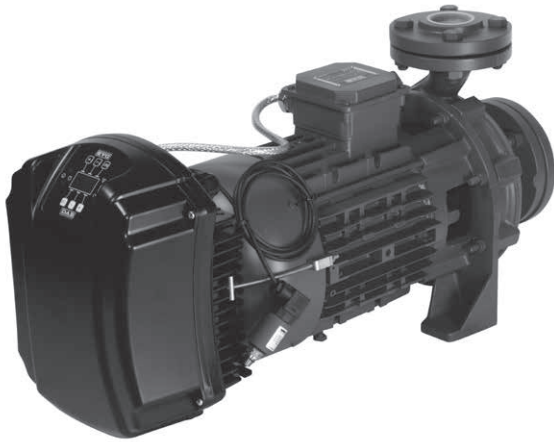


# KE SINGLE-IMPELLER

## SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER



### TECHNICAL DATA

**Operating range:**

from 6 to 100 m<sup>3</sup>/h with head up to 60 metres.

**Liquid temperature range:**

from -10 °C to +50 °C for KE 36/200 and KE 40/200,

from -15 °C to +80 °C for the other pumps.

**Pumped liquid:** clean, free of solids and abrasives, non-viscous, non-aggressive, non-crystallised and chemically neutral, with properties similar to water.

**Maximum ambient temperature:** +40 °C.

**Maximum operating pressure:**

KE 36/200, KE 40/200, KE 55/200: 8 bar (800 kPa)

KE 40/400, KE 50/400, KE 30/800, KE 40/800, KE 50/800, KE 20/1200,

KE 25/1200, KE 35/1200: 10 bar (1000 kPa)

**Protection class at the terminal board:** IP 55.

**Protection class:** IP 44

**Insulation class:** F.

**Installation:** normally in horizontal or vertical position, provided that the motor is always above the pump.

### APPLICATIONS

Single-impeller centrifugal pump suitable for domestic, civil, industrial and agricultural systems, and for decanting, mixing and irrigation uses.

### CONSTRUCTION FEATURES OF THE PUMP

Pump body and motor support in cast iron.

Technopolymer or cast iron impeller, as per the TECHNICAL DATA table.

Carbon/ceramic mechanical seal.

### CONSTRUCTION FEATURES OF THE MOTOR

Closed asynchronous type, external ventilation cooling.

Rotor running on ball bearings, oversized to ensure low noise and durability.

Construction according to CEI 2-3.

Controlled by MCE inverter.

**Standard single-phase voltage:** 1x230 V / 50-60 Hz

**Special version on request:** three-phase 3x400 V / 50 Hz, or three-phase 3x460 V / 60 Hz

**Standard three-phase voltage:** 3x400 V / 50 Hz

**Special version on request:** 3x460 V / 60 Hz

# KE SINGLE-IMPELLER

## SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER



### MCE/P INVERTER

#### 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.

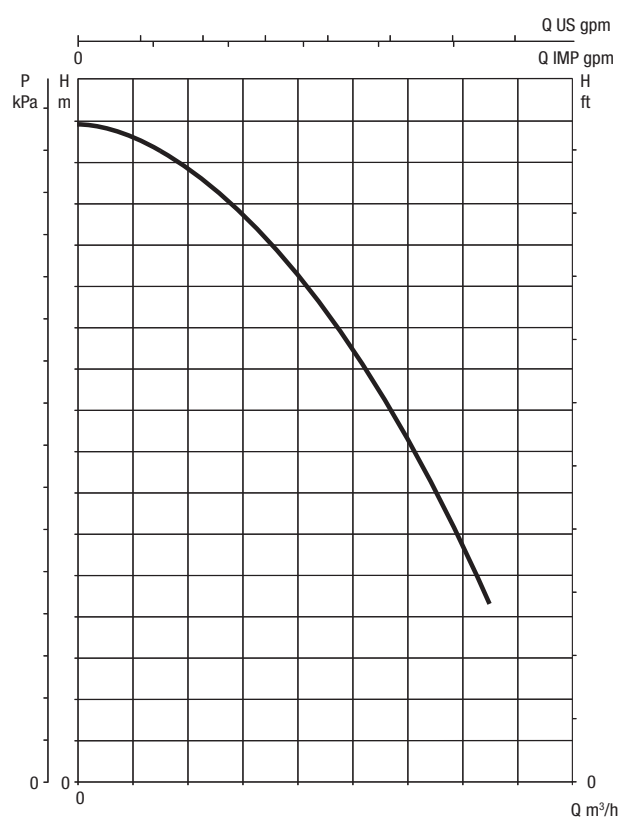
The other electric pumps, also with variable speed, are activated in cascade after the first one has reached maximum speed. Through modulation, they compensate the pressure fluctuations of the system.

For every operating cycle, it is possible to switch the restart to a different pump, therefore ensuring even use of all electric pumps.

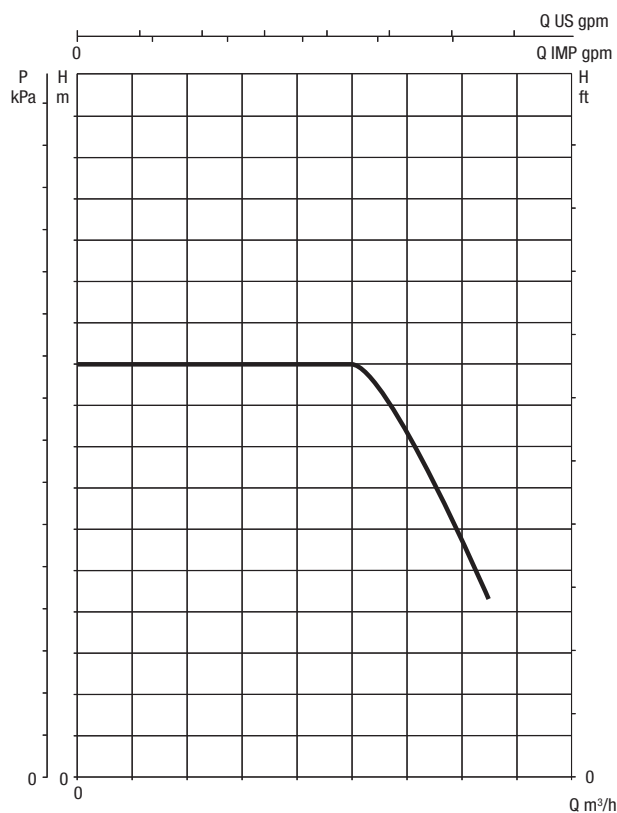
It is possible to set operation times for each individual pump, switching to another pump after such set times.

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 efficiency 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.

**For more information refer to the technical appendix.**

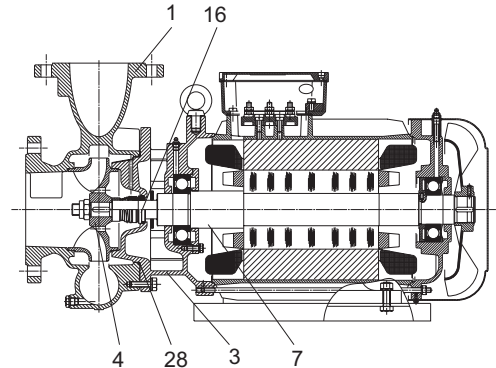
# KE SINGLE-IMPELLER

## SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER

### MATERIALS

N.	PARTS	MATERIALS	MODELS
1	PUMP BODY	CAST IRON 200 UNI ISO 185	
3	SUPPORT	CAST IRON 200 UNI ISO 185	
4	IMPELLER	TECHNOPOLYMER A	K 36/200; K 40/200;
		TECHNOPOLYMER B	K 55/200
		CAST IRON 200 UNI ISO 185	K 40/400; K 50/400; K 30/800; K 40/800; K 50/800; K 25/1200; K 35/1200
7	SHAFT WITH ROTOR	STAINLESS STEEL AISI 303 X10CRNIS 1089 UNI 6900/71	K 36/200; K 40/200; K 55/200
		STAINLESS STEEL AISI 304 X5CRNI 1810 UNI 6900/71	K 40/400; K 50/400; K 30/800; K 40/800; K 50/800; K 25/1200; K 35/1200
16	MECHANICAL SEAL	CARBON / CERAMIC	
28	OR RING	NBR RUBBER	

\* In contact with the liquid

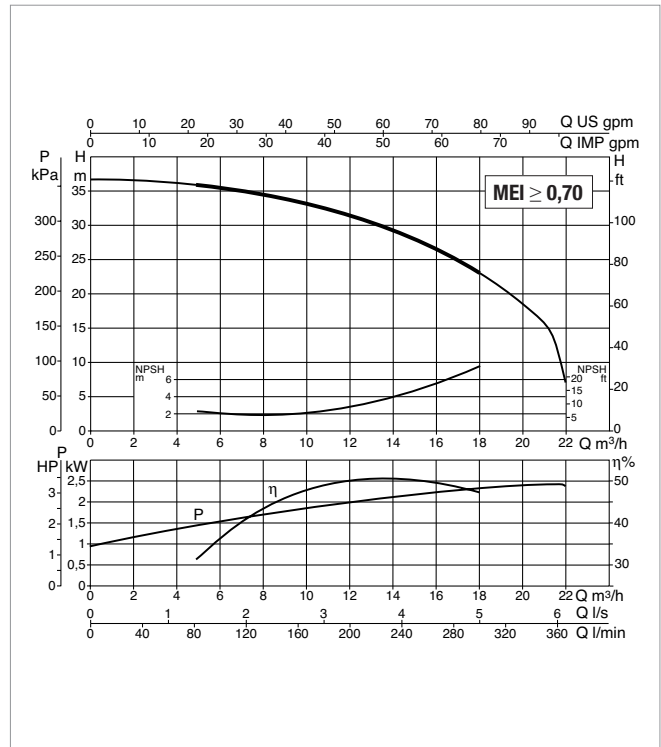
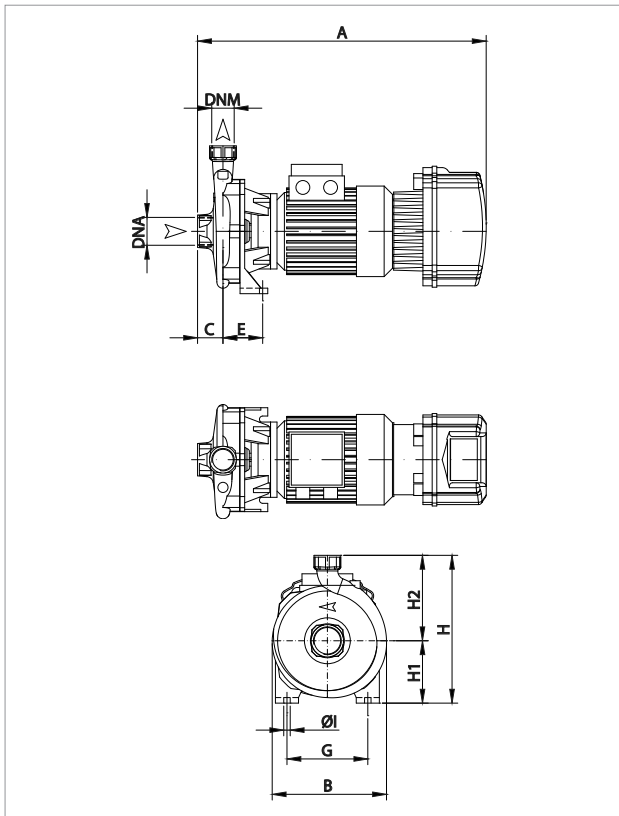


### SELECTION TABLE - KE SINGLE-PROPELLER

MODEL	Q= m³/h Q= l/min	0	4,8	6	7,2	9	9,6	10,8	12	15	18	24	30	36	42	60	72	84	96
		0	80	100	120	150	160	180	200	250	300	400	500	600	700	1000	1200	1400	1600
KE 36/200 T MCE30/P	H (m)	36,6	36	35,5	35	34	33,3	32,5	31,5	28	23,5								
KE 40/200 T MCE30/P		41,3	41	40,5	40	39	38,8	38	37	33,5	29								
KE 55/200 T MCE55/P		54		54	53,9	53,2	53	52	51,5	48,5	45								
KE 40/400 T MCE55/P		50,5							49	48	45	37	24						
KE 50/400 T MCE110/P		62							61	60	59	54,5	46						
KE 30/800 T MCE110/P		44										42	40	38	35	21,5			
KE 40/800 T MCE110/P		51,5										50	48	47	43,5	32,5	21		
KE 50/800 T MCE110/P		58										56,5	55	53,5	51	41	31		
KE 25/1200 T MCE110/P		40,7										39	38,5	38	37	33,5	30	25	18
KE 35/1200 T MCE110/P		45												43	42,5	38,5	35	31,5	27

# KE 36/200 - SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER, FOR WATER SUPPLY IN DOMESTIC, CIVIL, AND INDUSTRIAL ENVIRONMENTS

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



See hydraulic efficiency details on page 241.

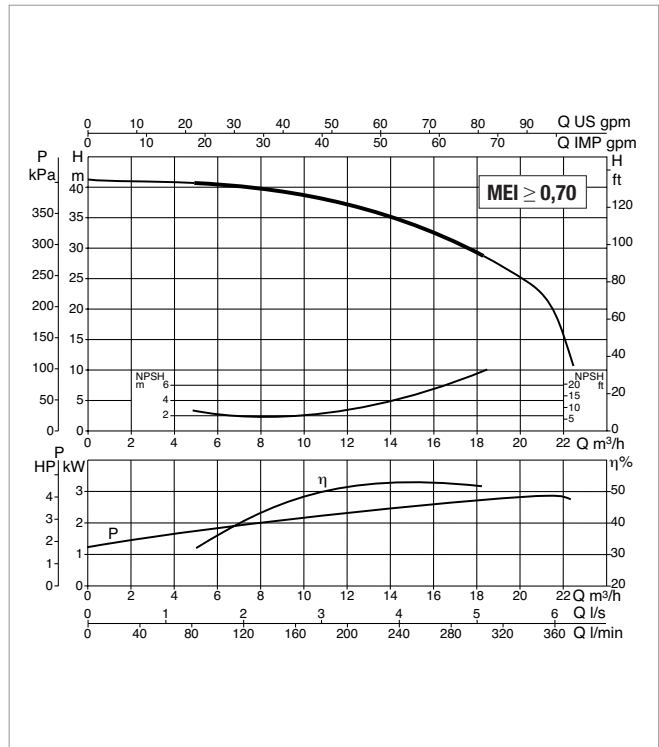
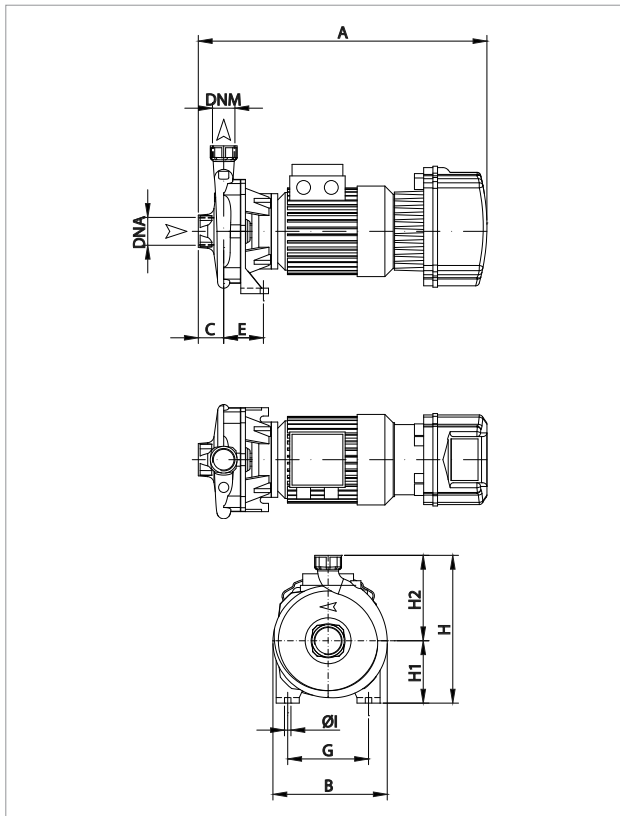
The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

MODEL	ELECTRICAL DATA					
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	r.p.m.
			kW	HP		
KE 36/200 T MCE30/P	3 x 400 V	3,2	2,2	3	6,96	2895

MODEL	A	B	C	E	G	I	H	H1	H2	DNA			DNM			PACKING DIMENSIONS			VOLUME (m <sup>3</sup> )	WEIGHT kg		
										X1	Y1	Z1	X2	Y2	Z2	L/A	L/B	H				
KE 36/200 T MCE30/P	625	267	55	86	175	14	357	135	185	G 2"	-	-	-	G 1" ¼	-	-	-	826	430	426	0,151	39,9

# KE 40/200 - SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER, FOR WATER SUPPLY IN DOMESTIC, CIVIL, AND INDUSTRIAL ENVIRONMENTS

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



See hydraulic efficiency details on page 241.

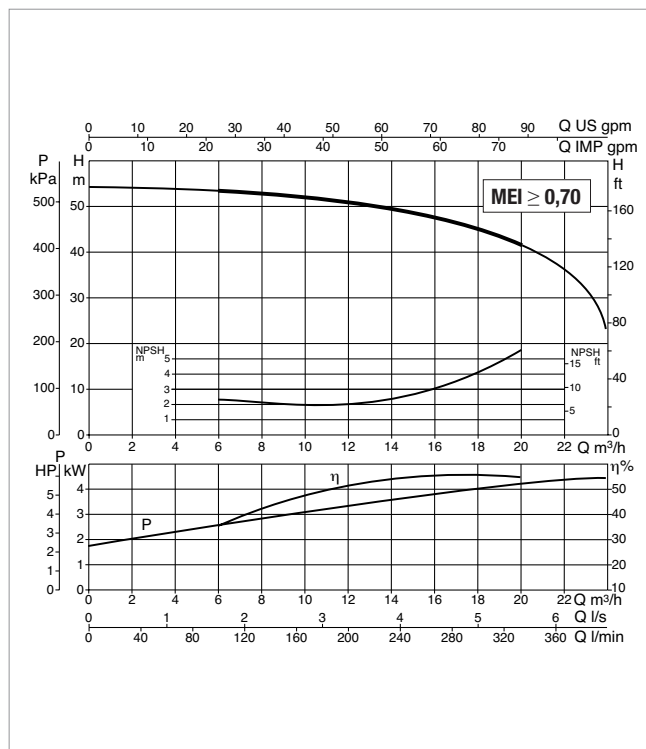
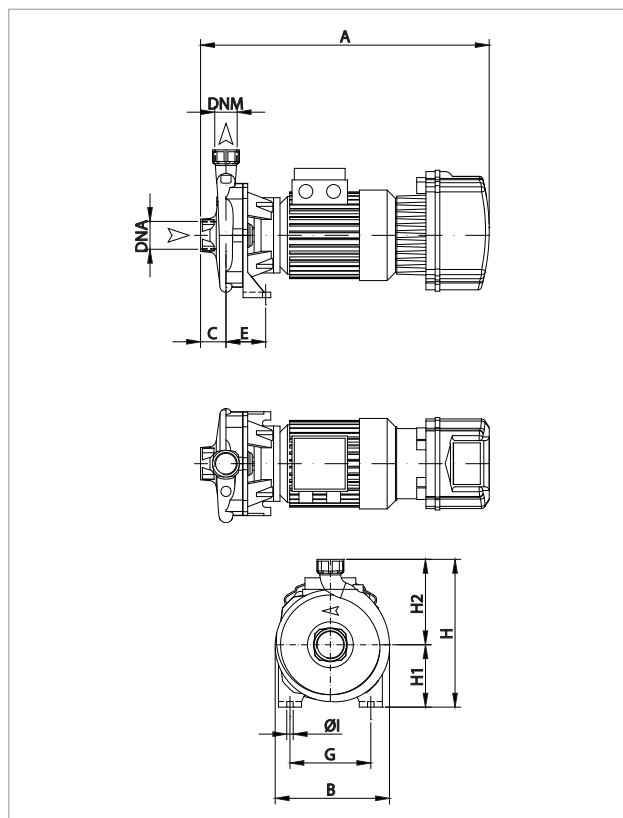
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

MODEL	ELECTRICAL DATA					
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	r.p.m.
			kW	HP		
KE 40/200 T MCE30/P	3 x 400 V	3,8	3	4	8,93	2924

MODEL	A	B	C	E	G	I	H	H1	H2	DNA			DNM			PACKING DIMENSIONS			VOLUME (m³)	WEIGHT kg		
										X1	Y1	Z1	X2	Y2	Z2	L/A	L/B	H				
KE 40/200 T MCE30/P	625	267	55	86	175	14	357	135	185	G 2"	-	-	-	G 1 1/4"	-	-	-	826	430	426	0,151	41,7

# KE 55/200 - SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER, FOR WATER SUPPLY IN DOMESTIC, CIVIL, AND INDUSTRIAL ENVIRONMENTS

Pumped liquid temperature range: from -15 °C to +80 °C - Maximum ambient temperature: +40 °C



See hydraulic efficiency details on page 241.

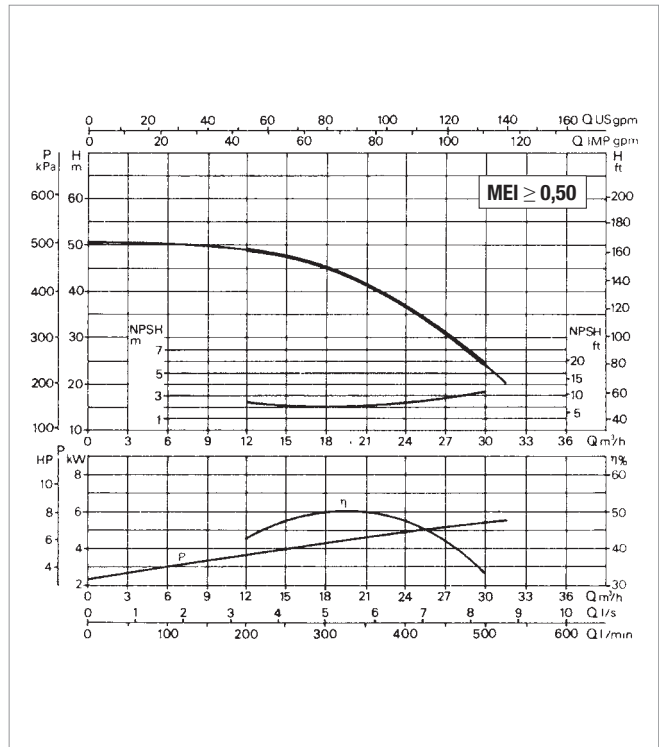
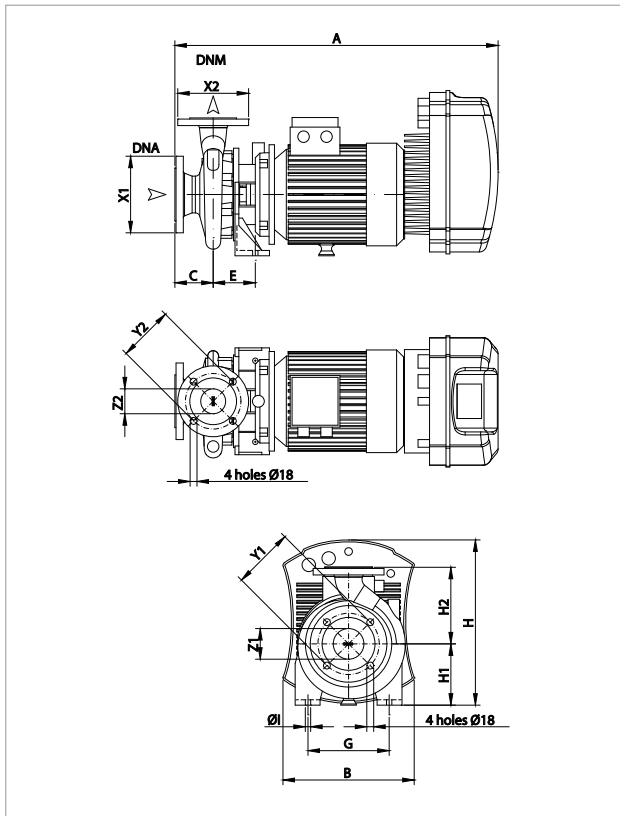
The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

MODEL	ELECTRICAL DATA					
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	r.p.m.
			kW	HP		
KE 55/200 T MCE55/P	3 x 400V	5,3	4	5,5	10,90	2871

MODEL	A	B	C	E	G	I	H	H1	H2	DNA			DNM			PACKING DIMENSIONS			VOLUME (m <sup>3</sup> )	WEIGHT kg		
										X1	Y1	Z1	X2	Y2	Z2	L/A	L/B	H				
KE 55/200 T MCE55/P	625	267	55	86	175	14	357	135	185	G 2"	-	-	-	G 1" ¼	-	-	-	826	430	426	0,151	41,7

# KE 40/400 - SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER, FOR WATER SUPPLY IN DOMESTIC, CIVIL, AND INDUSTRIAL ENVIRONMENTS

Pumped liquid temperature range: from -15 °C to +80 °C - Maximum ambient temperature: +40 °C



See hydraulic efficiency details on page 241.

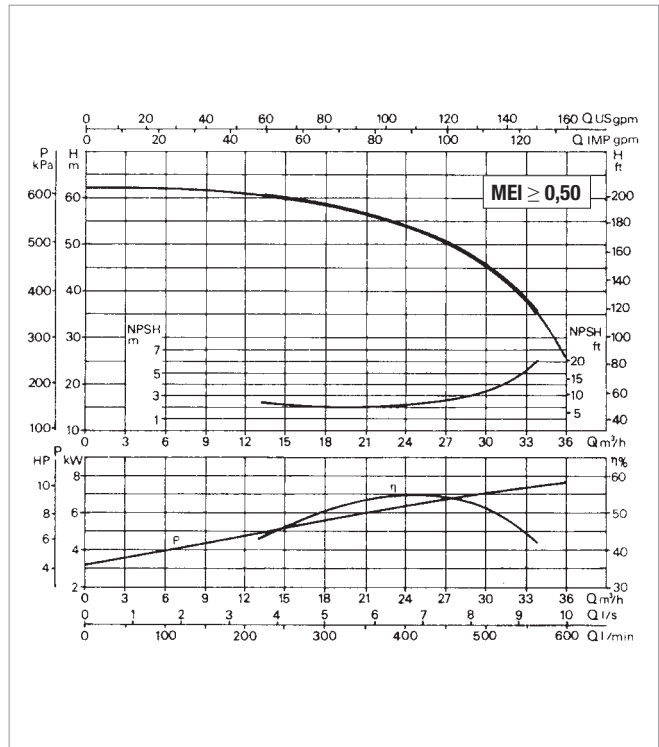
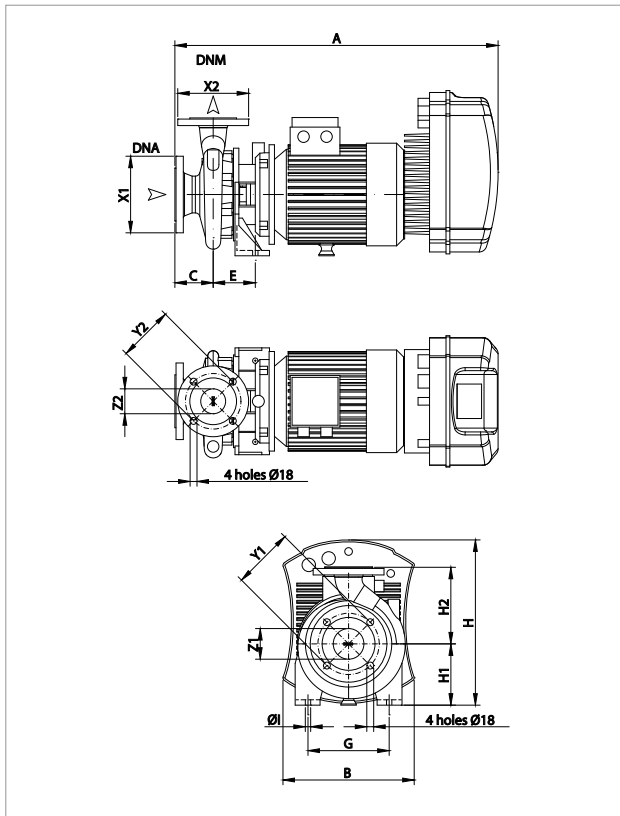
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

MODEL	ELECTRICAL DATA					
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	r.p.m.
			kW	HP		
KE 40/400 T MCE55/P	3 x 400 V	6,7	5,5	7,5	14,67	2938

MODEL	A	B	C	E	G	I	H	H1	H2	DNA			DNM			PACKING DIMENSIONS			VOLUME (m³)	WEIGHT kg		
										X1	Y1	Z1	X2	Y2	Z2	L/A	L/B	H				
KE 40/400 T MCE55/P	768	273	100	110	212	14	360	160	200	-	185	145	65	-	165	125	50	826	430	426	0,151	86,6

# KE 50/400 - SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER, FOR WATER SUPPLY IN DOMESTIC, CIVIL, AND INDUSTRIAL ENVIRONMENTS

Pumped liquid temperature range: from -15 °C to +80 °C - Maximum ambient temperature: +40 °C



See hydraulic efficiency details on page 241.

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

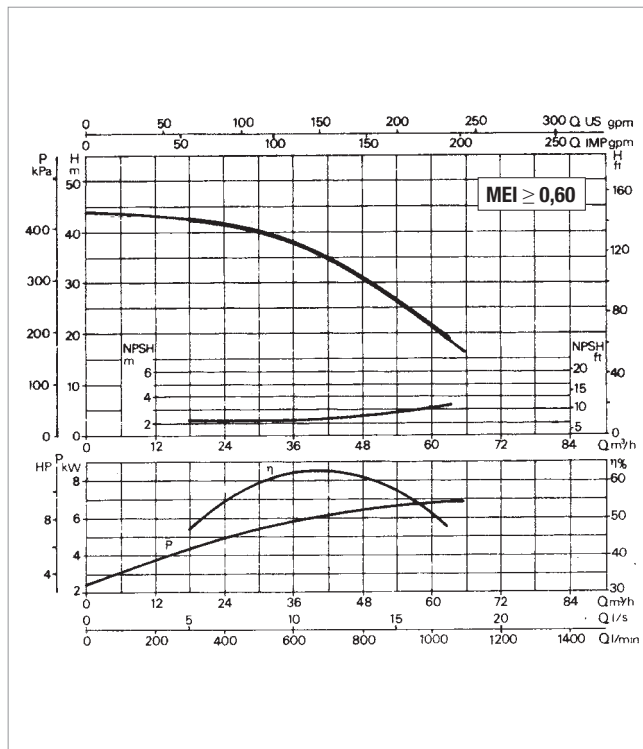
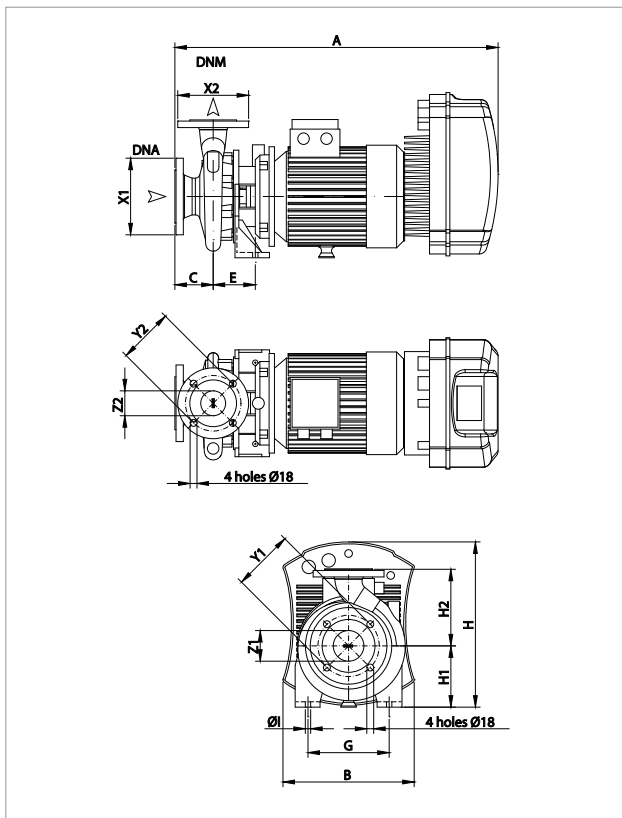
MODEL	ELECTRICAL DATA					
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	r.p.m.
			kW	HP		
KE 50/400 T MCE110/P	3 x 400V	8,9	7,5	10	18,74	2935

MODEL	A	B	C	E	G	I	H	H1	H2	DNA			DNM			PACKING DIMENSIONS			VOLUME (m <sup>3</sup> )	WEIGHT kg		
										X1	Y1	Z1	X2	Y2	Z2	L/A	L/B	H				
KE 50/400 T MCE110/P	818	341	100	110	212	14	428	160	200	-	185	145	65	-	165	125	50	1026	530	546	0,297	91,7



# KE 30/800 - SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER, FOR WATER SUPPLY IN DOMESTIC, CIVIL, AND INDUSTRIAL ENVIRONMENTS

Pumped liquid temperature range: from -15 °C to +80 °C - Maximum ambient temperature: +40 °C



See hydraulic efficiency details on page 241.

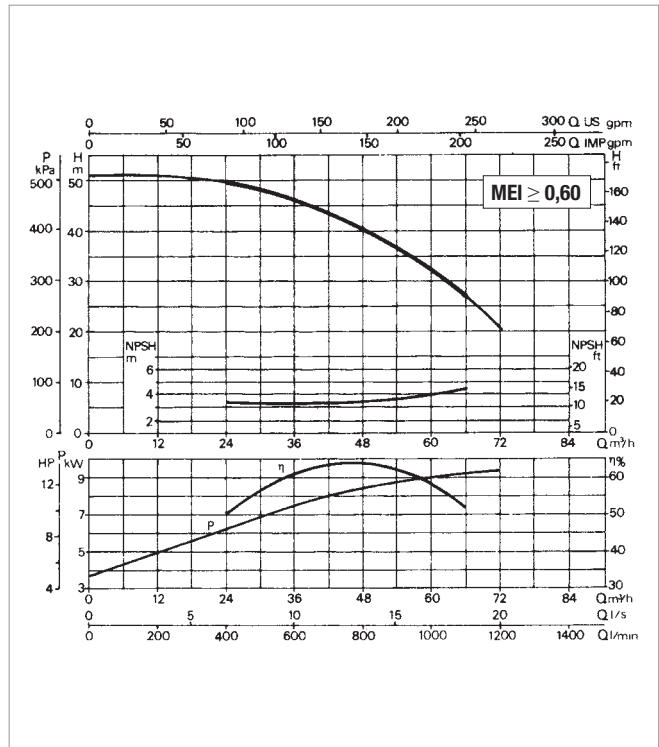
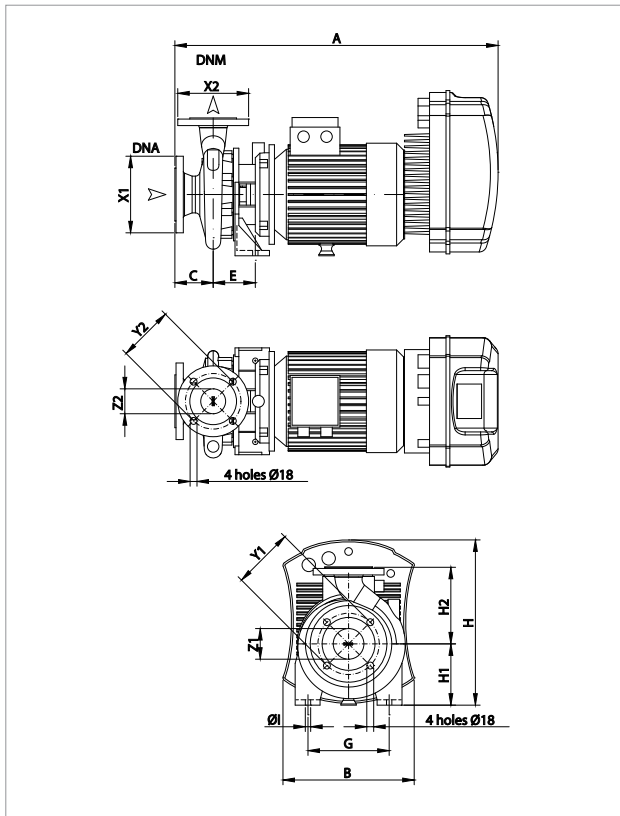
The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

MODEL	ELECTRICAL DATA					
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	r.p.m.
			kW	HP		
KE 30/800 T MCE110/P	3 x 400V	8,5	7,5	10	18,19	2936

MODEL	A	B	C	E	G	I	H	H1	H2	DNA			DNM			PACKING DIMENSIONS			VOLUME (m <sup>3</sup> )	WEIGHT kg		
										X1	Y1	Z1	X2	Y2	Z2	L/A	L/B	H				
KE 30/800 T MCE110/P	858	341	100	110	212	14	428	160	225	-	200	160	80	-	185	145	65	1026	530	546	0,297	103,1

# KE 40/800 - SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER, FOR WATER SUPPLY IN DOMESTIC, CIVIL, AND INDUSTRIAL ENVIRONMENTS

Pumped liquid temperature range: from -15 °C to +80 °C - Maximum ambient temperature: +40 °C



See hydraulic efficiency details on page 241.

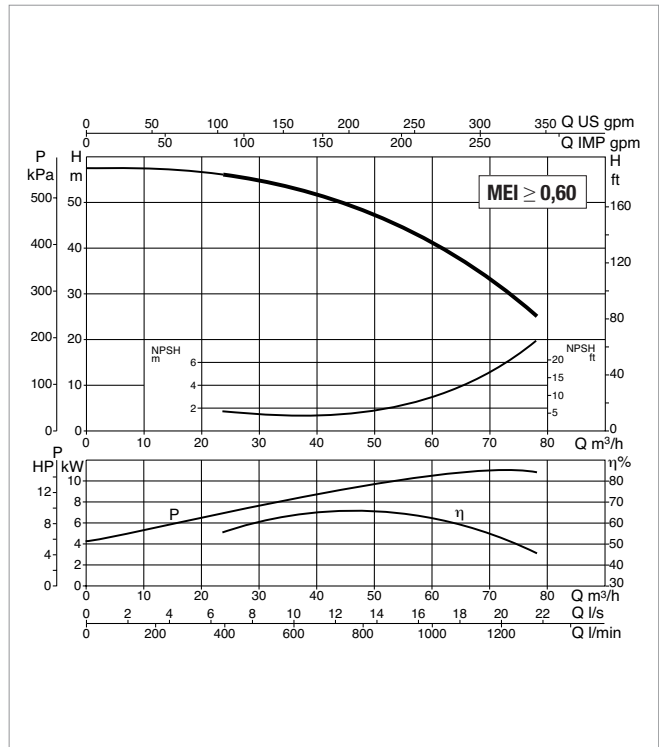
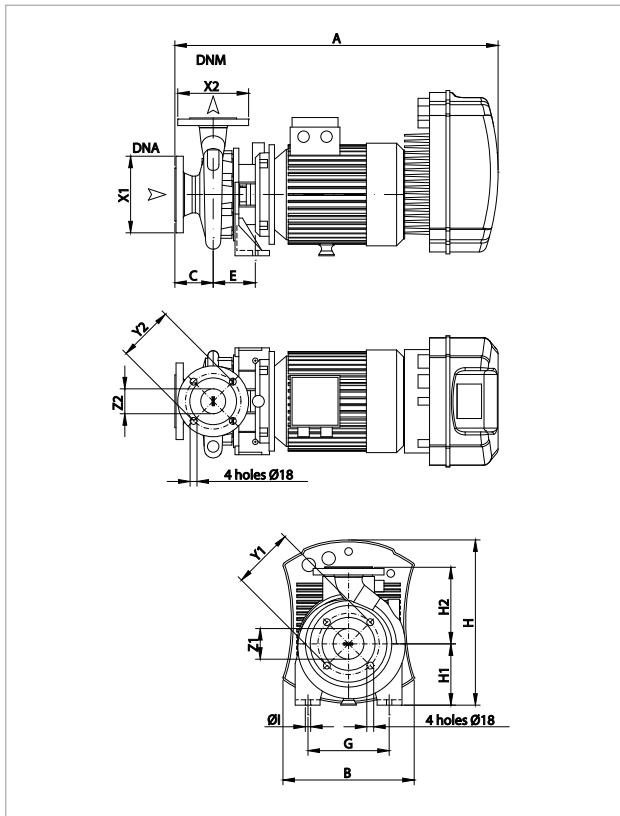
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

MODEL	ELECTRICAL DATA					
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	r.p.m.
			kW	HP		
KE 40/800 T MCE110/P	3 x 400 V	10,4	9,2	12,5	21,48	2941

MODEL	A	B	C	E	G	I	H	H1	H2	DNA			DNM			PACKING DIMENSIONS			VOLUME (m³)	WEIGHT kg		
										X1	Y1	Z1	X2	Y2	Z2	L/A	L/B	H				
KE 40/800 T MCE110/P	858	341	100	110	212	14	428	160	225	-	200	160	80	-	185	145	65	1026	530	546	0,297	107,9

# KE 50/800 - SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER, FOR WATER SUPPLY IN DOMESTIC, CIVIL, AND INDUSTRIAL ENVIRONMENTS

Pumped liquid temperature range: from -15 °C to +80 °C - Maximum ambient temperature: +40 °C



See hydraulic efficiency details on page 241.

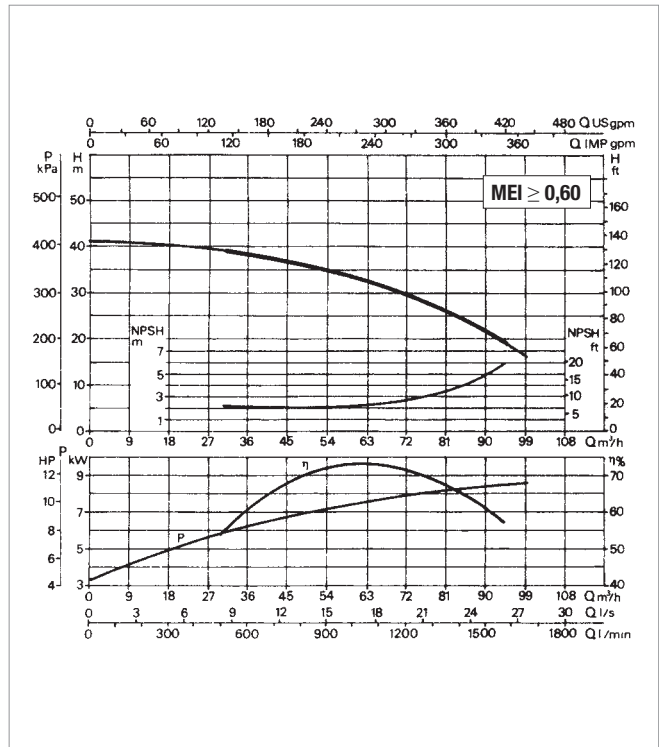
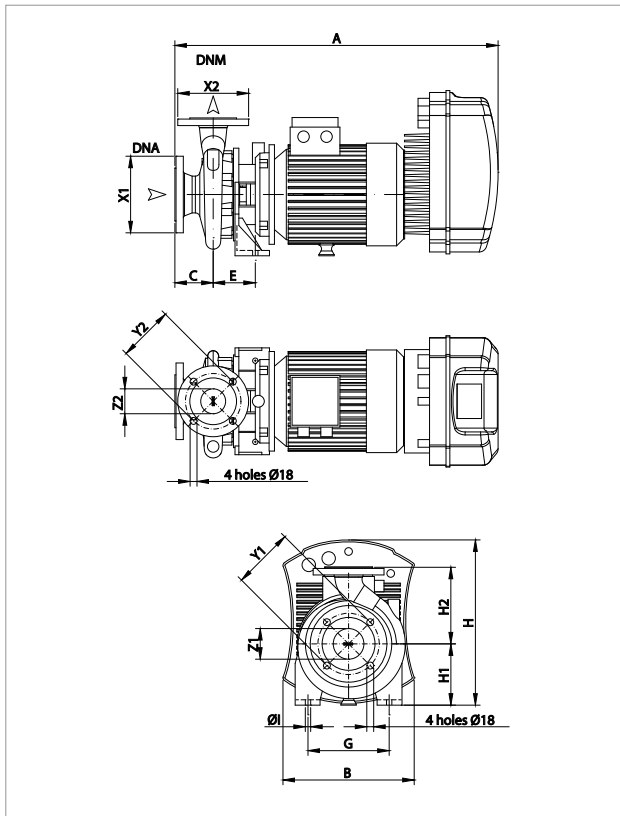
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

MODEL	ELECTRICAL DATA					
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	r.p.m.
			kW	HP		
KE 50/800 T MCE110/P	3 x 400V	13,5	11	15	27,49	2937

MODEL	A	B	C	E	G	I	H	H1	H2	DNA			DNM			PACKING DIMENSIONS			VOLUME (m³)	WEIGHT kg		
										X1	Y1	Z1	X2	Y2	Z2	L/A	L/B	H				
KE 50/800 T MCE110/P	858	341	100	110	212	14	428	160	225	-	200	160	80	-	185	145	65	1026	530	546	0,297	117,2

# KE 25/1200 - SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER, FOR WATER SUPPLY IN DOMESTIC, CIVIL, AND INDUSTRIAL ENVIRONMENTS

Pumped liquid temperature range: from -15 °C to +80 °C - Maximum ambient temperature: +40 °C



See hydraulic efficiency details on page 241.

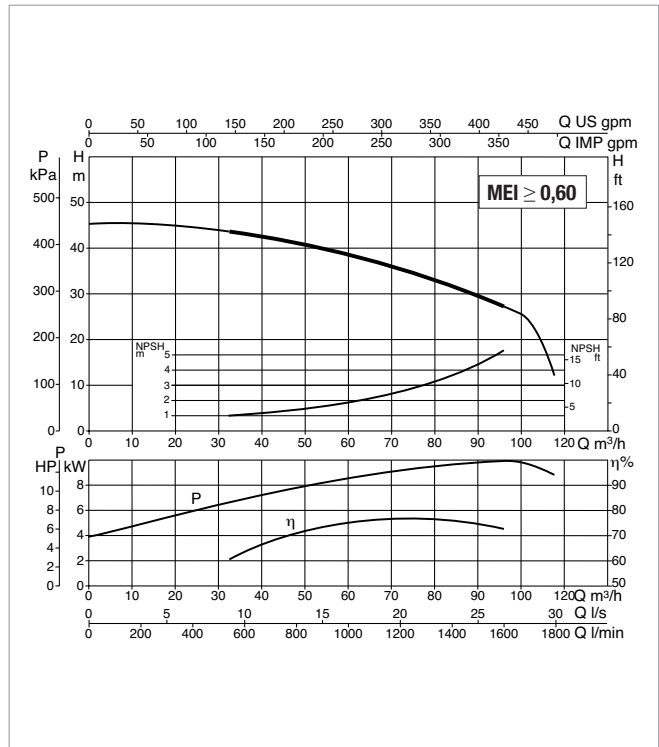
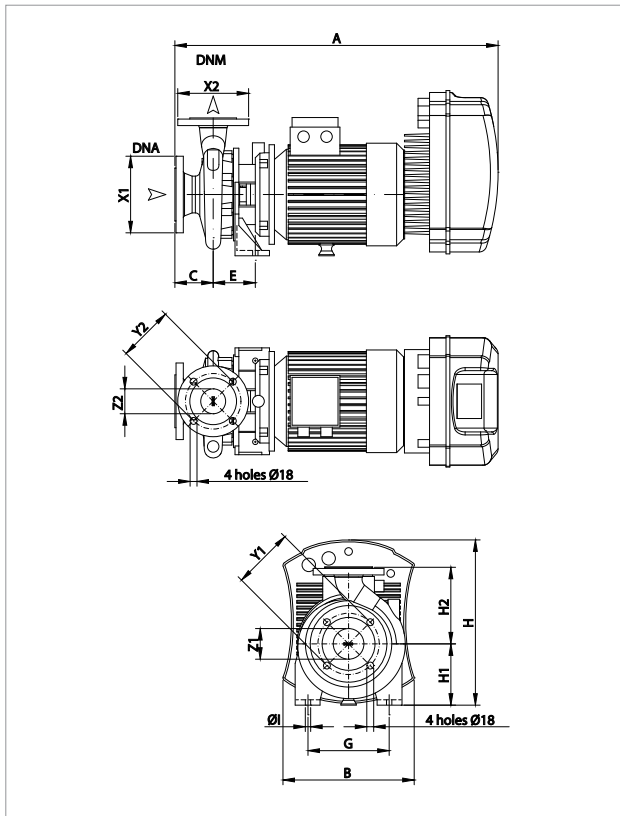
The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

MODEL	ELECTRICAL DATA					
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	r.p.m.
			kW	HP		
KE 25/1200 T MCE110/P	3 x 400 V	12,0	10	12,5	20,92	2944

MODEL	A	B	C	E	G	I	H	H1	H2	DNA			DNM			PACKING DIMENSIONS			VOLUME (m³)	WEIGHT kg		
										X1	Y1	Z1	X2	Y2	Z2	L/A	L/B	H				
KE 25/1200 T MCE110/P	858	341	100	110	212	14	428	160	225	-	200	160	80	-	185	145	65	1026	530	546	0,297	106,9

# KE 35/1200 - SINGLE-IMPELLER CENTRIFUGAL ELECTRIC PUMPS WITH MCE/P INVERTER, FOR WATER SUPPLY IN DOMESTIC, CIVIL, AND INDUSTRIAL ENVIRONMENTS

Pumped liquid temperature range: from -15 °C to +80 °C - Maximum ambient temperature: +40 °C



See hydraulic efficiency details on page 241.

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	ELECTRICAL DATA					
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	r.p.m.
			kW	HP		
KE 35/1200 T MCE110/P	3 x 400 V	11,4	12	15	25,10	2946

MODEL	DIMENSIONS										PACKING DIMENSIONS			VOLUME (m³)	WEIGHT kg							
	A	B	C	E	G	I	H	H1	H2	DNA			L/A			L/B	H					
	X1	Y1	Z1	X2	Y2	Z2	DNA	DNM	DNA	DNM												
KE 35/1200 T MCE110/P	858	341	100	110	212	14	428	160	225	-	200	160	80	-	185	145	65	1026	530	546	0,297	112,9