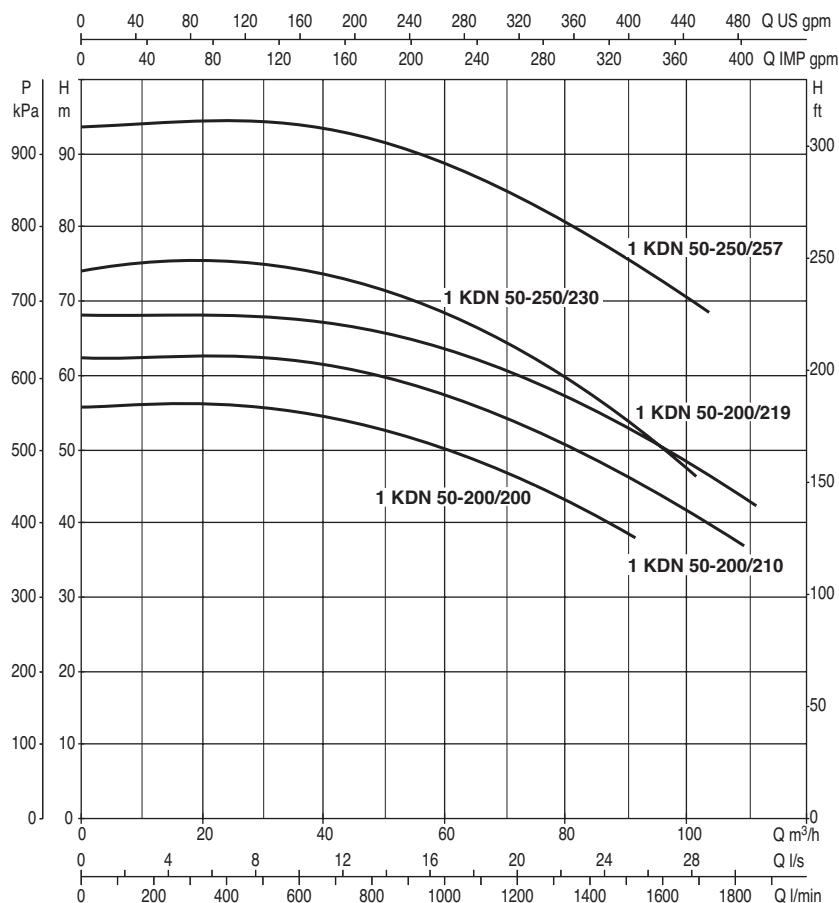
1 KDN 50 SETS

FIRE-FIGHTING TO UNI 9490-10779 WITH 1 DIESEL MOTOR PUMP

Pumped liquid temperature range: from -10°C to +70°C

Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 110 m³/h



MODEL	MOTOR PUMP BATTERY CHARGER SUPPLY 50 Hz	TYPE PILOT PUMP *	VOLTAGE PILOT PUMP	** P2 NOMINAL MOTOR PUMP		P2 NOMINAL PILOT PUMP		FLOW METER	
				50 Hz	kW	HP	kW		
1 KDN 50-200/200	1x220-240 V ~	JET 251 T	3x400 V ~	3x400 V ~	17,7	24	1,85	2,5	1P S.50 - DN 80
1 KDN 50-200/210	1x220-240 V ~	JET 251 T	3x400 V ~	3x400 V ~	17,7	24	1,85	2,5	1P S.50 - DN 80
1 KDN 50-200/219	1x220-240 V ~	JET 251 T	3x400 V ~	3x400 V ~	26	35	1,85	2,5	1P S.50 - DN 80
1 KDN 50-250/230	1x220-240 V ~	JET 251 T	3x400 V ~	3x400 V ~	26	35	1,85	2,5	1P S.50 - DN 80
1 KDN 50-250/257	1x220-240 V ~	JET 251 T	3x400 V ~	3x400 V ~	26	35	1,85	2,5	1P S.50 - DN 80

* Pilot pump on request

** Continuous power (NA ISO 3046 ICXN). The motor can supply +10% of the continuous power (UNI 9490 4.9.5.1.).

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KDN 65-200 SETS

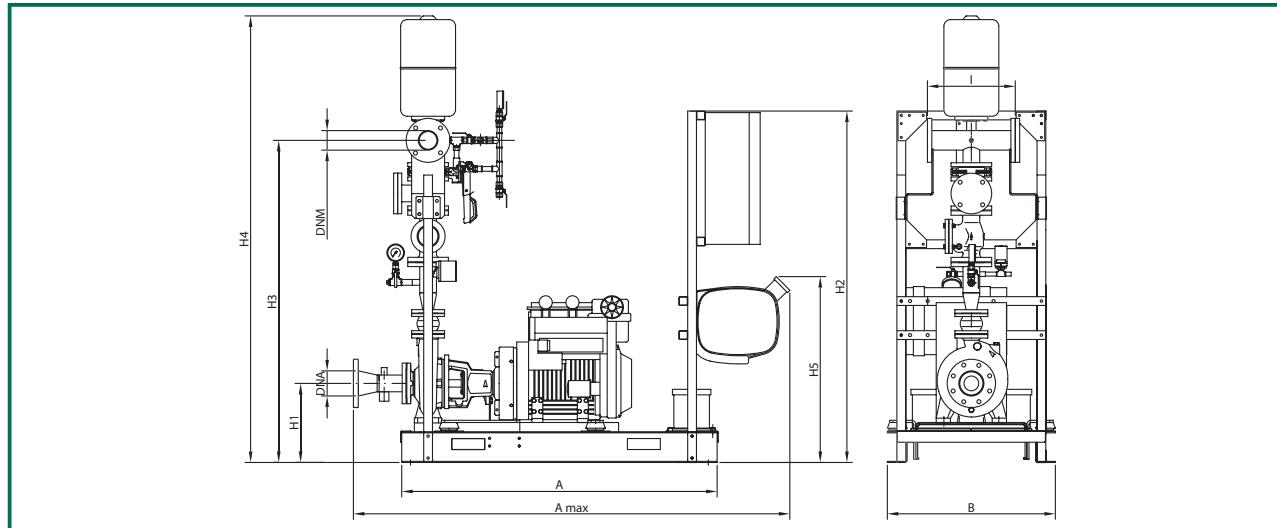
FIRE-FIGHTING TO UNI 9490-10779 WITH 1 DIESEL MOTOR PUMP

Pumped liquid temperature range: from -10°C to +70°C

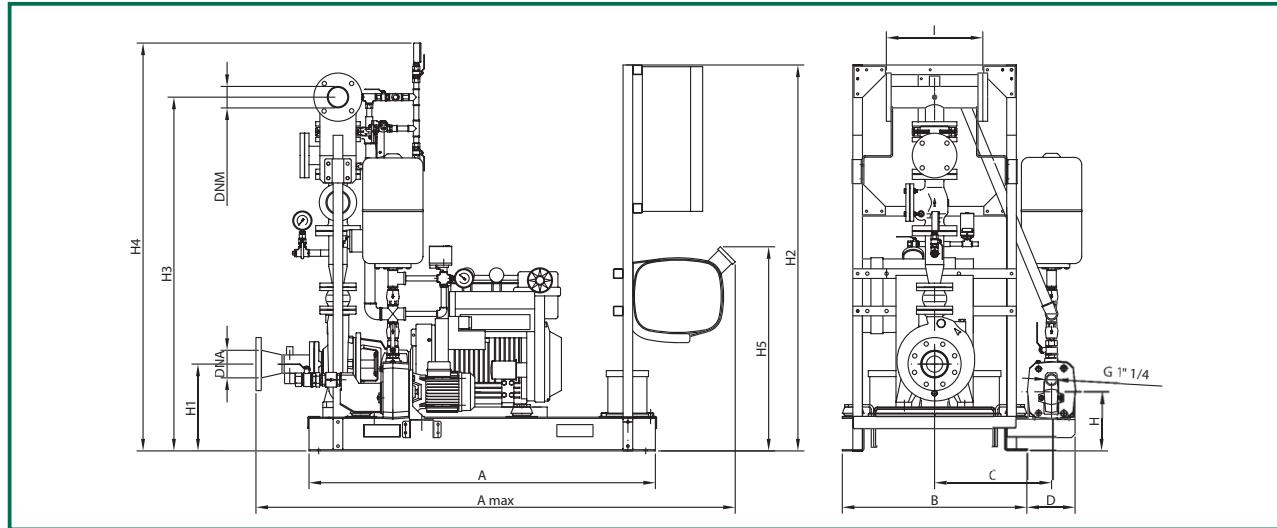
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 155 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	H1	H2	H3	H4	H5	I	DNA	DNM	WEIGHT Kg
1 KDN 65-200/190	1436	2015	765	360	1600	1690	2280	846	400	125	125	605
1 KDN 65-200/200	1436	2015	765	360	1600	1690	2280	846	400	125	125	715
1 KDN 65-200/219	1436	2015	765	380	1600	1710	2300	846	400	125	125	750

WITH PILOT PUMP

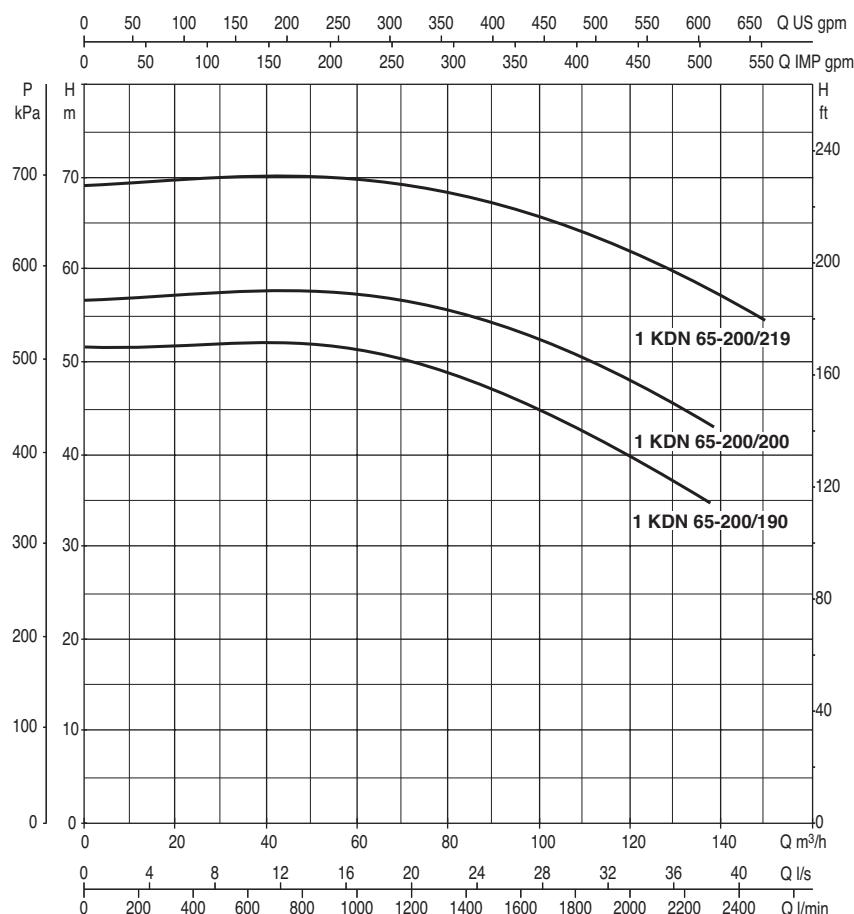
MODEL	A	A max	B	C	D	G	H	H1	H2	H3	H4	H5	I	DNA	DNM	WEIGHT Kg
1 KDN 65-200/190	1436	2015	765	485	200	1" 1/4	245	360	1600	1690	1915	846	400	125	125	655
1 KDN 65-200/200	1436	2015	765	485	200	1" 1/4	245	360	1600	1690	1915	846	400	125	125	765
1 KDN 65-200/219	1436	2015	765	485	200	1" 1/4	245	380	1600	1710	1935	846	400	125	125	800

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KDN 65-200 SETS FIRE-FIGHTING TO UNI 9490-10779 WITH 1 DIESEL MOTOR PUMP

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 155 m³/h



MODEL	MOTOR PUMP BATTERY CHARGER SUPPLY 50 Hz	TYPE PILOT PUMP *	VOLTAGE PILOT PUMP	** P2 NOMINAL MOTOR PUMP		P2 NOMINAL PILOT PUMP		FLOW METER
				50 Hz	kW	HP	kW	
1 KDN 65-200/190	1x220-240 V ~	JET 251 T	3x400 V ~	17,7	24	1,85	2,5	1P S.65 - DN 100
1 KDN 65-200/200	1x220-240 V ~	JET 251 T	3x400 V ~	26	35	1,85	2,5	1P S.65 - DN 100
1 KDN 65-200/219	1x220-240 V ~	JET 251 T	3x400 V ~	26	35	1,85	2,5	1P S.65 - DN 100

* Pilot pump on request

** Continuous power (NA ISO 3046 ICXN). The motor can supply +10% of the continuous power (UNI 9490 4.9.5.1.).

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KDN 65-315 SETS

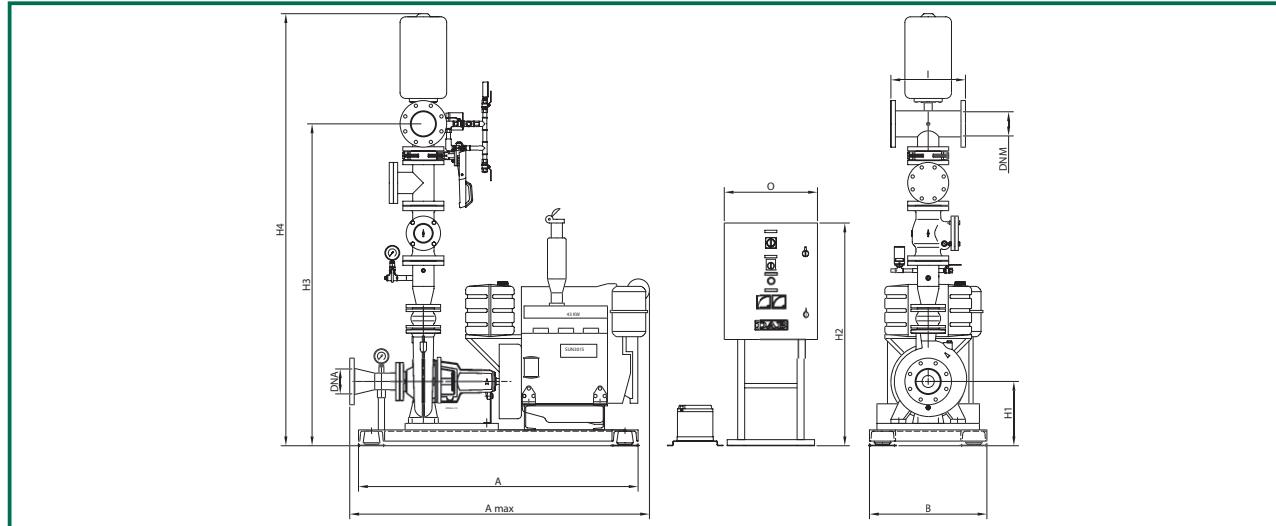
FIRE-FIGHTING TO UNI 9490-10779 WITH 1 DIESEL MOTOR PUMP

Pumped liquid temperature range: from -10°C to +70°C

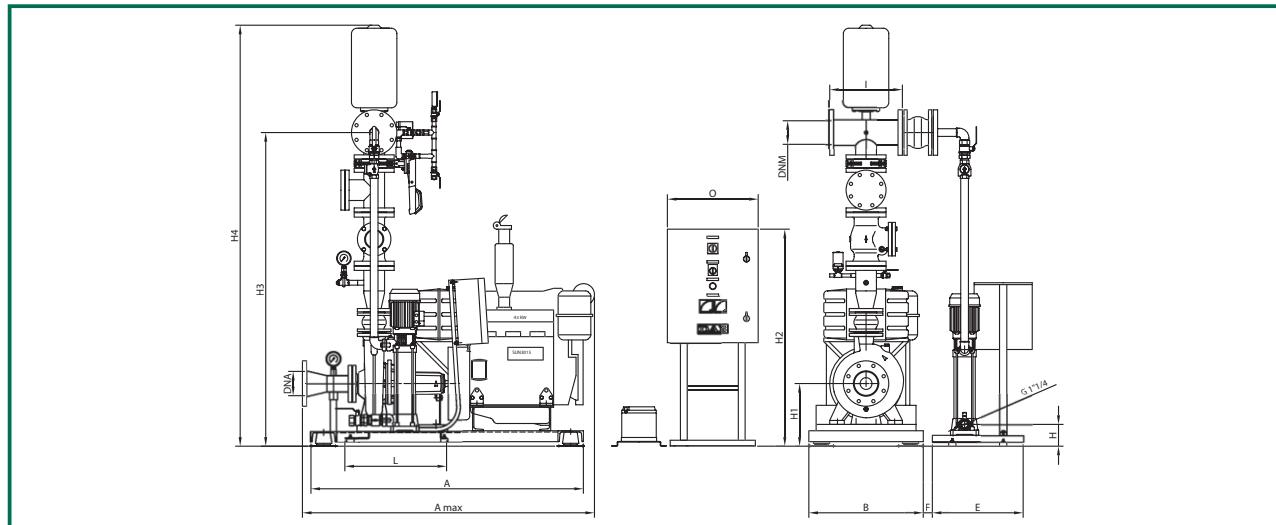
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 165 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	H1	H2	H3	H4	I	O	DNA	DNM	WEIGHT Kg
1 KDN 65-315.290	1500	1610	630	345	1195	1730	2320	400	500	125	125	760

WITH PILOT PUMP

MODEL	A	A max	B	E	F	G	H	H1	H2	H3	H4	I	L	O	DNA	DNM	WEIGHT Kg
1 KDN 65-315.290	1500	1610	630	500	50	1" 1/4	120	345	1195	1730	2320	400	560	500	125	125	810

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

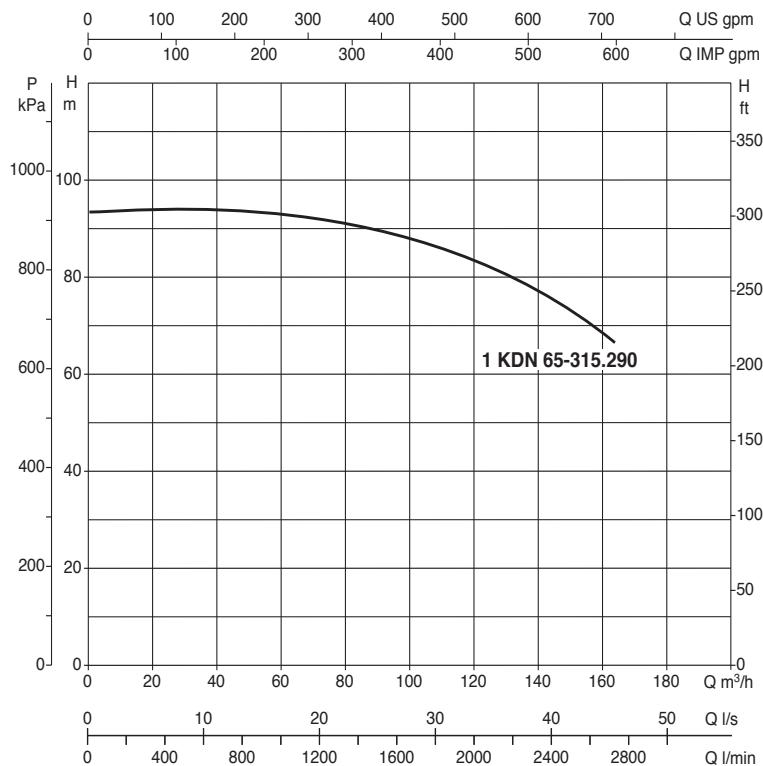
1 KDN 65-315 SETS

FIRE-FIGHTING TO UNI 9490-10779 WITH 1 DIESEL MOTOR PUMP

Pumped liquid temperature range: from -10°C to +70°C

Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 165 m³/h



MODEL	MOTOR PUMP BATTERY CHARGER SUPPLY 50 Hz	TYPE PILOT PUMP *	VOLTAGE PILOT PUMP 50 Hz	** P2 NOMINAL MOTOR PUMP		P2 NOMINAL PILOT PUMP		FLOW METER
	1x220-240 V ~			kW	HP	kW	HP	
1 KDN 65-315.290	KV 3/12		3x400 V ~	43	58	1,5	2	1P S.65 - DN 100

* Pilot pump on request

** Continuous power (NA ISO 3046 ICXN). The motor can supply +10% of the continuous power (UNI 9490 4.9.5.1.).

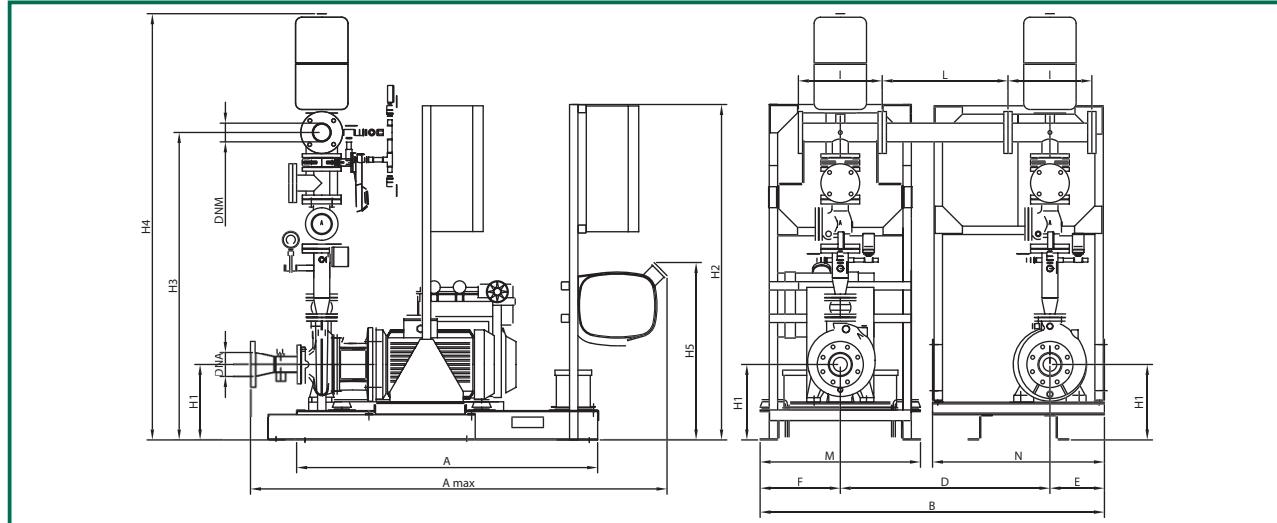
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KDN 32 SETS FIRE-FIGHTING TO UNI 9490-10779 WITH 1 ELECTRIC PUMP NKP-G AND 1 DIESEL MOTOR PUMP KDN

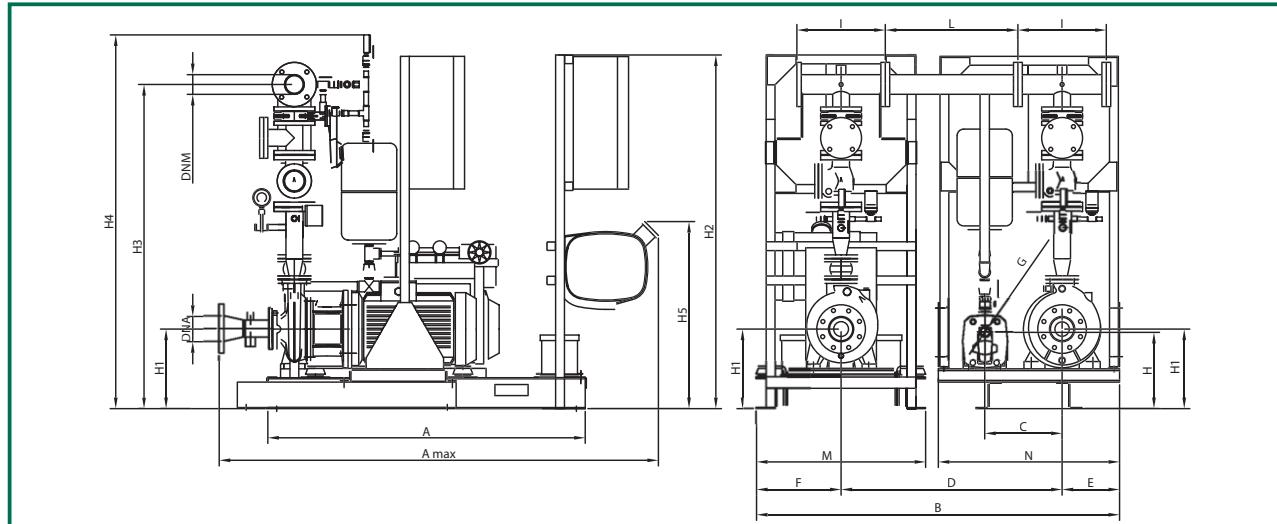
Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 45 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	F	H1	H2	H3	H4	H5	I	L	M	N	DNA	DNM	WEIGHT Kg
2 KDN/P 32-200/190	1436	1945	1642	1000	260	383	340	1600	1330	1890	846	400	600	765	820	80	2" 1/2	900
2 KDN/P 32-200/210	1436	1945	1642	1000	260	383	340	1600	1330	1890	846	400	600	765	820	80	2" 1/2	905

WITH PILOT PUMP

MODEL	A	A max	B	C	D	E	F	G	H	H1	H2	H3	H4	H5	I	L	M	N	DNA	DNM	WEIGHT Kg
2 KDN/P 32-200/190	1436	1945	1642	350	1000	260	383	1" 1/4	345	340	1600	1330	1550	846	400	600	765	820	80	2" 1/2	1220
2 KDN/P 32-200/210	1436	1945	1642	350	1000	260	383	1" 1/4	345	340	1600	1330	1550	846	400	600	765	820	80	2" 1/2	915

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

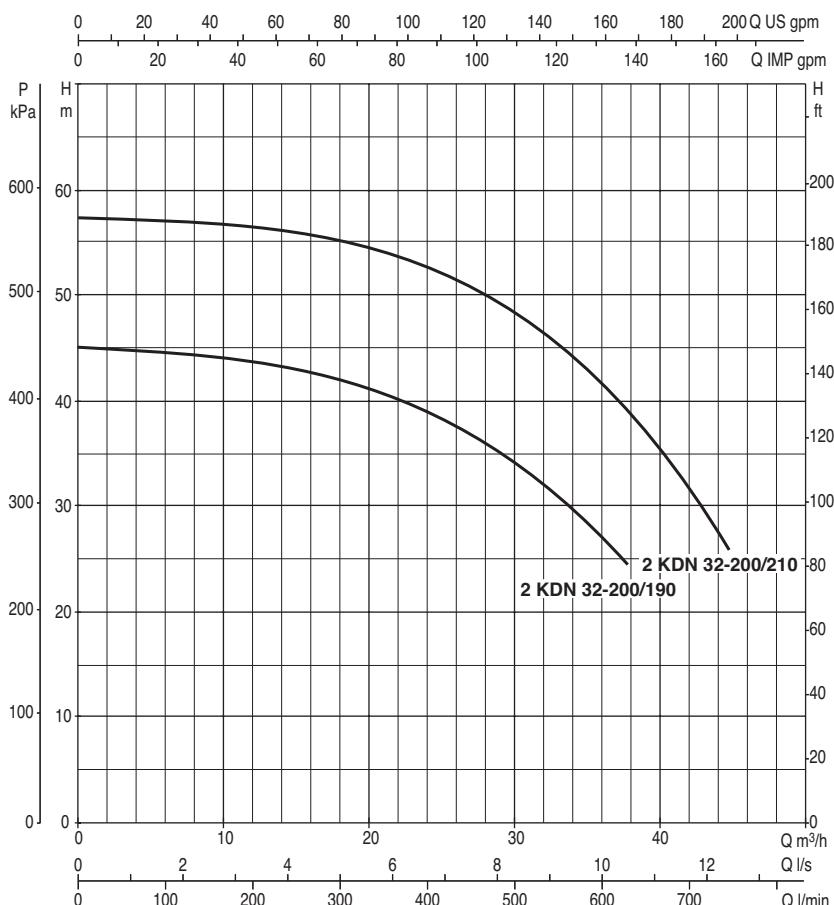
2 KDN 32 SETS

FIRE-FIGHTING TO UNI 9490-10779

WITH 1 ELECTRIC PUMP NKP-G AND 1 DIESEL MOTOR PUMP KDN

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 45 m³/h



Performance curves related to one functioning pump only.

MODEL	VOLTAGE ELECTRIC PUMP ⁽¹⁾ 50 Hz	TYPE PILOT PUMP *	ELECTRIC PUMP	P2 NOMINAL		P2 NOMINAL PILOT PUMP kW	FLOW METER
				DIESEL PUMP** kW	ELECTRIC PUMP kW		
2 KDN/P 32-200/190	3x400 V + N ~	JET 251	NKP-G 32-200/190	8,6	12	5,5	2P S.32 - DN 50
2 KDN/P 32-200/210	3x400 V + N ~	JET 251	NKP-G 32-200/210	8,6	12	7,5	1,85

* Pilot pump on request

** Continuous power (NA ISO 3046 ICXN). The motor can supply +10% of the continuous power (UNI 9490 4.9.5.1.).

⁽¹⁾ 1x220/240 V motor pump battery charger supply

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KDN 40 SETS

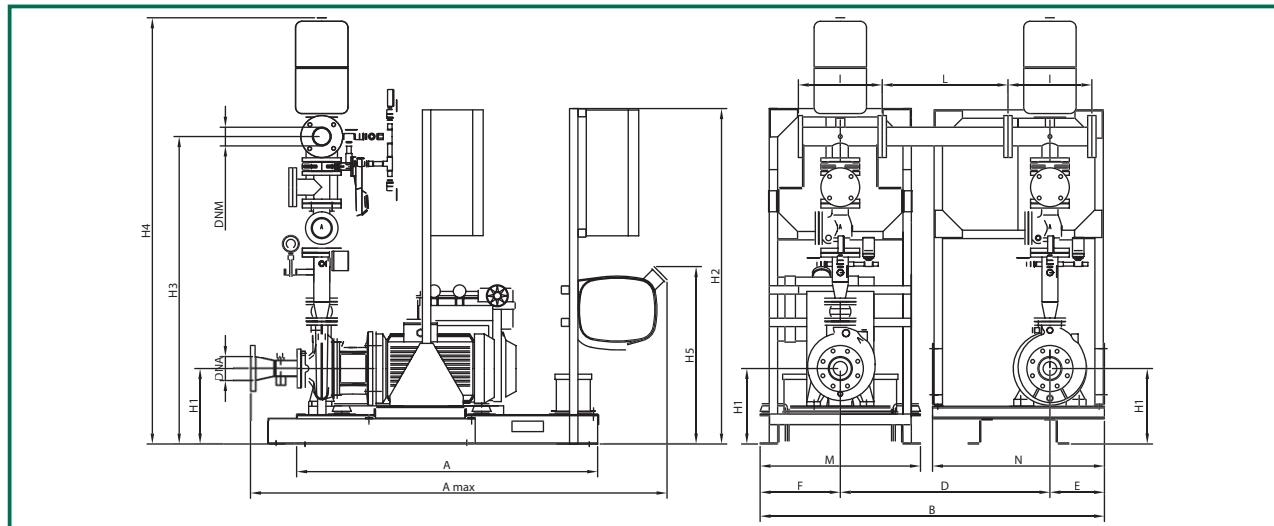
FIRE-FIGHTING TO UNI 9490-10779

WITH 1 ELECTRIC PUMP NKP-G AND DIESEL 1 MOTOR PUMP KDN

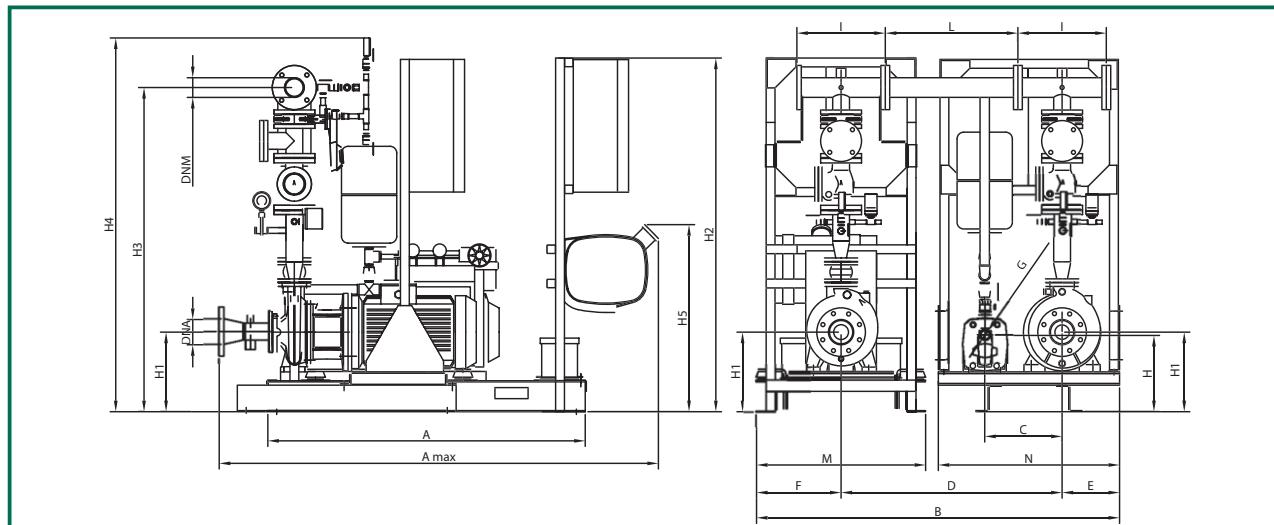
Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 68 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A _{max}	B	D	E	F	H1	H2	H3	H4	H5	I	L	M	N	DNA	DNM	WEIGHT Kg
2 KDN/P 40-160/172	1436	1965	1642	1000	260	383	332	1600	1375	1940	846	400	600	765	820	100	80	980
2 KDN/P 40-200/210	1436	1985	1642	1000	260	383	360	1600	1425	1990	846	400	600	765	820	100	80	900
2 KDN/P 40-250/230	1436	1985	1642	1000	260	383	360	1600	1470	2035	846	400	600	765	820	100	80	1200
2 KDN/P 40-250/245	1436	1985	1642	1000	260	383	360	1600	1470	2035	846	400	600	765	820	100	80	1200
2 KDN/P 40-250/260	1436	1985	1642	1000	260	383	360	1600	1470	2035	846	400	600	765	820	100	80	1200

WITH PILOT PUMP

MODEL	A	A _{max}	B	C	D	E	F	G	H	H1	H2	H3	H4	H5	I	L	M	N	DNA	DNM	WEIGHT Kg
2 KDN/P 40-160/172	1436	1965	1642	350	1000	260	383	1" 1/4	345	332	1600	1375	1600	846	400	600	765	820	100	80	1120
2 KDN/P 40-200/210	1436	1985	1642	350	1000	260	383	1" 1/4	345	360	1600	1425	1650	846	400	600	765	820	100	80	1120
2 KDN/P 40-250/230	1436	1985	1642	350	1000	260	383	1" 1/4	345	360	1600	1470	1695	846	400	600	765	820	100	80	1250
2 KDN/P 40-250/245	1436	1985	1642	350	1000	260	383	1" 1/4	345	360	1600	1470	1695	846	400	600	765	820	100	80	1250
2 KDN/P 40-250/260	1436	1985	1642	350	1000	260	383	1" 1/4	345	360	1600	1470	1695	846	400	600	765	820	100	80	1250

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

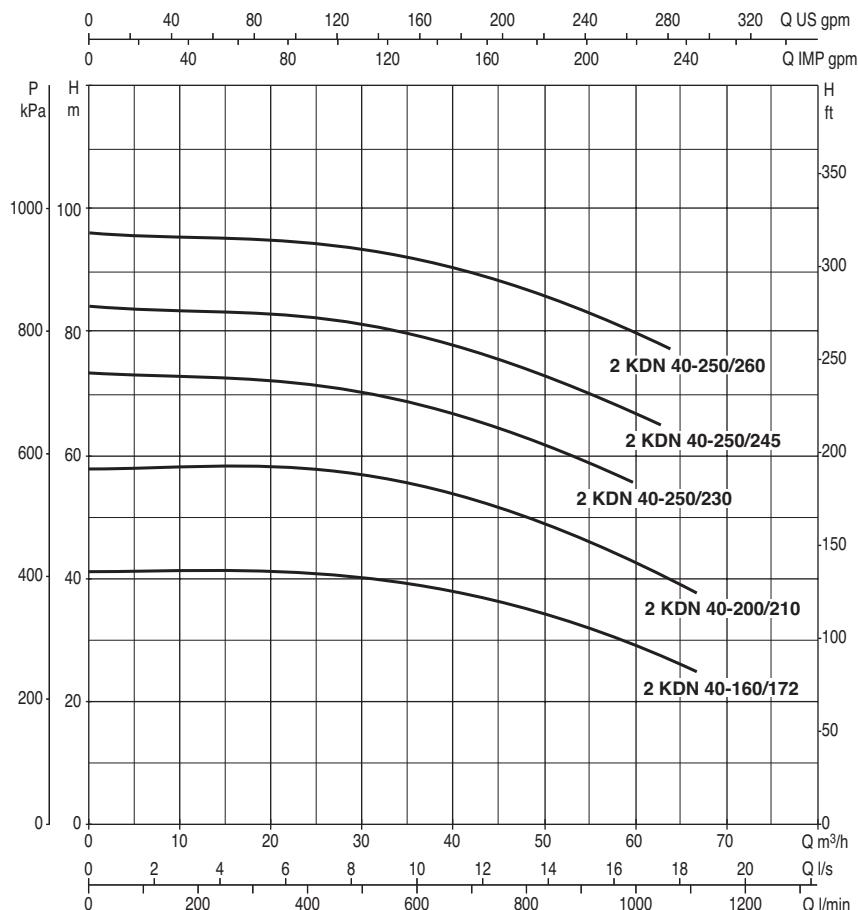
2 KDN 40 SETS

FIRE-FIGHTING TO UNI 9490-10779

WITH 1 ELECTRIC PUMP NKP-G AND DIESEL 1 MOTOR PUMP KDN

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 68 m³/h



Performance curves related to one functioning pump only.

MODEL	VOLTAGE ⁽¹⁾ 50 Hz	TYPE PILOT PUMP *	ELECTRIC PUMP	P2 NOMINAL		P2 NOMINAL		FLOW METER
				DIESEL PUMP ** kW	HP	ELECTRIC PUMP kW	HP	
2 KDN/P 40-160/172	3x400 V + N ~	JET 251	NKP-G 40-160/172	8,6	12	7,5	10	1,85 2,5 2P S.40 - DN 65
2 KDN/P 40-200/210	3x400 V + N ~	JET 251	NKP-G 40-200/210	13,5	18	11	15	1,85 2,5 2P S.40 - DN 65
2 KDN/P 40-250/230	3x400 V + N ~	JET 251	NKP-G 40-250/230	17,7	24	15	20	1,85 2,5 2P S.40 - DN 65
2 KDN/P 40-250/245	3x400 V + N ~	JET 251	NKP-G 40-250/245	17,7	24	18,5	25	1,85 2,5 2P S.40 - DN 65
2 KDN/P 40-250/260	3x400 V + N ~	JET 251	NKP-G 40-250/260	26	35	22	30	1,85 2,5 2P S.40 - DN 65

* Pilot pump on request

** Continuous power (NA ISO 3046 ICXN). The motor can supply +10% of the continuous power (UNI 9490 4.9.5.1).

⁽¹⁾ 1x220/240 V motor pump battery charger supply

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KDN 50 SETS

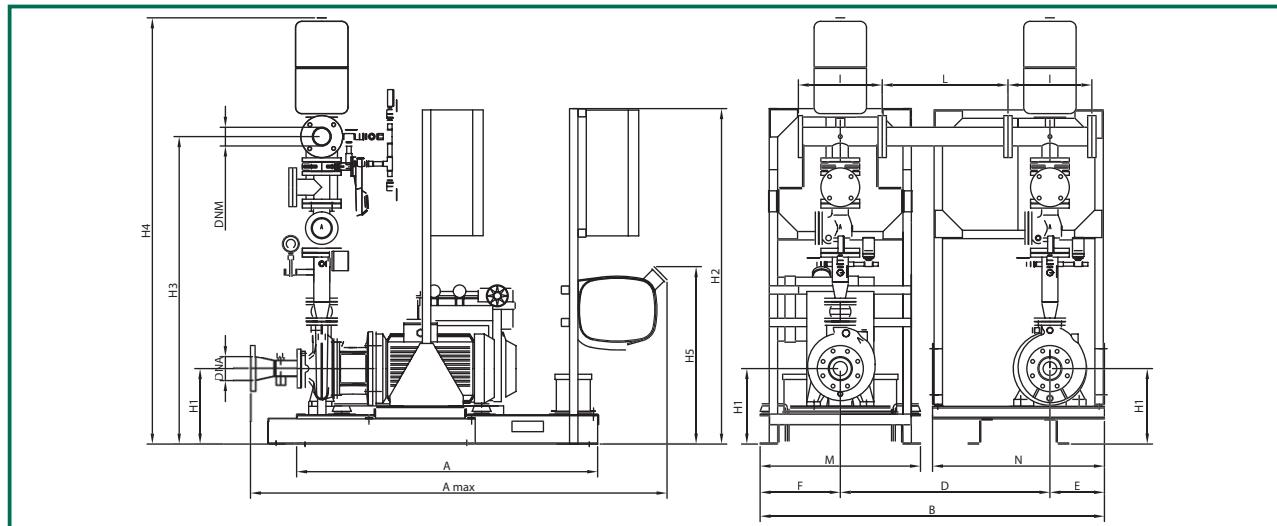
FIRE-FIGHTING TO UNI 9490-10779

WITH 1 ELECTRIC PUMP NKP-G AND 1 DIESEL MOTOR PUMP KDN

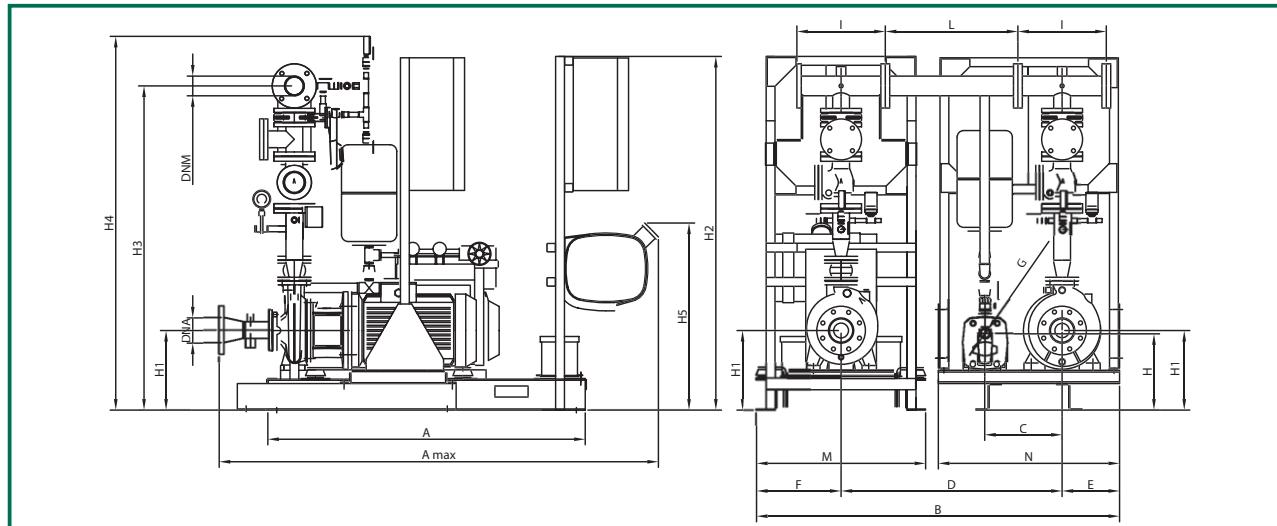
Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 110 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	F	H1	H2	H3	H4	H5	I	L	M	N	DNA	DNM	WEIGHT Kg
2 KDN/P 50-200/200	1436	1985	1642	1000	260	383	360	1600	1515	2095	846	400	600	765	820	100	100	1250
2 KDN/P 50-200/210	1436	1985	1642	1000	260	383	360	1600	1515	2095	846	400	600	765	820	100	100	1250
2 KDN/P 50-200/219	1436	1985	1642	1000	260	383	360	1600	1515	2095	846	400	600	765	820	100	100	1250
2 KDN/P 50-250/230	1436	1985	1642	1000	260	383	360	1600	1540	2120	846	400	600	765	820	100	100	1250
2 KDN/P 50-250/257	1436	1985	1642	1000	260	383	380	1600	1560	2140	846	400	600	765	820	100	100	1250

WITH PILOT PUMP

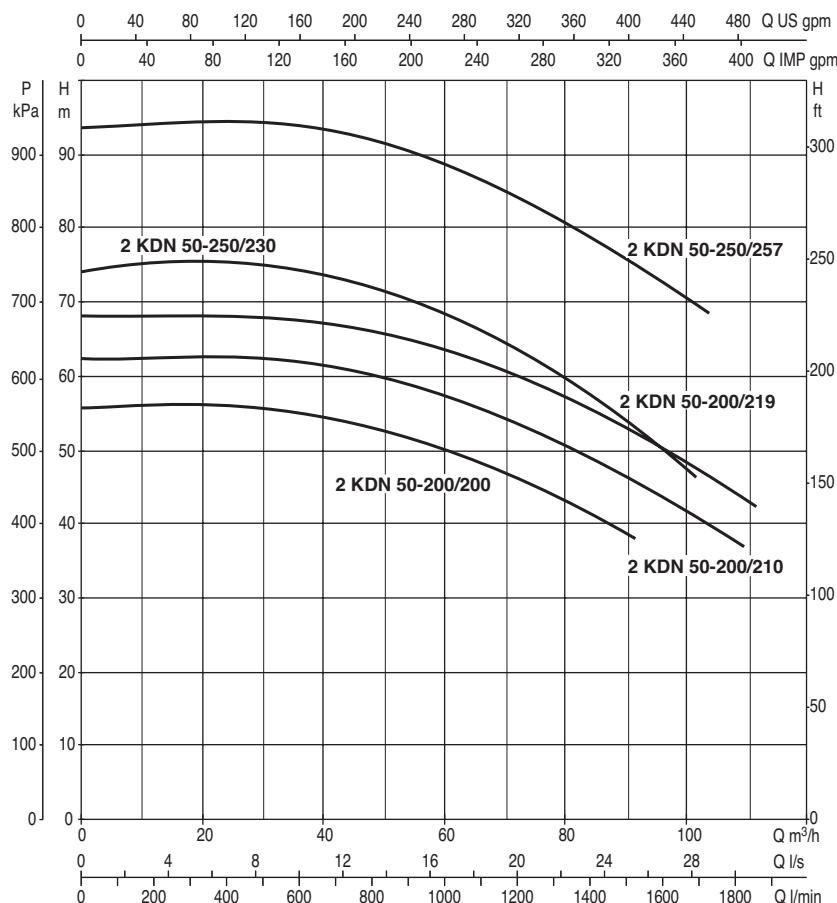
MODEL	A	A max	B	C	D	E	F	G	H	H1	H2	H3	H4	H5	I	L	M	N	DNA	DNM	WEIGHT Kg
2 KDN/P 50-200/200	1436	1985	1642	350	1000	260	383	1" 1/4	345	360	1600	1515	1740	846	400	600	765	820	100	100	1250
2 KDN/P 50-200/210	1436	1985	1642	350	1000	260	383	1" 1/4	345	360	1600	1515	1740	846	400	600	765	820	100	100	1250
2 KDN/P 50-200/219	1436	1985	1642	350	1000	260	383	1" 1/4	345	360	1600	1515	1740	846	400	600	765	820	100	100	1250
2 KDN/P 50-250/230	1436	1985	1642	350	1000	260	383	1" 1/4	345	360	1600	1540	1765	846	400	600	765	820	100	100	1250
2 KDN/P 50-250/257	1436	1985	1642	350	1000	260	383	1" 1/4	345	380	1600	1560	1785	846	400	600	765	820	100	100	1250

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KDN 50 SETS FIRE-FIGHTING TO UNI 9490-10779 WITH 1 ELECTRIC PUMP NKP-G AND 1 DIESEL MOTOR PUMP KDN

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 110 m³/h



Performance curves related to one functioning pump only.

MODEL	VOLTAGE ⁽¹⁾ 50 Hz	TYPE PILOT PUMP *	ELECTRIC PUMP	P2 NOMINAL		P2 NOMINAL		FLOW METER
				DIESEL PUMP ** kW	ELECTRIC PUMP kW	PILOT PUMP kW	HP	
2 KDN/P 50-200/200	3x400 V + N ~	JET 251	NKP-G 50-200/200	17,7	24	15	20	2P S.50 - DN 80
2 KDN/P 50-200/210	3x400 V + N ~	JET 251	NKP-G 50-200/210	17,7	24	18,5	25	2P S.50 - DN 80
2 KDN/P 50-200/219	3x400 V + N ~	JET 251	NKP-G 50-200/219	26	35	22	30	2P S.50 - DN 80
2 KDN/P 50-250/230	3x400 V + N ~	JET 251	NKP-G 50-250/230	26	35	22	30	1,85 2,5 2P S.50 - DN 80
2 KDN/P 50-250/257	3x400 V + N ~	JET 251	NKP-G 50-250/257	26	35	30	40	1,85 2,5 2P S.50 - DN 80

* Pilot pump on request

** Continuous power (NA ISO 3046 ICXN). The motor can supply +10% of the continuous power (UNI 9490 4.9.5.1.).

(1) 1x220/240 V motor pump battery charger supply

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KDN 65-200 SETS

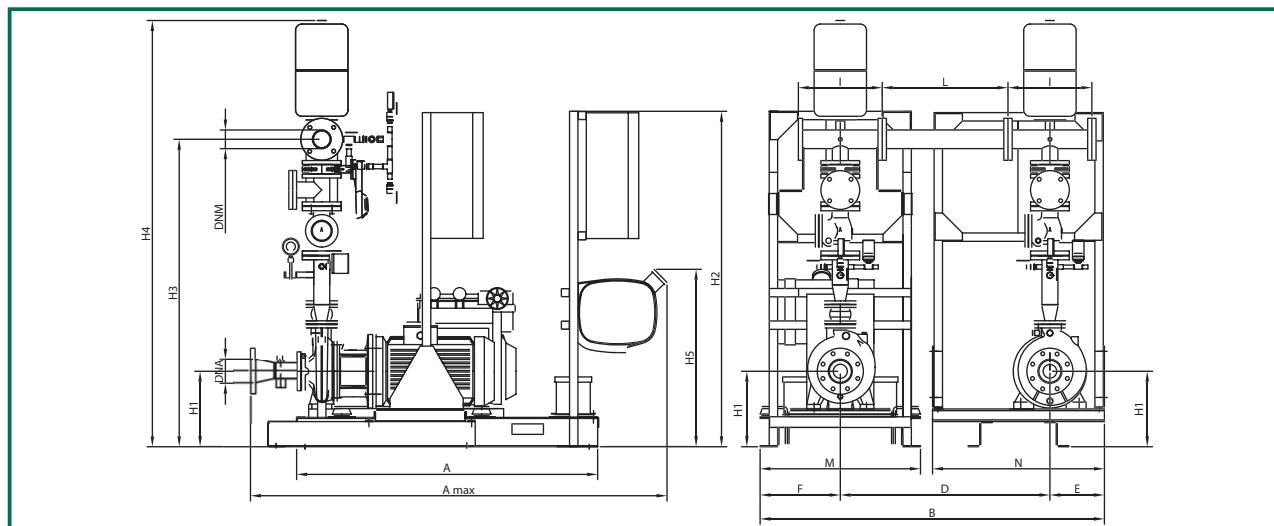
FIRE-FIGHTING TO UNI 9490-10779

WITH 1 ELECTRIC PUMP NKP-G AND DIESEL 1 MOTOR PUMP KDN

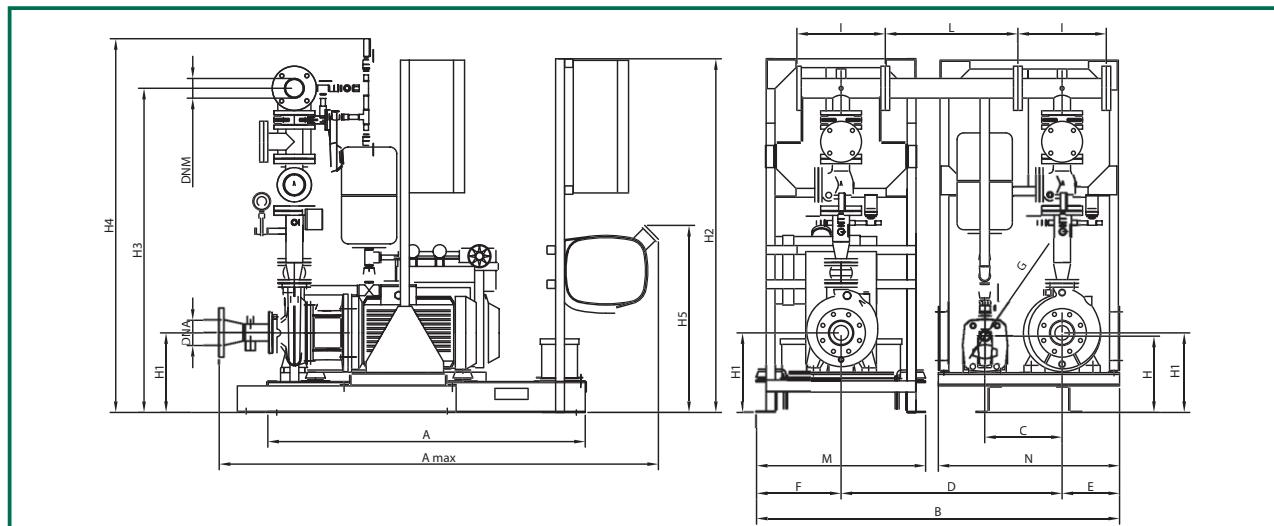
Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 155 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A	A max	B	D	E	F	H1	H2	H3	H4	H5	I	L	M	N	DNA	DNM	WEIGHT Kg
2 KDN/P 65-200/190	1436	2015	1642	1000	260	383	360	1600	1690	2280	846	400	600	765	820	125	125	1250
2 KDN/P 65-200/200	1436	2015	1642	1000	260	383	360	1600	1690	2280	846	400	600	765	820	125	125	1250
2 KDN/P 65-200/219	1436	2015	1642	1000	260	383	380	1600	1710	2300	846	400	600	765	820	125	125	1250

WITH PILOT PUMP

MODEL	A	A max	B	C	D	E	F	G	H	H1	H2	H3	H4	H5	I	L	M	N	DNA	DNM	WEIGHT Kg
2 KDN/P 65-200/190	1436	2015	1642	350	1000	260	383	1" 1/4	345	360	1600	1690	1915	846	400	600	765	820	125	125	1250
2 KDN/P 65-200/200	1436	2015	1642	350	1000	260	383	1" 1/4	345	360	1600	1690	1915	846	400	600	765	820	125	125	1250
2 KDN/P 65-200/219	1436	2015	1642	350	1000	260	383	1" 1/4	345	380	1600	1710	1935	846	400	600	765	820	125	125	1250

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

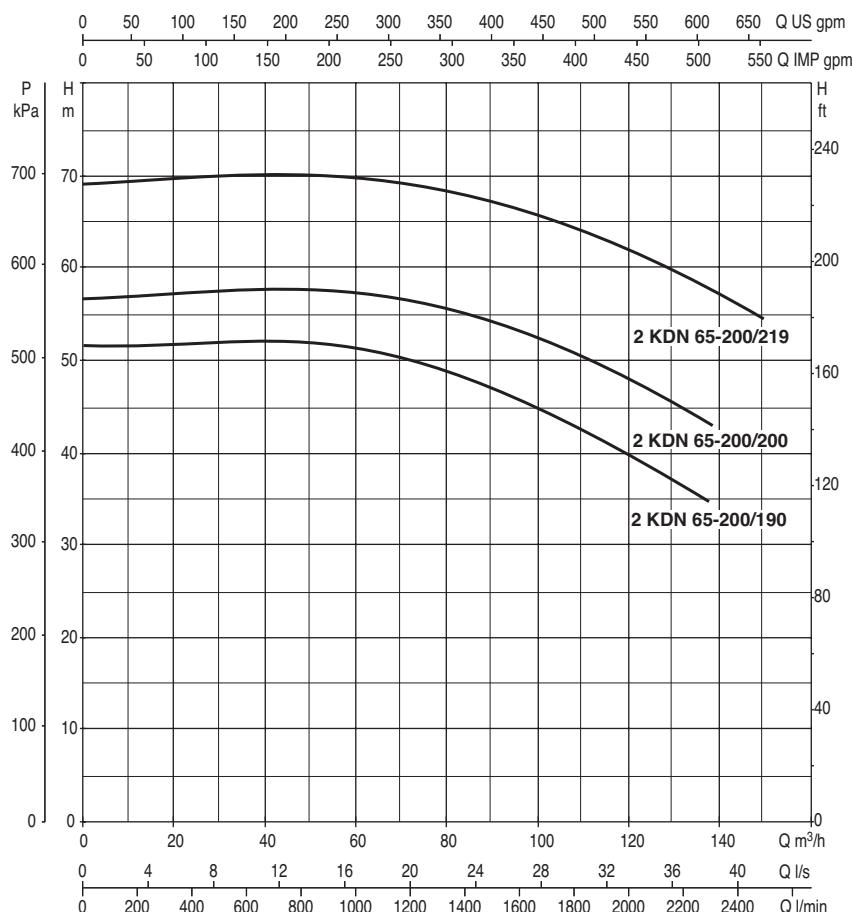
2 KDN 65-200 SETS

FIRE-FIGHTING TO UNI 9490-10779

WITH 1 ELECTRIC PUMP NKP-G AND DIESEL 1 MOTOR PUMP KDN

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 155 m³/h



Performance curves related to one functioning pump only.

MODEL	VOLTAGE ⁽¹⁾ 50 Hz	TYPE PILOT PUMP *	ELECTRIC PUMP	P2 NOMINAL				P2 NOMINAL PILOT PUMP		FLOW METER
				DIESEL PUMP ** kW	HP	ELECTRIC PUMP kW	HP	kW	HP	
2 KDN/P 65-200/190	3x400 V + N ~	JET 251	NKP-G 65-200/190	17,7	24	18,5	25	1,85	2,5	2P S.65 - DN 100
2 KDN/P 65-200/200	3x400 V + N ~	JET 251	NKP-G 65-200/200	26	35	22	30	1,85	2,5	2P S.65 - DN 100
2 KDN/P 65-200/219	3x400 V + N ~	JET 251	NKP-G 65-200/219	26	35	30	40	1,85	2,5	2P S.65 - DN 100

* Pilot pump on request

** Continuous power (NA ISO 3046 ICXN). The motor can supply +10% of the continuous power (UNI 9490 4.9.5.1.).

(1) 1x220/240 V motor pump battery charger supply

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KDN 65-250 SETS

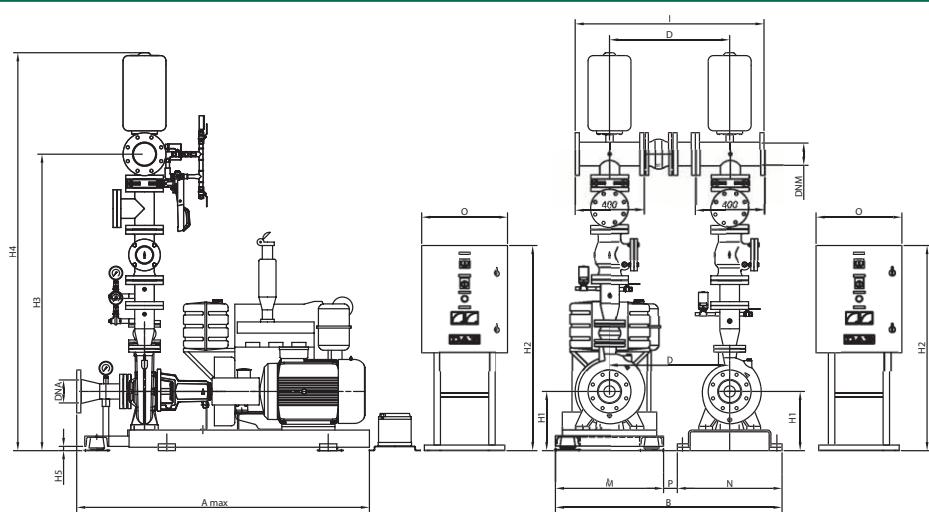
FIRE-FIGHTING TO UNI 9490-10779

WITH 1 ELECTRIC PUMP NKP-G AND DIESEL 1 MOTOR PUMP KDN

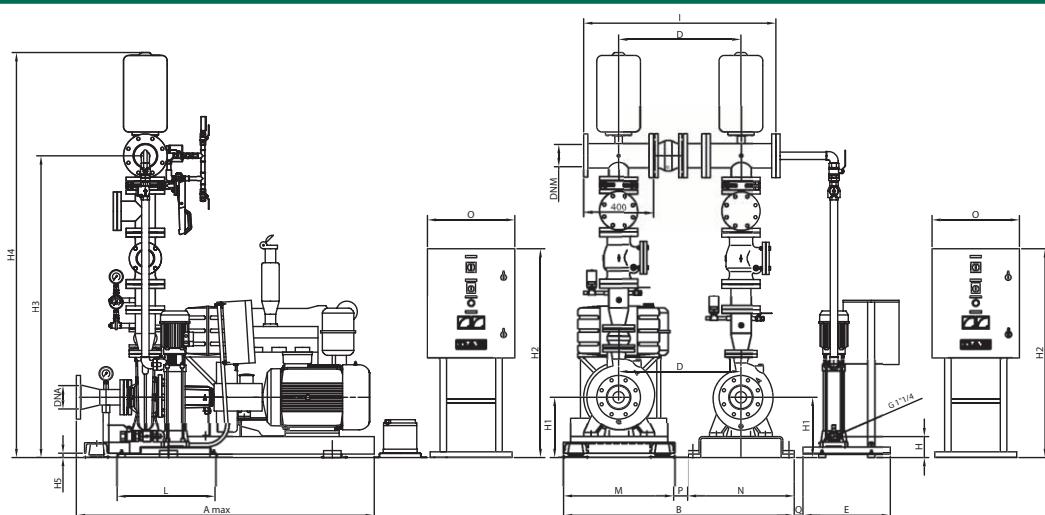
Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 165 m³/h

WITHOUT PILOT PUMP



WITH PILOT PUMP



WITHOUT PILOT PUMP

MODEL	A max	B	D	H1	H2	H3	H4	H5	I	M	N	O	P	DNA	DNM	WEIGHT Kg
2 KDN 65-250/240	1710	1320	700	345	1195	1705	2320	25	1100	630	610	500	80	125	125	1620
2 KDN 65-250/315.37	1710	1320	700	345	1195	1705	2320	25	1100	630	610	500	80	125	125	1620
2 KDN 65-250/315.45	1710	1320	700	345	1195	1705	2320	25	1100	630	610	500	80	125	125	1910

WITH PILOT PUMP

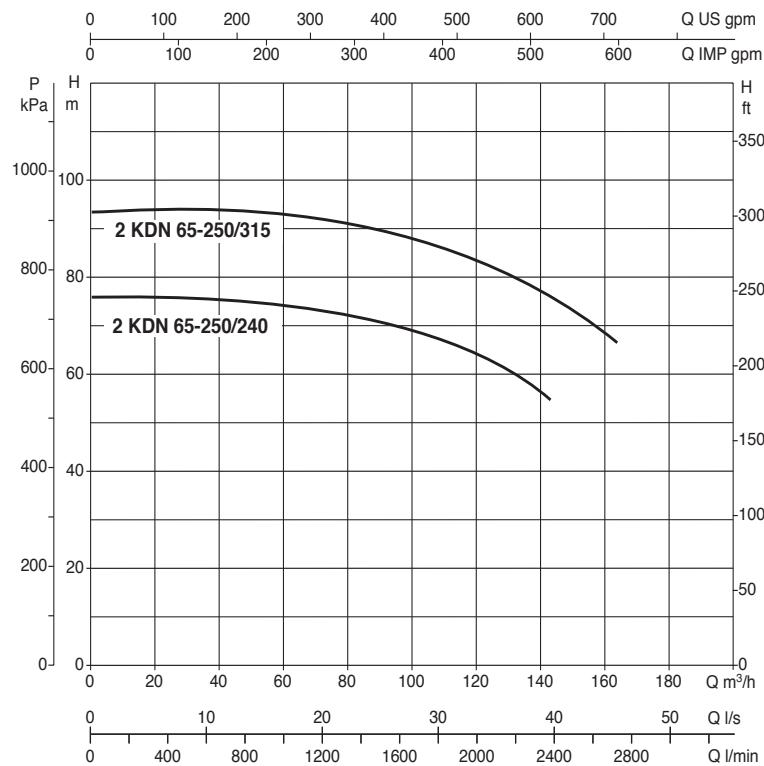
MODEL	A max	B	D	E	G	H	H1	H2	H3	H4	H5	I	L	M	N	O	P	Q	DNA	DNM	WEIGHT Kg
2 KDN 65-250/240	1710	1320	700	500	1" 1/4	120	345	1195	1730	2320	25	1100	560	630	610	500	80	50	125	125	1650
2 KDN 65-250/315.37	1710	1320	700	500	1" 1/4	120	345	1195	1730	2320	25	1100	560	630	610	500	80	50	125	125	1650
2 KDN 65-250/315.45	1710	1320	700	500	1" 1/4	120	345	1195	1730	2320	25	1100	560	630	610	500	80	50	125	125	1650

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KDN 65-250 SETS FIRE-FIGHTING TO UNI 9490-10779 WITH 1 ELECTRIC PUMP NKP-G AND DIESEL 1 MOTOR PUMP KDN

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 165 m³/h



Performance curves related to one functioning pump only.

MODEL	VOLTAGE ⁽¹⁾ 50 Hz	TYPE PILOT PUMP *	ELECTRIC PUMP	P2 NOMINAL		P2 NOMINAL PILOT PUMP		FLOW METER
				DIESEL PUMP ** kW	ELECTRIC PUMP kW	kW	HP	
2 KDN 65-250.240.30	3x400 V + N ~	KV 3/12	KDN 65-250.30	26	35	30	40	1,5
2 KDN 65-250.315.37	3x400 V + N ~	KV 3/12	KDN 65-315.37	43	58	37	50	1,5
2 KDN 65-250.315.45	3x400 V + N ~	KV 3/12	KDN 65-250.45	43	58	45	60	1,5
								2 P S.65 - DN 100

* Pilot pump on request

** Continuous power (NA ISO 3046 ICXN). The motor can supply +10% of the continuous power (UNI 9490 4.9.5.1.).

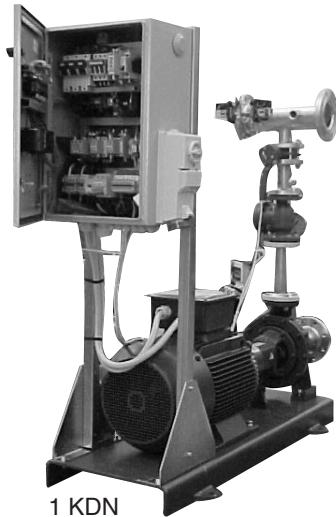
(1) 1x220/240 V motor pump battery charger supply

1-2 KDN / KV 32-40-50 SETS

UNI 9490-10779 1-2 KDN / KV 32-40-50 FIRE-FIGHTING UNITS

WITH 1-2 STANDARDISED ELECTRIC PUMPS WITH KDN BASEPLATE

KV 32-40-50 VERTICAL MULTISTAGE PUMPS



CE

1 KDN

GENERAL DATA

These are UNI 9490-10779 compliant pressurisation units for delivering water to fire-fighting systems.

The standard version comprises:

- one or two standardised KDN electric pumps with base, joint, plus a compensation pump (if present).
- one or two KV vertical multistage electric pumps and compensating pump (if present)

CONSTRUCTIONAL CHARACTERISTICS

BASE

Galvanised steel baseplate for electric pump/s and pilot electric pump.

ELECTRIC PUMPS

Standardised centrifugal KDN electric pumps with joint, coupled to a three-phase asynchronous motor, performance and size compliant with DIN-EN 733 (formerly DIN 24255).

Axial suction port, radial discharge port, pump body in cast iron, impeller in cast iron equilibrata dinamicamente, carbon/silicon carbide mechanical seal.

Asynchronous, closed 2-pole motor, cooled by external ventilation.

Vertically-mounted multistage centrifugal KV electric pump, coupled to an asynchronous three-phase motor.

Discharge and suction body in cast iron, impeller and diffuser in technopolymer (KV 32), bronze impeller and diffuser in cast iron (KV40 KV50), carbon/tungsten carbide mechanical seal.

Asynchronous, closed 2-pole motor, cooled by external ventilation.

PILOT PUMP

KV 3 centrifugal multistage electric pump on a vertical axis. Discharge and suction body in cast iron, impeller and diffuser in technopolymer. Asynchronous, closed 2-pole motor, cooled by external ventilation.

HYDRAULIC PART

Separate suction lines for each pump, complete with vacuum pressure gauge, butterfly valve and anti-vibration joint.

Delivery of each main pump to the manifold with

connections for rate of flow indicator, shut-off butterfly valve, galvanised steel delivery manifold with pressure gauges and starting pressure switches, 15 bar expansion tank and anti-vibration joint.

Pilot pump with ball valve on suction and delivery sides, check valve on the delivery side, starting pressure switch, hose connection to the delivery manifold of the main pumps.

The size of the hydraulic part is compliant with UNI 9490 - UNI 9489 - UNI 10779.

CONTROL PANELS

One IP 55 control panel for **each electric pump** with duplicated front-of-panel indicator LED's, general switch, fuses, starting contactors for electric pumps (direct up to 7,5 kW inclusive/star delta over 7,5 kW), 1 voltmeter and 1 ammeter, AUT-0-MAN selector, START – STOP buttons, recessed selector for operation to UNI 10779.

Also in version with for weekly test unit (only for main electric pumps), **this must be specified when ordering** as it cannot be added later.

Control panel for pilot pump with overload cut-out, line isolator, direct starting, AUT-0-MAN selector and indicator LED's.

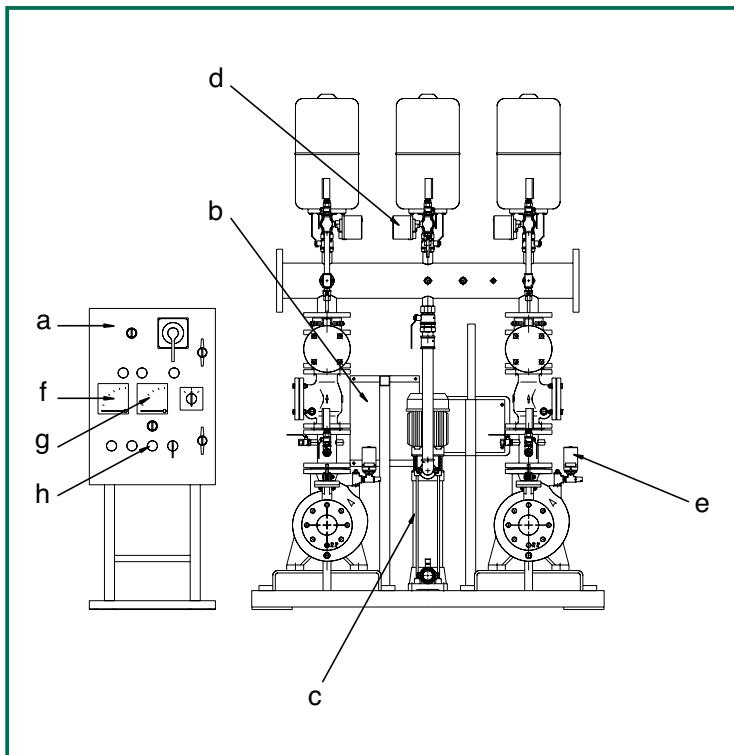
UNIT BUILT TO UNI 9490 - 10779 STANDARDS

WITH 1-2 KDN, WITH 1-2 KV 32-40-50

FOR SUPPLYING WATER TO AUTOMATIC FIRE-FIGHTING SYSTEMS

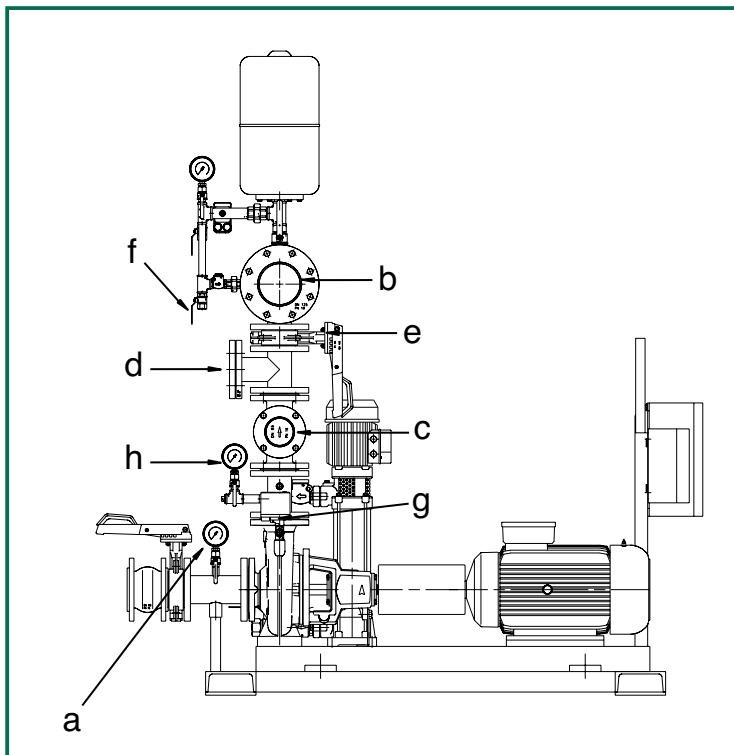
Main components required by UNI 9490 supplied standard

ELECTRICAL COMPONENTS



- a - Electrical panel for each pump
- b - Electrical panel for pilot pump
- c - Pilot pump
- d - Pump start pressure switch
- e - Pump working pressure switch
- f - Voltmeter
- g - Ammeter
- h - Manual stop button

HYDRAULIC COMPONENTS



- a - Vacuum pressure gauge
- b - Delivery manifold
- c - Inspectable check valve
- d - Connector for rate of flow indicator
- e - Padlockable shut-off valves
- f - Manual test device
- g - Water recirculating device (membrane)
- h - Pump working pressure gauge.

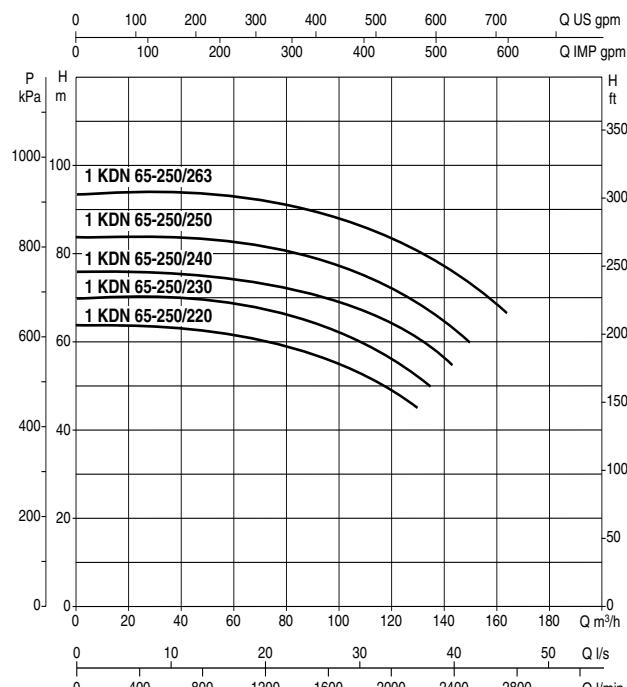
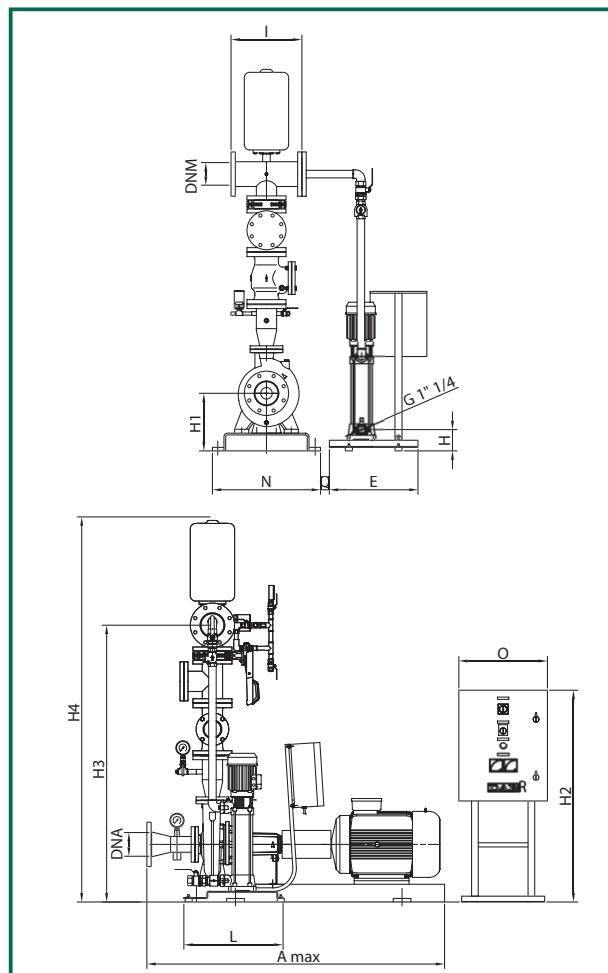
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KDN 65-250 SETS

FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 165 m³/h



MODEL	A max	E	G	H	H1	H2	H3	H4	I	L	N	O	Q	DNA	DNM
1 KDN 65-250/220	1530	500	1" 1/4	120	280	1195	1517	2130	400	560	540	500	50	125	125
1 KDN 65-250/230	1680	500	1" 1/4	120	300	1195	1537	2150	400	560	610	500	50	125	125
1 KDN 65-250/240	1680	500	1" 1/4	120	300	1195	1537	2150	400	560	610	500	50	125	125
1 KDN 65-250/250	1680	500	1" 1/4	120	325	1195	1562	2175	400	560	610	500	50	125	125
1 KDN 65-250/263	1880	500	1" 1/4	120	350	1195	1587	2200	400	560	660	500	50	125	125

MODEL	VOLTAGE 50 Hz	PILOT PUMP *	MOTOR SIZE	P2 NOMINAL		In A	P2 NOMINAL PILOT PUMP		WEIGHT WITH PILOT PUMP Kg
				kW	HP		kW	HP	
1 KDN 65-250/220	3x400 V + N ~	KV 3/10	MEC 180 M	22	30	39	1,1	1,5	452
1 KDN 65-250/230	3x400 V + N ~	KV 3/10	MEC 200 L	30	40	53,5	1,1	1,5	452
1 KDN 65-250/240	3x400 V + N ~	KV 3/12	MEC 200 L	37	50	64,5	1,5	2	472
1 KDN 65-250/250	3x400 V + N ~	KV 3/12	MEC 225 M	45	60	78	1,5	2	547
1 KDN 65-250/263	3x400 V + N ~	KV 3/12	MEC 250 M	55	75	94,5	1,5	2	642

* Pilot pump on request

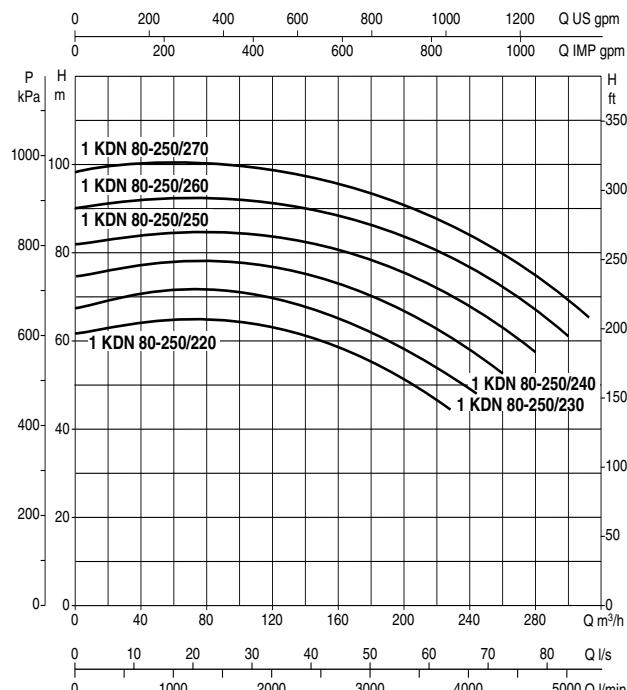
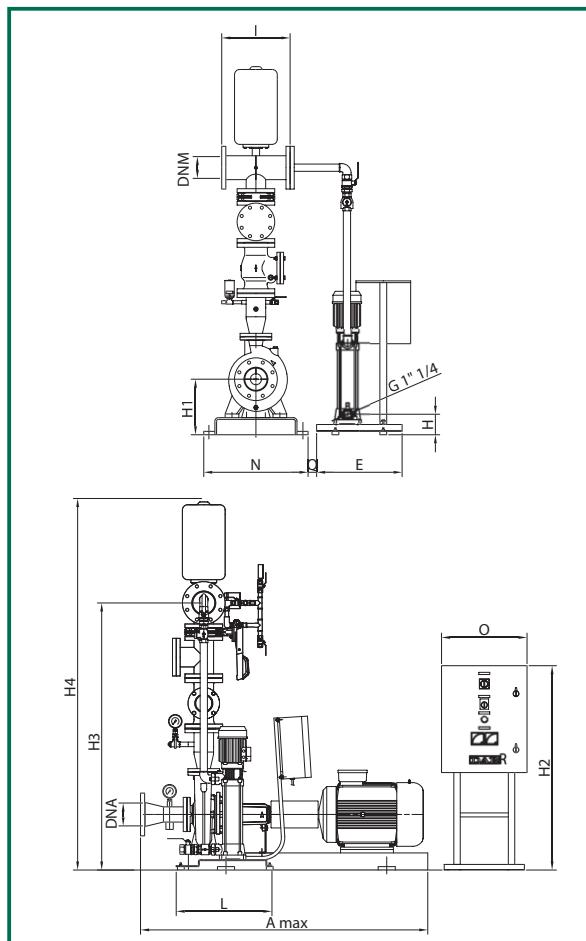
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KDN 80-250 SETS

FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 350 m³/h



MODEL	A max	E	G	H	H1	H2	H3	H4	I	L	N	O	Q	DNA	DNM
1 KDN 80-250/220	1710	500	1" 1/4	120	300	1195	1710	2316	600	560	610	500	50	150	150
1 KDN 80-250/230	1710	500	1" 1/4	120	300	1195	1710	2316	600	560	610	500	50	150	150
1 KDN 80-250/240	1910	500	1" 1/4	120	300	1195	1710	2316	600	560	660	500	50	150	150
1 KDN 80-250/250	2110	500	1" 1/4	120	300	1195	1710	2316	600	560	730	500	50	150	150
1 KDN 80-250/260	2110	500	1" 1/4	120	300	1195	1710	2316	600	560	730	500	50	150	150
1 KDN 80-250/270	2110	500	1" 1/4	120	300	1195	1710	2316	600	560	730	500	50	150	150

MODEL	VOLTAGE 50 Hz	PILOT PUMP *	MOTOR SIZE	P2 NOMINAL		In A	P2 NOMINAL PILOT PUMP kW	WEIGHT WITH PILOT PUMP Kg	
				kW	HP				
1 KDN 80-250/220	3x400 V + N ~	KV 3/10	MEC 200 L	37	50	64,5	1,1	1,5	508
1 KDN 80-250/230	3x400 V + N ~	KV 3/10	MEC 225 M	45	60	78	1,1	1,5	583
1 KDN 80-250/240	3x400 V + N ~	KV 3/10	MEC 250 M	55	75	94,5	1,1	1,5	678
1 KDN 80-250/250	3x400 V + N ~	KV 3/12	MEC 280 S	75	100	128	1,5	2	828
1 KDN 80-250/260	3x400 V + N ~	KV 3/12	MEC 280 M	90	120	160	1,5	2	888
1 KDN 80-250/270	3x400 V + N ~	KV 3/15	MEC 280 M	90	120	160	1,85	2,5	888

* Pilot pump on request

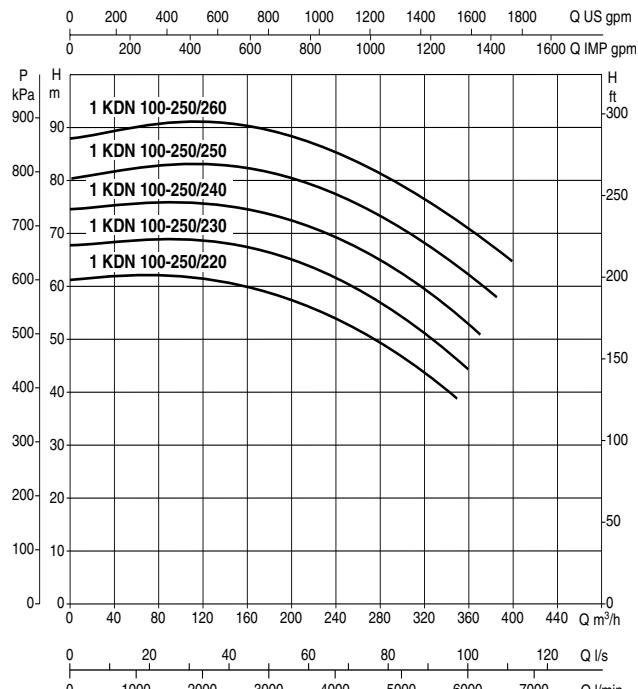
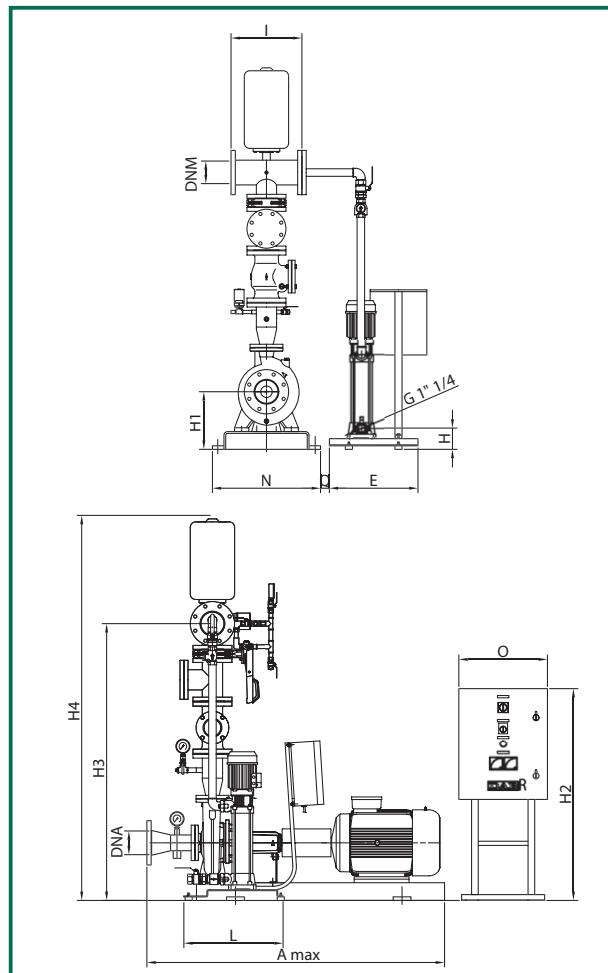
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KDN 100-250 SETS

FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 400 m³/h



MODEL	A max	E	G	H	H1	H2	H3	H4	I	L	N	O	Q	DNA	DNM
1 KDN 100-250/220	2000	500	1" 1/4	120	325	1195	1846	2476	735	560	660	500	50	200	200
1 KDN 100-250/230	2000	500	1" 1/4	120	325	1195	1846	2476	735	560	660	500	50	200	200
1 KDN 100-250/240	2200	500	1" 1/4	120	380	1195	1901	2531	735	560	730	500	50	200	200
1 KDN 100-250/250	2200	500	1" 1/4	120	380	1195	1901	2531	735	560	730	500	50	200	200
1 KDN 100-250/260	2400	500	1" 1/4	120	435	1195	1956	2586	735	560	910	500	50	200	200

MODEL	VOLTAGE 50 Hz	PILOT PUMP *	MOTOR SIZE	P2 NOMINAL		In A	P2 NOMINAL PILOT PUMP		WEIGHT WITH PILOT PUMP Kg
				kW	HP		kW	HP	
1 KDN 100-250/220	3x400 V + N ~	KV 3/10	MEC 225 M	45	60	78	1,1	1,5	613
1 KDN 100-250/230	3x400 V + N ~	KV 3/10	MEC 250 M	55	75	94,5	1,1	1,5	708
1 KDN 100-250/240	3x400 V + N ~	KV 3/10	MEC 280 S	75	100	128	1,1	1,5	858
1 KDN 100-250/250	3x400 V + N ~	KV 3/12	MEC 280 M	90	120	160	1,5	2	918
1 KDN 100-250/260	3x400 V + N ~	KV 3/12	MEC 315 S	110	150	188	1,5	2	1038

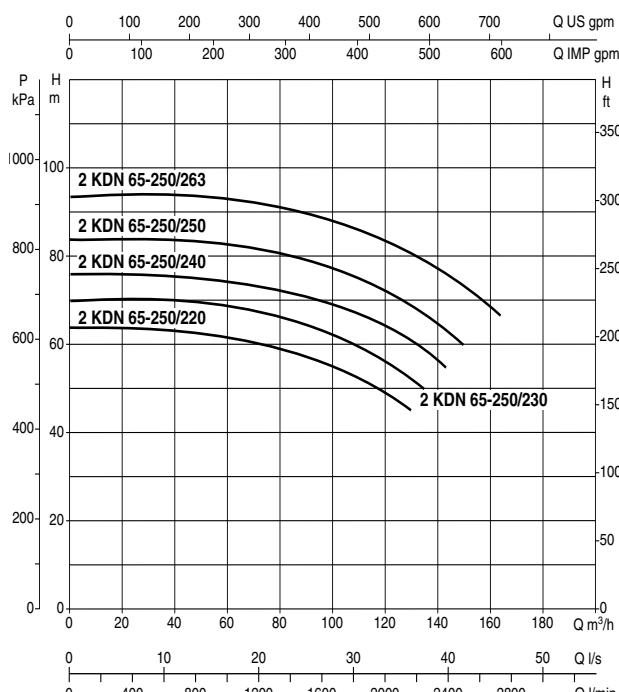
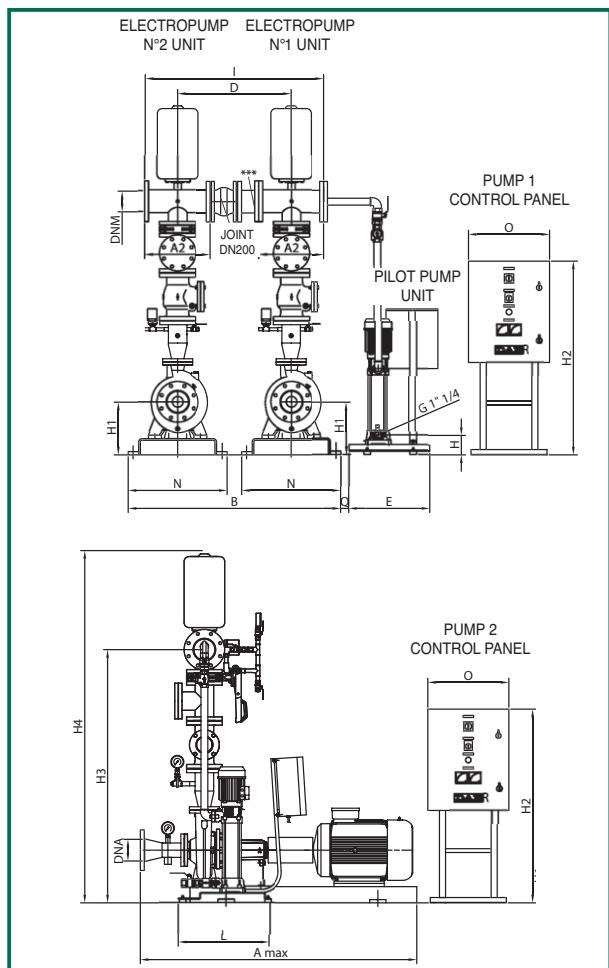
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KDN 65-250 SETS FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 165 m³/h



Performance curves related to one functioning pump only.

MODEL	A max	B	C	D	E	G	H	H1	H2	H3	H4	I	L	N	O	Q	DNA	DNM
2 KDN 65-250/220	1530	1240	500	400	500	1" 1/4	120	280	1195	1517	2130	1100	560	540	500	50	125	125
2 KDN 65-250/230	1680	1310	500	400	500	1" 1/4	120	300	1195	1537	2150	1100	560	610	500	50	125	125
2 KDN 65-250/240	1680	1310	500	400	500	1" 1/4	120	300	1195	1537	2150	1100	560	610	500	50	125	125
2 KDN 65-250/250	1680	1310	500	400	500	1" 1/4	120	325	1195	1562	2175	1100	560	610	500	50	125	125
2 KDN 65-250/263	1880	1360	500	400	500	1" 1/4	120	350	1195	1587	2200	1100	560	660	500	50	125	125

MODEL	VOLTAGE 50 Hz	PILOT PUMP *	MOTOR SIZE	P2 NOMINAL		In A	P2 NOMINAL PILOT PUMP		WEIGHT WITH PILOT PUMP Kg	
				kW	HP		kW	HP	Kg	
2 KDN 65-250/220	3x400 V + N ~	KV 3/10	MEC 180 M	2x22	2x30	39	1,1	1,5	734	
2 KDN 65-250/230	3x400 V + N ~	KV 3/10	MEC 200 L	2x30	2x40	53,5	1,1	1,5	904	
2 KDN 65-250/240	3x400 V + N ~	KV 3/12	MEC 200 L	2x37	2x50	64,5	1,5	2	944	
2 KDN 65-250/250	3x400 V + N ~	KV 3/12	MEC 225 M	2x45	2x60	78	1,5	2	1094	
2 KDN 65-250/263	3x400 V + N ~	KV 3/12	MEC 250 M	2x55	2x75	94,5	1,5	2	1284	

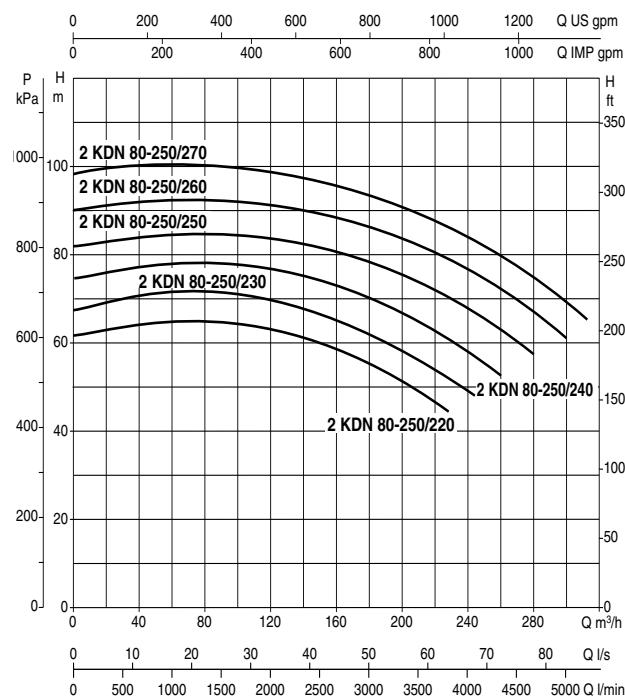
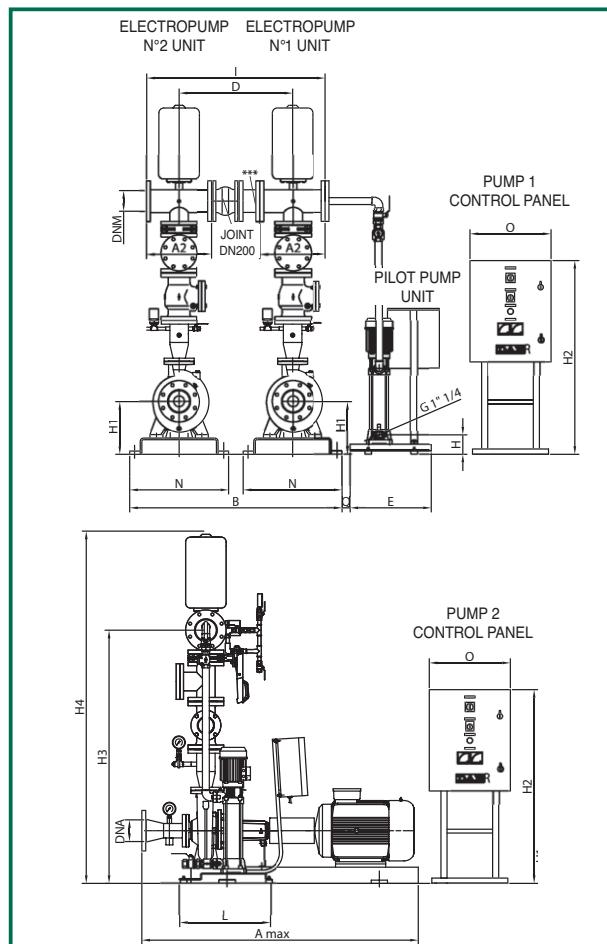
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KDN 80-250 SETS FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 350 m³/h



Performance curves related to one functioning pump only.

MODEL	A max	B	C	D	E	G	H	H1	H2	H3	H4	I	L	N	O	Q	DNA	DNM
2 KDN 80-250/220	1710	1390	600	780	500	1" 1/4	120	300	1195	1710	2316	1380	560	610	500	50	150	150
2 KDN 80-250/230	1710	1390	600	780	500	1" 1/4	120	325	1195	1735	2341	1380	560	610	500	50	150	150
2 KDN 80-250/240	1910	1440	600	780	500	1" 1/4	120	350	1195	1760	2366	1380	560	660	500	50	150	150
2 KDN 80-250/250	2110	1510	600	780	500	1" 1/4	120	380	1195	1790	2396	1380	560	730	500	50	150	150
2 KDN 80-250/260	2110	1510	600	780	500	1" 1/4	120	380	1195	1790	2396	1380	560	730	500	50	150	150
2 KDN 80-250/270	2110	1510	600	780	500	1" 1/4	120	380	1195	1790	2396	1380	560	730	500	50	150	150

MODEL	VOLTAGE 50 Hz	PILOT PUMP *	MOTOR SIZE	P2 NOMINAL		In A	P2 NOMINAL PILOT PUMP		WEIGHT WITH PILOT PUMP Kg
				kW	HP		kW	HP	
2 KDN 80-250/220	3x400 V + N ~	KV 3/10	MEC 200 L	2x37	2x50	64,5	1,1	1,5	1016
2 KDN 80-250/230	3x400 V + N ~	KV 3/10	MEC 225 M	2x45	2x60	78	1,1	1,5	1166
2 KDN 80-250/240	3x400 V + N ~	KV 3/10	MEC 250 M	2x55	2x75	94,5	1,1	1,5	1356
2 KDN 80-250/250	3x400 V + N ~	KV 3/12	MEC 280 S	2x75	2x100	128	1,5	2	1656
2 KDN 80-250/260	3x400 V + N ~	KV 3/12	MEC 280 M	2x90	2x120	160	1,5	2	1776
2 KDN 80-250/270	3x400 V + N ~	KV 3/15	MEC 280 M	2x90	2x120	160	1,85	2,5	1776

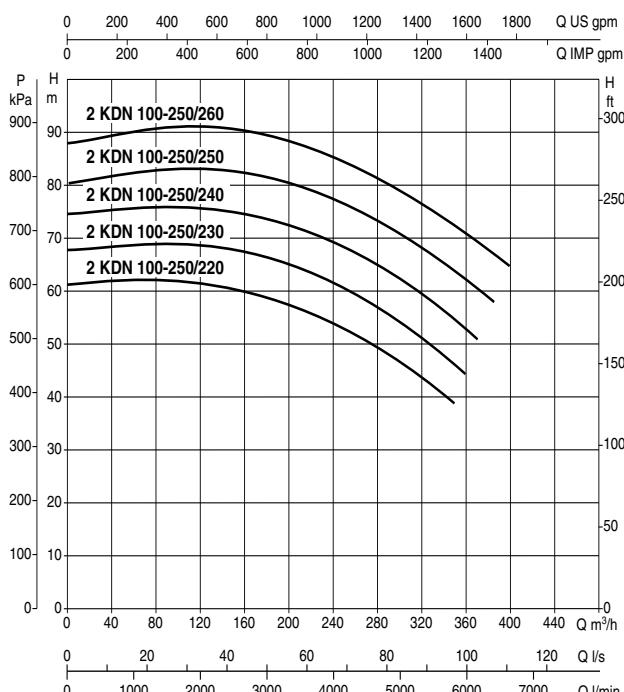
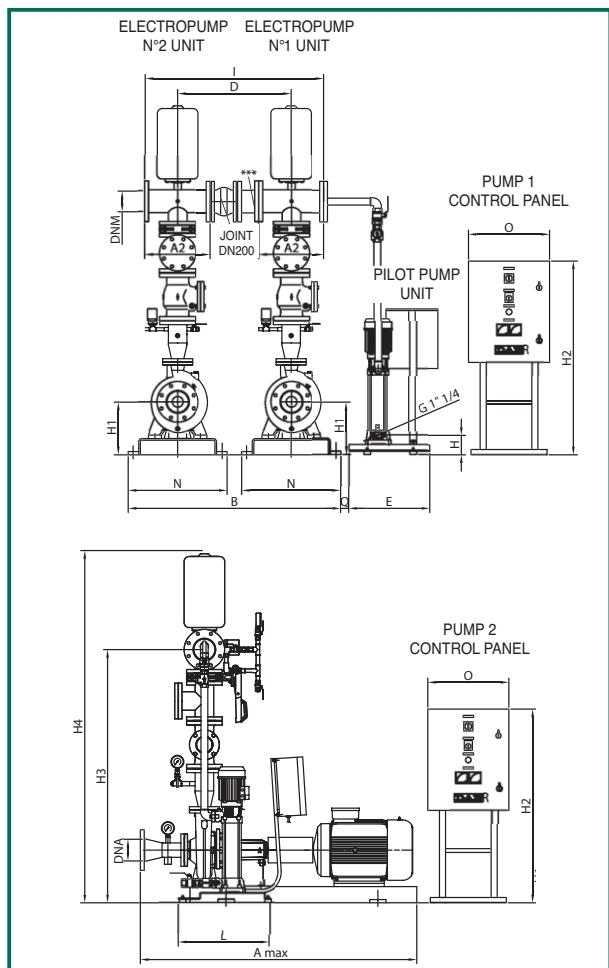
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KDN 100-250 SETS FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -10°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 400 m³/h



Performance curves related to one functioning pump only.

MODEL	A max	B	C	D	E	G	H	H1	H2	H3	H4	I	L	N	O	Q	DNA	DNM
2 KDN 100-250/220	2000	1600	735	940	500	1" 1/4	120	300	1195	1821	2451	1675	560	660	500	50	200	200
2 KDN 100-250/230	2000	1600	735	940	500	1" 1/4	120	350	1195	1871	2501	1675	560	660	500	50	200	200
2 KDN 100-250/240	2200	1670	735	940	500	1" 1/4	120	380	1195	1901	2531	1675	560	730	500	50	200	200
2 KDN 100-250/250	2200	1670	735	940	500	1" 1/4	120	385	1195	1906	2536	1675	560	730	500	50	200	200
2 KDN 100-250/260	2400	1850	735	940	500	1" 1/4	120	435	1195	1956	2586	1675	560	910	500	50	200	200

MODEL	VOLTAGE 50 Hz	PILOT PUMP *	MOTOR SIZE	P2 NOMINAL		In A	P2 NOMINAL PILOT PUMP		WEIGHT WITH PILOT PUMP Kg	
				kW	HP		kW	HP		
2 KDN 100-250/220	3x400 V + N ~	KV 3/10	MEC 225 M	2x45	2x60	78	1,1	1,5	1226	
2 KDN 100-250/230	3x400 V + N ~	KV 3/10	MEC 250 M	2x55	2x75	94,5	1,1	1,5	1416	
2 KDN 100-250/240	3x400 V + N ~	KV 3/10	MEC 280 S	2x75	2x100	128	1,1	1,5	1716	
2 KDN 100-250/250	3x400 V + N ~	KV 3/12	MEC 280 M	2x90	2x120	160	1,5	2	1836	
2 KDN 100-250/260	3x400 V + N ~	KV 3/12	MEC 315 S	2x110	2x150	188	1,5	2	2076	

* Pilot pump on request

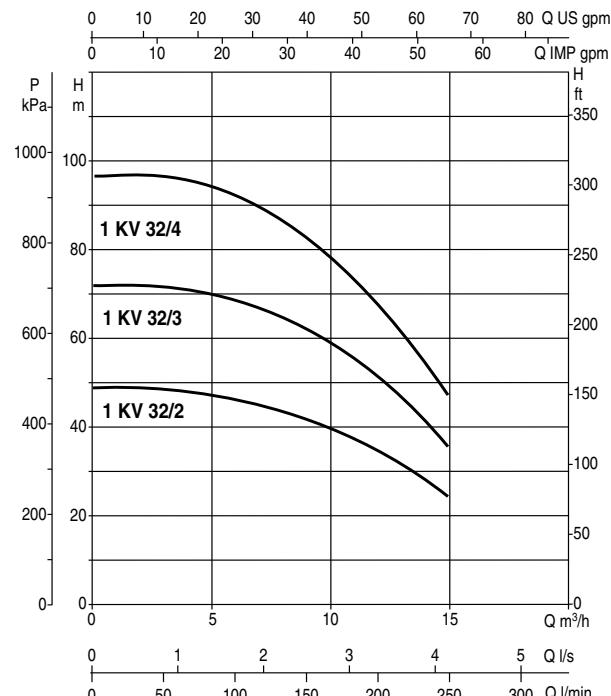
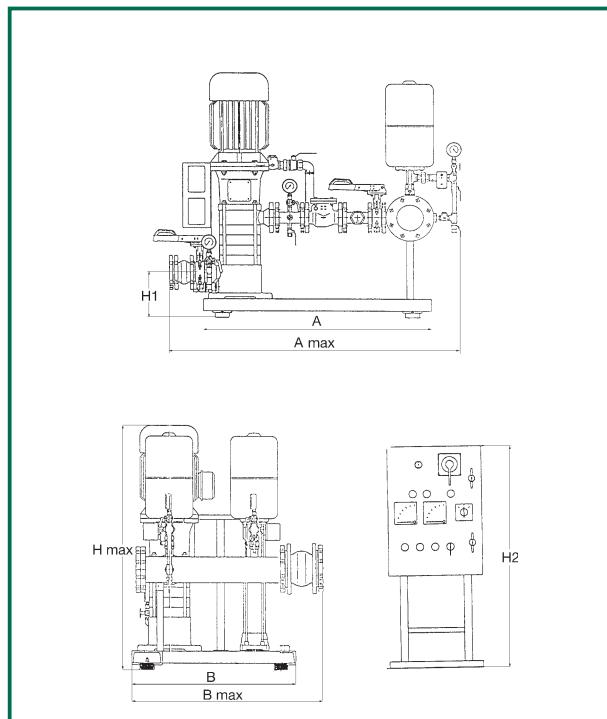
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KV 32 SETS

FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 15 m³/h



MODEL	A	A max	B	B max	H max	H1	H2	WEIGHT WITH PILOT PUMP Kg	WEIGHT WITHOUT PILOT PUMP Kg
1 KV 32/2 T	1250	1400	630	700	850	180	1195	300	265
1 KV 32/3 T	1250	1400	630	700	850	180	1195	305	270
1 KV 32/4 T	1250	1400	630	700	850	180	1195	315	280

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL PILOT PUMP		P2 NOMINAL		Ø DELIVERY MANIFOLD	Ø SUCTION PUMP	Ø FLOW RATE
			kW	HP	kW	HP			
1 KV 32/2 T	3x400 V ~	KV 6/7 T	1,1	1,5	2,2	3	1 1/4"	DN 40	1P S.KV 32 DN 40
1 KV 32/3 T	3x400 V ~	KV 3/10 T	1,1	1,5	3	4	1 1/4"	DN 40	1P S.KV 32 DN 40
1 KV 32/4 T	3x400 V ~	KV 3/15 T	1,85	2,5	4	5,5	1 1/4"	DN 40	1P S.KV 32 DN 40

* Pilot pump on request

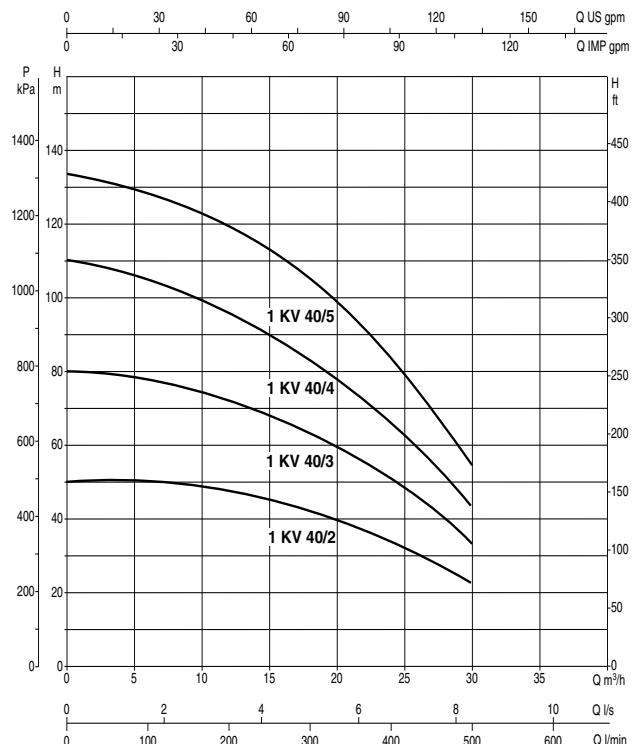
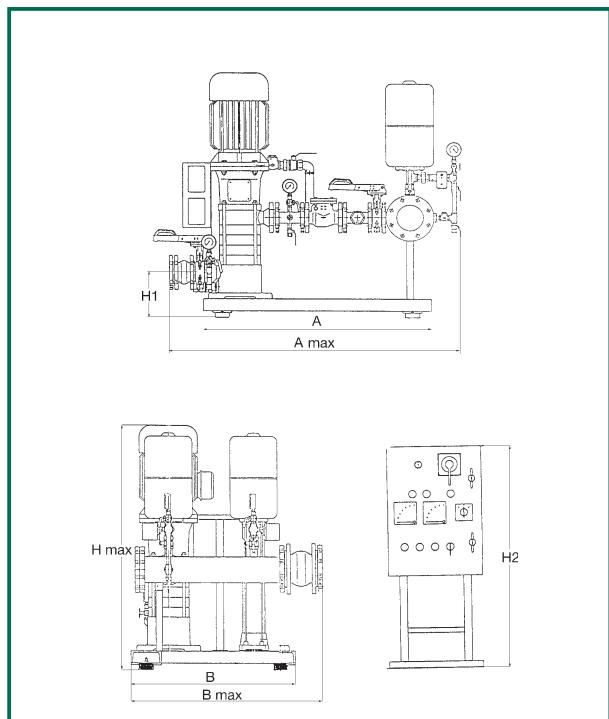
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KV 40 SETS

FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 30 m³/h



MODEL	A	A max	B	B max	H max	H1	H2	WEIGHT WITH PILOT PUMP Kg	WEIGHT WITHOUT PILOT PUMP Kg
1 KV 40/2 T	1120	1400	750	1000	1100	212	1195	325	390
1 KV 40/3 T	1120	1400	750	1000	1100	212	1195	355	320
1 KV 40/4 T	1120	1400	750	1000	1100	212	1195	325	290
1 KV 40/5 T	1120	1400	750	1000	1100	212	1195	517	482

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL PILOT PUMP		P2 NOMINAL		Ø DELIVERY MANIFOLD	Ø SUCTION PUMP	Ø FLOW RATE
			kW	HP	kW	HP			
1 KV 40/2 T	3x400 V ~	KV 6/7 T	1,1	1,5	4	5,5	DN 40 - PN 16	DN 50	1P S.KV 40 DN 50
1 KV 40/3 T	3x400 V ~	KV 3/12 T	1,5	2	5,5	7,5	DN 40 - PN 16	DN 50	1P S.KV 40 DN 50
1 KV 40/4 T	3x400 V ~	KV 3/15 T	1,85	2,5	7,5	10	DN 40 - PN 16	DN 50	1P S.KV 40 DN 50
1 KV 40/5 T	3x400 V ~	KV 3/18 T	2,2	3	9,2	12,5	DN 40 - PN 16	DN 50	1P S.KV 40 DN 50

* Pilot pump on request

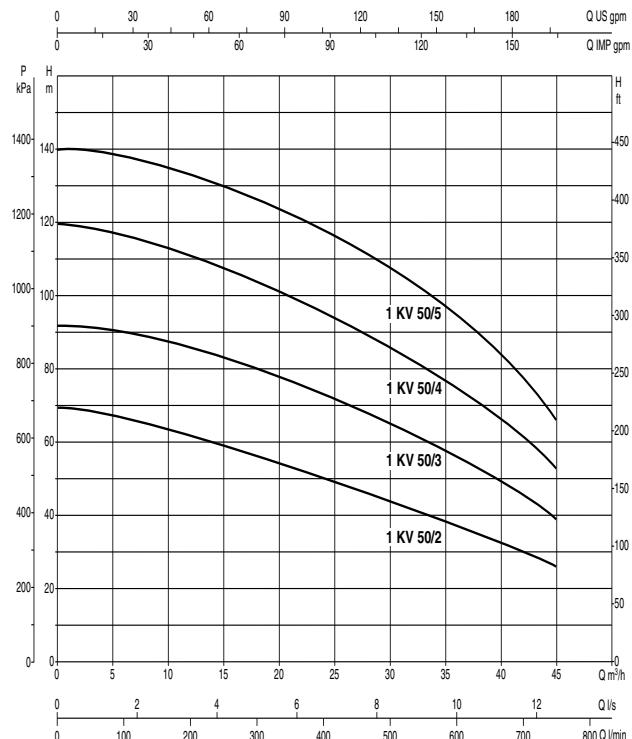
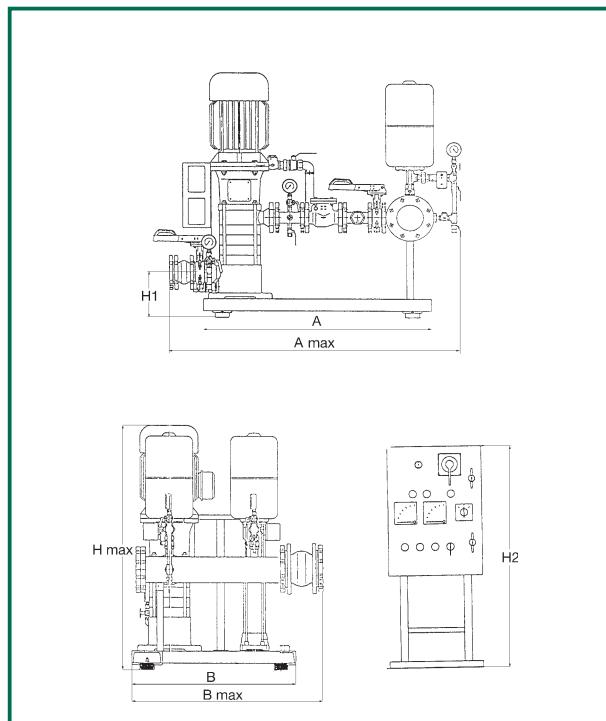
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

1 KV 50 SETS

FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 45 m³/h



MODEL	A	A max	B	B max	H max	H1	H2	WEIGHT WITH PILOT PUMP Kg	WEIGHT WITHOUT PILOT PUMP Kg
1 KV 50/2 T	1200	1400	850	1000	1500	245	1195	413	378
1 KV 50/3 T	1200	1400	850	1000	1500	245	1195	435	400
1 KV 50/4 T	1200	1400	850	1000	1500	245	1195	465	430
1 KV 50/5 T	1200	1400	850	1000	1500	245	1195	517	482

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL PILOT PUMP		P2 NOMINAL		Ø DELIVERY MANIFOLD	Ø SUCTION PUMP	Ø FLOW RATE
			kW	HP	kW	HP			
1 KV 50/2 T	3x400 V ~	KV 3/10 T	1,1	1,5	7,5	10	DN 50 - PN 16	DN 65	1P S. KV 50 DN 50
1 KV 50/3 T	3x400 V ~	KV 3/12 T	1,5	2	9,2	12,5	DN 50 - PN 16	DN 65	1P S. KV 50 DN 50
1 KV 50/4 T	3x400 V ~	KV 3/15 T	1,85	2,5	11	15	DN 50 - PN 16	DN 65	1P S. KV 50 DN 50
1 KV 50/5 T	3x400 V ~	KV 3/18 T	2,2	3	14,2	20	DN 50 - PN 16	DN 65	1P S. KV 50 DN 50

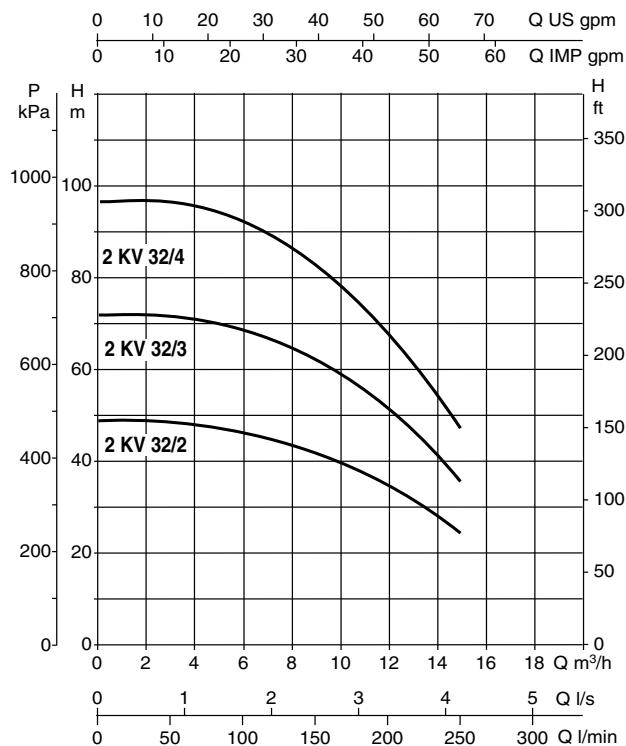
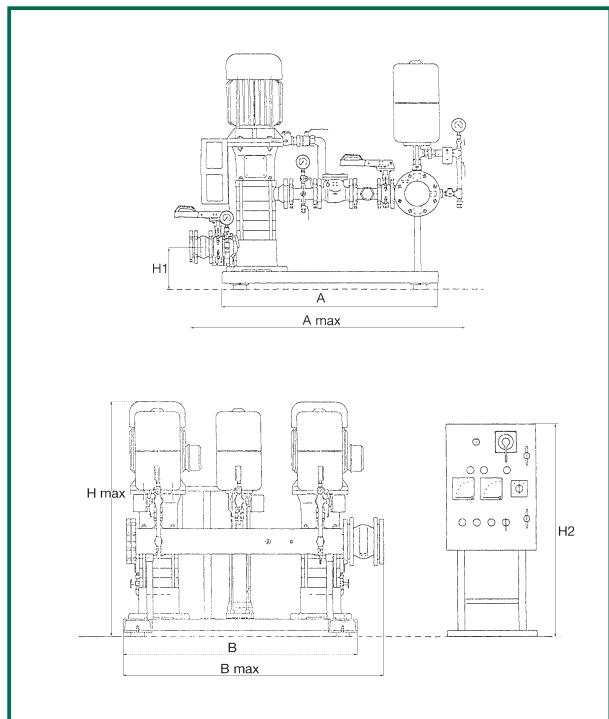
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KV 32 SETS FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 15 m³/h



Performance curves related to one functioning pump only.

MODEL	A	A max	B	B max	H max	H1	H2	WEIGHT WITH PILOT PUMP Kg	WEIGHT WITHOUT PILOT PUMP Kg
2 KV 32/2 T	900	1400	1050	1250	900	212	1195	445	410
2 KV 32/3 T	900	1400	1050	1250	900	212	1195	455	420
2 KV 32/4 T	900	1400	1050	1250	900	212	1195	485	450

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL PILOT PUMP		P2 NOMINAL		Ø DELIVERY MANIFOLD	Ø SUCTION PUMP	Ø FLOW RATE
			kW	HP	kW	HP			
2 KV 32/2 T	3x400 V ~	KV 6/7 T	2x1,1	2x1,5	2x2,2	2x3	DN 65 - PN 16	DN 40	2P S. KV 32 DN 40
2 KV 32/3 T	3x400 V ~	KV 3/10 T	2x1,1	2x1,5	2x3	2x4	DN 65 - PN 16	DN 40	2P S. KV 32 DN 40
2 KV 32/4 T	3x400 V ~	KV 3/15 T	2x1,85	2x2,5	2x4	2x5,5	DN 65 - PN 16	DN 40	2P S. KV 32 DN 40

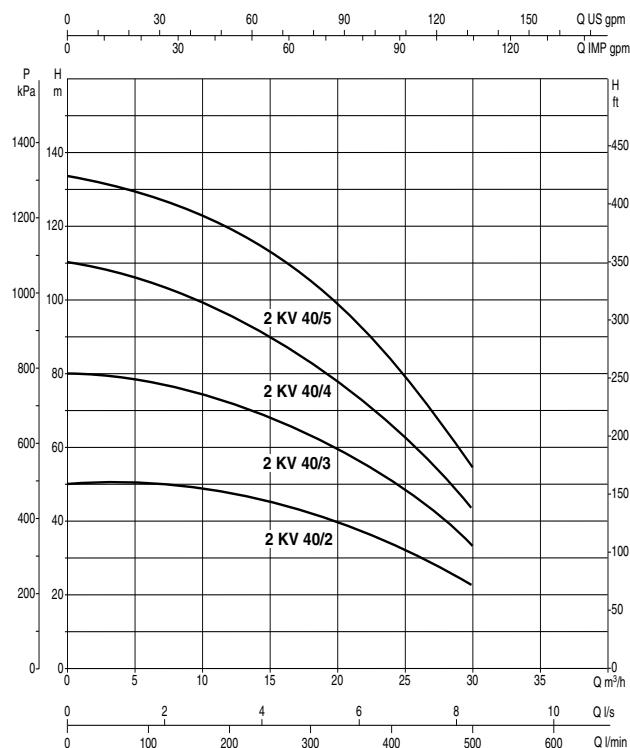
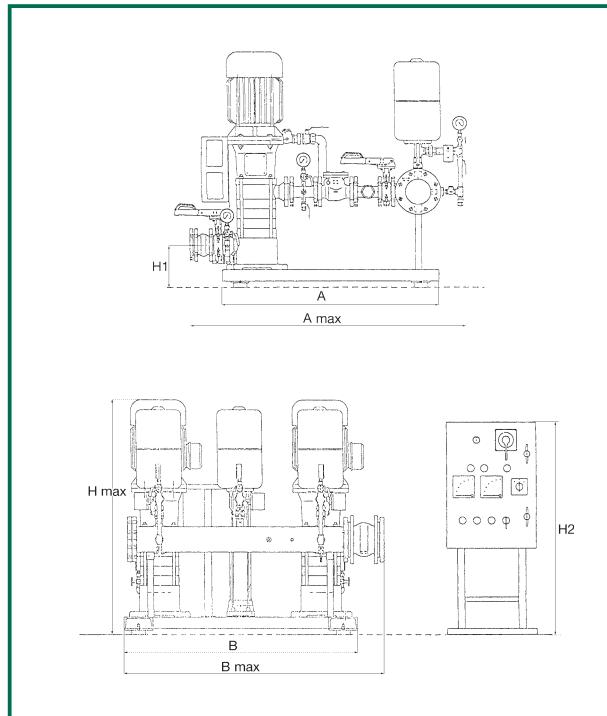
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KV 40 SETS FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 30 m³/h



Performance curves related to one functioning pump only.

MODEL	A	A max	B	B max	H max	H1	H2	WEIGHT WITH PILOT PUMP Kg	WEIGHT WITHOUT PILOT PUMP Kg
2 KV 40/2 T	1120	1490	1100	1250	1100	212	1195	635	600
2 KV 40/3 T	1120	1490	1100	1250	1100	212	1195	675	640
2 KV 40/4 T	1120	1490	1100	1250	1100	212	1195	325	290
2 KV 40/5 T	1120	1490	1100	1250	1100	212	1195	325	290

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL PILOT PUMP		P2 NOMINAL		Ø DELIVERY MANIFOLD	Ø SUCTION PUMP	Ø FLOW RATE
			kW	HP	kW	HP			
2 KV 40/2 T	3x400 V ~	KV 6/7 T	2x1,1	2x1,5	2x4	2x5,5	DN 100 - PN 16	DN 50	2P S. KV 40 DN 50
2 KV 40/3 T	3x400 V ~	KV 3/12 T	2x1,5	2x2	2x5,5	2x7,5	DN 100 - PN 16	DN 50	2P S. KV 40 DN 50
2 KV 40/4 T	3x400 V ~ Δ	KV 3/15 T	2x1,85	2x2,5	2x7,5	2x10	DN 100 - PN 16	DN 50	2P S. KV 40 DN 50
2 KV 40/5 T	3x400 V ~ Δ	KV 3/18 T	2x2,2	2x3	2x9,2	2x12,5	DN 100 - PN 16	DN 50	2P S. KV 40 DN 50

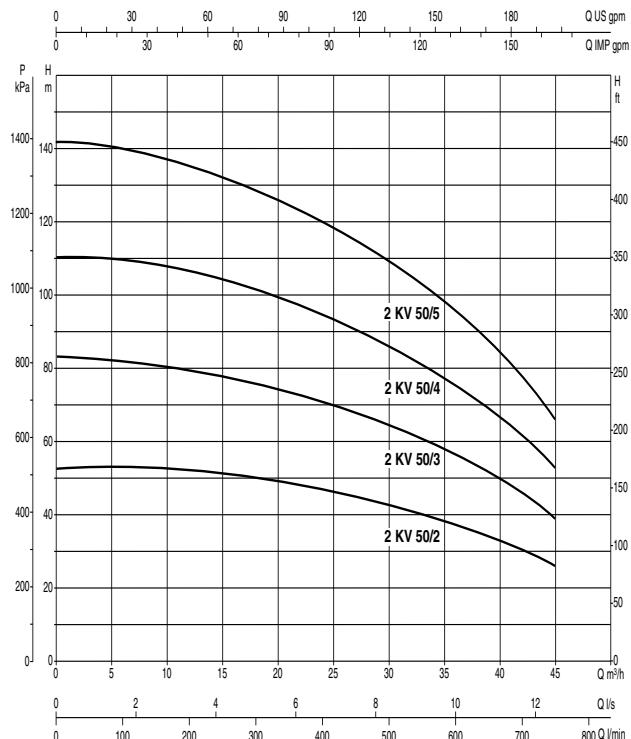
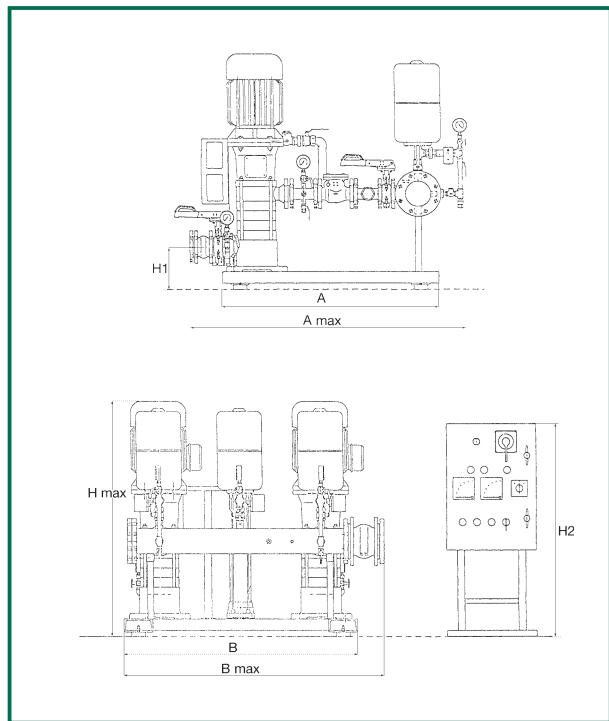
* Pilot pump on request

The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

2 KV 50 SETS FIRE-FIGHTING TO UNI 9490 - 10779

Pumped liquid temperature range: from -15°C to +70°C
Maximum ambient temperature: from +4°C to +40°C

Max flow rate: 45 m³/h



Performance curves related to one functioning pump only.

MODEL	A	A max	B	B max	H max	H1	H2	WEIGHT WITH PILOT PUMP Kg	WEIGHT WITHOUT PILOT PUMP Kg
2 KV 50/2 T	1200	1540	1300	1450	1500	243	1195	785	750
2 KV 50/3 T	1200	1540	1300	1450	1500	243	1195	835	800
2 KV 50/4 T	1200	1540	1300	1450	1500	243	1195	895	860
2 KV 50/5 T	1200	1540	1300	1450	1500	243	1195	995	960

MODEL	VOLTAGE 50 Hz	TYPE PILOT PUMP *	P2 NOMINAL PILOT PUMP		P2 NOMINAL		Ø DELIVERY MANIFOLD	Ø SUCTION PUMP	Ø FLOW RATE
			kW	HP	kW	HP			
2 KV 50/2 T	3x400 V ~	KV 3/10 T	2x1,1	2x1,5	2x7,5	2x10	DN 125 - PN 16	DN 65	2P S. KV 50 DN 50
2 KV 50/3 T	3x400 V ~	KV 3/12 T	2x1,5	2x2	2x9,2	2x12,5	DN 125 - PN 16	DN 65	2P S. KV 50 DN 50
2 KV 50/4 T	3x400 V ~	KV 3/15 T	2x1,85	2x2,5	2x11	2x15	DN 125 - PN 16	DN 65	2P S. KV 50 DN 50
2 KV 50/5 T	3x400 V ~	KV 3/18 T	2x2,2	2x3	2x14,7	2x20	DN 125 - PN 16	DN 65	2P S. KV 50 DN 50

* Pilot pump on request

FIRE-FIGHTING UNITS SET ACCORDING TO EN 12845

FIRE-FIGHTING UNITS SET ACCORDING TO EN 12845

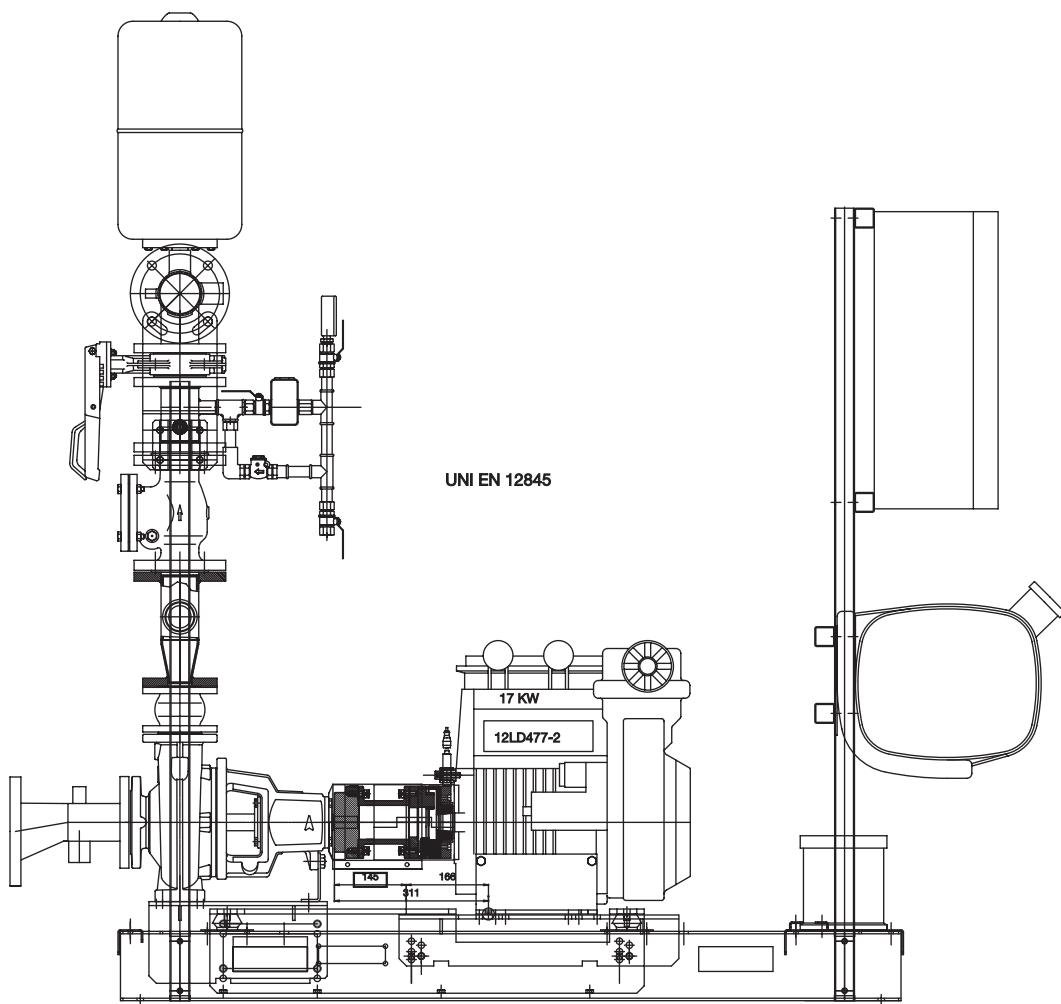
Fire-fighting units for sprinkler systems designed to European standard EN 12845.

The standard version features: one or more diesel motor pumps, which can be coupled with an electric pump and compensating PILOT PUMP (as needed).

The DAB pump sets are manufactured according to a modular design that allows for all the combinations provided for by EN 12845.



FOR INFORMATION CONTACT OUR SALES ORGANIZATION



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**DAB PUMPS LTD.**

Unit 4, Stortford Hall Industrial
Park Dunmow Road, Bishops Stortford, Herts
CM23 5GZ - UK
Tel. +44 1279 652 776
Fax +44 1279 657 727

**DAB PUMPS B.V.**

Brusselstraat 150
B-1702 Groot-Bijgaarden - Belgium
Tel. +32 2 4668353
Fax +32 2 4669218

**DAB PUMPEN DEUTSCHLAND GmbH**

Tackweg 11
D - 47918 Tönisvorst - Germany
Tel. +49 2151 82136-0
Fax +49 2151 82136-36

**DAB PUMPS IBERICA S.L.**

Parque Empresarial San Fernando
Edificio Italia Planta 1^a
28830 - San Fernando De Henares - Madrid - Spain
Ph. +34 91 6569545
Fax +34 91 6569676

**DAB PUMPS B.V.**

Albert Einsteinweg, 4
5151 DL Drunen - Nederland
Tel. +31 416 387280
Fax +31 416 387299
info.nl@dabpumps.com

**PUMPS AMERICA, INC. DAB PUMPS DIVISION**

3226 Benchmark Drive
Ladson, SC 29456 USA
Ph. 1-843-824-6332
Toll Free 1-866-896-4DAB (4322)
Fax 1-843-797-3366

**DAB PUMPS RUSSIA**

127247 Dmitovskoe sh., 100 bld. 3
Moscow, Russia
тел.: +7 095 485-1679

**DAB PUMPS S.p.A.**

Via M. Polo, 14 - 35035 Mestrino (PD) - Italy
Tel. +39 049 9048811 - Fax +39 049 9048847
<http://www.dabpumps.com>

Vendite Italia: Tel. 049 9048873-75-76
049 9048950
Fax 049 9048888

Export Sales Dept: Ph. (+39) 049 9048895-96-97
049 9048964-996
Fax (+39) 049 9048900

Assistenza Tecnica Clienti:

Customer Technical Assistance: Ph. (+39) 049 9048911
Fax (+39) 049 9048920