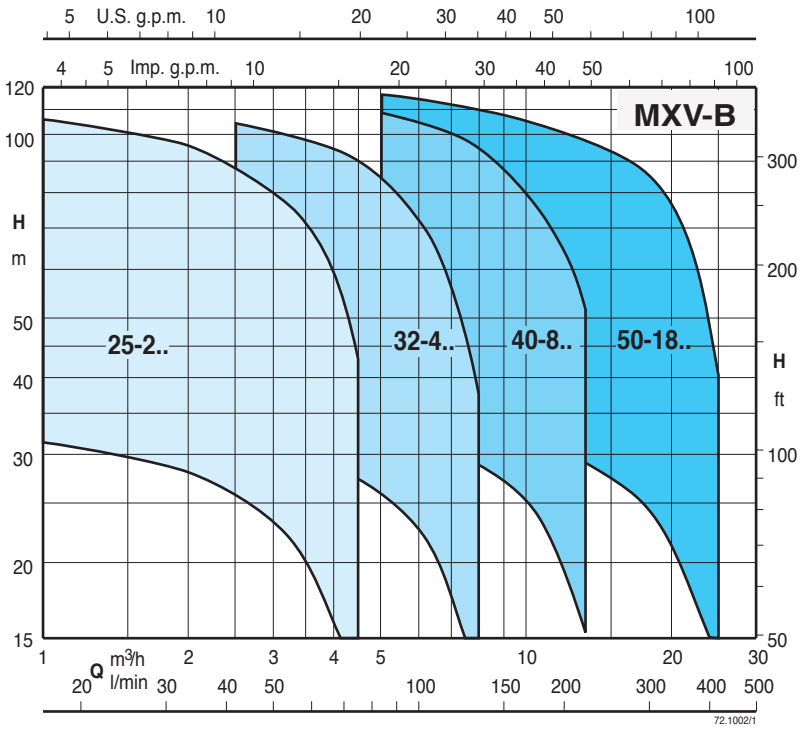
MXV-B

Vertical Multi-Stage Close Coupled Pumps

The electropumps MXV-B.. series comply with the European Regulation no. 547/2012 in force starting from 01.01.2013.

Coverage chart n ≈ 2900 rpm



Construction

Vertical multi-stage close coupled pumps with suction and delivery connections of the same diameter and arranged along the same axis (in-line).
All parts that come into contact with the liquid, including wet-end covers, are in chrome-nickel stainless steel with corrosion-resistant bearing sleeves lubricated by the pumped liquid.

Applications

For water supply systems.
For clean non-explosive liquids, without solid, filamentary or abrasive matter and non-aggressive for stainless steel (with adaptation of sealing materials on request).
A universal pump for civil and industrial use, for pressure-boosting systems, fire-extinguishing systems, high-pressure washing plants, irrigation, agricultural uses and sport installations.

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Operating conditions

Temperature of liquid: from -15 °C to +90 °C.
Operating environment temperature: up to 40 °C.
Maximum permissible pressure in pump casing: 16 bar.

Motor

2-pole induction motor, 50 Hz (n ≈ 2900 rpm).
MXV-B: three-phase 230/400 V ± 10% up to 3 kW;
400/690 V ± 10% from 3,7 to 7,5 kW.
MXV-BM: single-phase 230 V ± 10%,
with thermal protector.
Capacitor inside the terminal box.
Insulation class F. Protection IP 54.
Motor suitable for operation with frequency converter from 2,2 kW.
Classification scheme IE2 for three-phase motors.
Constructed in accordance with: EN 60034-1, EN 60034-30.
EN 60335-1, EN 60335-2-41.

Materials (wetted parts)

Component	Material
External jacket Suction casing Delivery casing Stage casing Impeller Lower cover Upper cover Spacer sleeve	Chrome-nickel steel 1.4301 EN 10088 (AISI 304)
Pump shaft Plug	Chrome-nickel steel 1.4305 EN 10088 (AISI 303)
Mechanical seal ISO 3069 - KU	Ceramic alumina/Carbon/EPDM
Wear ring	PTFE
O-ring	NBR

Special features on request

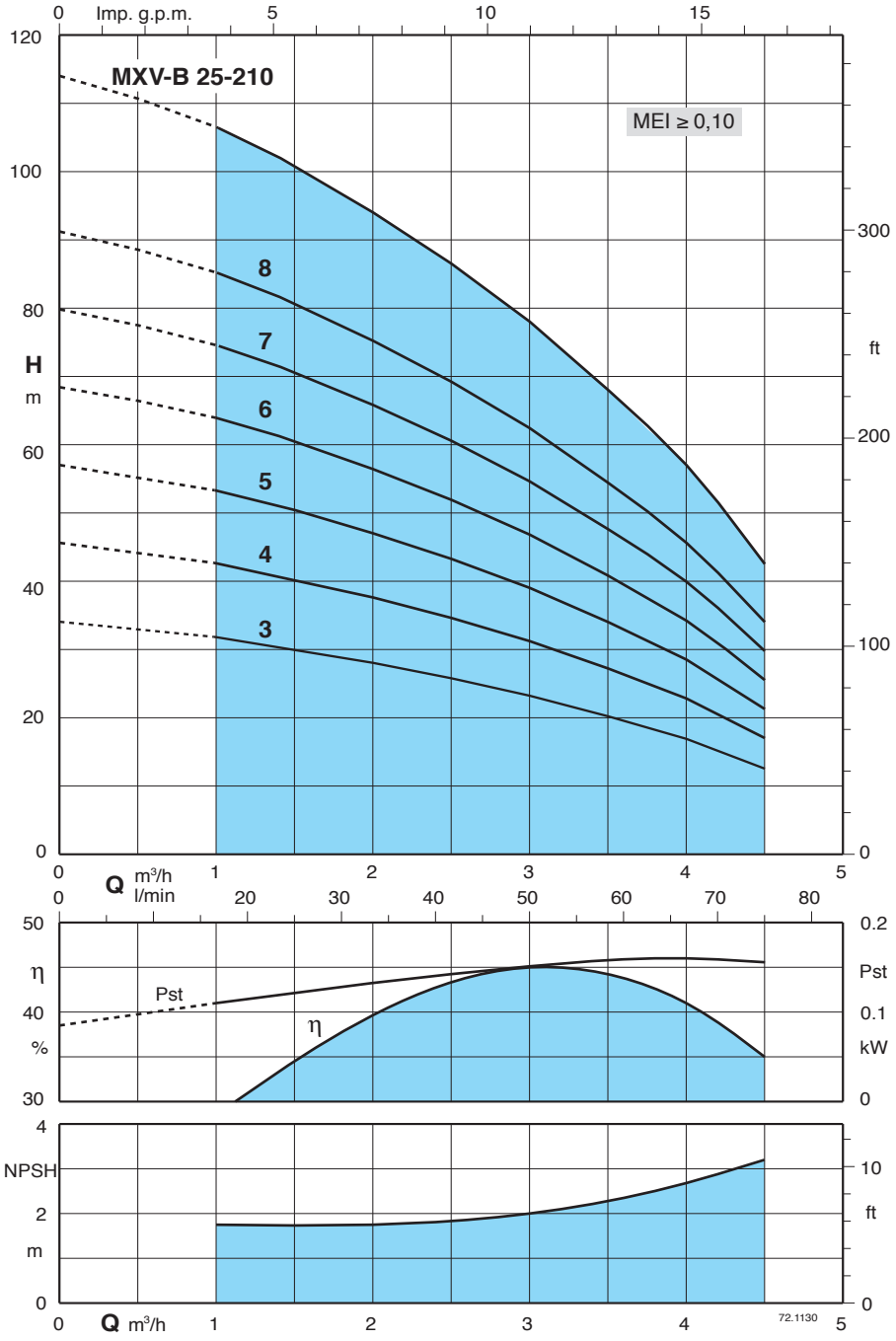
- Other voltages. - Frequency 60 Hz.
- Protection IP 55.
- Special mechanical seal
- Pump casing seal rings in FPM.
- Higher or lower liquid or ambient temperatures.
- Flanges to screw, in chrome-nickel steel.
- Motor suitable for operation with frequency converter up to 1,5 kW.

Designation

MXV-B M 25-205

Series
Single-phase motor (up to 2.2 kW)
DN ports in mm
Rated capacity in m³/h
Number of stages

Characteristic curves and performance n ≈ 2900 rpm



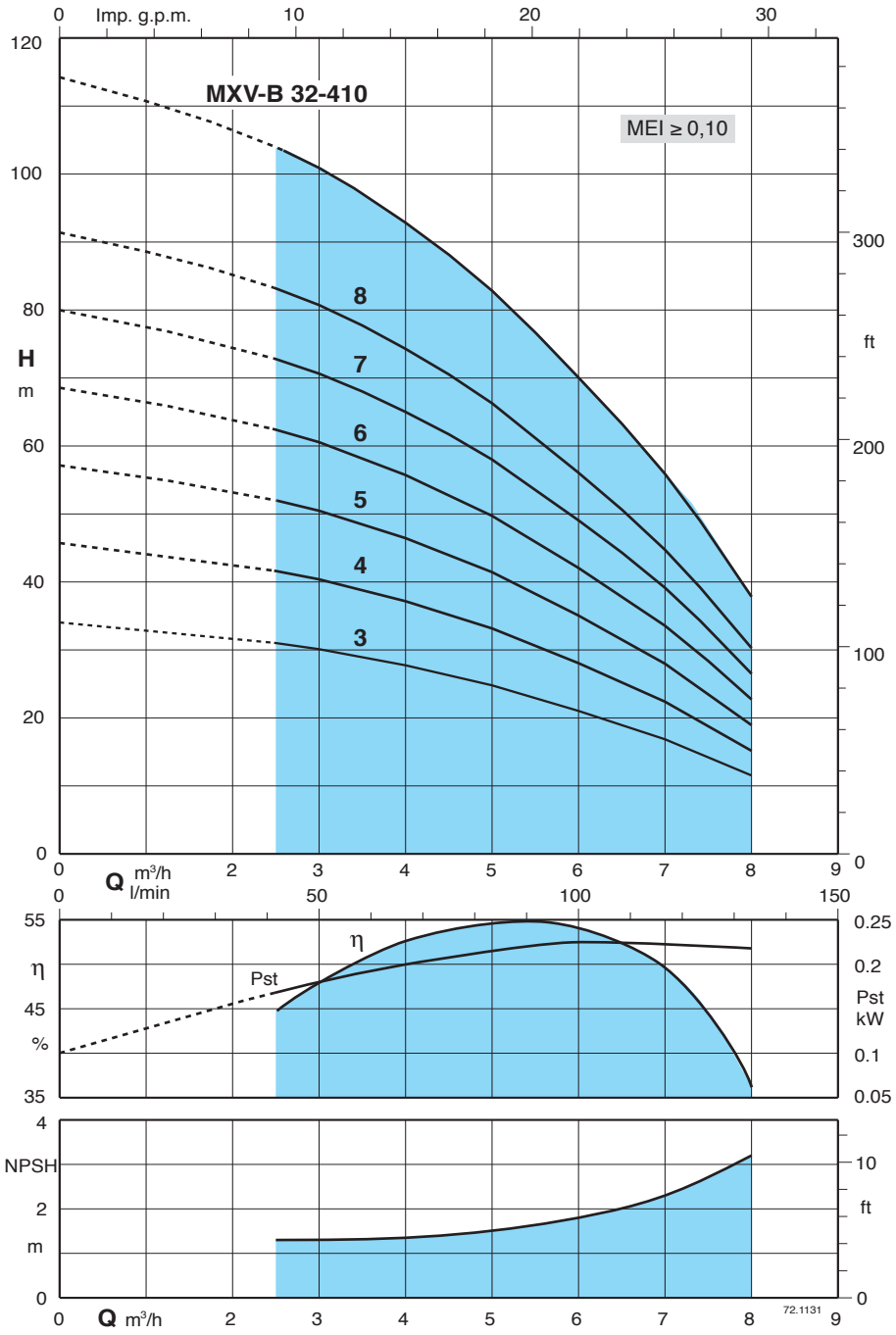
Test results with clean cold water, without gas content.
A safety margin of + 0.5 m is recommended for the NPSH value.
Tolerances in accordance with UNI EN ISO 9906:2012

Head and power values valid for liquids with density ρ = 1,0 kg/dm³ and kinematic viscosity ν = max 20 mm²/sec.

Pst = Power with reference to one stage.
P_1 Max. power input.
P_2 Rated motor power output.

3 ~	230 V	400 V	1 ~	230 V	P_1	P_2		m^3/h	0	1	1,5	2	2,5	3	3,5	4	4,5
	A	A		A	kW	kW	HP	Q l/min	0	16,6	25	33,3	41,6	50	58,3	66,6	75
MXV-B 25-203	3,3	1,9	MXV-BM 25-203	5,8	1,1	0,75	1		34	32	30	28	26	23,5	20,5	17	12,5
MXV-B 25-204	3,3	1,9	MXV-BM 25-204	5,8	1,1	0,75	1		44	42,5	40	37,5	34,5	31	27	22,5	17
MXV-B 25-205	3,3	1,9	MXV-BM 25-205	5,8	1,1	0,75	1		56	53	50	47	43	39	34	28	21
MXV-B 25-206	4,7	2,7	MXV-BM 25-206	7,4	1,5	1,1	1,5	H	68	63,5	60,5	56	51,5	46,5	40,5	34	25
MXV-B 25-207	4,7	2,7	MXV-BM 25-207	7,4	1,6	1,1	1,5	m	79,5	74	70,5	65,5	60	54,5	47,5	39,5	30
MXV-B 25-208	7,5	4,3	MXV-BM 25-208	9,2	2	1,5	2		91	85	80,5	75	69	62	54	45,5	34
MXV-B 25-210	7,5	4,3	MXV-BM 25-210	9,2	2,3	1,5	2		114	106	101	94	86	78	68	57	42

Characteristic curves and performance n ≈ 2900 rpm



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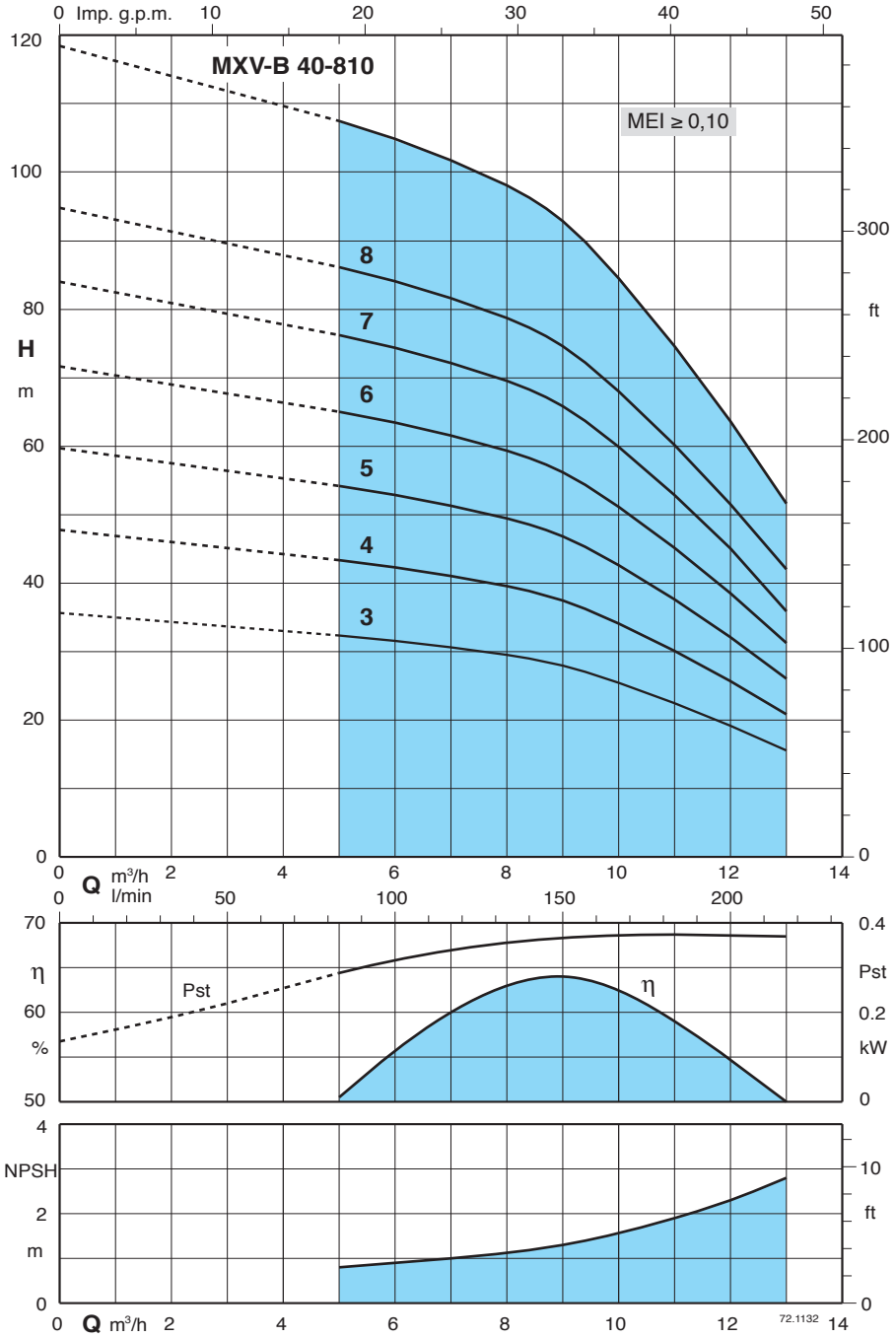
P_1 Max. power input.
P_2 Rated motor power output.

3 ~	230 V	400 V	1 ~	230 V	P_1	P_2		m³/h	0	2,5	3	3,5	4	4,5	5	6	7	8
	A	A		A	kW	kW	HP	Q l/min	0	41,6	50	58,3	66,6	75	83,3	100	116,6	133,3
MXV-B 32-403	3,3	1,9	MXV-BM 32-403	5,8	1,1	0,75	1		34	31	30,5	29	28	26,5	25	21	17	11,5
MXV-B 32-404	4,7	2,7	MXV-BM 32-404	7,4	1,5	1,1	1,5		45	41,5	40	38,5	36,5	34,5	32,5	27,5	22	14,5
MXV-B 32-405	4,7	2,7	MXV-BM 32-405	7,4	1,6	1,1	1,5		56	51,5	50	48	46	43,5	41	34,5	27,5	18,5
MXV-B 32-406	7,5	4,3	MXV-BM 32-406	9,2	2	1,5	2	H m	68	62	60	58	55,5	52,5	49,5	42	33,5	22,5
MXV-B 32-407	7,5	4,3	MXV-BM 32-407	9,2	2,3	1,5	2		79,5	72,5	70,5	68	65	61,5	58	49	39	26,5
MXV-B 32-408/A	9,15	5,3				2,2	3		91	83	80,5	78	74	70	66	56	44,5	30
MXV-B 32-410/A	9,15	5,3				2,2	3		114	104	101	97,5	93	88	83	70	56	38

Characteristic curves and performance n ≈ 2900 rpm



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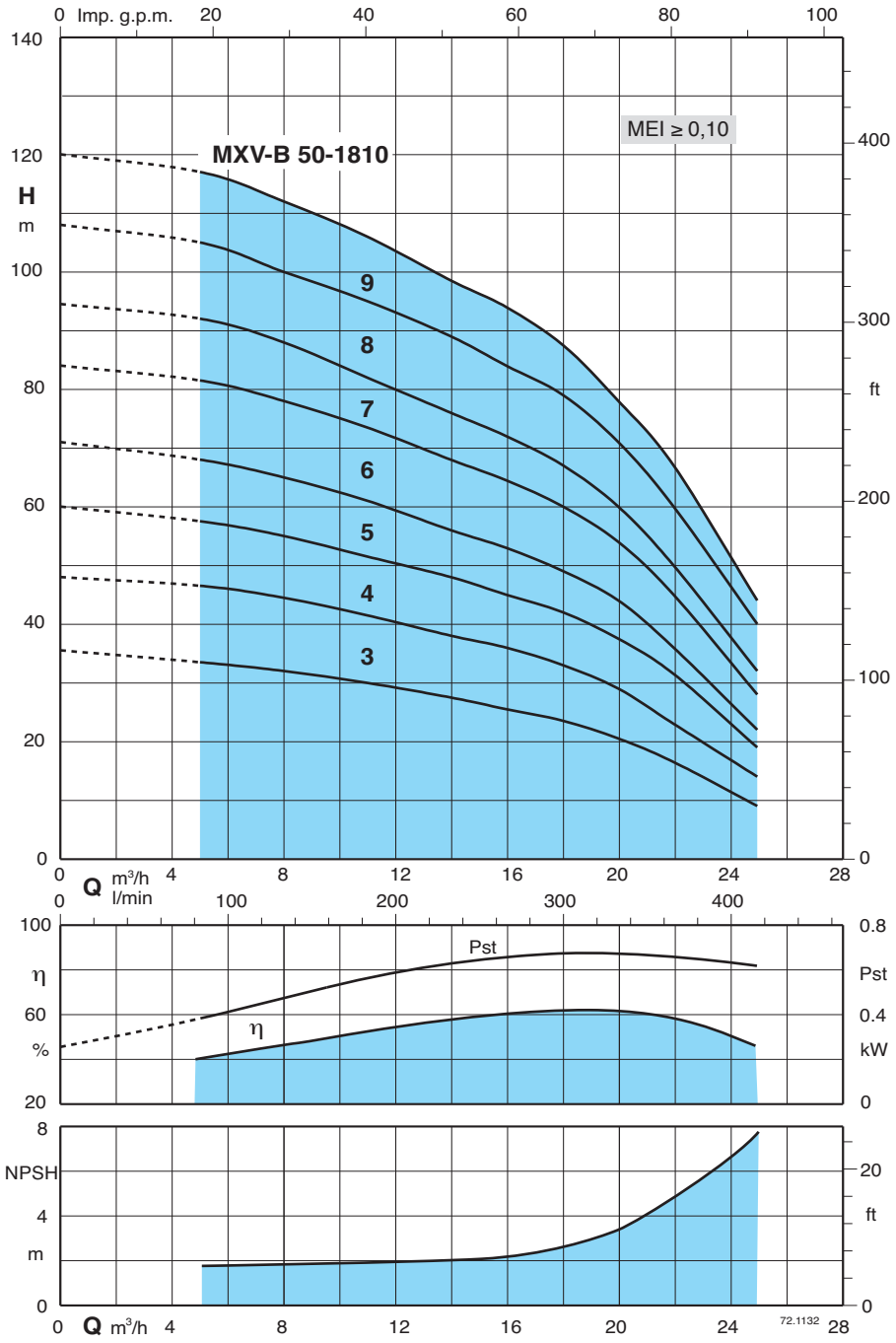
P_1 Max. power input.
P_2 Rated motor power output.

3 ~	230 V	400 V	1 ~	230 V	P_1	P_2		m³/h	0	5	6	7	8	9	10	11	12	13
	A	A		A	kW	kW	HP	Q l/min	0	83,3	100	116,6	133,3	150	166,6	183,3	200	216,6
MXV-B 40-803	4,7	2,7	MXV-BM 40-803	7,4	1,6	1,1	1,5		35,5	32,5	31,5	31	29,5	28	25,5	22,5	19,5	15,5
MXV-B 40-804	7,5	4,3	MXV-BM 40-804	9,2	2,3	1,5	2	H m	47	43	42	41	40	37	34	30	26	21
MXV-B 40-805/A	9,15	5,3				2,2	3		59	54	53	51	50	47	43	38	32	26
MXV-B 40-806/A	9,15	5,3				2,2	3		71	65	63	62	59	56	51	45	39	31
MXV-B 40-807/A	11,5	6,6				3	4		83	76	74	72	69	66	60	53	45	36
MXV-B 40-808/A	11,5	6,6				3	4		95	87	85	82	79	75	69	60	51	42
MXV-B 40-810/A		9,6				3,7	5		119	109	106	103	99	94	86	75	64	52

Characteristic curves and performance n ≈ 2900 rpm



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Pst = Power with reference to one stage.
P_1 Max. power input.
P_2 Rated motor power output.

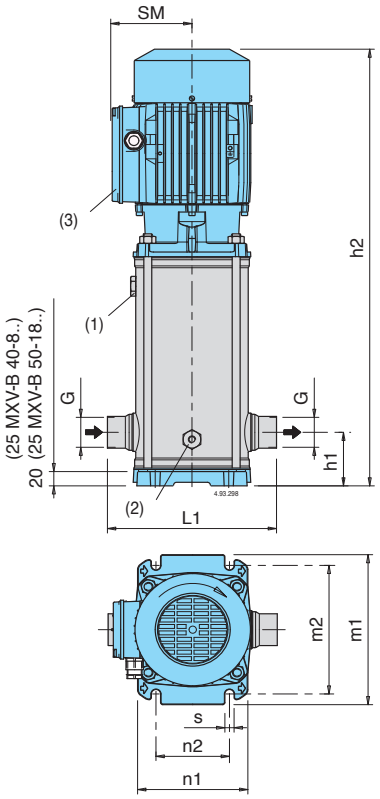
3 ~	230 V	400 V		P_2		m^3/h Q	0	5	8	11	14	16	18	20	22	25
	A	A		kW	HP	l/min	0	83,3	133,3	183,3	233	266	300	333	366	416
MXV-B 50-1803/A	9,15	5,3		2,2	3		35,5	33,5	32	30	27,5	25,5	23,5	20,5	16,5	9
MXV-B 50-1804/A	11,5	6,6		3	4		48	46,5	44,5	41,5	38	36	33	29	23	14
MXV-B 50-1805/A		9,6		3,7	5		60	57,5	55	51,5	48	45	42	37,5	31,5	19
MXV-B 50-1806/A		9,6		4	5,5		71	68	65	61	56	53	49	44	36	22
MXV-B 50-1807/A		10,9		5,5	7,5	H m	84	81,5	78	73,5	68	64,5	60	54	45	28
MXV-B 50-1808/A		10,9		5,5	7,5		94,5	92	88	82	76	72	68	60	50	32
MXV-B 50-1809/A		14,3		7,5	10		108	105	100	95	89	84	79	71	60	40
MXV-B 50-1810/A		14,3		7,5	10		120	117	112	106	98	94	88	78	67	44

MXV-B

Vertical Multi-Stage Close Coupled Pumps

calpeda®

Dimensions and weights



(1) Filling

(2) Draining

(3) Standard position of terminal box
(for other positions rotate motor through 90° or 180°)

Pump	Motor P_2		G ISO 228	L1	mm								Net weight	
	kW	HP			h1	h2	SM	m1	m2	n1	n2	s	MXV-B kg	MXV-BM kg
MXV-B(M) 25-203	0,75	1	G 1	215	75	564	128	210	180	150	100	12,5	23	24
MXV-B(M) 25-204	0,75	1	G 1	215	75	565	128	210	180	150	100	12,5	23,5	24,5
MXV-B(M) 25-205	0,75	1	G 1	215	75	588	128	210	180	150	100	12,5	24,5	25,5
MXV-B(M) 25-206	1,1	1,5	G 1	215	75	612	128	210	180	150	100	12,5	26	27
MXV-B(M) 25-207	1,1	1,5	G 1	215	75	636	128	210	180	150	100	12,5	27	28
MXV-B(M) 25-208	1,5	2	G 1	215	75	660	128	210	180	150	100	12,5	30	31
MXV-B(M) 25-210	1,5	2	G 1	215	75	708	128	210	180	150	100	12,5	31	32
MXV-B(M) 32-403	0,75	1	G 1 1/4	215	75	564	128	210	180	150	100	12,5	24	25
MXV-B(M) 32-404	1,1	1,5	G 1 1/4	215	75	565	128	210	180	150	100	12,5	25	26
MXV-B(M) 32-405	1,1	1,5	G 1 1/4	215	75	588	128	210	180	150	100	12,5	26	27
MXV-B(M) 32-406	1,5	2	G 1 1/4	215	75	612	128	210	180	150	100	12,5	28	29
MXV-B(M) 32-407	1,5	2	G 1 1/4	215	75	636	128	210	180	150	100	12,5	29	30
MXV-B 32-408/A	2,2	3	G 1 1/4	215	75	700	128	210	180	150	100	12,5	34	-
MXV-B 32-410/A	2,2	3	G 1 1/4	215	75	748	128	210	180	150	100	12,5	35	-
MXV-B(M) 40-803	1,1	1,5	G 1 1/2	225	80	593	128	246	215	190	130	14	27	28
MXV-B(M) 40-804	1,5	2	G 1 1/2	225	80	593	128	246	215	190	130	14	28	29
MXV-B 40-805/A	2,2	3	G 1 1/2	225	80	663	128	246	215	190	130	14	33	-
MXV-B 40-806/A	2,2	3	G 1 1/2	225	80	693	128	246	215	190	130	14	34	-
MXV-B 40-807/A	3	4	G 1 1/2	225	80	746	138	246	215	190	130	14	45	-
MXV-B 40-808/A	3	4	G 1 1/2	225	80	776	138	246	215	190	130	14	49	-
MXV-B 40-810/A	3,7	5	G 1 1/2	225	80	953	138	246	215	190	130	14	49	-
MXV-B 50-1803/A	2,2	3	G 2	250	90	635	128	246	215	190	130	14	34	-
MXV-B 50-1804/A	3	4	G 2	250	90	701	138	246	215	190	130	14	44	-
MXV-B 50-1805/A	3,7	5	G 2	250	90	738	138	246	215	190	130	14	46,5	-
MXV-B 50-1806/A	4	5,5	G 2	250	90	776	138	246	215	190	130	14	47,5	-
MXV-B 50-1807/A	5,5	7,5	G 2	250	90	841	160	246	215	190	130	14	59	-
MXV-B 50-1808/A	5,5	7,5	G 2	250	90	878	160	246	215	190	130	14	60	-
MXV-B 50-1809/A	7,5	10	G 2	250	90	916	160	246	215	190	130	14	67	-
MXV-B 50-1810/A	7,5	10	G 2	250	90	953	160	246	215	190	130	14	68	-

Regulation (EU) No 547/2012

- The benchmark for most efficient water pumps is MEI ≥ 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 will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.
- The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.

Features

Wider Range of Application

All parts that come into contact with the liquid, including wet-end covers, are in chrome-nickel stainless steel.
With corrosion-resistant seal rings and guide ring.

Low Cost Installation

Vertical construction with reduced pump height for installation in small spaces.
In-line connections to simplify the piping layout with the possibility of inserting the pump in straight pipe-lines.
Disassembly, inspection or cleaning of internal parts without removal of piping.

Robust and Reliable

The suction and discharge nozzles arranged in-line absorb the forces of the piping on the pump without the creation of distorting loads causing local friction and early wears.
The lantern brackets compact and robust design maintains a sure alignment between rotating and fixed parts, reducing vibration.
The upper cover design prevents entrapment of air around the mechanical seal.

Low-Noise Operation

The water filled shroud around the stages and thick external walls, work together for low-noise operation.