



Construction

Vertical multi-stage pumps with suction and delivery connections of the same diameter and arranged along the same axis (in-line). Corrosion-resistant bearing sleeves lubricated by the pumped liquid. Removal of the mechanical seal without dismantling the motor (for MXV 50, MXV 100 with motors exceeding 4 kW). A pump with thrust bearing and sleeve coupling for use of any standard motor with IM V1 construction.

Version with frequency converter (on request)

Applications

For water supply systems. For clean non-explosive liquids, without solid, filamentary or abrasive matter (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.

Operating conditions

Temperature of liquid: from -15 °C to +110 °C (up to +120 °C for MXV 50).

Operating environment temperature: up to 40 °C.

Maximum permissible pressure in pump casing: 25 bar. (16 bar for pumps with oval flanges).

Motor

Standard-type: 2-pole induction motor, 50 Hz (n ≈ 2900 rpm). Construction IM V1 (EN 60034-7).

Motor suitable for operation with frequency converter.

Classification scheme IE3 for three-phase motors.

Insulation class F.

Protection IP 55.

three-phase with rated voltage: up to 3 kW 230/400 V; from 4 kW 400/690 V.

The electropumps MXV series comply with the European Regulation no. 547/2012.

MXV 25, 32, 40, 50

All parts that come into contact with the liquid, including wet-end covers, are in chrome-nickel stainless steel AISI 304.

Materials (wetted parts)

Component	Material
Flange External jacket Suction casing Delivery casing Stage casing Impeller Lower cover Upper cover Spacer sleeve	Stainless Steel 1.4301 EN 10088 (AISI 304)
Pump shaft Plug	Stainless Steel 1.4305 EN 10088 (AISI 303) (for MXV 50 AISI 304)
Bearing sleeve Bearing in stage casing	Corrosion-resistant, cemented carbide Ceramic alumina
Mechanical seal ISO 3069 - KU	Hard metal/Carbon/EPDM.
Wear ring	PPS (PTFE for MXV 40)
O-rings	NBR (EPDM for MXV 50)

Direction of rotation: clockwise as seen from the motor.

Variants (to be specified when ordering)

- Pump with threaded ports (G) (for MXV 25, 32, 40).
- Pump with flanged ports (F).
- Pump with oval flange ports (O) (for MXV 50).
- Pump without motor.
- Pump with standard motor.

Other variants (on request)

- With counter-flanges in chrome-nickel steel.
- O-rings FPM. Other mechanical seal.
- Pump with motor of Client's choice (if available).
- Single-phase motor 230 V, up to 2.2 kW.
- Other voltage ratings.
- Frequency 60 Hz.

MXV 65, 80, 100

Internal parts in contact with the liquid in chrome-nickel stainless steel, AISI 304 with pump casing and upper cover in cast iron.

Materials (wetted parts)

Component	Material
Pump casing Upper cover	Cast iron GJL 250 EN 1561
External jacket Stage casing Impeller Spacer sleeve	Stainless Steel 1.4301 EN 10088 (AISI 304)
Pump shaft Plug	Stainless Steel (AISI 303)(AISI 431 for MXV 100) Stainless Steel (AISI 303)(AISI 304 for MXV 100)
Bearing sleeve Bearing in stage casing	Corrosion-resistant, cemented carbide Ceramic alumina (Corrosion-resistant, cemented carbide for MXV 100)
Mechanical seal ISO 3069 - KU	Hard metal/Carbon/EPDM
Wear ring	PTFE
O-rings	NBR (EPDM for MXV 100)

Direction of rotation: anticlockwise as seen from the motor. (clockwise as seen from the motor for MXV 100)

Variants (to be specified when ordering)

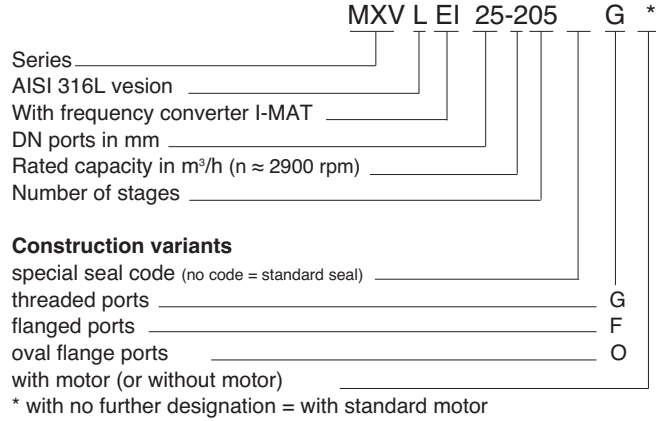
- Pump without motor.
- Pump with standard motor.

Other variants (on request)

- O-rings FPM. Other mechanical seal.
- Pump with motor of Client's choice (if available).
- Other voltage ratings.
- Frequency 60 Hz.
- Pump with support feet for horizontal installation (H1 or H2).
- Support feet for horizontal installation, set.
- Welding counter-flanges, PN 25 (steel).

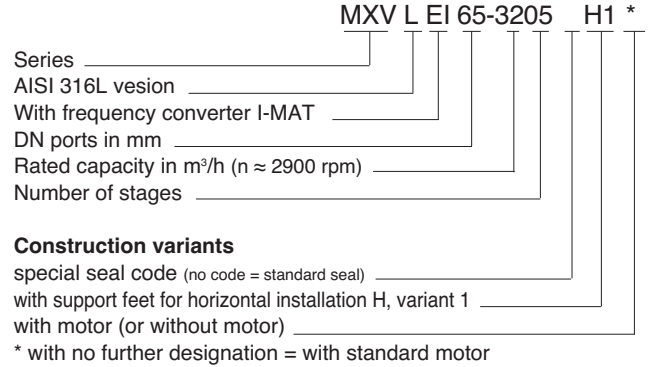
MXV 25, 32, 40, 50

Designation

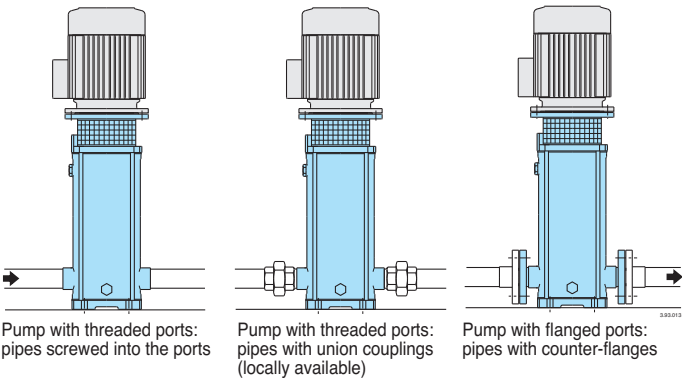


MXV 65, 80, 100

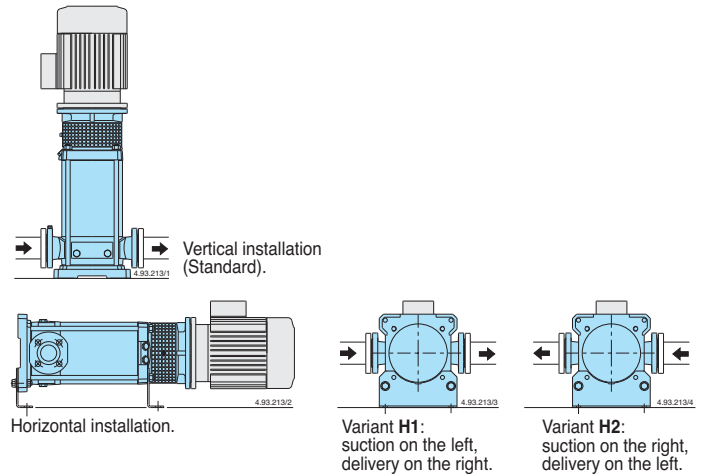
Designation



Pipe connection



Installations



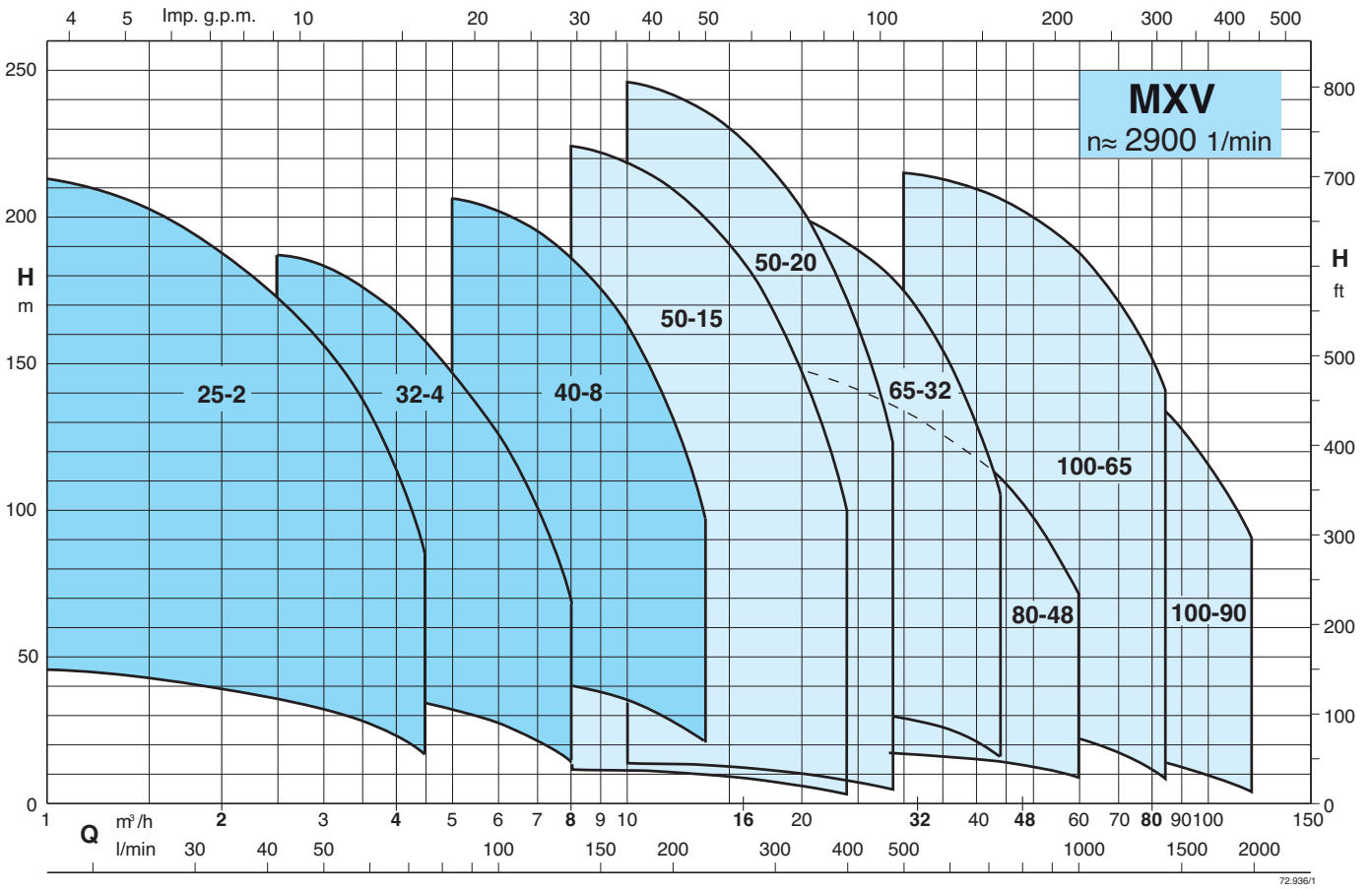
Variable parts

Pump size MXV			Number of stages	Stage casings with bearing
25-204	32-404	40-804	4	1
25-205	32-405	40-805	5	1
25-206	32-406	40-806	6	1
25-207	32-407	40-807	7	1
25-208	32-408	40-808	8	1
25-210	32-410	40-810	10	1
25-212	32-412	40-811	11	2
25-214	32-414	40-813	12	2
25-216	32-416	40-815	13	2
25-218	32-418	40-815	14	2
25-220	32-418	40-817	15	2
		40-819	16	2
		40-817	17	2
		40-819	18	2
			19	3
			20	3

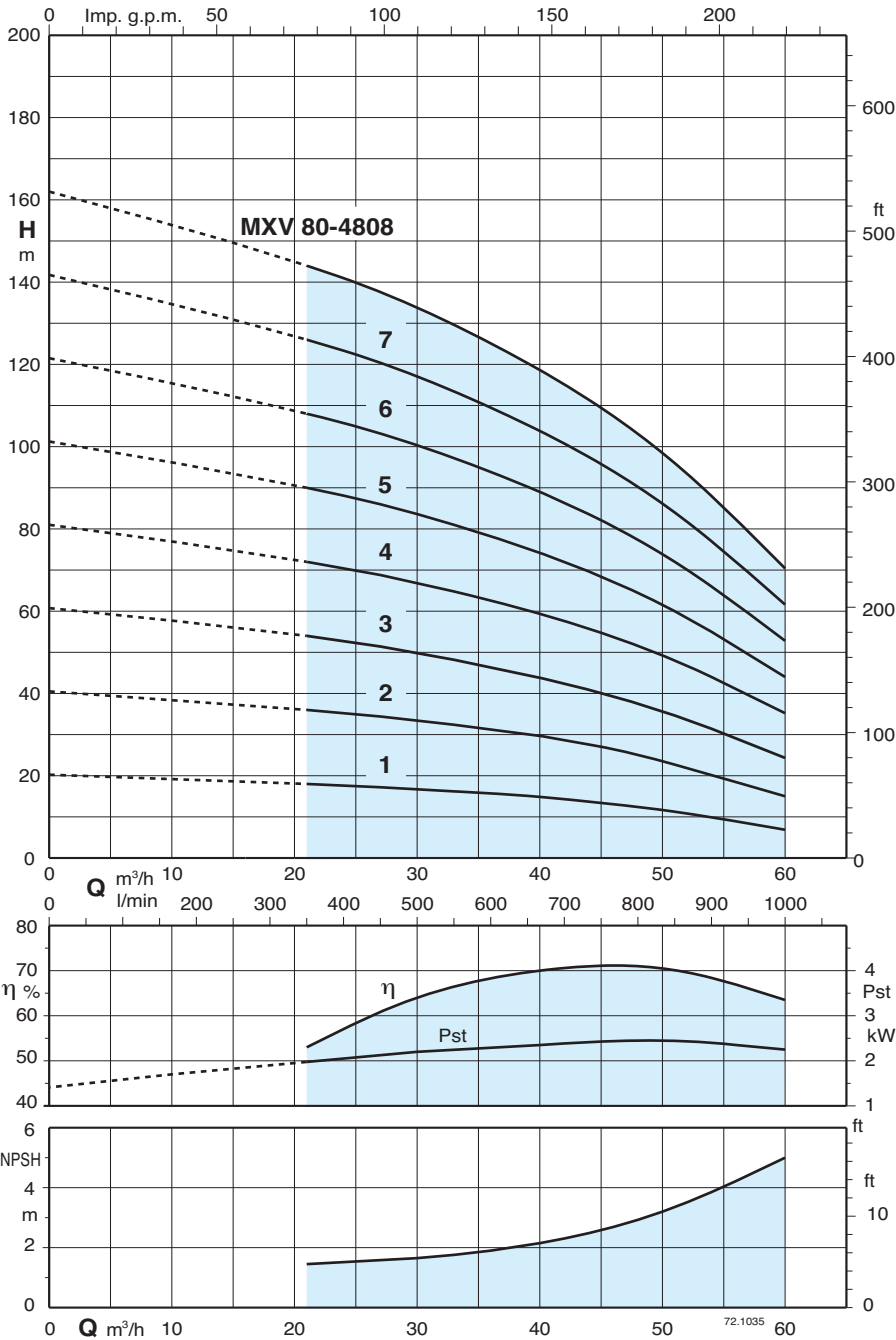
Variable parts

Pump size MXV				Number of stages	Stage casings with bearing
50-1501	50-2001	65-3202	80-4801	1	1
50-1502	50-2002	65-3202	80-4802	2	1
50-1503	50-2003	65-3203	80-4803	3	1
50-1504	50-2004	65-3204	80-4804	4	1
50-1505	50-2005	65-3205	80-4805	5	1
50-1506	50-2006	65-3206		6	1
50-1507	50-2007	65-3207		7	1
50-1508	50-2008	65-3207		8	1
		65-3208	80-4806	6	2
		65-3209	80-4807	7	2
		65-3210	80-4808	8	2
50-1509	50-2009			9	2
50-1510	50-2010			10	2
50-1511	50-2011			11	2
50-1512	50-2012	65-3212		12	2
50-1513	50-2013			13	2
50-1514	50-2014			14	3
50-1515	50-2015			15	3
50-1516	50-2016			16	3
50-1517	50-2017			17	3

Coverage chart



Characteristic curves and performance $n \approx 2900$ 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

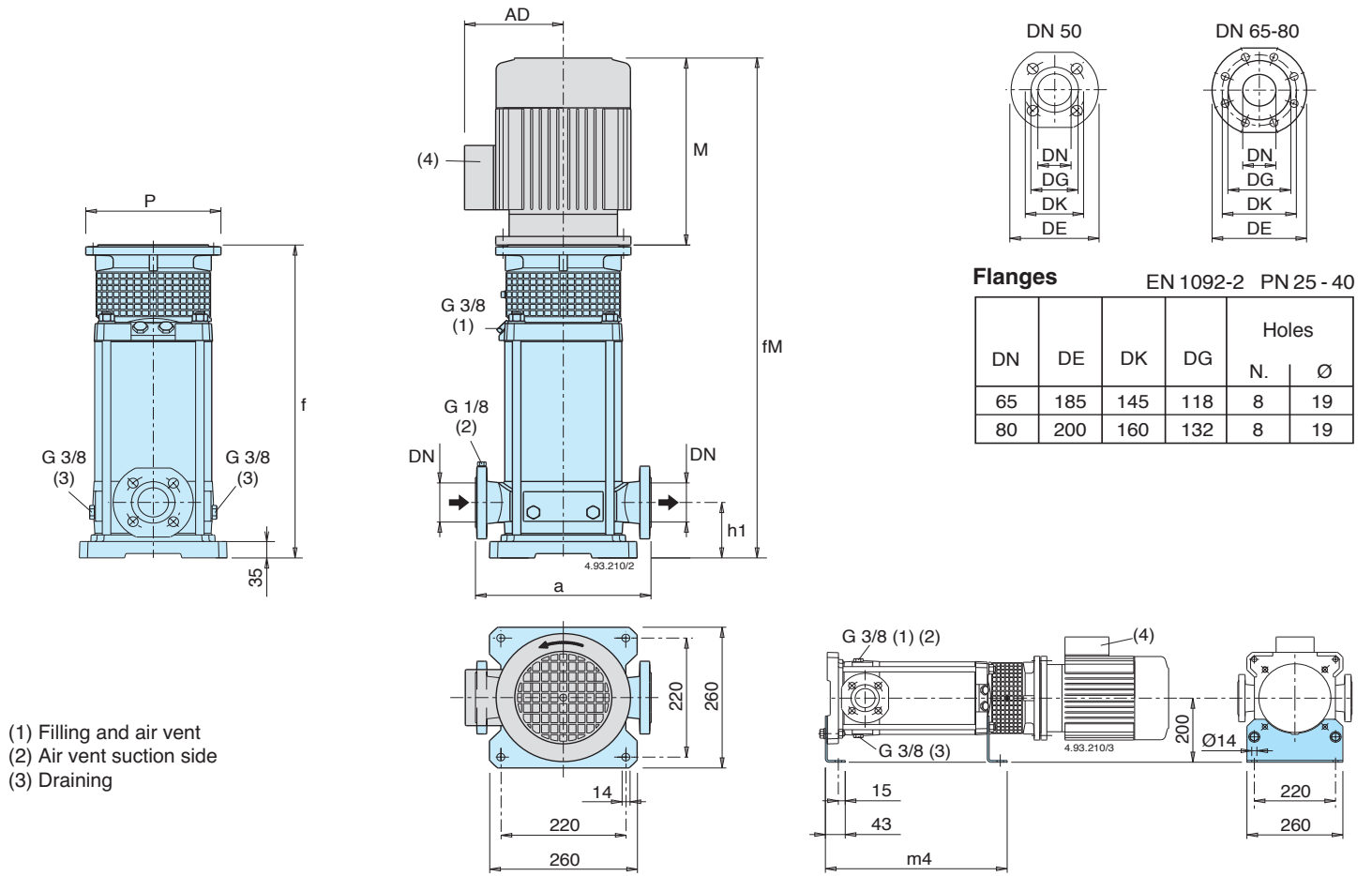
Head and power values valid for liquids with density $\rho = 1,0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = \text{max } 20 \text{ mm}^2/\text{sec}$.

Pst = Power with reference to one stage.

A* Calpeda motor currents

Pump type	Motor power		Q m³/h l/min	H m										
	230 V A*	400 V A*		kW	HP	0	21	27	33	39	45	48	51	54
MXV 80-4801/D		9,6	4	5,5	0	350	450	550	650	750	800	850	900	1000
MXV 80-4802/C		10,9	5,5	7,5	20	18	17	16	15	13	12	10,7	9,5	7
MXV 80-4803/C		14,3	7,5	10	40,5	36	34,5	32,5	29,5	26,5	24,5	22	20	15,5
MXV 80-4804/D		21,5	11	15	61	54	51	48	44	40	37	34	31	24,5
MXV 80-4805/D		27,3	15	20	81	72	69	65	60	55	51,5	48	44	35
MXV 80-4806/D		27,3	15	20	101	90	86	81	75	68,5	64,5	60	55	44
MXV 80-4807/E		34	18,5	25	121	108	103	97	90	82	77,5	72	66	53
MXV 80-4808/D		41	22	30	142	126	120	113	105	96	90	84	77	61,5
					162	144	137	129	120	109	103	96	88	70,5

Dimensions and weights



- (1) Filling and air vent
- (2) Air vent suction side
- (3) Draining

Pump	Motor			mm									without motor	with motor
	kW	HP		DN	a	h1	f	(6) M	fM	P	(6) AD	m4	MXV (5) kg (7)	(6) kg (7)
MXV 65-3202/D	4	5,5	M112 V1	65	320	105	407	311	718	250	137,5	334	45	72,8
MXV 65-3203/C	5,5	7,5	M132 V1	65	320	105	473	339	812	300	159,5	380	51	93,3
MXV 65-3204/C	7,5	10	M132 V1	65	320	105	519	339	858	300	159,5	426	53	100,7
MXV 65-3205/D	11	15	M160 V1	65	320	105	595	459	1054	350	186	472	62	138
MXV 65-3206/D	11	15	M160 V1	65	320	105	641	459	1100	350	186	518	64	140
MXV 65-3207/D	15	20	M160 V1	65	320	105	687	484	1171	350	186	564	66	168
MXV 65-3208/D	15	20	M160 V1	65	320	105	733	484	1217	350	186	610	68	170
MXV 65-3209/E	18,5	25	M160 V1	65	320	105	779	538	1290	350	206	656	70	-
MXV 65-3210/E	18,5	25	M160 V1	65	320	105	825	538	1363	350	206	702	72	-
MXV 65-3212/D	22	30	M180 V1	65	320	105	917	538	1455	350	206	794	75	204
MXV 80-4801/D	4	5,5	M112 V1	80	320	105	411	311	722	250	137,5	338	45	72,8
MXV 80-4802/C	5,5	7,5	M132 V1	80	320	105	466	339	805	300	159,5	373	51	93,3
MXV 80-4803/C	7,5	10	M132 V1	80	320	105	527	339	866	300	159,5	434	54	101,7
MXV 80-4804/D	11	15	M160 V1	80	320	105	618	459	1077	350	186	495	64	140
MXV 80-4805/D	15	20	M160 V1	80	320	105	680	484	1164	350	186	557	66	168
MXV 80-4806/D	15	20	M160 V1	80	320	105	741	484	1225	350	186	618	69	171
MXV 80-4807/E	18,5	25	M160 V1	80	320	105	802	538	1363	350	206	679	72	-
MXV 80-4808/D	22	30	M180 V1	80	320	105	864	538	1402	350	206	741	74	203

(4) Standard position of terminal box. (for other positions rotate motor through 90° or 180°) (5) MXV (L) : + 3 kg (6) With standard motor (7) Net weight
MXV (H) : + 3 kg

Features

Long Service Life with Standard Motor

Pump with thrust bearing without additional axial loads on the motor bearings. Any standard motor V1 design (suitable to be lifted in vertical position) can be used, of our choice or of Client's choice.

Easy Assembly of the Motor

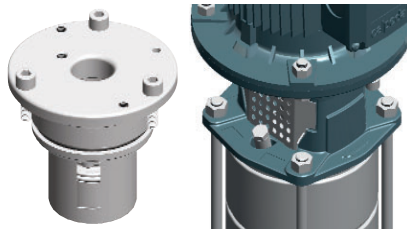
With the single-piece sleeve coupling the pump unit can be supplied fully assembled also without the motor. This eliminates the risk of damage caused by shifting of the pump shaft during transportation.

The motor is simply inserted in the coupling and fastened to the flange without the necessity for adapting the axial position of the pump shaft.

Removable mechanical Seal

Easy removal of the mechanical seal without dismantling the motor (for MXV 50-15, MXV 50-20 and MXV 100 with motors exceeding 4 KW).

MXV 50-15, MXV 50-20



Extra Safety

Single-piece coupling guard to be removed only by means of a tool, positioned around the lantern bracket, thus avoiding accidental pushing and rubbing against the coupling.

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

Single PN 25 construction for all pump sizes.

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.

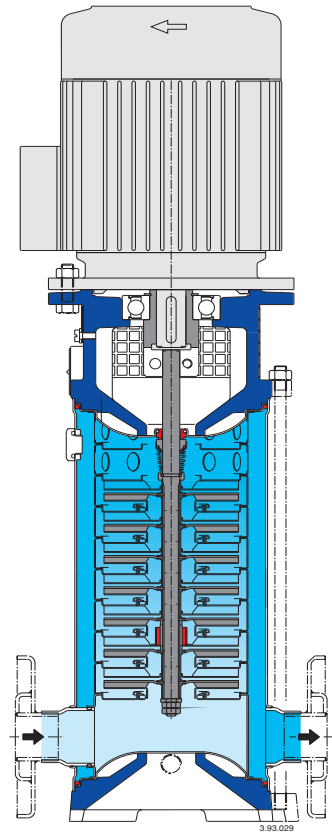
The lantern brackets compact and robust design maintains a sure alignment between rotating and fixed parts, reducing vibration.

The upper cover design prevents entrapment of air around the mechanical seal.

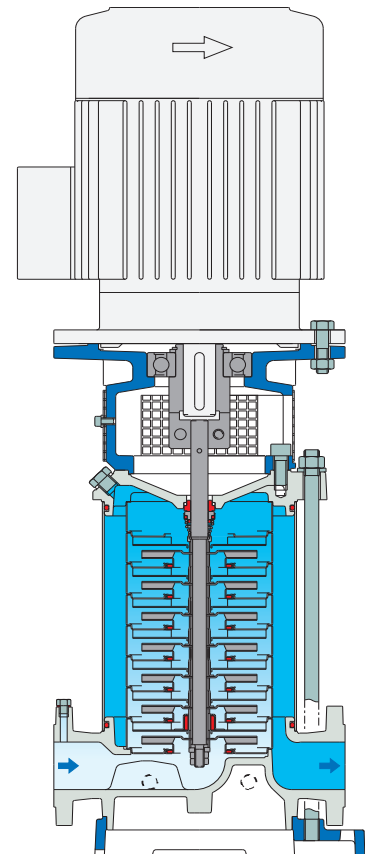
Low-Noise Operation

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

Low-noise standard motor.



MXV 25, 32, 40, 50



MXV 65, 80