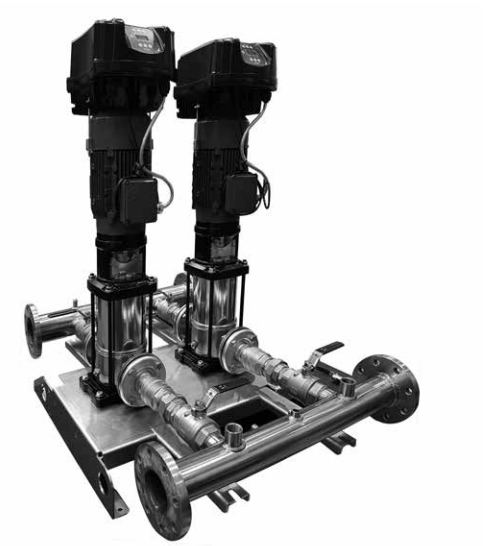
DAB
WATER•TECHNOLOGY

1/2/3/4 NKVE WITH MCE-P

CONSTANT PRESSURE BOOSTING UNITS WITH INTEGRATED MULTI INVERTER SYSTEM

1/2/3/4 NKVE 10 - 15 - 20 - 32 - 45 MCE/P

CONSTANT PRESSURE SETS WITH MCE/P MULTI INVERTER SYSTEM ON THE PUMP



TECHNICAL DATA

Flow rate minum and maximum: From 0,5 m^3/h up to 280 m^3/h
Head up to: 140 m
Type of pumped liquid : Clean, free of solids and abrasive substances, non-viscous, non-aggressive, non-crystallized and chemically neutral
Min. and max. supported liquid temperature: From +0°C to 120°C (+80°C with expansion vessel)
Maximum ambient temperature: +50°C
Maximum operating pressure bar / kPa: 16 bar / 1600 kPa
Class of protection: IP 55
Motor insulation class: F
Impeller/s material: AISI 304 stainless steel
Single phase power input: Contact our sales network
Three phase power input: 3x230 V 50 Hz / 3x400 V 50 Hz
Special versions on request: Available with different types of mechanical seals for aggressive liquids and connections (round, oval, Victaulic, clamp flanges), with parts in contact with the liquid in AISI 316 stainless steel (X versions), other voltages and frequencies, ATEX version.

1, 2, 3, 4 NKVE 10, 15, 20, 32, 45 MCE-P are variable pressure units for residential building service and commercial building service. Galvanized steel base. They can also be used in agriculture and in watering systems.
There are 1, 2, 3 or 4 multi-impeller vertical centrifugal pumps with coupling with MCE-P variable frequency drive installed as standard. One control unit and one pressure sensor per units. Delivery check valve and expansion vessel for each pump. Suction and delivery manifolds in AISI 304 stainless steel. Possibility of remote control thanks to the D.Connect service (D.Connect Box supplied separately). The units are supplied assembled, set up and tested directly in the factory and complete with installation and maintenance instructions and test report of the test.

CONSTRUCTION FEATURES OF THE PUMP

The NKVE 10 S, 15 S and 20 S models have all the parts in contact with the liquid in stainless steel. Internal pump body, impellers and jacket in AISI 304 steel, diffusers in technopolymer. Removable mechanical seal in silicon carbide-graphite. It is possible to remove it without removing the motor, starting from the 5.5 kW models.
The NKV 32 and 45 versions have the impellers, diffusers and jacket in AISI 304 stainless steel. Pump body and sealing port in cataphorized cast iron. Mechanical seal in removable silicon carbide-graphite without removing the motor starting from the 5.5 kW models. Available on request version X with materials in contact with water in AISI 316 stainless steel.

CONSTRUCTION FEATURES OF THE MOTOR

Air-cooled asynchronous normalized motor. Shaft in AISI 431 stainless steel. IE3 electric motors.

CONSTRUCTION FEATURES OF THE ELECTRONIC

The use of the MCE-P variable frequency drive has many advantages: better comfort thanks to the constant pressure at the variation of demand (pressure sensor installed as standard), increased efficiency, energy savings, protection from water hammering effects. Simpler configuration thanks to the display. It makes it possible to set a setpoint in case of units with several pumps (each with MCE-P inverter), or to start a different pump at each restart or at set intervals. It must be installed on the motor fan cover to take advantage of its cooling capabilities.
The MCE-P continuously adjusts the rotation speed of the electric pump, keeping the pressure constant, even when the flow rate varies.
In the units when the first pump has reached the maximum speed the others are added in cascade compensating the pressure fluctuations of the system.
When a setting pressure data “SP” is set on an MCE-P this is automatically propagated to all the other within the units.
Possibility of remote control thanks to the D.Connect service (D.Connect Box supplied separately).

MATERIAL TABLE SELECTION

PUMP MODEL	IMPELLER / DIFFUSER	BASE	FLANGES
NKV 32, 45, 65, 95	Inox 304	Cast iron	Cast iron
NKV 1, 3, 6, 10, 15, 20 S	Inox 304	Inox 304	Inox 304
NKV 1, 3, 6, 10, 15, 20, 32, 45, 65, 95 X	Inox 316	Inox 316	Inox 316

LIQUID TABLE SELECTION

Type of mechanical seal (E1=STANDARD)
E1=BQGE=Carbon/Silicon carbide/AISI 316/EPDM STD
E2=QQGE=Silicon Carbide/Silicon Carbide/AISI 316/EPDM
V3=QQGV=Silicon Carbide/Silicon Carbide/AISI 316/FKM-Viton
V4=BQGV= Carbon/Silicon carbide /AISI 316/ FKM-Viton
E5=UUGE=Tungsten carbide/Tungsten carbide/AISI 316/EPDM

LIQUID (WATER SOLUTION)	CONCENTRATION [%]	MIN/MAX TEMPERATURE [°C]	NKV MODEL		
			STANDARD (NKV 32-95)	S (NKV 1-20)	X (NKV 1-95)
Acetic acid	10 ÷ 40	+0/+70	-	-	E1
Citric Acid	5	+5/+70	-	E1	E1
Hydrochloric Acid	2	+5/+25	-	-	V3
Formic Acid	5	+5/+25	-	E1	E1
Phosphoric Acid	10	+5/+30	-	-	E1
Nitric Acid	40	+5/+30	-	V3	V3
Sulfuric Acid	2	+5/+25	-	-	V4
Tannic Acid	20	+5/+50	-	-	E1
Tartaric Acid	50	+5/+25	-	V3	V3
Deionized Water, Demineralized	100	+5/+110	E1	E1	E1
Sodium Bicarbonate	6	+5/+60	-	-	E1
Chloroform	100	-10/+30	V4	V4	V4
Oil In Water Emulsion	100	+15/+90	V4	V4	V4
Phosphates, PolyphosphaTes	10	+5/+90	-	V3	V3
Ethylene Glycol	10 ÷ 30	-15/+120	-	E1	E1
Propylene Glycol	30	-10/+100	V3	V3	V3
Sodium Hypochlorite	1	+5/+25	-	-	V3
Sodium Nitrate	10	+5/+60	-	V3	V3
Diathermic Oil	100	+90/+120	V4	V4	V4
Mineral Oil	100	+90/+120	V4	V4	V4
Vegetable Oil	100	+70/+100	E1	E1	E1
Perchlorethylene	100	-10/+30	V4	V4	V4
Sodium Hydroxide	25	+5/+70	E2	E2	E2
Aluminium Sulphate	10 ÷ 25	+5/+50	-	-	E2
Ammonium Sulphate	10	-10/+60	-	-	E2
Ferric Sulphate	10	+5/+30	-	-	E1
Trichloroethylene	100	-10/+40	V4	V4	V4

For use with sea water, please consult the technical office. This table should be considered a general guide.
It is important to consider the specific operating conditions, in particular the concentration in the pumped liquid, the specific weight and/or the viscosity, the temperature of the liquid and its pressure.
All these conditions are essential for engine and pump performance.
When pumping hazardous liquids, it is recommended to take safety precautions. You can contact us for more information.

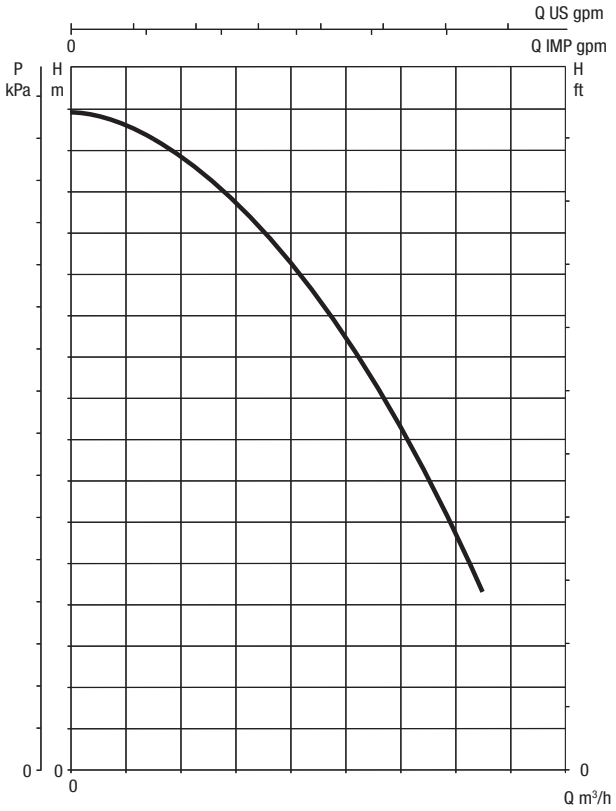
MCE/P INVERTER

MCE-P

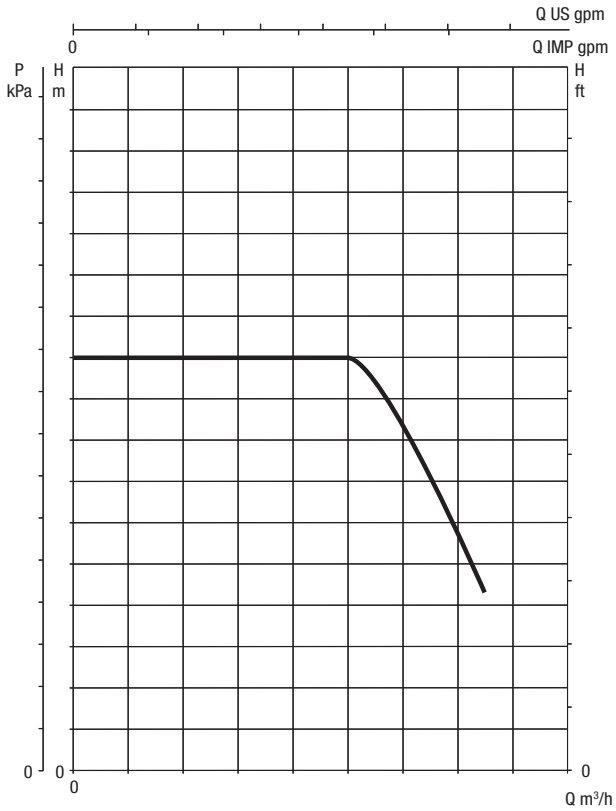
CONSTRUCTION FEATURES OF THE ELECTRONICS: MCE/P INVERTER

The inverter continuously adjusts the rotation speed of the electric pump, keeping the pressure constant, even when the flow rate varies.
The other electric pumps, also with variable speed, are activated in cascade after the first one has reached maximum speed. Through modulation, they compensate the pressure fluctuations of the system.
For every operating cycle, it is possible to switch the restart to a different pump, therefore ensuring even use of all electric pumps.
It is possible to set operation times for each individual pump, switching to another pump after such set times.
The “SP” pressure can be adjusted by the user using the “+” and “-” keys found on the MCE/P (as a rule, all the pumps are set to the same pressure value). With the new MCE/P, it is sufficient to set the data on one of the devices, and it will be automatically propagated to the other pumps of the system.

MODES OF OPERATION



PERFORMANCE CURVES WITHOUT INVERTER



PERFORMANCE CURVES WITH INVERTER

The inverter is capable of maintaining a constant pressure even when the flow rate varies.
The operating pressure can be adjusted by the user.
A good pressure set-point is between 1/3 and 2/3 of the maximum head of the electric pump. In this way, high efficient of the pump is maintained, together with maximum saving.
In addition, the MCE/P does not block the pump if the pressure is not reached, but the flow is present. This prevents service interruptions in case of high flows.

D.CONNECT READY

Only the MCE/P with D.Connect READY label are D.Connect compatible

D.CONNECT SERVICE

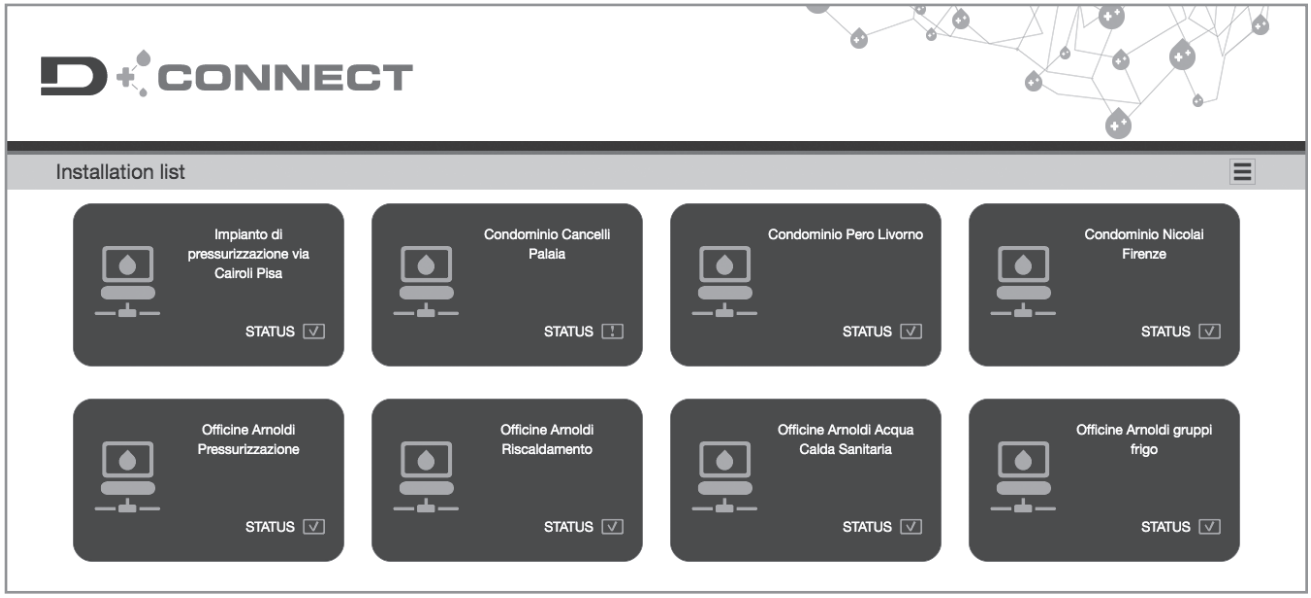
REMOTE CONTROL FOR ELECTRONIC RESIDENTIAL AND COMMERCIAL SYSTEMS

INTRODUCTION

The D.Connect service offers simple and intuitive remote control of your installation, without the need of a server or specialist personnel. With D.Connect, you can remotely manage your installations as if you were right in front of them.
Thanks to the system operation charts, you will also be able to optimise operation. You will also receive prompt notifications of any system faults.

THE CONNECTIVITY SERVICE ALLOWS YOU TO:

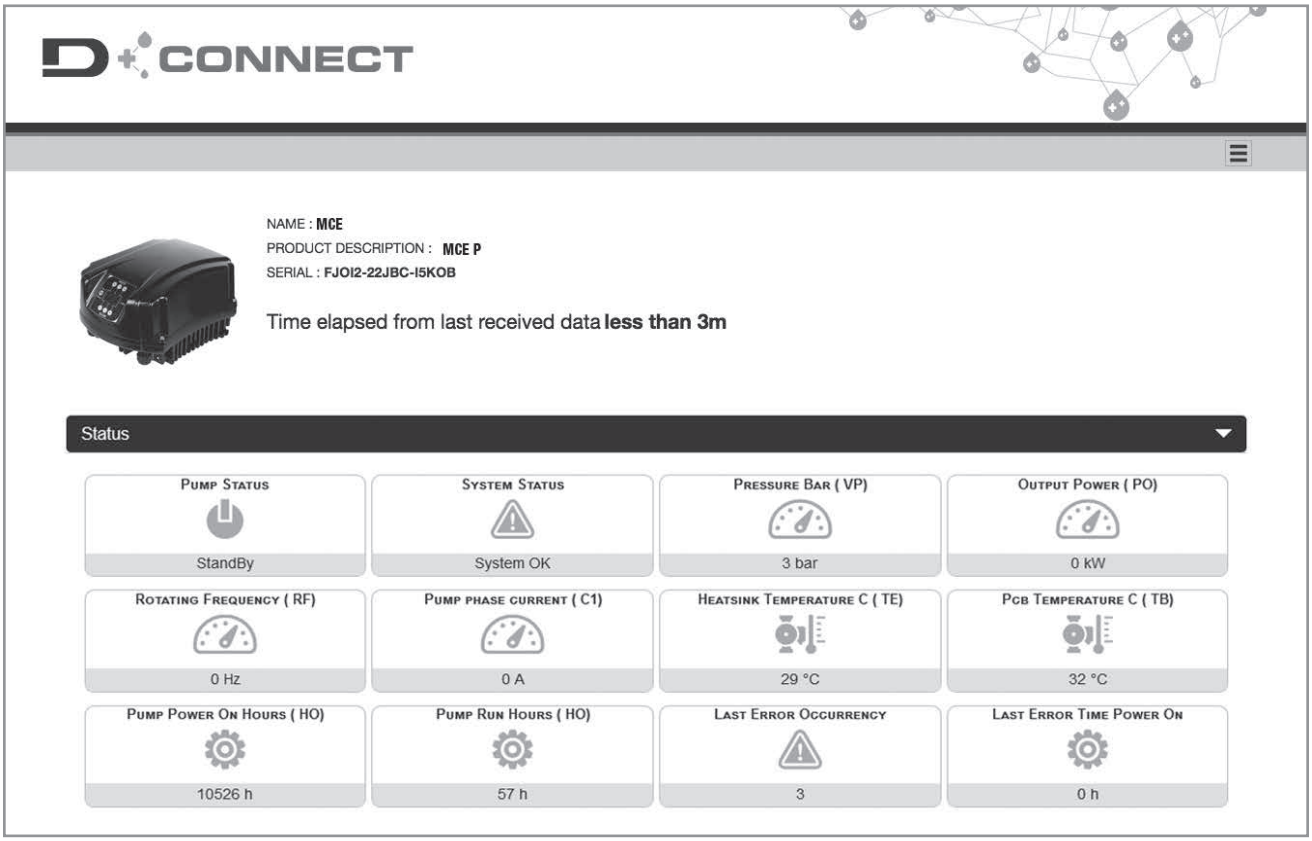
EASILY MONITOR YOUR SYSTEMS



The installations with green status are OK, while the orange ones need attention, and the red ones are experiencing problems

TAKE ANY NECESSARY ACTIONS AS IF YOU WERE RIGHT IN THE PUMP ROOM

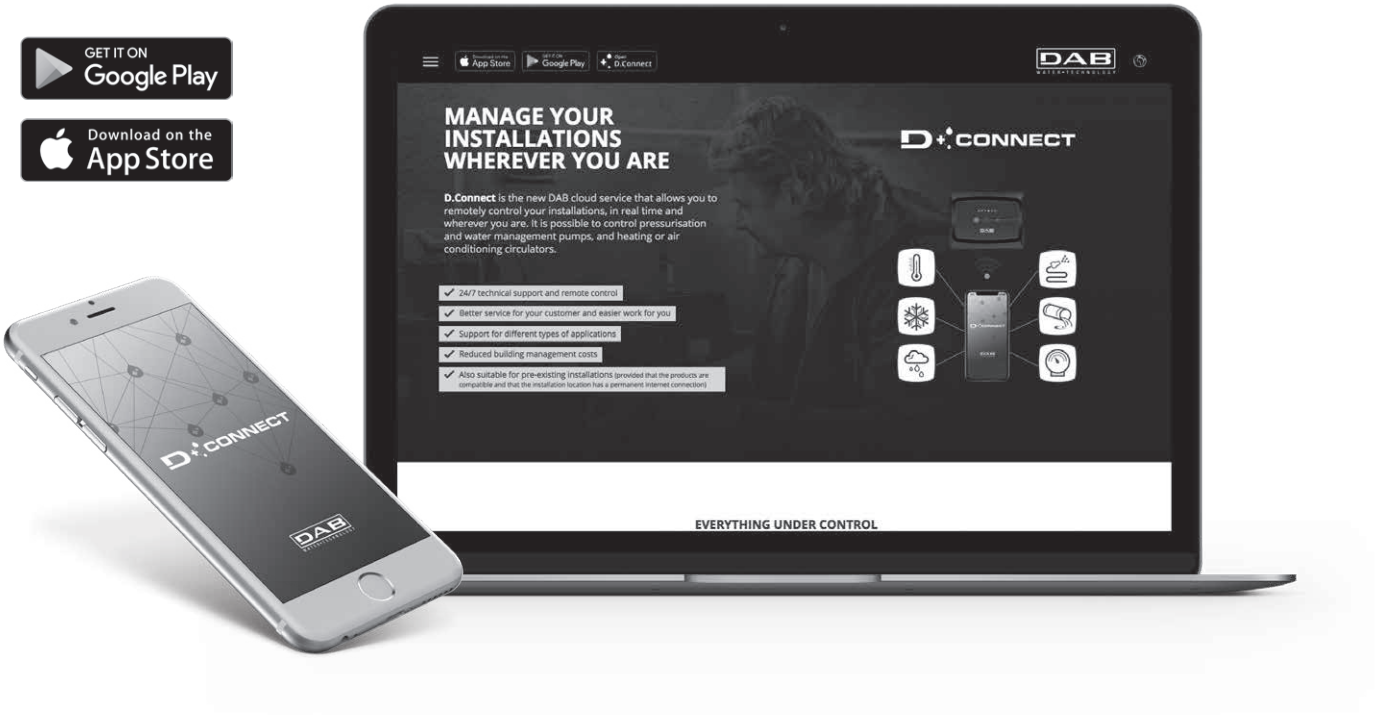
Using the internet site or the APPs, you will be able to easily and quickly control your systems.



D.CONNECT SERVICE

REMOTE CONTROL FOR ELECTRONIC RESIDENTIAL AND COMMERCIAL SYSTEMS

Connect to the website: **https://dconnect.dabpumps.com**, using Internet Browsers such as Microsoft Edge or Google Chrome.
The Android and iOS D.Connect APPs can be downloaded from the relevant Stores:



In order to use the D.Connect service, registration and connected products are required.

REMOTE ALARMS

In case of alarm, the D.Connect service will promptly send you a notification, so that you can check what is happening and organise a visit to the system before the issue becomes an emergency for your customer.

WHAT PRODUCTS CAN YOU MANAGE USING THE D.CONNECT SERVICE?

MCE/P, AD AC, Active driver Plus, E.box, Evoplus, E.sybox, E.sybox mini.

WHAT DO YOU NEED TO USE THE SERVICE?

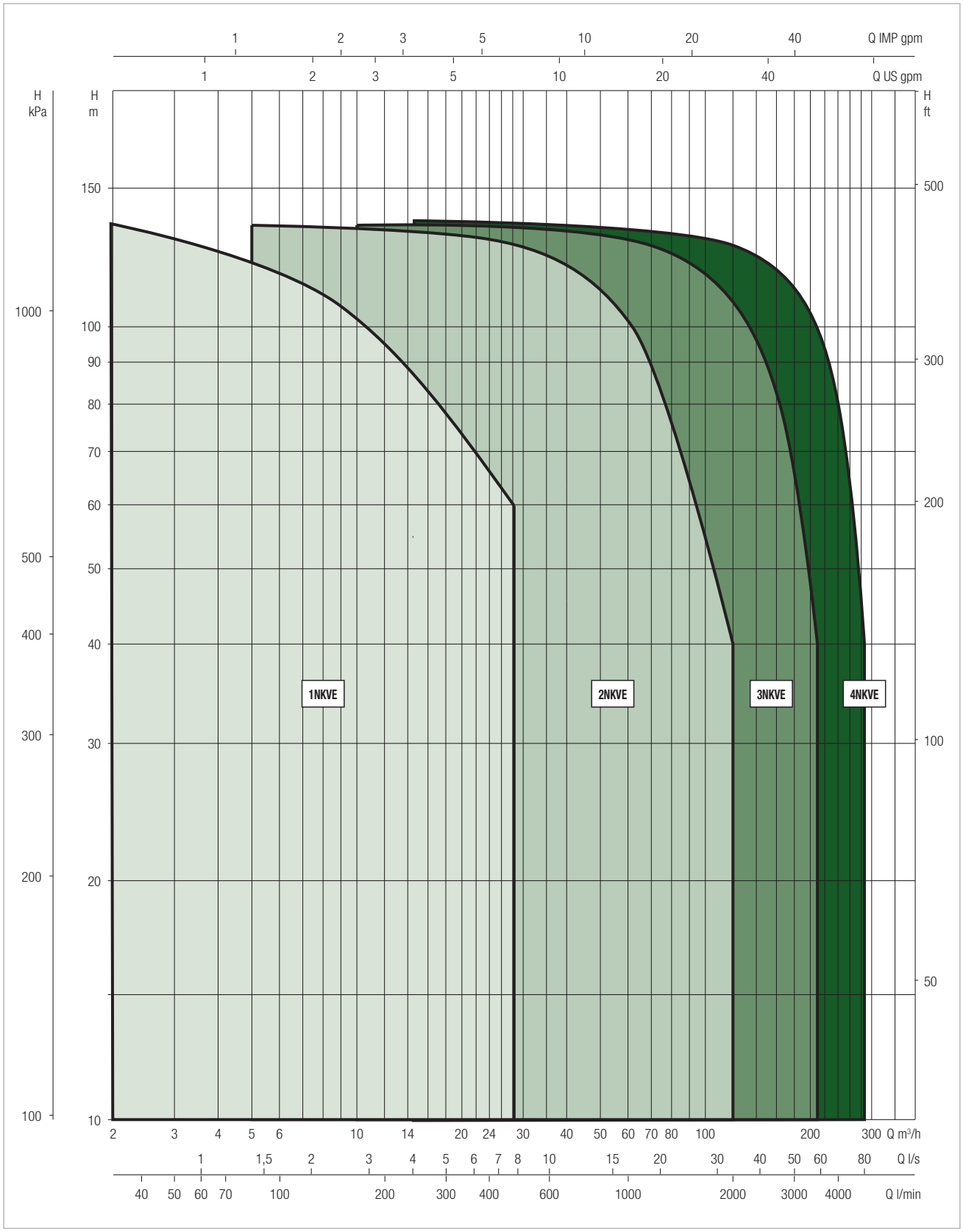
1. D.Connect Box
2. Cables for the connection of the D.Connect Box to the products to control
3. One or more compatible products
4. An internet connection in the system to control

For more information visit: **https://dconnect.dabpumps.com/getstarted**

PERFORMANCE RANGE

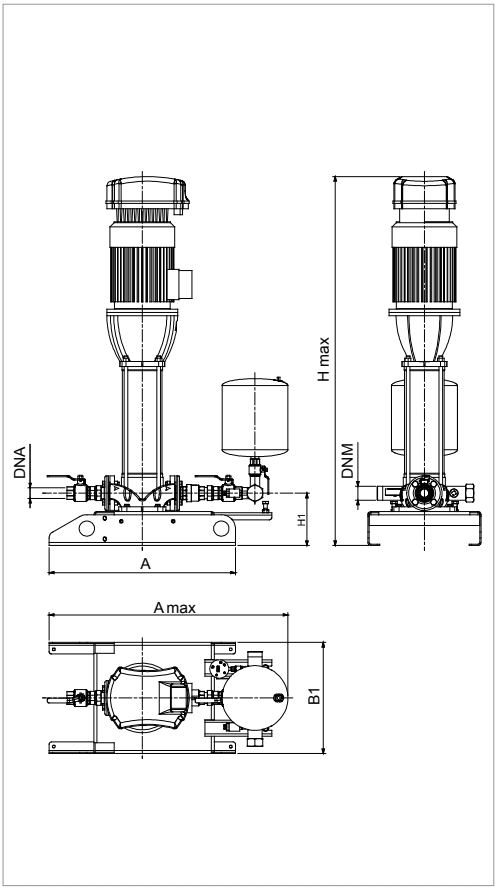
The performance curves are based on the kinematic viscosity values = 1 mm^2/s and density equal to 1000 kg/m^3. Curve tolerance according to ISO 9906.

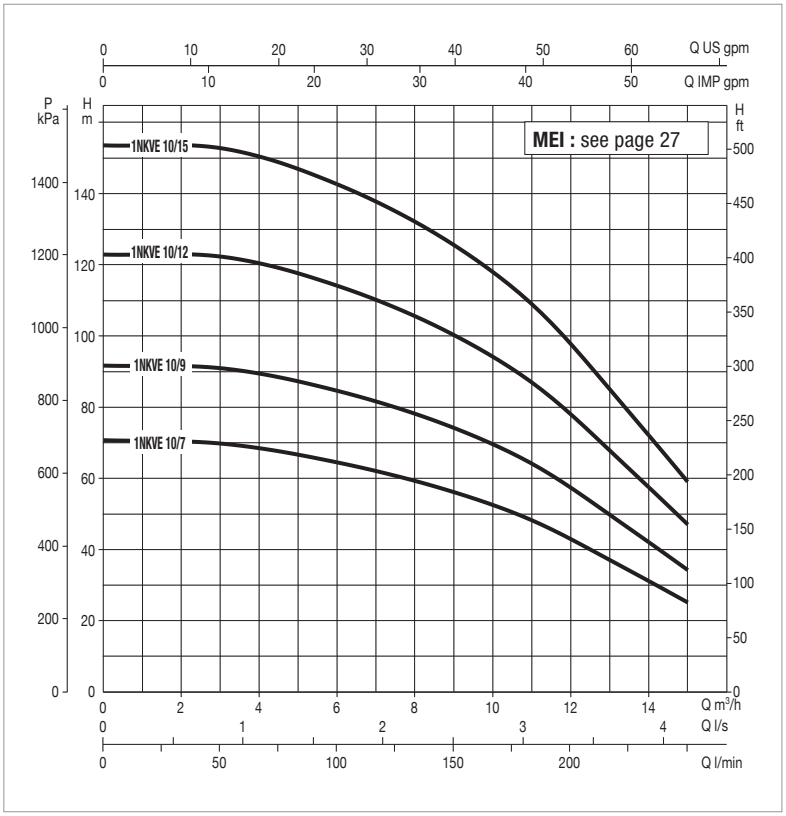
GRAPHICAL SELECTION TABLE



1 NKVE 10 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - Maximum ambient temperature: +50 °C - Max flow rate: 280 m³/h





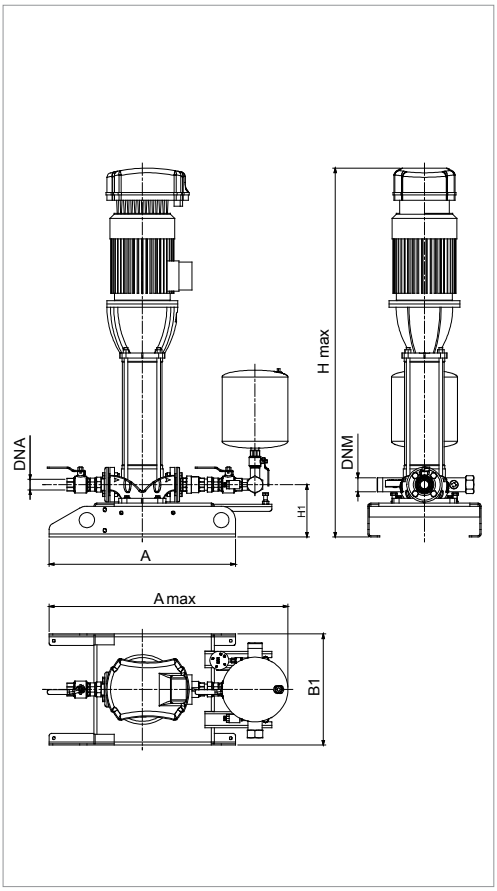
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.

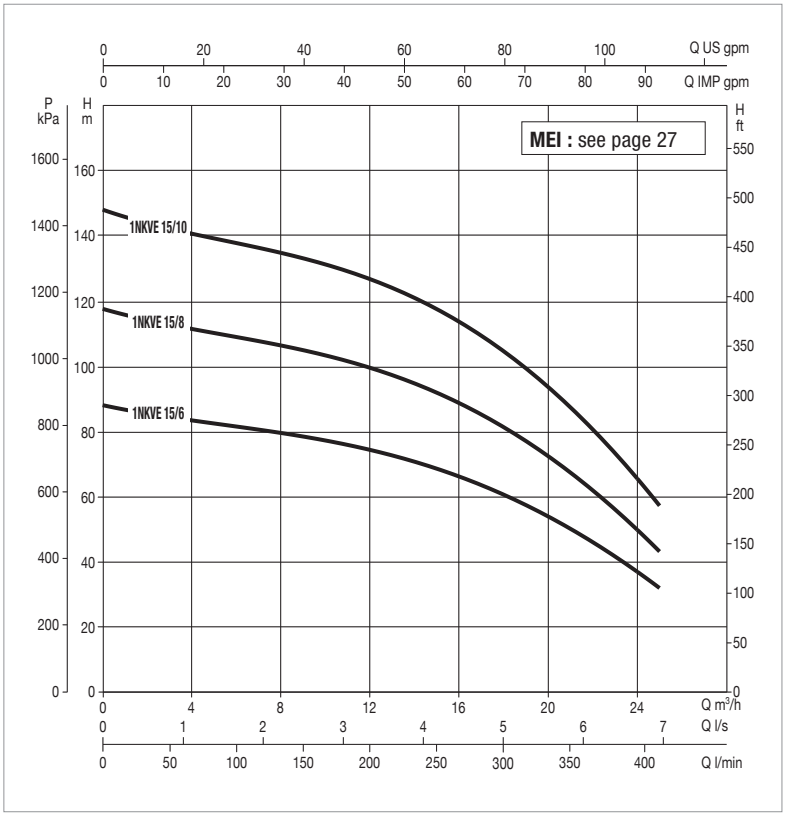
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
1 NKVE 10/7 S T MCE 400-50	3 x 400 V ~	2,2	3	5,4	MCE 30/P	13	7	6
1 NKVE 10/9 S T MCE 400-50	3 x 400 V ~	3	4	7,37	MCE 30/P	13	9	7,7
1 NKVE 10/12 S T MCE 400-50	3 x 400 V ~	4	5,5	10,1	MCE 30/P	13	12	10
1 NKVE 10/15 S T MCE 400-50	3 x 400 V ~	5,5	7,5	13,1	MCE 55/P	13	14	10

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
1 NKVE 10/7 S T MCE 400-50	790	1012	-	480	-	-	226	-	1310	1" ½	2"	1440	1040	2113	115
1 NKVE 10/9 S T MCE 400-50	790	1012	-	480	-	-	226	-	1419	1" ½	2"	1440	1040	2113	123
1 NKVE 10/12 S T MCE 400-50	790	1012	-	480	-	-	226	-	1509	1" ½	2"	1440	1040	2113	137
1 NKVE 10/15 S T MCE 400-50	790	1012	-	480	-	-	226	-	1796	1" ½	2"	1440	1040	2113	150

1 NKVE 15 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h





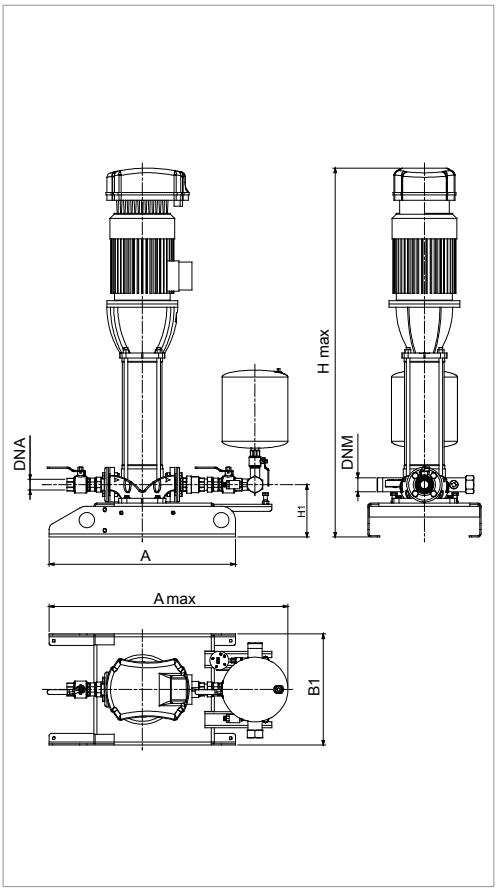
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.

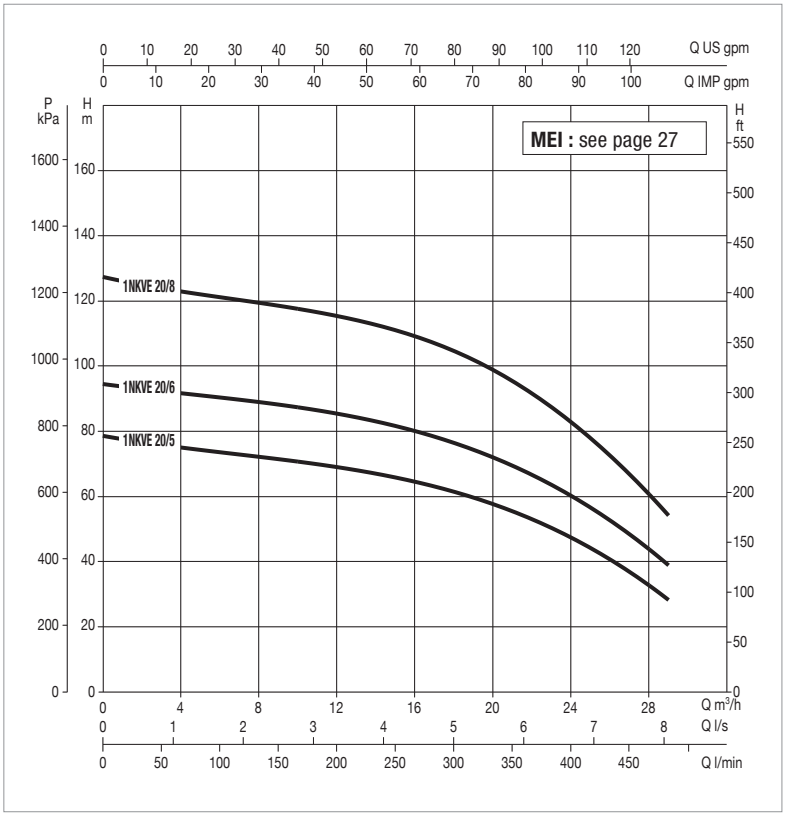
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
1 NKVE 15/6 S T MCE 400-50	3 x 400 V ~	5,5	7,5	13,1	MCE 55/P	24	7,5	6,5
1 NKVE 15/8 S T MCE 400-50	3 x 400 V ~	7,5	10	17,6	MCE 55/P	24	11	10
1 NKVE 15/10 S T MCE 400-50	3 x 400 V ~	11	15	25,5	MCE 110/P	24	13	12

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
1 NKVE 15/6 S T MCE 400-50	790	1067	-	480	-	-	235	-	1669	2"	2" ½	1440	1040	2113	160
1 NKVE 15/8 S T MCE 400-50	790	1067	-	480	-	-	235	-	1885	2"	2" ½	1440	1040	2113	175
1 NKVE 15/10 S T MCE 400-50	790	1067	-	480	-	-	235	-	2076	2"	2" ½	1440	1040	2113	190

1 NKVE 20 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h





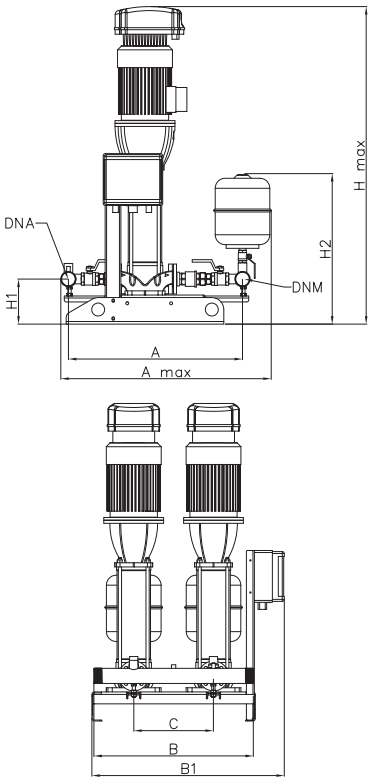
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.

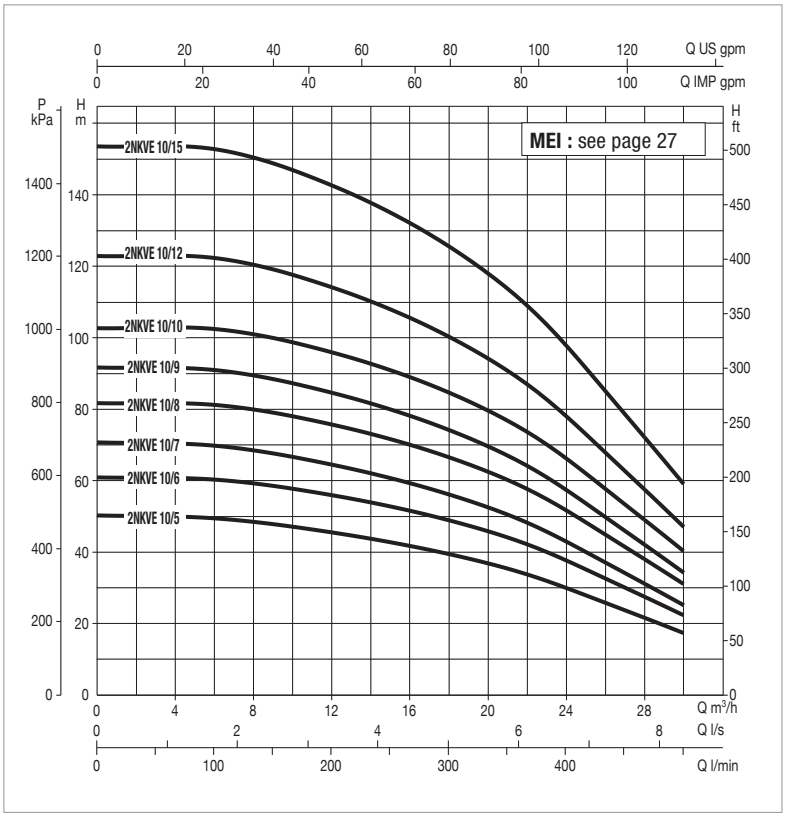
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
1 NKVE 20/5 S T MCE 400-50	3 x 400 V ~	5,5	7,5	13,1	MCE 55/P	29	7	6
1 NKVE 20/6 S T MCE 400-50	3 x 400 V ~	7,5	10	17,6	MCE 55/P	29	8,5	7,5
1 NKVE 20/8 S T MCE 400-50	3 x 400 V ~	11	15	25,5	MCE 110/P	29	11,5	10

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
1 NKVE 20/5 S T MCE 400-50	790	1067	-	480	-	-	235	-	1620	2"	2" ½	1440	1040	2113	165
1 NKVE 20/6 S T MCE 400-50	790	1067	-	480	-	-	235	-	1789	2"	2" ½	1440	1040	2113	200
1 NKVE 20/8 S T MCE 400-50	790	1067	-	480	-	-	235	-	1979	2"	2" ½	1440	1040	2113	220

2 NKVE 10 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - Maximum ambient temperature: +50 °C - Max flow rate: 280 m³/h





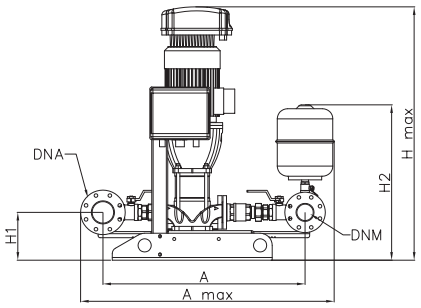
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account TWO pumps working at the same time.

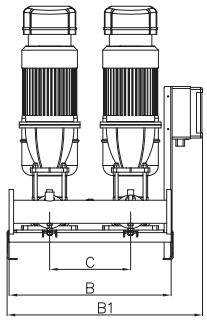
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
2 NKVE 10/5 S T MCE 400-50	3 x 400 V ~	2x1,5	2x2	2x4,9	MCE 30/P	26	5	4
2 NKVE 10/6 S T MCE 400-50	3 x 400 V ~	2x2,2	2x3	2x5,4	MCE 30/P	26	6	5
2 NKVE 10/7 S T MCE 400-50	3 x 400 V ~	2x2,2	2x3	2x5,4	MCE 30/P	26	7	6
2 NKVE 10/8 S T MCE 400-50	3 x 400 V ~	2x3	2x4	2x7,37	MCE 30/P	26	8	6,5
2 NKVE 10/9 S T MCE 400-50	3 x 400 V ~	2x3	2x4	2x7,37	MCE 30/P	26	9	7,7
2 NKVE 10/10 S T MCE 400-50	3 x 400 V ~	2x4	2x5,5	2x10,1	MCE 30/P	26	10	8,5
2 NKVE 10/12 S T MCE 400-50	3 x 400 V ~	2x4	2x5,5	2x10,1	MCE 30/P	26	12	10
2 NKVE 10/15 S T MCE 400-50	3 x 400 V ~	2x5,5	2x7,5	2x13,1	MCE 55/P	26	14	10

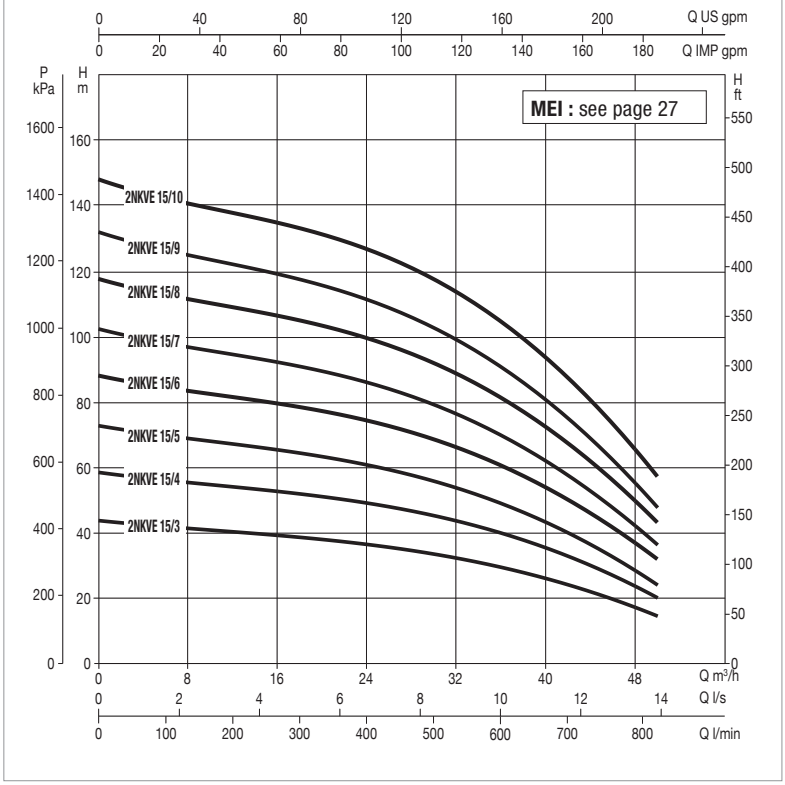
MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
2 NKVE 10/5 S T MCE 400-50	875	1060	800	965	400	-	226	755	1255	2" ½	2" ½	2150	1000	1400	186
2 NKVE 10/6 S T MCE 400-50	875	1060	800	965	400	-	226	755	1285	2" ½	2" ½	2150	1000	1400	187
2 NKVE 10/7 S T MCE 400-50	875	1060	800	965	400	-	226	755	1314	2" ½	2" ½	2150	1000	1400	214
2 NKVE 10/8 S T MCE 400-50	875	1060	800	965	400	-	226	755	1393	2" ½	2" ½	2150	1000	1400	216
2 NKVE 10/9 S T MCE 400-50	875	1060	800	965	400	-	226	755	1423	2" ½	2" ½	2150	1000	1400	218
2 NKVE 10/10 S T MCE 400-50	875	1060	800	965	400	-	226	755	1453	2" ½	2" ½	2150	1000	1400	237
2 NKVE 10/12 S T MCE 400-50	875	1060	800	965	400	-	226	755	1513	2" ½	2" ½	2150	1000	1400	240
2 NKVE 10/15 S T MCE 400-50	875	1060	800	965	400	-	226	755	1800	2" ½	2" ½	2150	1000	1400	298

2 NKVE 15 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - Maximum ambient temperature: +50 °C - Max flow rate: 280 m³/h







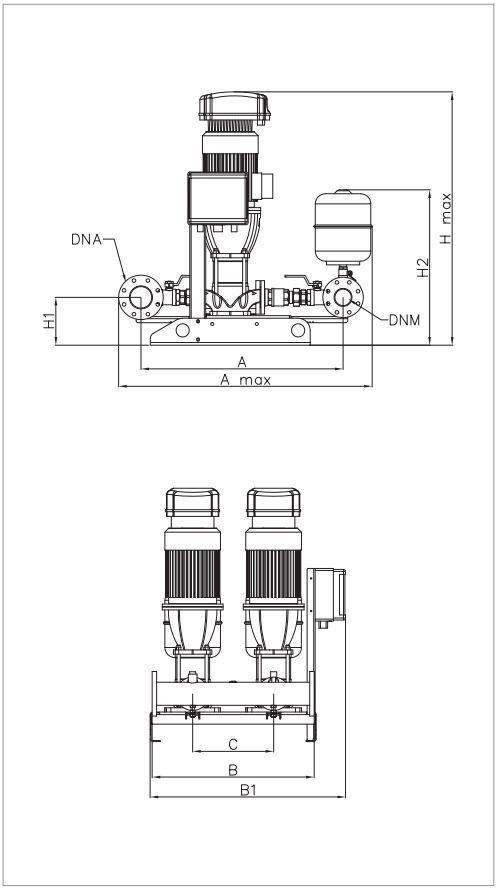
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account TWO pumps working at the same time.

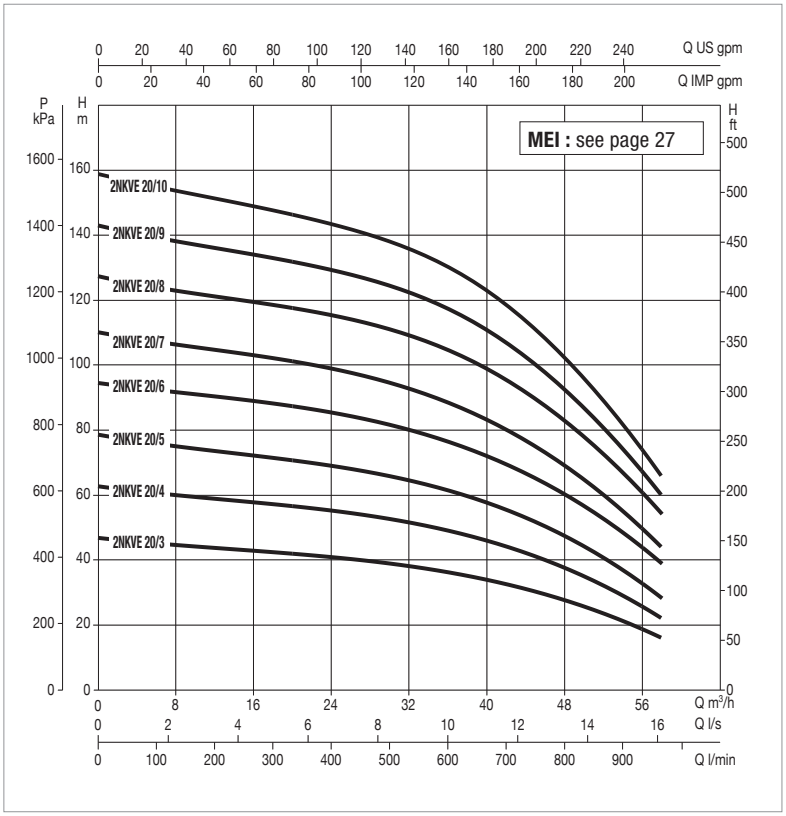
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
2 NKVE 15/3 S T MCE 400-50	3 x 400 V ~	2x3	2x4	2x7,37	MCE 30/P	48	4	3,5
2 NKVE 15/4 S T MCE 400-50	3 x 400 V ~	2x4	2x5,5	2x10,1	MCE 30/P	48	5	4
2 NKVE 15/5 S T MCE 400-50	3 x 400 V ~	2x4	2x5,5	2x10,1	MCE 30/P	48	6,5	5
2 NKVE 15/6 S T MCE 400-50	3 x 400 V ~	2x5,5	2x7,5	2x13,1	MCE 55/P	48	7,5	6,5
2 NKVE 15/7 S T MCE 400-50	3 x 400 V ~	2x5,5	2x7,5	2x13,1	MCE 55/P	48	9	8
2 NKVE 15/8 S T MCE 400-50	3 x 400 V ~	2x7,5	2x10	2x17,6	MCE 55/P	48	11	10
2 NKVE 15/9 S T MCE 400-50	3 x 400 V ~	2x7,5	2x10	2x17,6	MCE 55/P	48	12	11
2 NKVE 15/10 S T MCE 400-50	3 x 400 V ~	2x11	2x15	2x25,5	MCE 110/P	48	13	12

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
2 NKVE 15/3 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1321	100	80	2150	1000	1400	238
2 NKVE 15/4 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1369	100	80	2150	1000	1400	258
2 NKVE 15/5 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1417	100	80	2150	1000	1400	261
2 NKVE 15/6 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1674	100	80	2150	1000	1400	317
2 NKVE 15/7 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1722	100	80	2150	1000	1400	319
2 NKVE 15/8 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1892	100	80	2150	1000	1400	344
2 NKVE 15/9 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1940	100	80	2150	1000	1400	347
2 NKVE 15/10 S T MCE 400-50	1000	1255	800	965	400	-	236	770	2084	100	80	2150	1000	1400	459

2 NKVE 20 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h





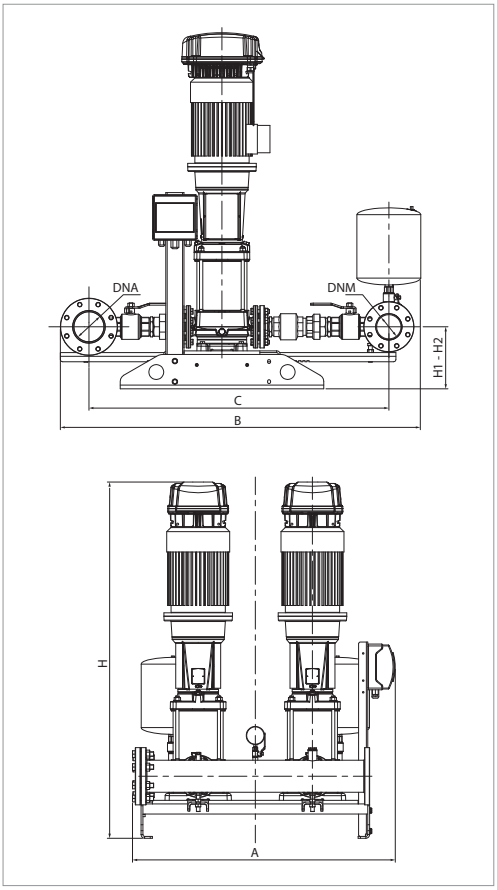
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account TWO pumps working at the same time.

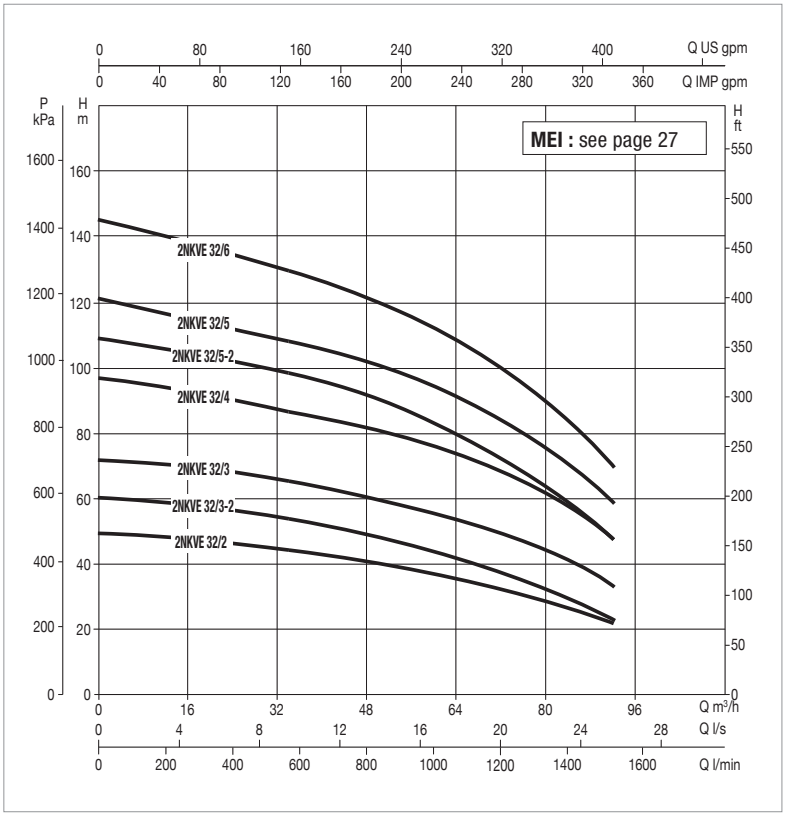
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
2 NKVE 20/3 S T MCE 400-50	3 x 400 V ~	2x3	2x4	2x7,37	MCE 30/P	58	4	3,5
2 NKVE 20/4 S T MCE 400-50	3 x 400 V ~	2x4	2x5,5	2x10,1	MCE 30/P	58	6	5
2 NKVE 20/5 S T MCE 400-50	3 x 400 V ~	2x5,5	2x7,5	2x13,1	MCE 55/P	58	7	6
2 NKVE 20/6 S T MCE 400-50	3 x 400 V ~	2x7,5	2x10	2x17,6	MCE 55/P	58	8,5	7,5
2 NKVE 20/7 S T MCE 400-50	3 x 400 V ~	2x7,5	2x10	2x17,6	MCE 55/P	58	10	9
2 NKVE 20/8 S T MCE 400-50	3 x 400 V ~	2x11	2x15	2x25,5	MCE 110/P	58	11,5	10
2 NKVE 20/9 S T MCE 400-50	3 x 400 V ~	2x11	2x15	2x25,5	MCE 110/P	58	13	12
2 NKVE 20/10 S T MCE 400-50	3 x 400 V ~	2x11	2x15	2x25,5	MCE 110/P	58	14	13

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
2 NKVE 20/3 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1321	100	80	2150	1000	1400	228
2 NKVE 20/4 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1369	100	80	2150	1000	1400	256
2 NKVE 20/5 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1626	100	80	2150	1000	1400	260
2 NKVE 20/6 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1796	100	80	2150	1000	1400	284
2 NKVE 20/7 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1844	100	80	2150	1000	1400	286
2 NKVE 20/8 S T MCE 400-50	1000	1255	800	965	400	-	236	770	1987	100	80	2150	1000	1400	350
2 NKVE 20/9 S T MCE 400-50	1000	1255	800	965	400	-	236	770	2035	100	80	2150	1000	1400	352
2 NKVE 20/10 S T MCE 400-50	1000	1255	800	965	400	-	236	770	2084	100	80	2150	1000	1400	374

2 NKVE 32 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h





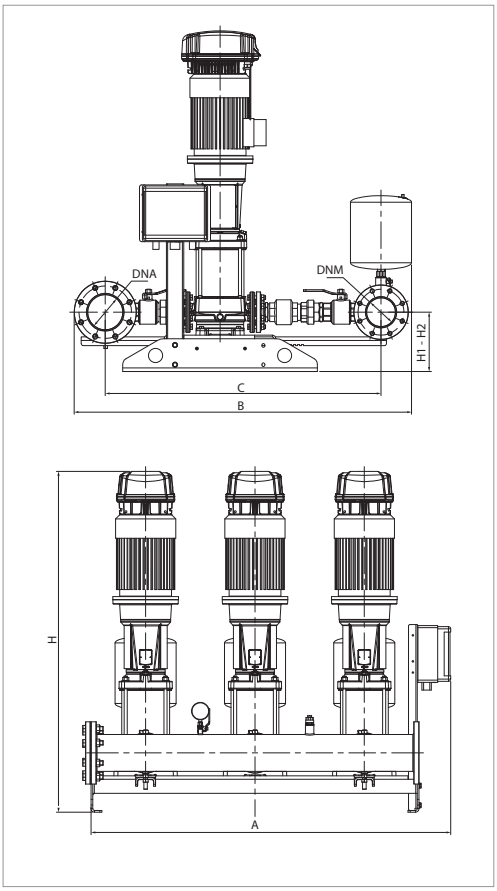
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account TWO pumps working at the same time.

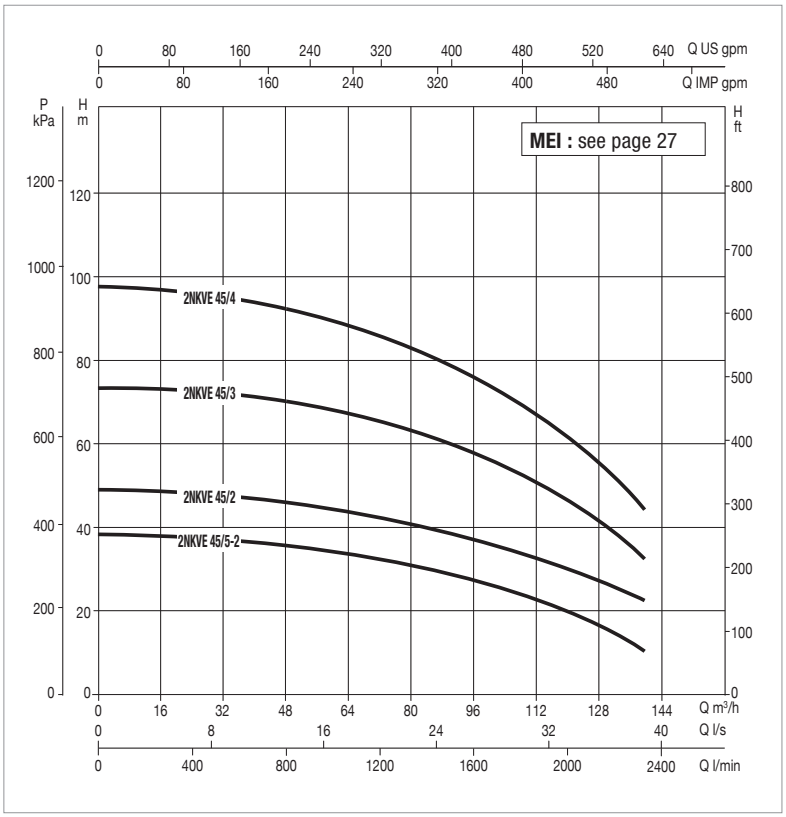
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
2 NKVE 32/2 T MCE 400-50	3 x 400 V ~	2x5,5	2x7,5	2x13,1	MCE 55/P	90	4,8	4
2 NKVE 32/3-2 T MCE 400-50	3 x 400 V ~	2x5,5	2x7,5	2x13,1	MCE 55/P	90	6	5
2 NKVE 32/3 T MCE 400-50	3 x 400 V ~	2x7,5	2x10	2x17,6	MCE 55/P	90	7,3	6
2 NKVE 32/4 T MCE 400-50	3 x 400 V ~	2x11	2x15	2x25,5	MCE 110/P	90	9,8	8
2 NKVE 32/5-2 T MCE 400-50	3 x 400 V ~	2x11	2x15	2x25,5	MCE 110/P	90	10,9	9
2 NKVE 32/5 T MCE 400-50	3 x 400 V ~	2x15	2x20	2x34	MCE 150/P	90	12,2	10
2 NKVE 32/6 T MCE 400-50	3 x 400 V ~	2x15	2x20	2x34	MCE 150/P	90	14,6	12

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
2 NKVE 32/2 T MCE 400-50	1150	-	1575	-	1312	1476	271	271	-	125	100	1400	1800	2200	476
2 NKVE 32/3-2 T MCE 400-50	1150	-	1575	-	1312	1558	271	271	-	125	100	1400	1800	2200	484
2 NKVE 32/3 T MCE 400-50	1150	-	1575	-	1312	1558	271	271	-	125	100	1400	1800	2200	506
2 NKVE 32/4 T MCE 400-50	1150	-	1575	-	1312	1829	271	271	-	125	100	1400	1800	2200	616
2 NKVE 32/5-2 T MCE 400-50	1150	-	1575	-	1312	1911	271	271	-	125	100	1400	1800	2200	624
2 NKVE 32/5 T MCE 400-50	1150	-	1575	-	1312	1993	271	271	-	125	100	1400	1800	2200	652
2 NKVE 32/6 T MCE 400-50	1150	-	1575	-	1312	1993	271	271	-	125	100	1400	1800	2200	660

2 NKVE 45 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h





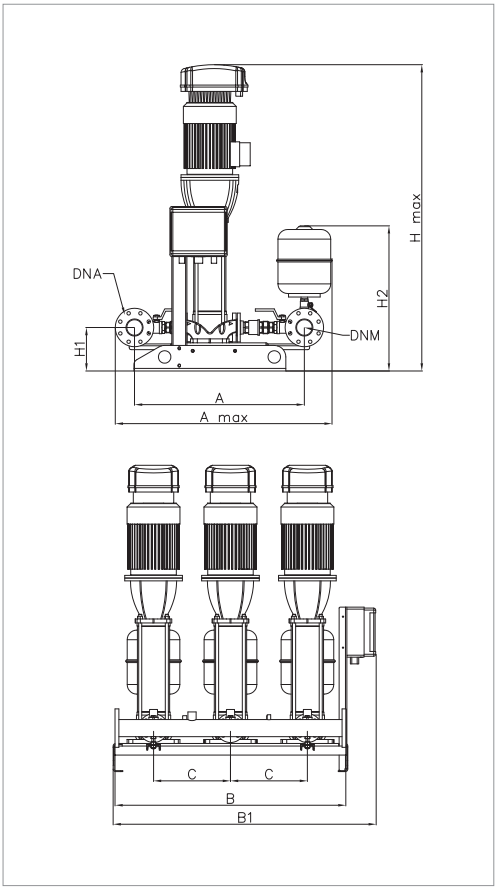
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account TWO pumps working at the same time.

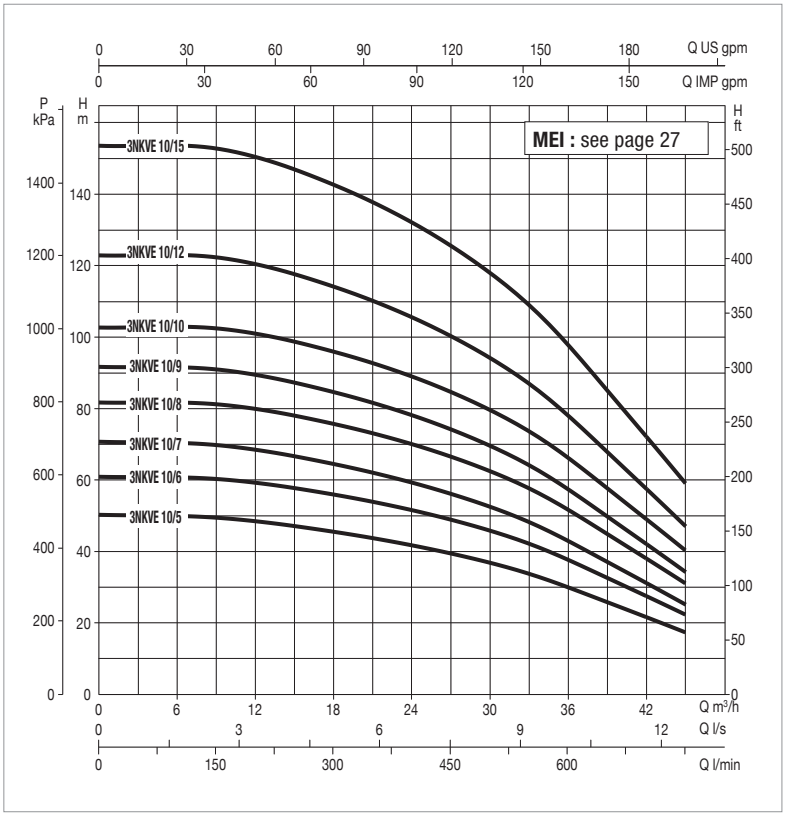
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
2 NKVE 45/2-2 T MCE 400-50	3 x 400 V ~	2x5,5	2x7,5	2x13,1	MCE 55/P	140	3,8	3
2 NKVE 45/2 T MCE 400-50	3 x 400 V ~	2x7,5	2x10	2x17,6	MCE 55/P	140	4,8	4
2 NKVE 45/3 T MCE 400-50	3 x 400 V ~	2x11	2x15	2x25,5	MCE 110/P	140	7,3	6,5
2 NKVE 45/4 T MCE 400-50	3 x 400 V ~	2x15	2x20	2x34	MCE 150/P	140	9,7	8,5

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
2 NKVE 45/2-2 T MCE 400-50	1150	-	1622	-	1340	1515	271	271	-	150	125	1400	1800	2200	488
2 NKVE 45/2 T MCE 400-50	1150	-	1622	-	1340	1565	271	271	-	150	125	1400	1800	2200	510
2 NKVE 45/3 T MCE 400-50	1150	-	1622	-	1340	1782	271	271	-	150	125	1400	1800	2200	620
2 NKVE 45/4 T MCE 400-50	1150	-	1622	-	1340	1864	271	271	-	150	125	1400	1800	2200	656

3 NKVE 10 -MCE/P- CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h





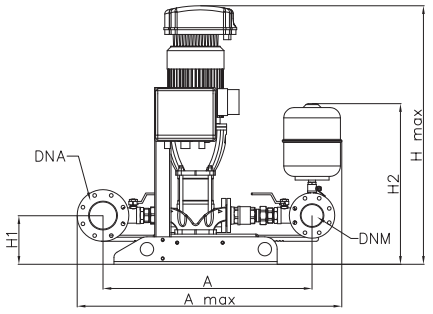
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account THREE pumps working at the same time.

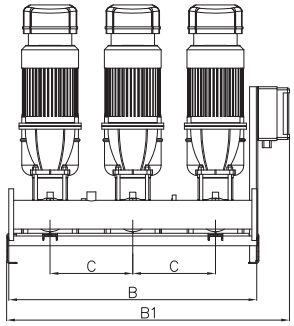
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
3 NKVE 10/5 S T MCE 400-50	3 x 400 V ~	3x1,5	3x2	3x4,9	MCE 30/P	39	5	4
3 NKVE 10/6 S T MCE 400-50	3 x 400 V ~	3x2,2	3x3	3x5,4	MCE 30/P	39	6	5
3 NKVE 10/7 S T MCE 400-50	3 x 400 V ~	3x2,2	3x3	3x5,4	MCE 30/P	39	7	6
3 NKVE 10/8 S T MCE 400-50	3 x 400 V ~	3x3	3x4	3x7,37	MCE 30/P	39	8	6,5
3 NKVE 10/9 S T MCE 400-50	3 x 400 V ~	3x3	3x4	3x7,37	MCE 30/P	39	9	7,7
3 NKVE 10/10 S T MCE 400-50	3 x 400 V ~	3x4	3x5,5	3x10,1	MCE 30/P	39	10	8,5
3 NKVE 10/12 S T MCE 400-50	3 x 400 V ~	3x4	3x5,5	3x10,1	MCE 30/P	39	12	10
3 NKVE 10/15 S T MCE 400-50	3 x 400 V ~	3x5,5	3x7,5	3x13,1	MCE 55/P	39	14	10

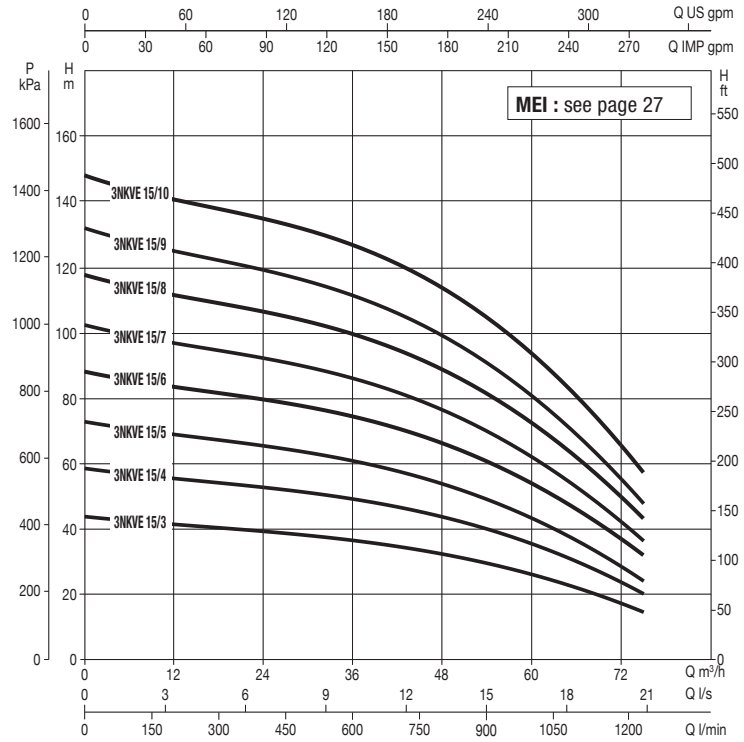
MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
3 NKVE 10/5 S T MCE 400-50	885	1130	1200	1370	400	-	226	755	1255	80	80	2150	1400	1800	425
3 NKVE 10/6 S T MCE 400-50	885	1130	1200	1370	400	-	226	755	1285	80	80	2150	1400	1800	428
3 NKVE 10/7 S T MCE 400-50	885	1130	1200	1370	400	-	226	755	1314	80	80	2150	1400	1800	468
3 NKVE 10/8 S T MCE 400-50	885	1130	1200	1370	400	-	226	755	1393	80	80	2150	1400	1800	471
3 NKVE 10/9 S T MCE 400-50	885	1130	1200	1370	400	-	226	755	1423	80	80	2150	1400	1800	473
3 NKVE 10/10 S T MCE 400-50	885	1130	1200	1370	400	-	226	755	1453	80	80	2150	1400	1800	503
3 NKVE 10/12 S T MCE 400-50	885	1130	1200	1370	400	-	226	755	1513	80	80	2150	1400	1800	508
3 NKVE 10/15 S T MCE 400-50	885	1130	1200	1370	400	-	226	755	1800	80	80	2150	1400	1800	593

3 NKVE 15 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - Maximum ambient temperature: +50 °C - Max flow rate: 280 m³/h







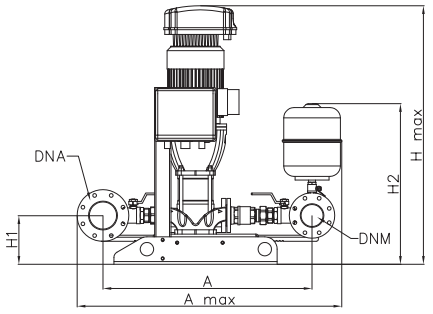
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account THREE pumps working at the same time.

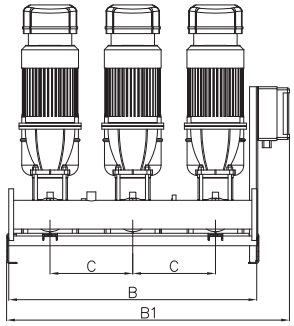
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
3 NKVE 15/3 S T MCE 400-50	3 x 400 V ~	3x3	3x4	3x7,37	MCE 30/P	72	4	3,5
3 NKVE 15/4 S T MCE 400-50	3 x 400 V ~	3x4	3x5,5	3x10,1	MCE 30/P	72	5	4
3 NKVE 15/5 S T MCE 400-50	3 x 400 V ~	3x4	3x5,5	3x10,1	MCE 30/P	72	6,5	5
3 NKVE 15/6 S T MCE 400-50	3 x 400 V ~	3x5,5	3x7,5	3x13,1	MCE 55/P	72	7,5	6,5
3 NKVE 15/7 S T MCE 400-50	3 x 400 V ~	3x5,5	3x7,5	3x13,1	MCE 55/P	72	9	8
3 NKVE 15/8 S T MCE 400-50	3 x 400 V ~	3x7,5	3x10	3x17,6	MCE 55/P	72	11	10
3 NKVE 15/9 S T MCE 400-50	3 x 400 V ~	3x7,5	3x10	3x17,6	MCE 55/P	72	12	11
3 NKVE 15/10 S T MCE 400-50	3 x 400 V ~	3x11	3x15	3x25,5	MCE 110/P	72	13	12

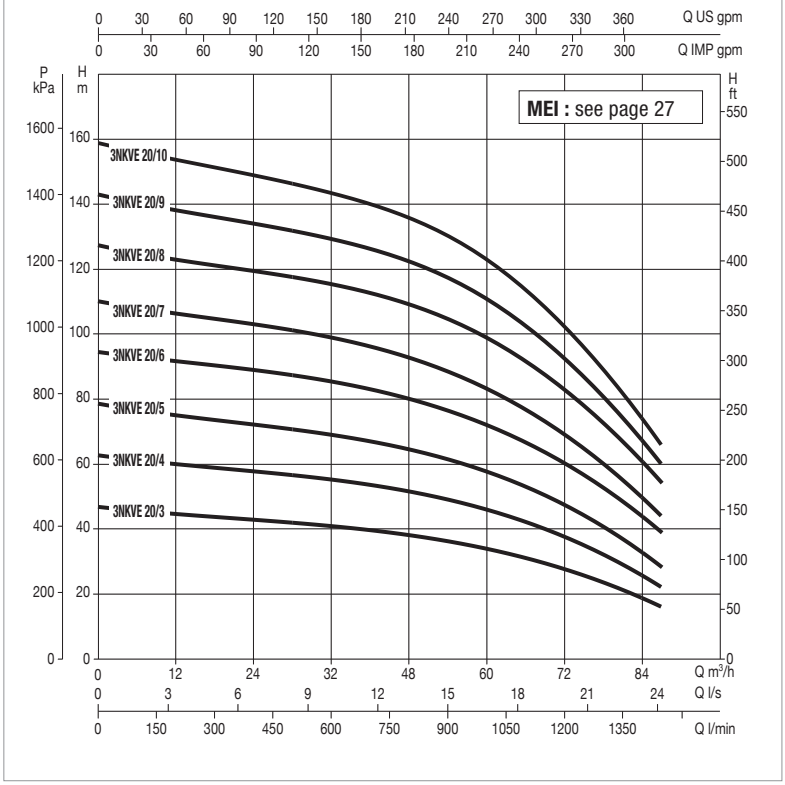
MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
3 NKVE 15/3 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1321	125	100	2150	1400	1800	486
3 NKVE 15/4 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1369	125	100	2150	1400	1800	516
3 NKVE 15/5 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1417	125	100	2150	1400	1800	520
3 NKVE 15/6 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1674	125	100	2150	1400	1800	605
3 NKVE 15/7 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1722	125	100	2150	1400	1800	608
3 NKVE 15/8 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1892	125	100	2150	1400	1800	645
3 NKVE 15/9 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1940	125	100	2150	1400	1800	649
3 NKVE 15/10 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	2084	125	100	2150	1400	1800	818

3 NKVE 20 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h







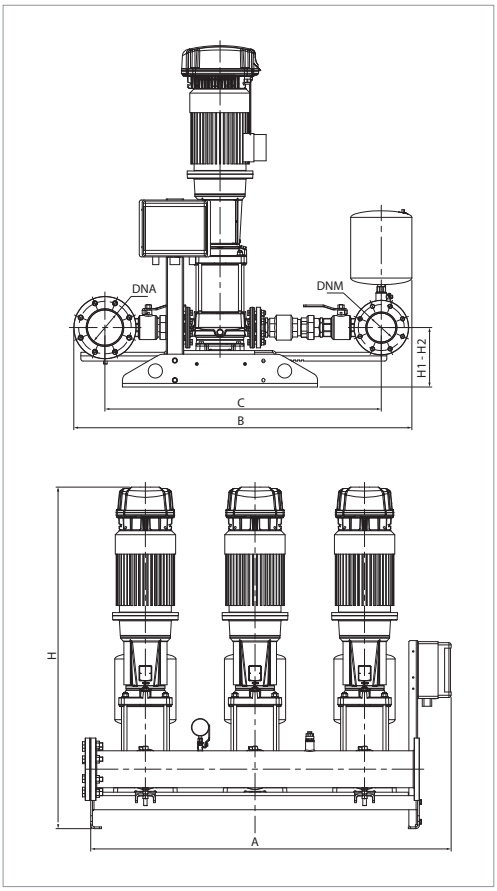
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account THREE pumps working at the same time.

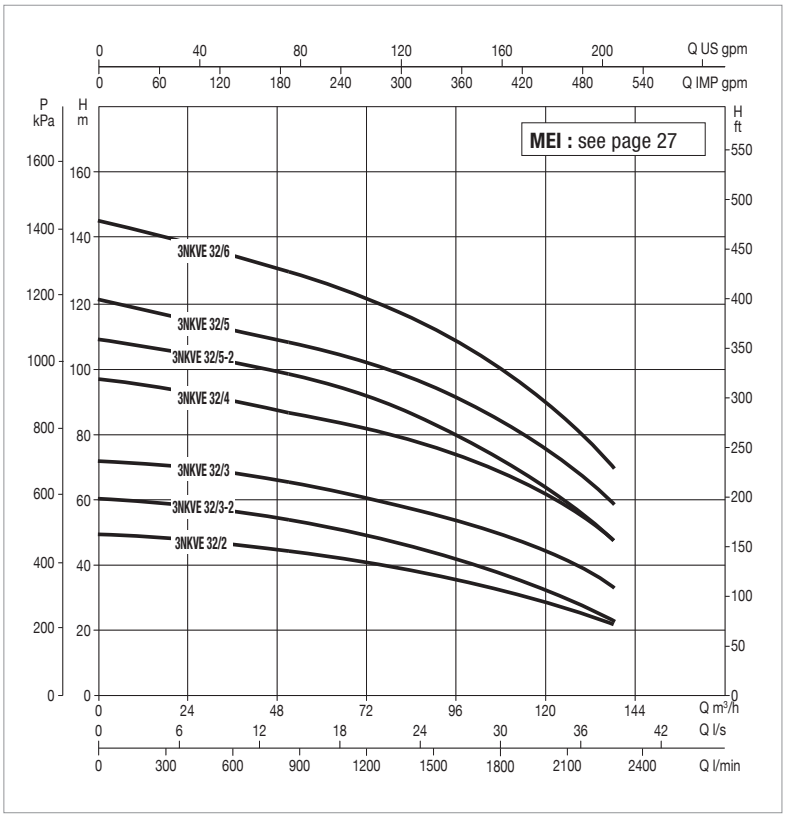
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
3 NKVE 20/3 S T MCE 400-50	3 x 400 V ~	3x3	3x4	3x7,37	MCE 30/P	87	4	3,5
3 NKVE 20/4 S T MCE 400-50	3 x 400 V ~	3x4	3x5,5	3x10,1	MCE 30/P	87	6	5
3 NKVE 20/5 S T MCE 400-50	3 x 400 V ~	3x5,5	3x7,5	3x13,1	MCE 55/P	87	7	6
3 NKVE 20/6 S T MCE 400-50	3 x 400 V ~	3x7,5	3x10	3x17,6	MCE 55/P	87	8,5	7,5
3 NKVE 20/7 S T MCE 400-50	3 x 400 V ~	3x7,5	3x10	3x17,6	MCE 55/P	87	10	9
3 NKVE 20/8 S T MCE 400-50	3 x 400 V ~	3x11	3x15	3x25,5	MCE 110/P	87	11,5	10
3 NKVE 20/9 S T MCE 400-50	3 x 400 V ~	3x11	3x15	3x25,5	MCE 110/P	87	13	12
3 NKVE 20/10 S T MCE 400-50	3 x 400 V ~	3x11	3x15	3x25,5	MCE 110/P	87	14	13

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
3 NKVE 20/3 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1321	125	100	2150	1400	1800	471
3 NKVE 20/4 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1369	125	100	2150	1400	1800	513
3 NKVE 20/5 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1626	125	100	2150	1400	1800	519
3 NKVE 20/6 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1796	125	100	2150	1400	1800	556
3 NKVE 20/7 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1844	125	100	2150	1400	1800	559
3 NKVE 20/8 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	1987	125	100	2150	1400	1800	655
3 NKVE 20/9 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	2035	125	100	2150	1400	1800	658
3 NKVE 20/10 S T MCE 400-50	1115	1285	1200	1370	400	-	236	780	2084	125	100	2150	1400	1800	691

3 NKVE 32 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - Maximum ambient temperature: +50 °C - Max flow rate: 280 m³/h





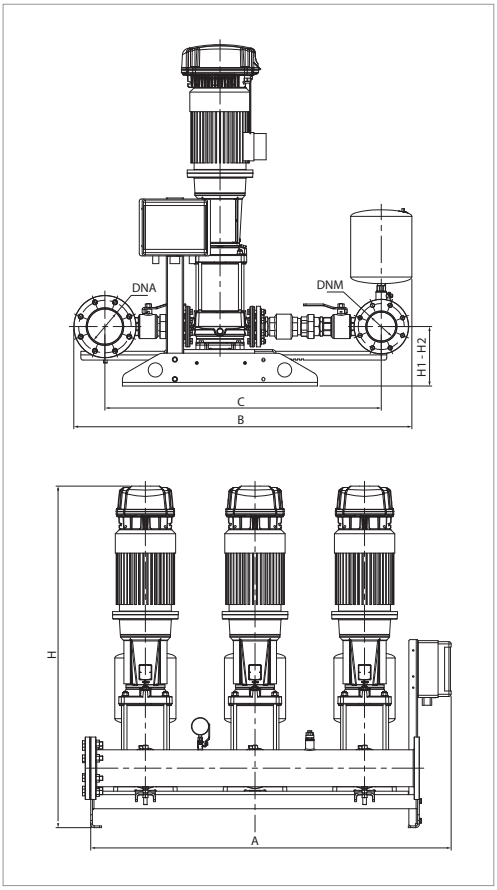
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account THREE pumps working at the same time.

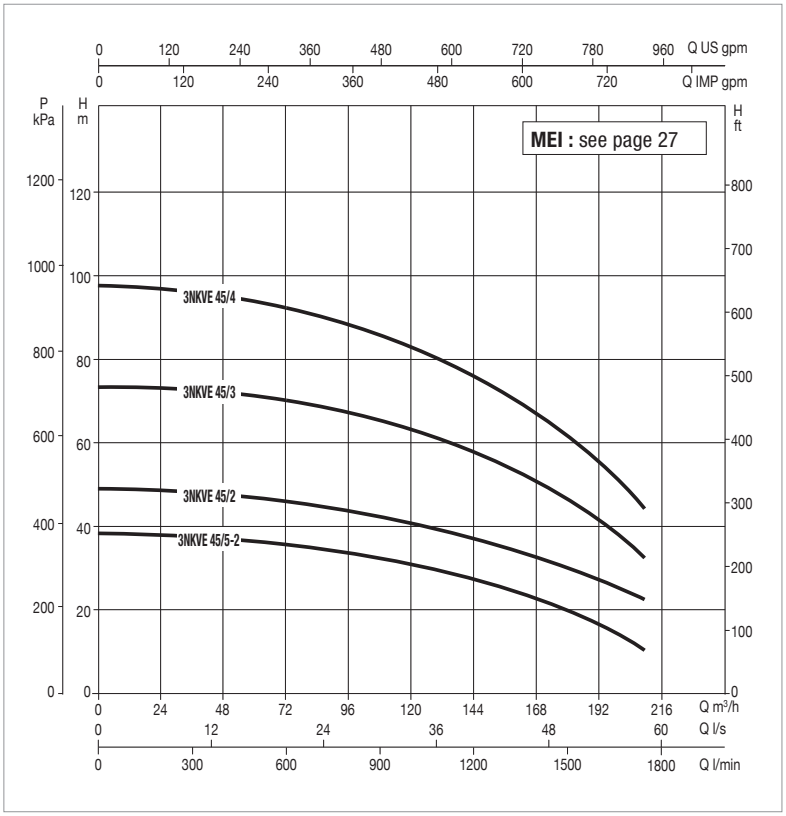
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
3 NKVE 32/2 T MCE 400-50	3 x 400 V ~	3x5,5	3x7,5	3x13,1	MCE 55/P	135	4,8	4
3 NKVE 32/3-2 T MCE 400-50	3 x 400 V ~	3x5,5	3x7,5	3x13,1	MCE 55/P	135	6	5
3 NKVE 32/3 T MCE 400-50	3 x 400 V ~	3x7,5	3x10	3x17,6	MCE 55/P	135	7,3	6
3 NKVE 32/4 T MCE 400-50	3 x 400 V ~	3x11	3x15	3x25,5	MCE 110/P	135	9,8	8
3 NKVE 32/5-2 T MCE 400-50	3 x 400 V ~	3x11	3x15	3x25,5	MCE 110/P	135	10,9	9
3 NKVE 32/5 T MCE 400-50	3 x 400 V ~	3x15	3x20	3x34	MCE 150/P	135	12,2	10
3 NKVE 32/6 T MCE 400-50	3 x 400 V ~	3x15	3x20	3x34	MCE 150/P	135	14,6	12

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
3 NKVE 32/2 T MCE 400-50	1683	-	1575	-	1312	1476	271	271	-	150	125	1500	2250	2200	714
3 NKVE 32/3-2 T MCE 400-50	1683	-	1575	-	1312	1558	271	271	-	150	125	1500	2250	2200	726
3 NKVE 32/3 T MCE 400-50	1683	-	1575	-	1312	1558	271	271	-	150	125	1500	2250	2200	759
3 NKVE 32/4 T MCE 400-50	1683	-	1575	-	1312	1829	271	271	-	150	125	1500	2250	2200	924
3 NKVE 32/5-2 T MCE 400-50	1683	-	1575	-	1312	1911	271	271	-	150	125	1500	2250	2200	936
3 NKVE 32/5 T MCE 400-50	1683	-	1575	-	1312	1911	271	271	-	150	125	1500	2250	2200	978
3 NKVE 32/6 T MCE 400-50	1683	-	1575	-	1312	1993	271	271	-	150	125	1500	2250	2200	990

3 NKVE 45 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h





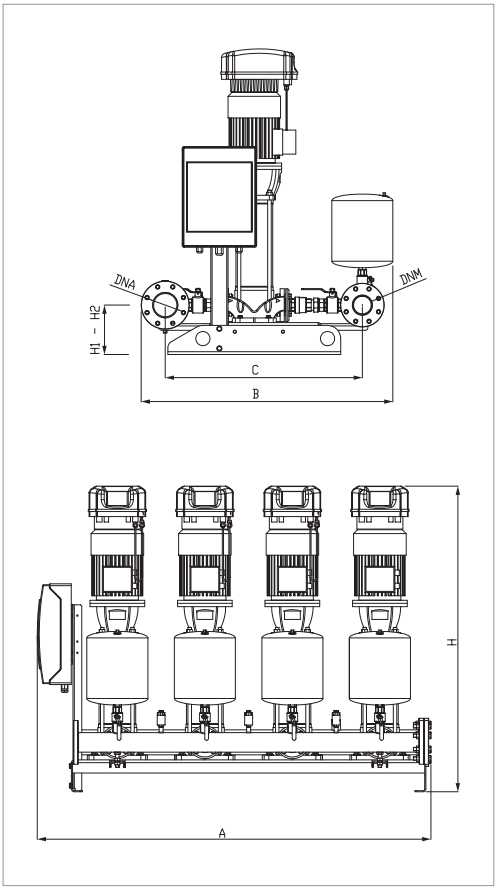
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account THREE pumps working at the same time.

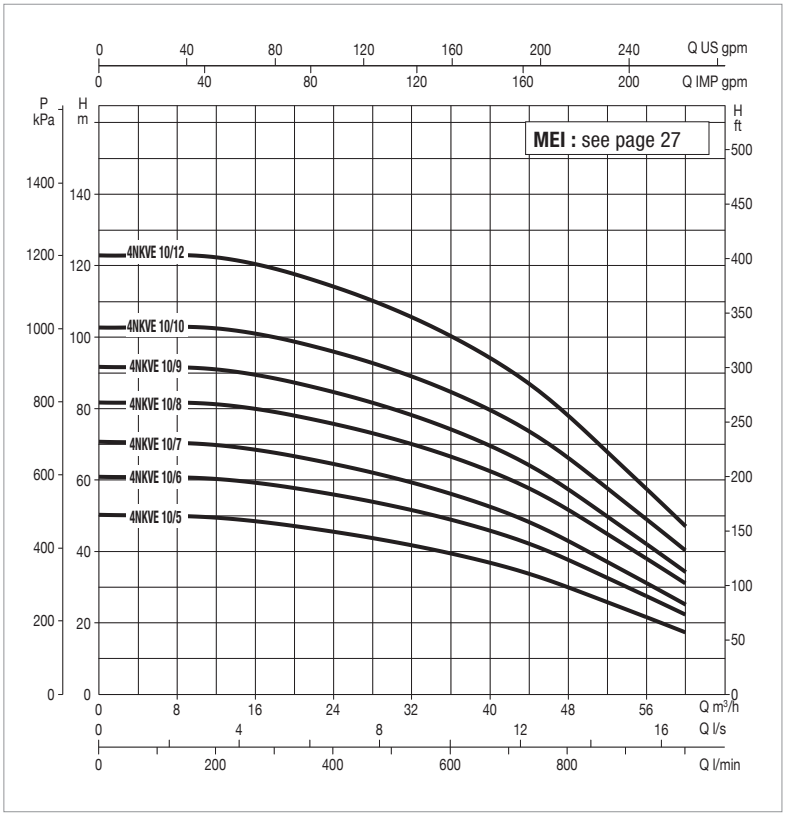
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
3 NKVE 45/2-2 T MCE 400-50	3 x 400 V ~	3x5,5	3x7,5	3x13,1	MCE 55/P	210	3,8	3
3 NKVE 45/2 T MCE 400-50	3 x 400 V ~	3x7,5	3x10	3x17,6	MCE 55/P	210	4,8	4
3 NKVE 45/3 T MCE 400-50	3 x 400 V ~	3x11	3x15	3x25,5	MCE 110/P	210	7,3	6,5
3 NKVE 45/4 T MCE 400-50	3 x 400 V ~	3x15	3x20	3x34	MCE 150/P	210	9,7	8,5

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
3 NKVE 45/2-2 T MCE 400-50	1683	-	1622	-	1340	1515	306	306	-	200	150	1500	2250	2200	732
3 NKVE 45/2 T MCE 400-50	1683	-	1622	-	1340	1565	306	306	-	200	150	1500	2250	2200	765
3 NKVE 45/3 T MCE 400-50	1683	-	1622	-	1340	1782	306	306	-	200	150	1500	2250	2200	930
3 NKVE 45/4 T MCE 400-50	1683	-	1622	-	1340	1864	306	306	-	200	150	1500	2250	2200	984

4 NKVE 10 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h





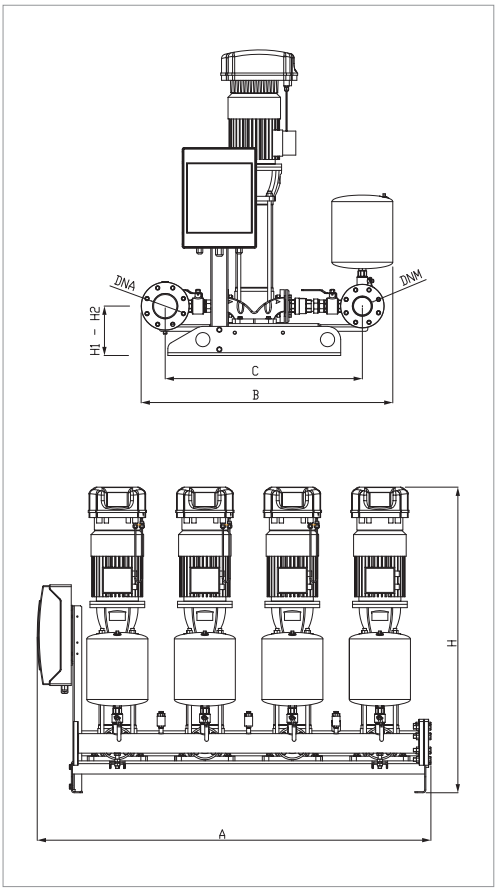
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account FOUR pumps working at the same time.

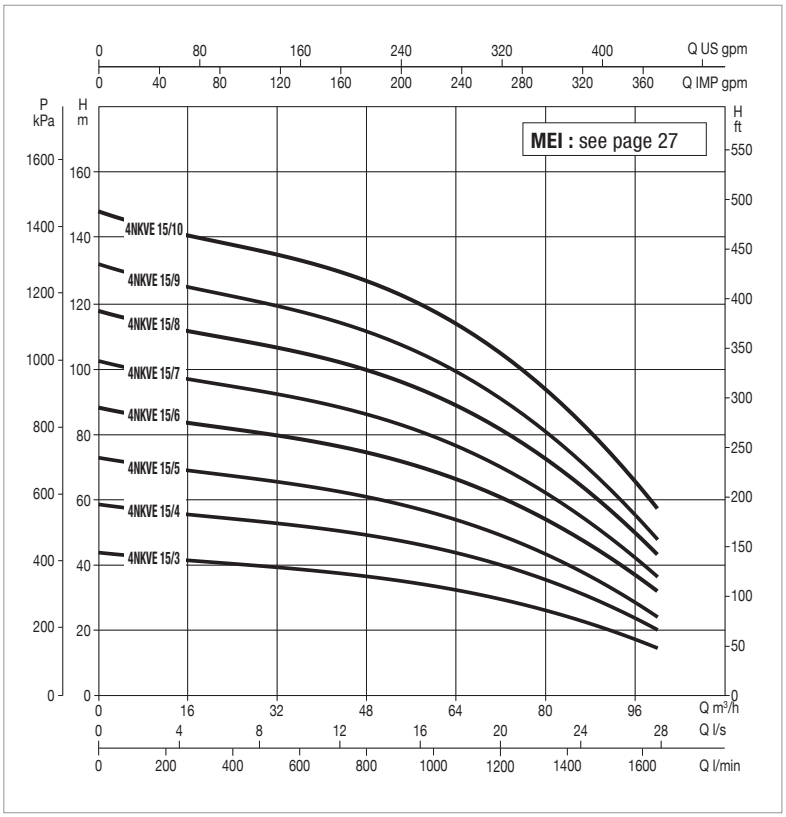
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
4 NKVE 10/5 S T MCE 400-50	3 x 400 V ~	4x1,5	4x2	4x4,9	MCE 30/P	52	5	4
4 NKVE 10/6 S T MCE 400-50	3 x 400 V ~	4x2,2	4x3	4x5,4	MCE 30/P	52	6	5
4 NKVE 10/7 S T MCE 400-50	3 x 400 V ~	4x2,2	4x3	4x5,4	MCE 30/P	52	7	6
4 NKVE 10/8 S T MCE 400-50	3 x 400 V ~	4x3	4x4	4x7,37	MCE 30/P	52	8	6,5
4 NKVE 10/9 S T MCE 400-50	3 x 400 V ~	4x3	4x4	4x7,37	MCE 30/P	52	9	7,7
4 NKVE 10/10 S T MCE 400-50	3 x 400 V ~	4x4	4x5,5	4x10,1	MCE 30/P	52	10	8,5
4 NKVE 10/12 S T MCE 400-50	3 x 400 V ~	4x4	4x5,5	4x10,1	MCE 30/P	52	12	10

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
4 NKVE 10/5 S T MCE 400-50	1800	-	1150	-	900	1254	226	226	-	100	80	2250	1500	2200	327
4 NKVE 10/6 S T MCE 400-50	1800	-	1150	-	900	1284	226	226	-	100	80	2250	1500	2200	571
4 NKVE 10/7 S T MCE 400-50	1800	-	1150	-	900	1314	226	226	-	100	80	2250	1500	2200	624
4 NKVE 10/8 S T MCE 400-50	1800	-	1150	-	900	1393	226	226	-	100	80	2250	1500	2200	628
4 NKVE 10/9 S T MCE 400-50	1800	-	1150	-	900	1423	226	226	-	100	80	2250	1500	2200	631
4 NKVE 10/10 S T MCE 400-50	1800	-	1150	-	900	1453	226	226	-	100	80	2250	1500	2200	671
4 NKVE 10/12 S T MCE 400-50	1800	-	1150	-	900	1513	226	226	-	100	80	2250	1500	2200	678

4 NKVE 15 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - Maximum ambient temperature: +50 °C - Max flow rate: 280 m³/h





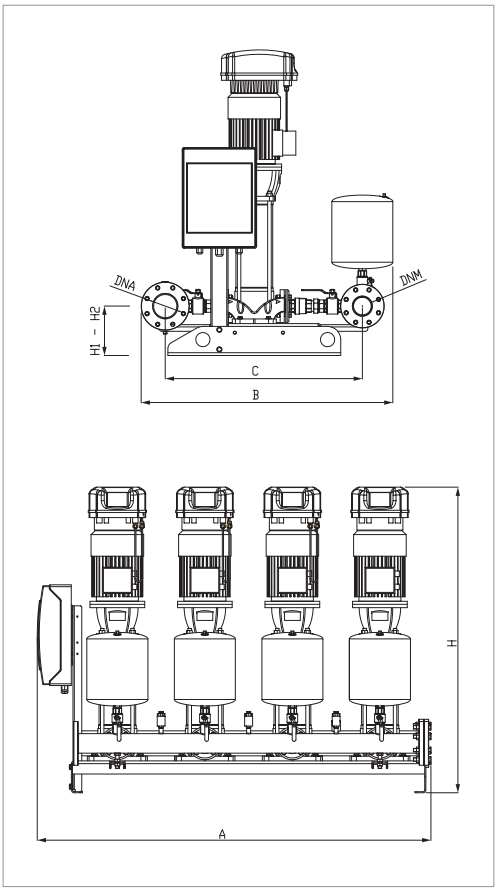
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account FOUR pumps working at the same time.

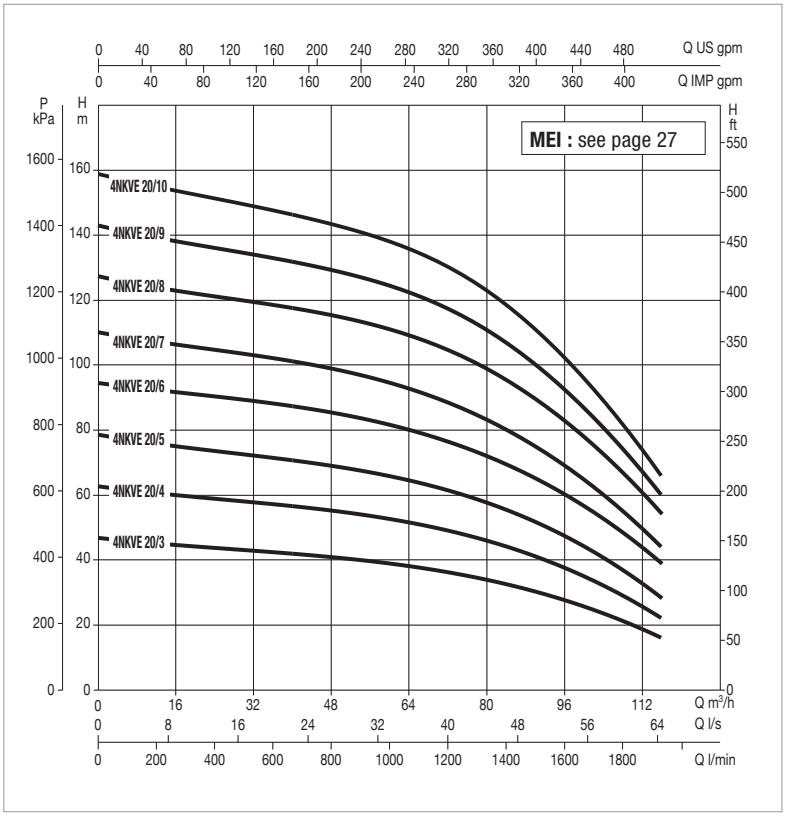
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
4 NKVE 15/3 S T MCE 400-50	3 x 400 V ~	4x3	4x4	4x7,37	MCE 30/P	96	4	3,5
4 NKVE 15/4 S T MCE 400-50	3 x 400 V ~	4x4	4x5,5	4x10,1	MCE 30/P	96	5	4
4 NKVE 15/5 S T MCE 400-50	3 x 400 V ~	4x4	4x5,5	4x10,1	MCE 30/P	96	6,5	5
4 NKVE 15/6 S T MCE 400-50	3 x 400 V ~	4x5,5	4x7,5	4x13,1	MCE 55/P	96	7,5	6,5
4 NKVE 15/7 S T MCE 400-50	3 x 400 V ~	4x5,5	4x7,5	4x13,1	MCE 55/P	96	9	8
4 NKVE 15/8 S T MCE 400-50	3 x 400 V ~	4x7,5	4x10	4x17,6	MCE 55/P	96	11	10
4 NKVE 15/9 S T MCE 400-50	3 x 400 V ~	4x7,5	4x10	4x17,6	MCE 55/P	96	12	11
4 NKVE 15/10 S T MCE 400-50	3 x 400 V ~	4x11	4x15	4x25,5	MCE 110/P	96	13	12

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
4 NKVE 15/3 S T MCE 400-50	1800	-	1330	-	1050	1321	236	236	-	150	125	2150	1000	1400	648
4 NKVE 15/4 S T MCE 400-50	1800	-	1330	-	1050	1369	236	236	-	150	125	2150	1000	1400	688
4 NKVE 15/5 S T MCE 400-50	1800	-	1330	-	1050	1417	236	236	-	150	125	2150	1000	1400	694
4 NKVE 15/6 S T MCE 400-50	1800	-	1330	-	1050	1674	236	236	-	150	125	2150	1000	1400	807
4 NKVE 15/7 S T MCE 400-50	1800	-	1330	-	1050	1722	236	236	-	150	125	2150	1000	1400	811
4 NKVE 15/8 S T MCE 400-50	1800	-	1330	-	1050	1892	236	236	-	150	125	2150	1000	1400	860
4 NKVE 15/9 S T MCE 400-50	1800	-	1330	-	1050	1940	236	236	-	150	125	2150	1000	1400	865
4 NKVE 15/10 S T MCE 400-50	1800	-	1330	-	1050	2084	236	236	-	150	125	2150	1000	1400	919

4 NKVE 20 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - Maximum ambient temperature: +50 °C - Max flow rate: 280 m³/h





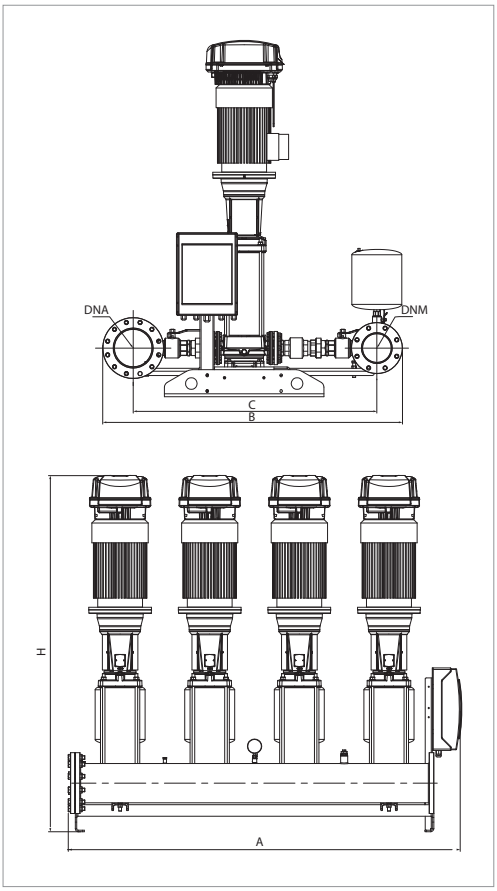
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account FOUR pumps working at the same time.

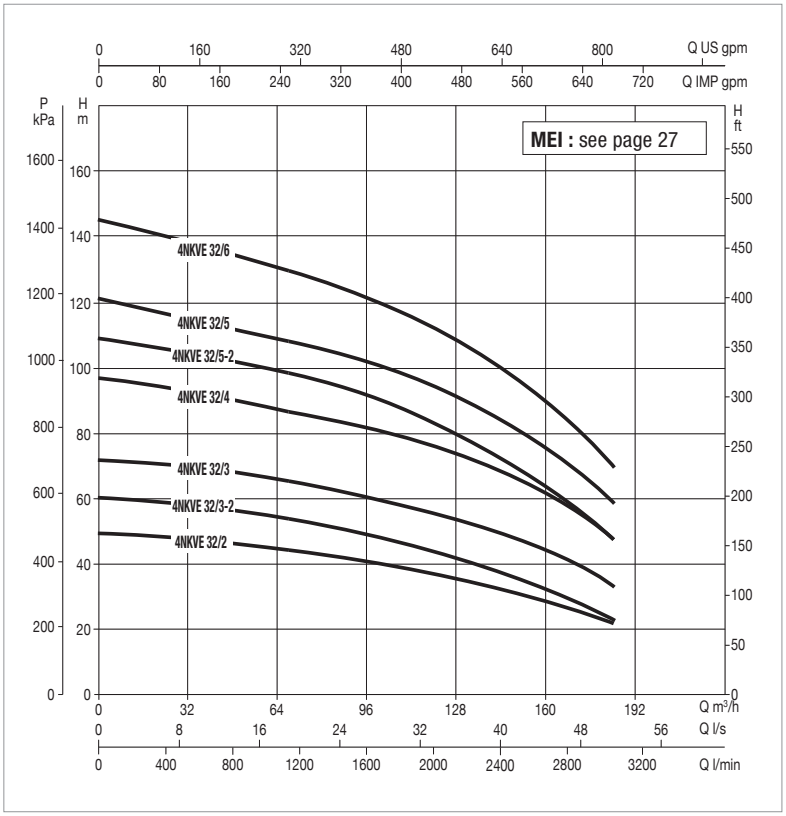
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
4 NKVE 20/3 S T MCE 400-50	3 x 400 V ~	4x3	4x4	4x7,37	MCE 30/P	116	4	3,5
4 NKVE 20/4 S T MCE 400-50	3 x 400 V ~	4x4	4x5,5	4x10,1	MCE 30/P	116	6	5
4 NKVE 20/5 S T MCE 400-50	3 x 400 V ~	4x5,5	4x7,5	4x13,1	MCE 55/P	116	7	6
4 NKVE 20/6 S T MCE 400-50	3 x 400 V ~	4x7,5	4x10	4x17,6	MCE 55/P	116	8,5	7,5
4 NKVE 20/7 S T MCE 400-50	3 x 400 V ~	4x7,5	4x10	4x17,6	MCE 55/P	116	10	9
4 NKVE 20/8 S T MCE 400-50	3 x 400 V ~	4x11	4x15	4x25,5	MCE 110/P	116	11,5	10
4 NKVE 20/9 S T MCE 400-50	3 x 400 V ~	4x11	4x15	4x25,5	MCE 110/P	116	13	12
4 NKVE 20/10 S T MCE 400-50	3 x 400 V ~	4x11	4x15	4x25,5	MCE 110/P	116	14	13

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
4 NKVE 20/3 S T MCE 400-50	1800	-	1330	-	1150	1321	236	236	-	150	125	2150	1000	1400	628
4 NKVE 20/4 S T MCE 400-50	1800	-	1330	-	1150	1369	236	236	-	150	125	2150	1000	1400	684
4 NKVE 20/5 S T MCE 400-50	1800	-	1330	-	1150	1626	236	236	-	150	125	2150	1000	1400	692
4 NKVE 20/6 S T MCE 400-50	1800	-	1330	-	1150	1796	236	236	-	150	125	2150	1000	1400	741
4 NKVE 20/7 S T MCE 400-50	1800	-	1330	-	1150	1844	236	236	-	150	125	2150	1000	1400	745
4 NKVE 20/8 S T MCE 400-50	1800	-	1330	-	1150	1987	236	236	-	150	125	2150	1000	1400	873
4 NKVE 20/9 S T MCE 400-50	1800	-	1330	-	1150	2035	236	236	-	150	125	2150	1000	1400	877
4 NKVE 20/10 S T MCE 400-50	1800	-	1330	-	1150	2084	236	236	-	150	125	2150	1000	1400	921

4 NKVE 32 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h





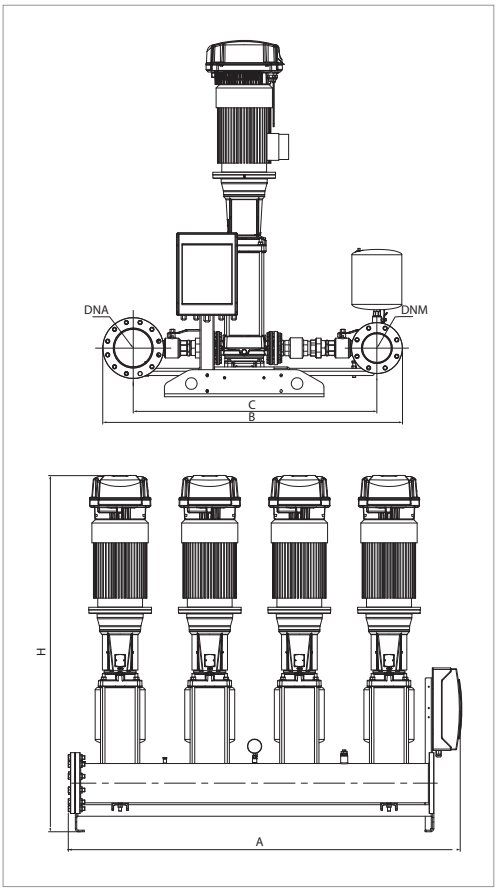
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account FOUR pumps working at the same time.

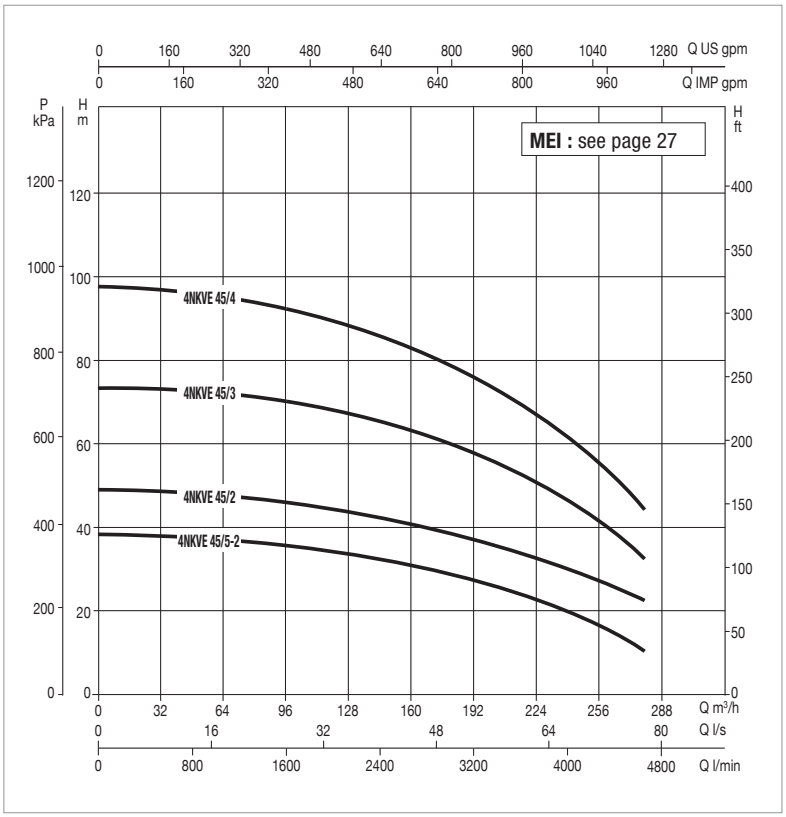
MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
4 NKVE 32/2 T MCE 400-50	3 x 400 V ~	4x5,5	4x7,5	4x13,1	MCE 55/P	180	4,8	4
4 NKVE 32/3-2 T MCE 400-50	3 x 400 V ~	4x5,5	4x7,5	4x13,1	MCE 55/P	180	6	5
4 NKVE 32/3 T MCE 400-50	3 x 400 V ~	4x7,5	4x10	4x17,6	MCE 55/P	180	7,3	6
4 NKVE 32/4 T MCE 400-50	3 x 400 V ~	4x11	4x15	4x25,5	MCE 110/P	180	9,8	8
4 NKVE 32/5-2 T MCE 400-50	3 x 400 V ~	4x11	4x15	4x25,5	MCE 110/P	180	10,9	9
4 NKVE 32/5 T MCE 400-50	3 x 400 V ~	4x15	4x20	4x34	MCE 150/P	180	12,2	10
4 NKVE 32/6 T MCE 400-50	3 x 400 V ~	4x15	4x20	4x34	MCE 150/P	180	14,6	12

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
4 NKVE 32/2 T MCE 400-50	2195	-	1672	-	1340	1476	271	271	-	200	150	2660	1760	2200	952
4 NKVE 32/3-2 T MCE 400-50	2195	-	1672	-	1340	1558	271	271	-	200	150	2660	1760	2200	968
4 NKVE 32/3 T MCE 400-50	2195	-	1672	-	1340	1558	271	271	-	200	150	2660	1760	2200	1012
4 NKVE 32/4 T MCE 400-50	2195	-	1672	-	1340	1829	271	271	-	200	150	2660	1760	2200	1232
4 NKVE 32/5-2 T MCE 400-50	2195	-	1672	-	1340	1911	271	271	-	200	150	2660	1760	2200	1248
4 NKVE 32/5 T MCE 400-50	2195	-	1672	-	1340	1911	271	271	-	200	150	2660	1760	2200	1304
4 NKVE 32/6 T MCE 400-50	2195	-	1672	-	1340	1993	271	271	-	200	150	2660	1760	2200	1320

4 NKVE 45 -MCE/P - CONSTANT PRESSURE BOOSTER SETS

Pumped liquid temperature range: from 0 °C to +120 °C - **Maximum ambient temperature:** +50 °C - **Max flow rate:** 280 m³/h





The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³.
Curve tolerance according to ISO 9906.
Overall performance taking into account FOUR pumps working at the same time.

MODEL	PUMP+INVERTER POWER INPUT	P2 NOMINAL		In A	MCE/P MODEL	MAXIMUM FLOW RATE m³/h	MAX OBTAINABLE PRESSURE BAR	STANDARD PRESSURE BAR
		kW	HP					
4 NKVE 45/2-2 T MCE 400-50	3 x 400 V ~	4x5,5	4x7,5	4x13,1	MCE 55/P	280	3,8	3
4 NKVE 45/2 T MCE 400-50	3 x 400 V ~	4x7,5	4x10	4x17,6	MCE 55/P	280	4,8	4
4 NKVE 45/3 T MCE 400-50	3 x 400 V ~	4x11	4x15	4x25,5	MCE 110/P	280	7,3	6,5
4 NKVE 45/4 T MCE 400-50	3 x 400 V ~	4x15	4x20	4x34	MCE 150/P	280	9,7	8,5

MODEL	A	A MAX	B	B1	C	H	H1	H2	H MAX	DNA	DNM	PACKING DIMENSIONS			WEIGHT Kg
												L/A	L/B	H	
4 NKVE 45/2-2 T MCE 400-50	2195	-	1813	-	1440	1515	306	306	-	250	200	2660	1760	2200	976
4 NKVE 45/2 T MCE 400-50	2195	-	1813	-	1440	1565	306	306	-	250	200	2660	1760	2200	1020
4 NKVE 45/3 T MCE 400-50	2195	-	1813	-	1440	1782	306	306	-	250	200	2660	1760	2200	1240
4 NKVE 45/4 T MCE 400-50	2195	-	1813	-	1440	1864	306	306	-	250	200	2660	1760	2200	1312

HYDRAULIC EFFICIENCY

EU 547/2012 REGULATION - MEI

GENERAL INFORMATION

With the aim of defining a comparable performance threshold value among all water pumps present on the market, an index has been created which considers the size of the pump and its specific rotation speed: the MEI (Minimum Efficiency Index).
The regulation applies to centrifugal pumps for pumping clean water included in these product categories:

- END SUCTION OWN BEARING PUMPS (ESOB)
- END SUCTION CLOSE COUPLED PUMPS (ESCC)
- END SUCTION CLOSE COUPLED INLINE PUMPS (ESCCI)
- VERTICAL MULTISTAGE PUMPS (MS-V)
- SUBMERSIBLE MULTISTAGE PUMPS (MSS)

MEI represents a dimensionless indicator for hydraulic performance and is a measurement of the sizing of the pump with respect to its performance.
The higher the MEI value, the better the sizing of the pump with respect to its performance and the lower the yearly energy consumption due to use of the pump. The upper limit of the MEI values is theoretically open, and depends only on physical and technological limits.

The minimum efficiency index (MEI) is based on the maximum diameter of the impeller. Multistage vertical pumps must undergo tests in a version with 3 stages.

The reference value for the most efficient water pumps is MEI $\geq$ 0.70.

The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller adapts the pump to a fixed work point, with a consequent lower energy consumption.

The operation of this water pump with variable operating points may be more efficient and economic if controlled, for example, by means of a variable speed motor which adapts pump operation to the system.

You can find information on reference efficiency at the address: **www.dabpumps.com** or contact our sales network.

The efficiency graphs for MEI=0.7 and MEI=0.4 for the different types of pumps are available on the site: **www.europump.org/efficiencycharts**

PUMP MODEL	N° STAGES	MEI	η PL	η BEP	η OL
NKVE 10/02 M MCE11/P IE3	2	$\geq$ 0,70	64,72	67,58	66,82
NKVE 10/03 M MCE11/P IE3	3		64,72	67,58	66,82
NKVE 10/04 M MCE11/P IE3	4		64,72	67,58	66,82
NKVE 10/05 M MCE11/P IE3	5		64,72	67,58	66,82
NKVE 10/06 M MCE15/P IE3	6		64,72	67,58	66,82
NKVE 10/07 M MCE15/P IE3	7		64,72	67,58	66,82
NKVE 10/08 T MCE30/P IE3	8		64,72	67,58	66,82
NKVE 10/09 T MCE30/P IE3	9		64,72	67,58	66,82
NKVE 10/10 T MCE30/P IE3	10		64,72	67,58	66,82
NKVE 10/12 T MCE30/P IE3	12		64,72	67,58	66,82
NKVE 10/15 T MCE55/P IE3	15		64,72	67,58	66,82
NKVE 10/17 T MCE55/P IE3	17		64,72	67,58	66,82
NKVE 10/19 T MCE55/P IE3	19		64,72	67,58	66,82
NKVE 10/23 T MCE55/P IE3	23		64,72	67,58	66,82
NKVE 10/24 T MCE110/P IE3	24		64,72	67,58	66,82

HYDRAULIC EFFICIENCY

EU 547/2012 REGULATION - MEI

PUMP MODEL	N° STAGES	MEI	η PL	η BEP	η OL
NKVE 15/02 M MCE22/P IE3	2	≥ 0,70	61,59	65,63	64,65
NKVE 15/03 T MCE30/P IE3	3		61,59	65,63	64,65
NKVE 15/04 T MCE30/P IE3	4		61,59	65,63	64,65
NKVE 15/05 T MCE30/P IE3	5		61,59	65,63	64,65
NKVE 15/06 T MCE55/P IE3	6		64,68	69,13	68,28
NKVE 15/07 T MCE55/P IE3	7		64,68	69,13	68,28
NKVE 15/08 T MCE110/P IE3	8		64,68	69,13	68,28
NKVE 15/09 T MCE110/P IE3	9		64,68	69,13	68,28
NKVE 15/10 T MCE110/P IE3	10		64,68	69,13	68,28
NKVE 15/12 T MCE110/P IE3	12		64,68	69,13	68,28
NKVE 15/14 T MCE110/P IE3	14		64,68	69,13	68,28
NKVE 15/16 T MCE150/P IE3	16		64,68	69,13	68,28
NKVE 15/17 T MCE150/P IE3	17		64,68	69,13	68,28

PUMP MODEL	N° STAGES	MEI	η PL	η BEP	η OL
NKVE 20/02 M MCE22/P IE3	2	≥ 0,70	61,78	66,22	65,64
NKVE 20/03 T MCE30/P IE3	3		61,78	66,22	65,64
NKVE 20/04 T MCE30/P IE3	4		61,78	66,22	65,64
NKVE 20/05 T MCE55/P IE3	5		61,78	66,22	65,64
NKVE 20/06 T MCE55/P IE3	6		64,59	69,58	68,67
NKVE 20/07 T MCE55/P IE3	7		64,59	69,58	68,67
NKVE 20/08 T MCE110/P IE3	8		64,59	69,58	68,67
NKVE 20/09 T MCE110/P IE3	9		64,59	69,58	68,67
NKVE 20/10 T MCE110/P IE3	10		64,59	69,58	68,67
NKVE 20/12 T MCE150/P IE3	12		64,59	69,58	68,67
NKVE 20/14 T MCE150/P IE3	14		64,59	69,58	68,67

PUMP MODEL	N° STAGES	MEI	η PL	η BEP	η OL
NKVE 32/2 T MCE 55/P IE3	2	≥ 0,70	70,08	74,12	73,16
NKVE 32/3-2 T MCE 55/P IE3	3		67,38	71,10	70,20
NKVE 32/3 T MCE 110/P IE3	3		70,08	74,12	73,16
NKVE 32/4 T MCE 110/P IE3	4		70,08	74,12	73,16
NKVE 32/5-2 T MCE 110/P IE3	5		68,40	72,20	71,44
NKVE 32/5 T MCE 150/P IE3	5		70,08	74,12	73,16
NKVE 32/6 T MCE 150/P IE3	6		70,08	74,12	73,16
NKVE 32/7-2 T MCE 150/P IE3	7		68,82	72,70	72,04

PUMP MODEL	N° STAGES	MEI	η PL	η BEP	η OL
NKVE 45/2-2 T MCE 55/P IE3	2	≥ 0,70	69,13	71,65	70,46
NKVE 45/2 T MCE 110/P IE3	2		73,47	76,37	75,25
NKVE 45/3 T MCE 110/P IE3	3		73,47	76,37	75,25
NKVE 45/4 T MCE 150/P IE3	4		73,47	76,37	75,25

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