

09/2016



water passion



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

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. A pump with thrust bearing and sleeve coupling for use of any standard motor with IM V1 construction.

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.
Operating environment temperature: up to 40 °C.
Maximum permissible pressure in pump casing: 25 bar.

Motor

Standard-type: 2-4 pole induction motor, 50 Hz.
Construction IM V1 (EN 60034-7).
Motor suitable for operation with frequency converter.
Classification scheme IE2 for three-phase motors from 0,75 kW to 5,5 kW, IE3 from 7,5 kW.
Insulation class F.
Protection IP 55.
three-phase with rated voltage: up to 3 kW 230/400 V;
from 4 kW 400/690 V.
Rated speed of rotation (50 Hz): **MXV** ≈ 2900 rpm
MXV4 ≈ 1450 rpm.

MXV 25, 32, 40

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)
Bearing sleeve Bearing in stage casing	Corrosion-resistant, cemented carbide Ceramic alumina
Mechanical seal ISO 3069 - KU	Hard metal/Carbon/EPDM.
Wear ring	PTFE
O-rings	NBR

Direction of rotation: **clockwise** as seen from the motor.

Variants (to be specified when ordering)

Pump with threaded ports (G).
Pump with flanged ports (F).
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 50, 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).

Pumps with frequency converter

The **MXV EI** pumps are available with power from 0,25 kW up to 11 kW, the pumps are equipped with **I-MAT** installed on board which allows to realize a variable-speed system extremely compact and efficient, ideal in applications of water supply and in the distribution of hot and cold water. The pump is equipped with transducers suitable for operation and is already programmed at the factory.

Advantages

- Energy saving
- Compact design
- Easy to use
- Programmable to suit the system requirements
- Reliability

Costruction

The system comprises of:

- Pump
- Induction motor
- I-MAT Frequency converter
- Motor adapter for the motor mounting of the frequency converter
- Connection cable between frequency converter and induction motor
- Transducers

Main features

Rated motor power output from 0,25 kW to 11 kW

Control range from 1750 to 2900 rpm (2-pole)

Control range from 870 to 1450 rpm (4-pole)

Protection against dry running

Protection against operations with closed connection ports

Protection against system leakages

Protection against overcurrent in the motor

Protection against overvoltage and undervoltage of the power supply

Protection against current unbalances between phases

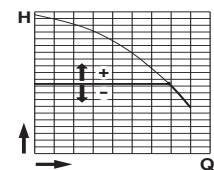


Operating modes



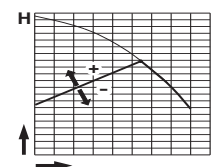
Mode at a constant pressure with pressure sensor

In this mode, the system maintains the preset pressure when the flow required by the installation changes.



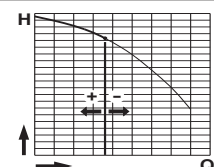
Proportional pressure mode with pressure sensor

In this mode the system changes the working pressure according to the required flow rate.



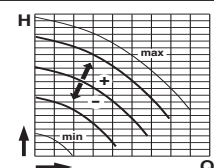
Constant flow mode with flow meter

In this mode the system maintains a constant flow rate value in a point of the installation according to the required pressure.



Fixed speed mode with setting of the speed preferential rotation.

In this mode, by changing the working frequency, you may choose any operational curve included within the working range.



Constant temperature mode with temperature transducer

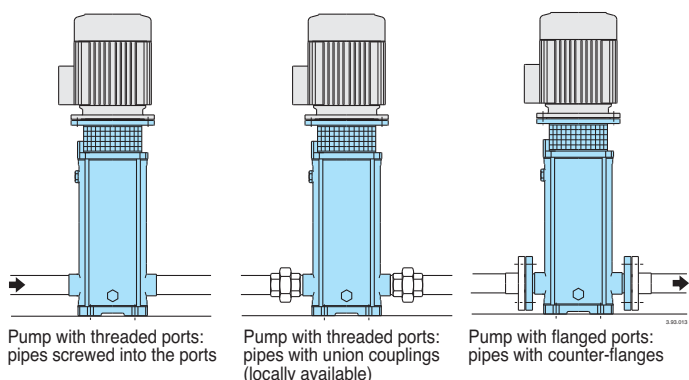
In this mode the system keeps the temperature constant inside a system by changing the speed of the pump.

MXV 25, 32, 40

Designation

Series _____ MXV 4 EI 25-205 G *
 4 pole (no code = 2 pole) _____
 With frequency converter I-MAT _____
 DN ports in mm _____
 Rated capacity in m³/h (n ≈ 2900 rpm) _____
 Number of stages _____
Construction variants
 special seal code (no code = standard seal) _____
 threaded ports _____ G
 flanged ports _____ F
 with motor (or without motor) _____
 * with no further designation = with standard motor

Pipe connection



Variable parts

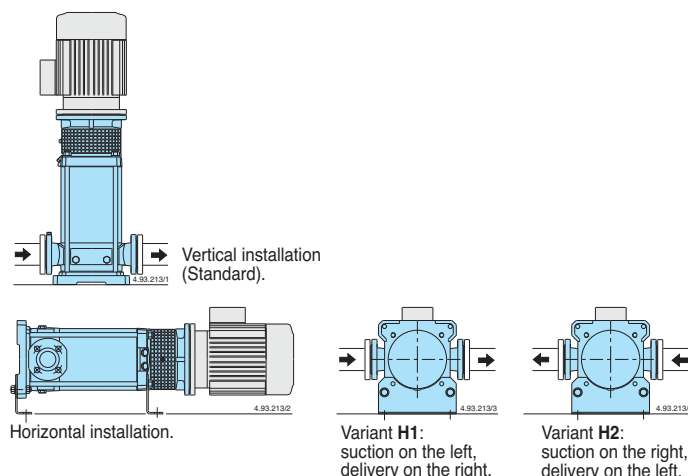
Pump size MXV - MXV4			Number of stages	Stage casings with bearing
25 - 204	32 - 404	40 - 804	4	1
25 - 205	32 - 405	40 - 805	5	1
25 - 206	32 - 406	40 - 806	6	1
25 - 207	32 - 407	40 - 807	7	1
25 - 208	32 - 408	40 - 808	8	1
25 - 210	32 - 410	40 - 810	10	1
25 - 212	32 - 412	40 - 811	11	2
		40 - 813	12	2
25 - 214	32 - 414	40 - 815	13	2
			14	2
25 - 216	32 - 416		15	2
25 - 218	32 - 418		16	2
			17	2
		40 - 817	18	3
		40 - 819	19	3
25 - 220			20	3

MXV 50, 65, 80, 100

Designation

Series _____ MXV 4 EI 50-1605 H1 *
 4 pole (no code = 2 pole) _____
 With frequency converter I-MAT _____
 DN ports in mm _____
 Rated capacity in m³/h (n ≈ 2900 rpm) _____
 Number of stages _____
Construction variants
 special seal code (no code = standard seal) _____
 with support feet for horizontal installation H, variant 1 _____
 with motor (or without motor) _____
 * with no further designation = with standard motor

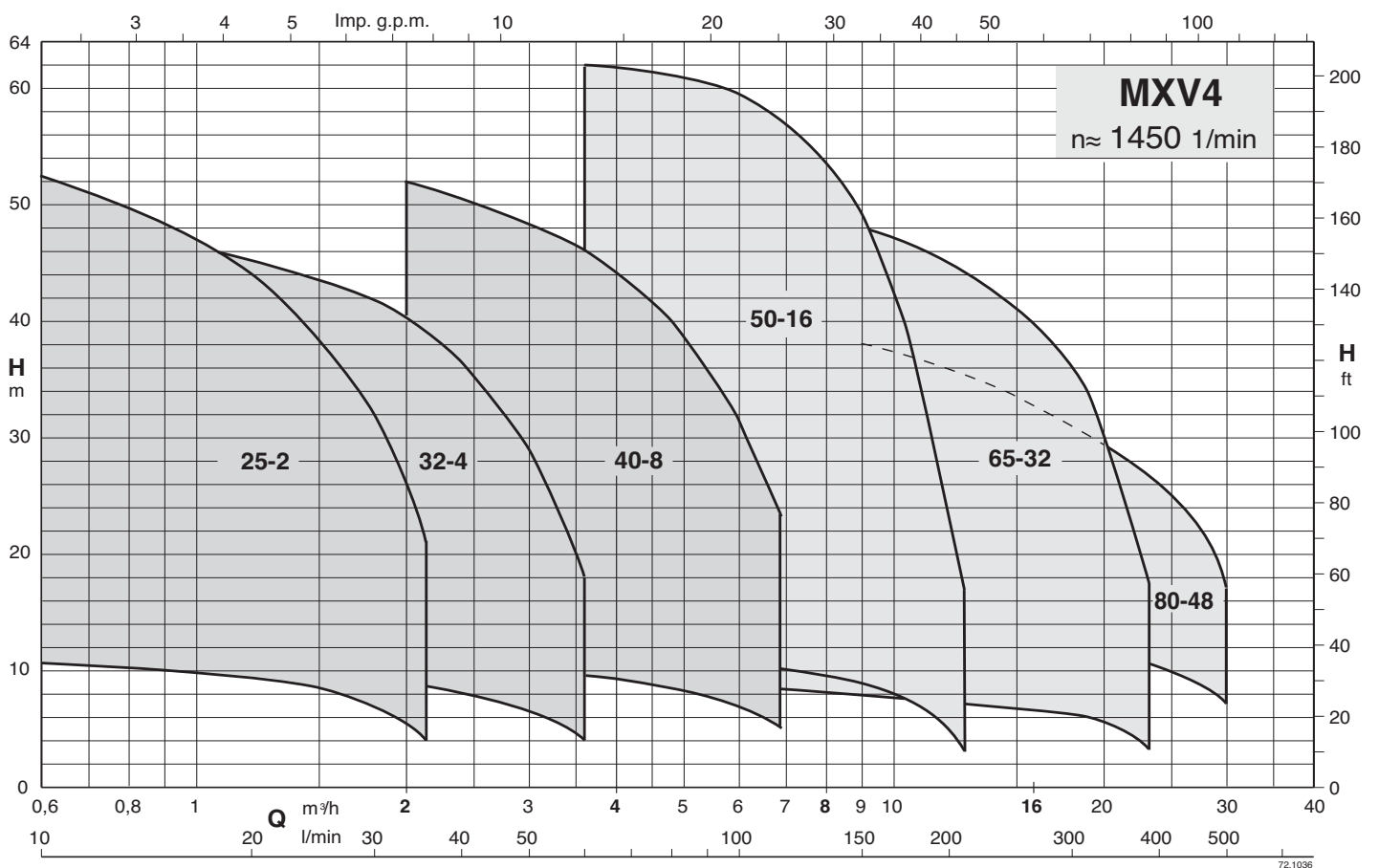
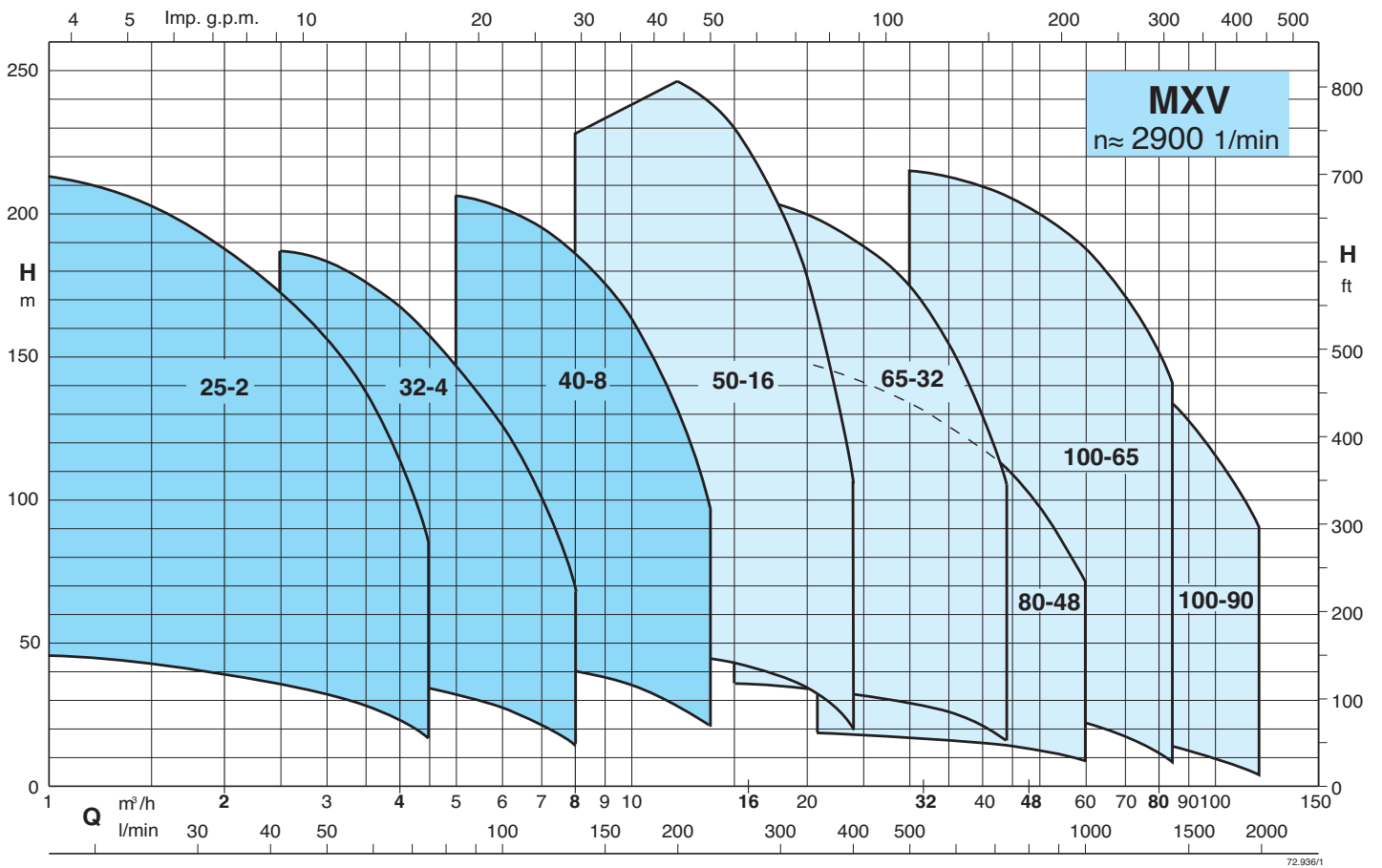
Installations



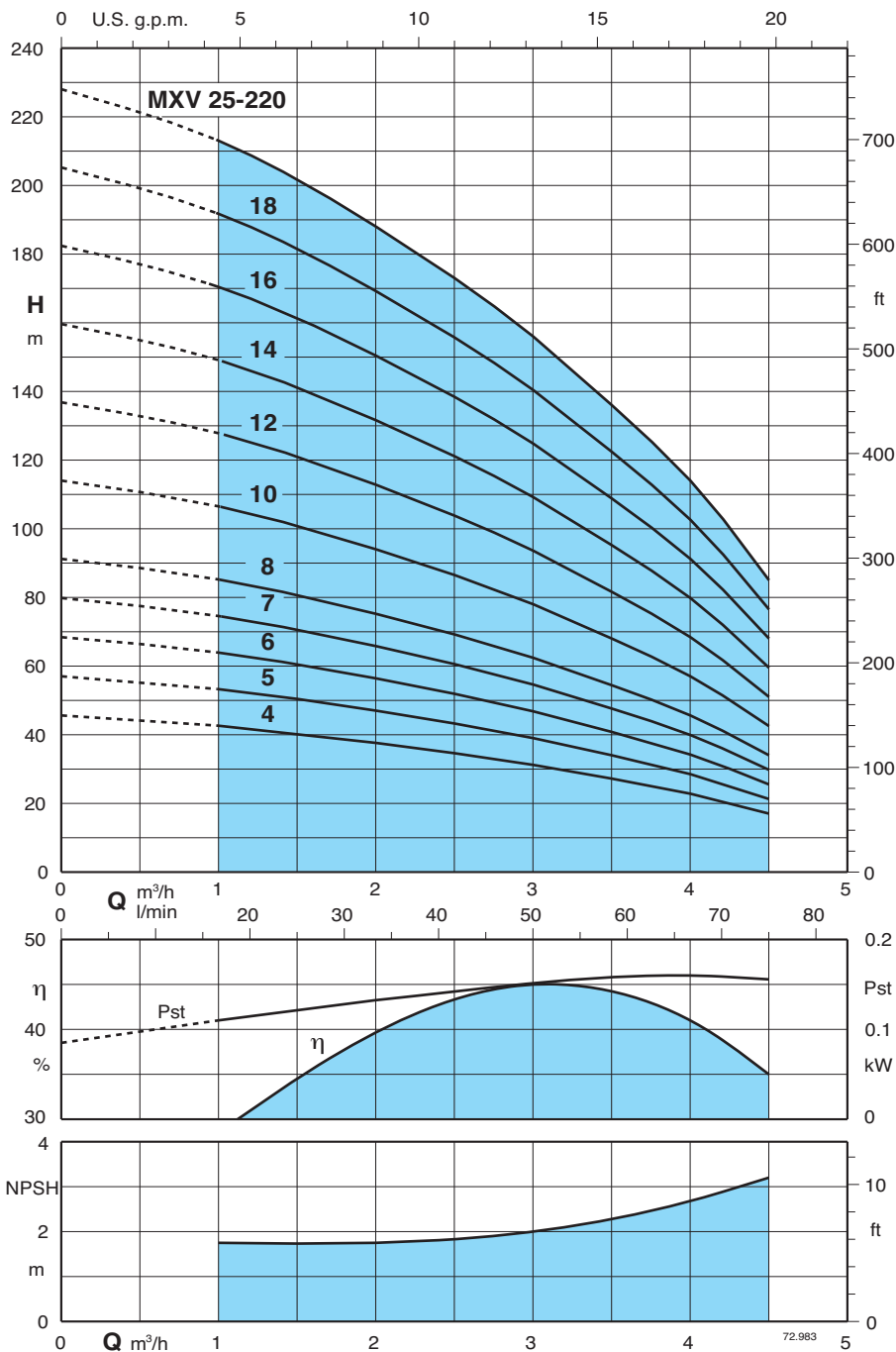
Variable parts

Pump size MXV - MXV4			Number of stages	Stage casings with bearing
50 - 1603	65 - 3202	80 - 4801	1	1
50 - 1604	65 - 3203	80 - 4802	2	1
50 - 1605	65 - 3204	80 - 4803	3	1
50 - 1606	65 - 3205	80 - 4804	4	1
50 - 1607	65 - 3206	80 - 4805	5	1
50 - 1608	65 - 3207		6	1
50 - 1609			7	1
50 - 1610			8	1
			9	1
			10	1
50 - 1611	65 - 3208	80 - 4806	6	2
50 - 1612	65 - 3209	80 - 4807	7	2
50 - 1614	65 - 3210	80 - 4808	8	2
50 - 1616	65 - 3212		9	2
			10	2
			11	2
			12	2
			14	2
			16	2

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

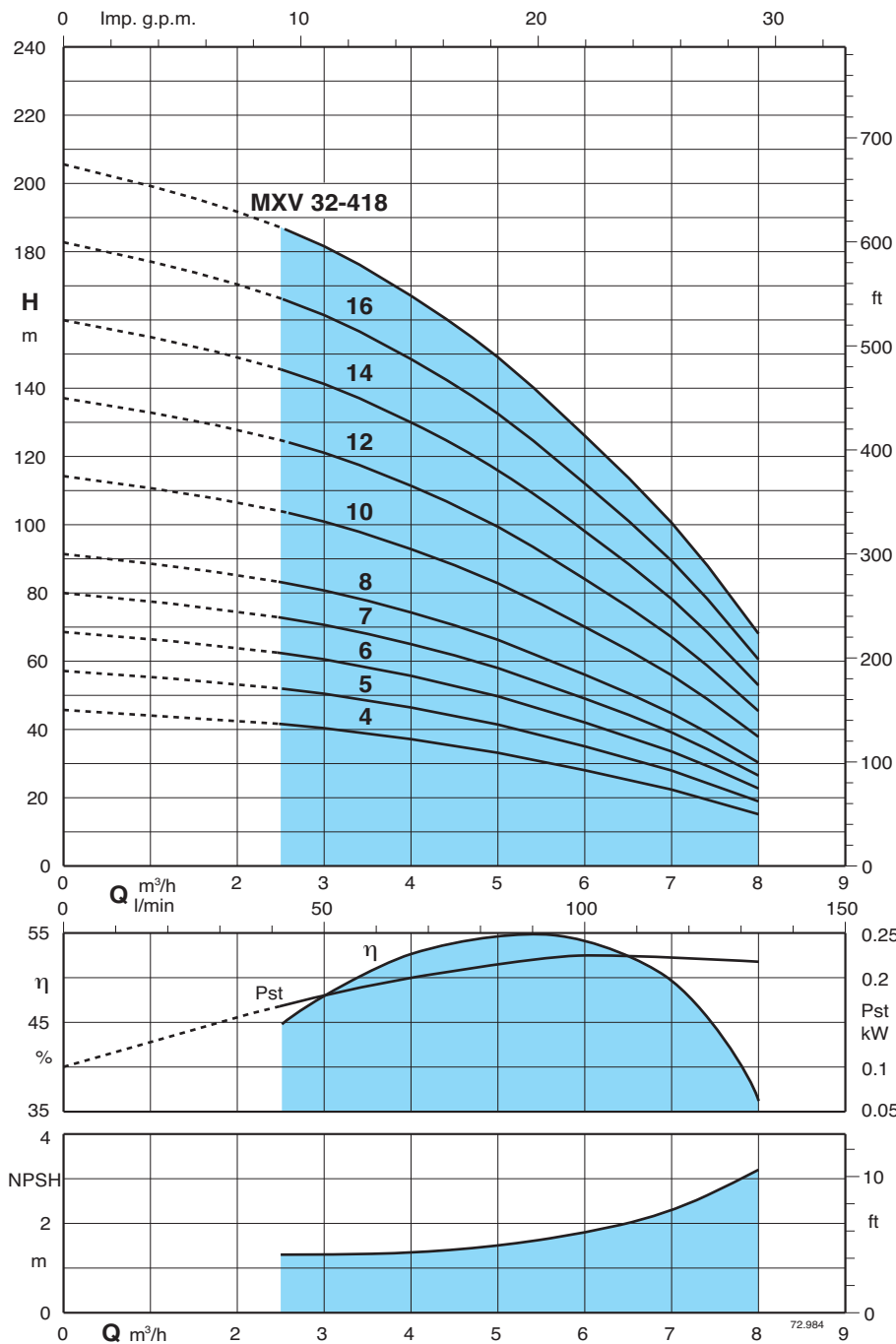
Head and power values valid for liquids with density $\rho = 1,0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = \text{max } 20 \text{ mm}^2/\text{sec}$.

Pst = Power with reference to one stage.

A* Calpeda motor currents

Pump type	230 V		400 V		Motor power		Q m³/h l/min	0	1	1,5	2	2,5	3	3,5	4	4,5
	A*	A*	kW	HP												
MXV 25-204/C	3,3	1,9	0,75	1	H m	0	0	16,6	25	33,3	41,6	50	58,3	66,6	75	
MXV 25-205/C	3,3	1,9	0,75	1			44	42,5	40	37,5	34,5	31	27	22,5	17	
MXV 25-206/C	4,7	2,7	1,1	1,5			56	53	50	47	43	39	34	28	21	
MXV 25-207/C	4,7	2,7	1,1	1,5			68	63,5	60,5	56	51,5	46,5	40,5	34	25	
MXV 25-208/C	7,4	4,3	1,5	2			79,5	74	70,5	65,5	60	54,5	47,5	39,5	30	
MXV 25-210/C	7,4	4,3	1,5	2			91	85	80,5	75	69	62	54	45,5	34	
MXV 25-212/C	9,2	5,3	2,2	3			114	106	101	94	86	78	68	57	42	
MXV 25-214/C	9,2	5,3	2,2	3			136	127	121	112	103	93,5	81,5	68	51	
MXV 25-216/C	11,4	6,6	3	4			159	149	141	131	121	109	95	79,5	59	
MXV 25-218/C	11,4	6,6	3	4			182	170	161	150	138	124	108	91	68	
MXV 25-220/C	11,4	6,6	3	4			205	191	181	169	155	140	122	102	76	
							228	213	202	188	173	156	136	114	85	

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

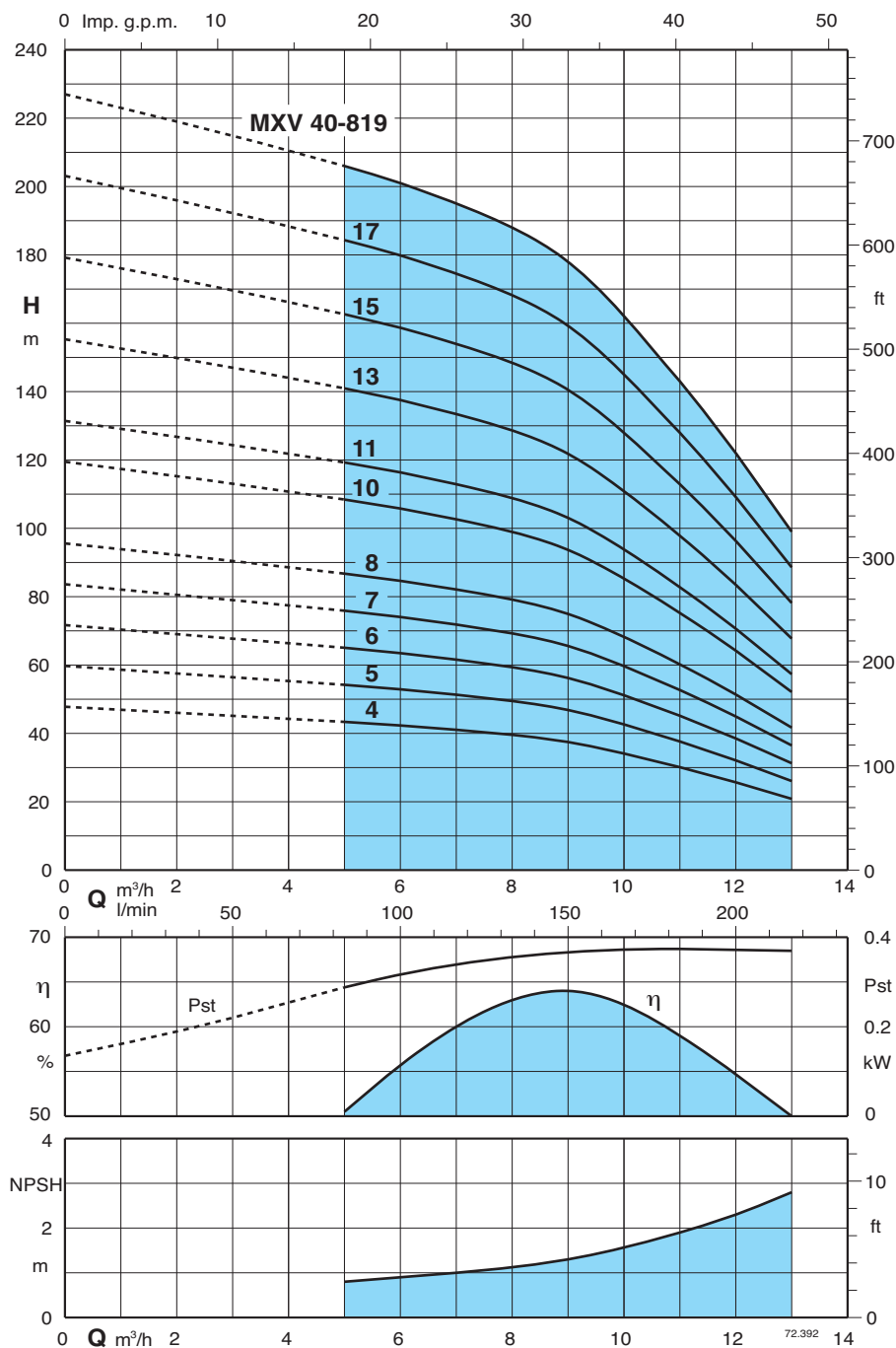
Head and power values valid for liquids with density $\rho = 1,0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = \text{max } 20 \text{ mm}^2/\text{sec}$.

P_{st} = Power with reference to one stage.

A* Calpeda motor currents

Pump type	230 V		400 V		Motor power		Q m^3/h l/min	0	2,5	3	3,5	4	4,5	5	6	7	8
	A*	A*	A*	A*	kW	HP		0	41,6	50	58,3	66,6	75	83,3	100	116,6	133,3
MXV 32-404/C	4,7	2,7			1,1	1,5	H m	45	41,5	40	38,5	36,5	34,5	32,5	27,5	22	14,5
MXV 32-405/C	4,7	2,7			1,1	1,5		56	51,5	50	48	46	43,5	41	34,5	27,5	18,5
MXV 32-406/C	7,4	4,3			1,5	2		68	62	60	58	55,5	52,5	49,5	42	33,5	22,5
MXV 32-407/C	7,4	4,3			1,5	2		79,5	72,5	70,5	68	65	61,5	58	49	39	26,5
MXV 32-408/C	9,2	5,3			2,2	3		91	83	80,5	78	74	70	66	56	44,5	30
MXV 32-410/C	9,2	5,3			2,2	3		114	104	101	97,5	93	88	83	70	56	38
MXV 32-412/C	11,4	6,6			3	4		136	124	121	117	111	105	99,5	84	67	45,5
MXV 32-414/C	11,4	6,6			3	4		159	145	141	136	130	123	116	98	78	53
MXV 32-416/C		9,6			4	5,5		182	166	161	156	148	140	132	112	89,5	60,5
MXV 32-418/C		9,6			4	5,5		205	187	181	175	167	158	149	126	100	68

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

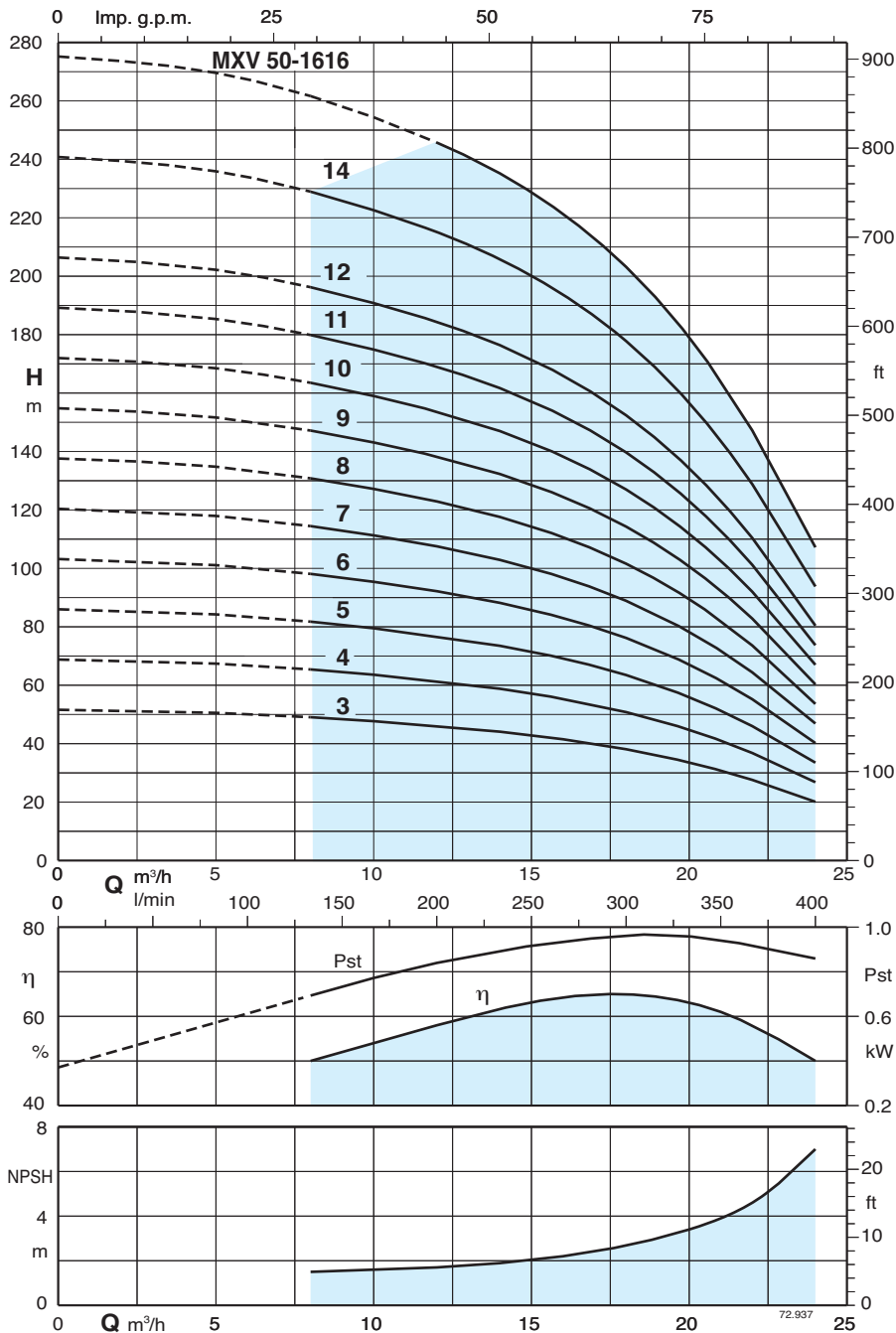
Head and power values valid for liquids with density $\rho = 1,0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = \max 20 \text{ mm}^2/\text{sec}$.

Pst = Power with reference to one stage.

A* Calpeda motor currents

Pump type	230 V		400 V		Motor power		Q	m³/h l/min										
	A*	A*	kW	HP	0	5			6	7	8	9	10	11	12	13		
									0	83,3	100	116,6	133,3	150	166,6	183,3	200	216,6
MXV 40-804/C	7,4	4,3	1,5	2	H m		47	43	42	41	40	37	34	30	26	21		
MXV 40-805/C	9,2	5,3	2,2	3			59	54	53	51	50	47	43	38	32	26		
MXV 40-806/C	9,2	5,3	2,2	3			71	65	63	62	59	56	51	45	39	31		
MXV 40-807/C	11,4	6,6	3	4			83	76	74	72	69	66	60	53	45	36		
MXV 40-808/C	11,4	6,6	3	4			95	87	85	82	79	75	69	60	51	42		
MXV 40-810/C		9,6	4	5,5			119	109	106	103	99	94	86	75	64	52		
MXV 40-811/C		9,6	4	5,5			131	119	116	113	109	103	94	83	71	57		
MXV 40-813/C		10,9	5,5	7,5			155	141	138	134	129	122	111	98	84	68		
MXV 40-815/C		10,9	5,5	7,5			179	163	159	154	149	141	128	113	96	78		
MXV 40-817/C		14,3	7,5	10			202	184	180	175	168	159	145	128	109	89		
MXV 40-819/C		14,3	7,5	10			226	206	201	195	188	178	162	143	122	99		

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

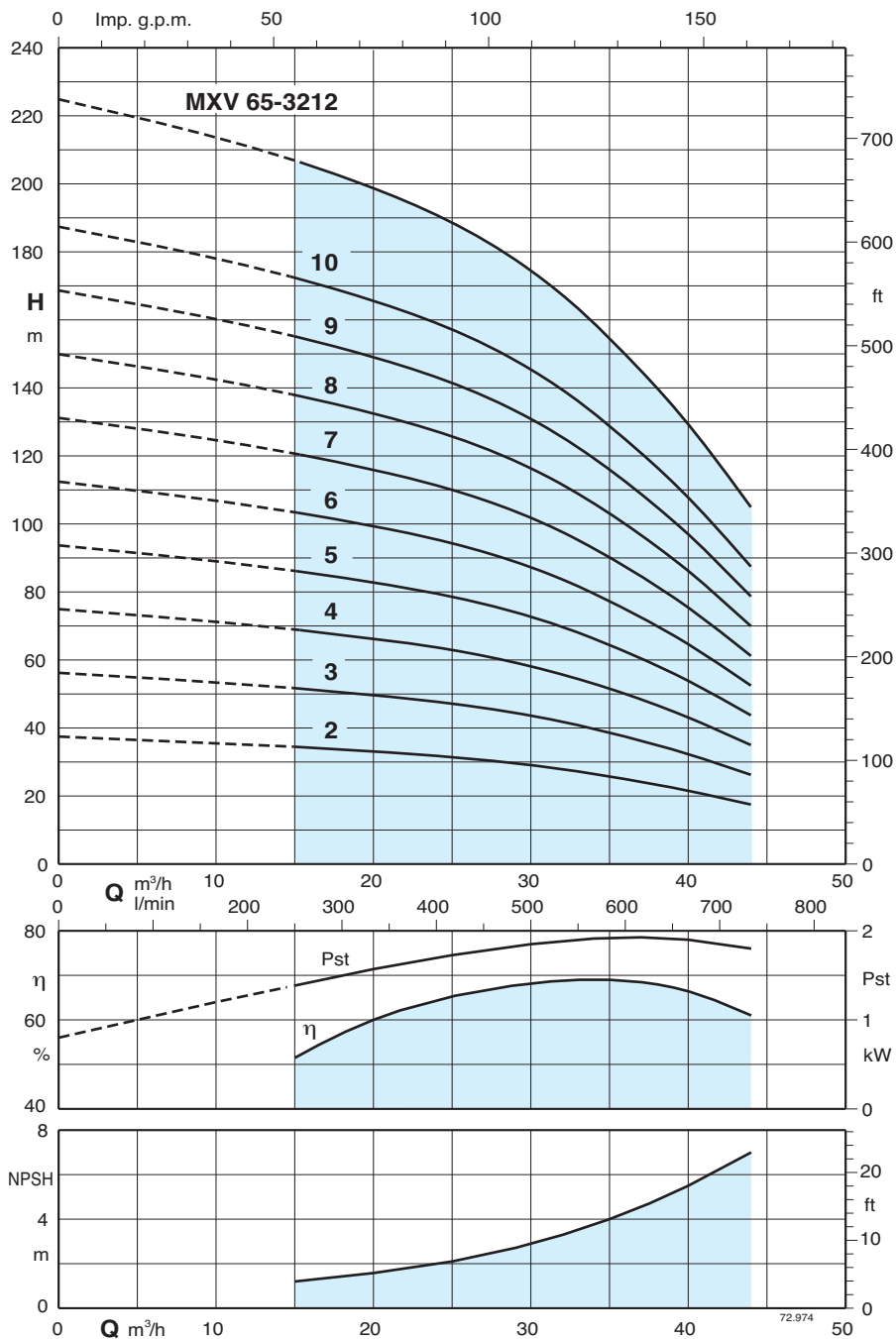
Head and power values valid for liquids with density $\rho = 1,0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = \text{max } 20 \text{ mm}^2/\text{sec}$.

Pst = Power with reference to one stage.

A* Calpeda motor currents

Pump type	230 V		400 V		Motor power		Q m³/h l/min	0	8	10	12	14	16	18	20	22	24
	A*	A*	kW	HP				0	133,3	166,6	200	233	266	300	333	366	400
MXV 50-1603/C	11,4	6,6	3	4	H m		51	49	48	46	44	41	38	33	27	20	
MXV 50-1604/C		9,6	4	5,5			69	65	63	61	59	55	51	44	37	27	
MXV 50-1605/C		10,9	5,5	7,5			86	81	79	76	73	69	63	55	46	33	
MXV 50-1606/C		10,9	5,5	7,5			103	98	95	92	88	83	76	67	55	40	
MXV 50-1607/C		14,3	7,5	10			120	114	111	107	103	97	89	78	64	47	
MXV 50-1608/C		14,3	7,5	10			138	130	127	122	117	110	101	89	73	53	
MXV 50-1609/D		21,5	11	15			155	147	143	138	132	124	114	100	83	60	
MXV 50-1610/D		21,5	11	15			172	163	159	153	147	138	127	111	92	67	
MXV 50-1611/D		21,5	11	15			189	179	175	168	161	152	139	122	101	73	
MXV 50-1612/D		27,3	15	20			206	196	190	184	176	166	152	133	110	80	
MXV 50-1614/D		27,3	15	20			240	228	222	214	206	193	178	156	129	94	
MXV 50-1616/D		34	18,5	25			275				245	235	221	203	178	147	107

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

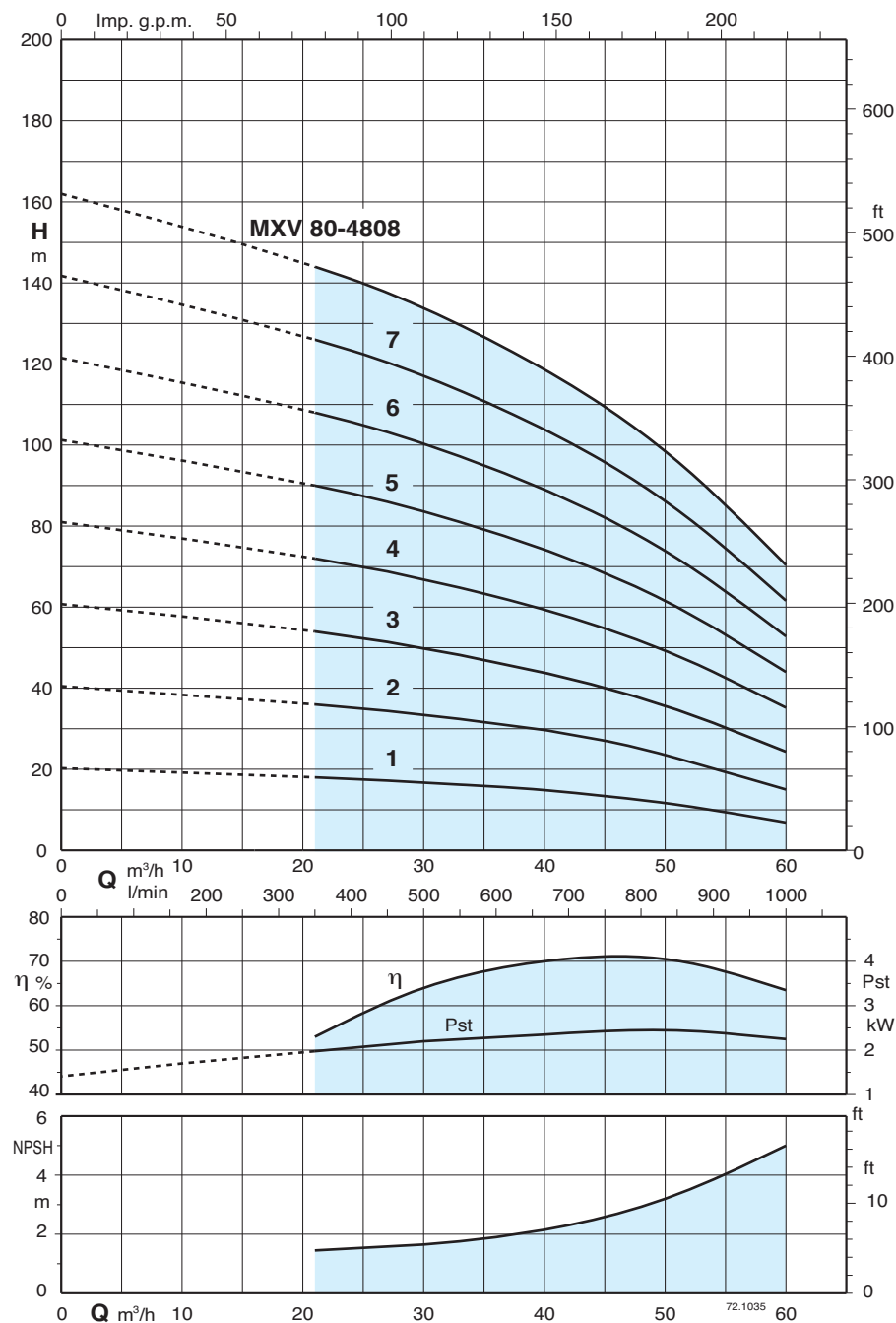
Head and power values valid for liquids with density $\rho = 1,0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = \max 20 \text{ mm}^2/\text{sec}$.

Pst = Power with reference to one stage.

A* Calpeda motor currents

Pump type	230 V		400 V		Motor power		Q m³/h l/min	0	15	21	24	27	30	33	36	39	44
	A*	A*	A*	A*	kW	HP											
MXV 65-3202/C			9,6		4	5,5	H m	37	34	32	31	30	29	27	24,5	22	17
MXV 65-3203/C			10,9		5,5	7,5		55,5	51	49	47,5	46	43,5	40,5	37	33,5	25,5
MXV 65-3204/C			14,3		7,5	10		75	69	65,5	63,5	61	58,5	54,5	50	45	35
MXV 65-3205/D			21,5		11	15		93,5	86	82	79,5	77	73	68	62,5	56,5	44
MXV 65-3206/D			21,5		11	15		112	103	98,5	95,5	92	87	82	75	67,5	52,5
MXV 65-3207/D			27,3		15	20		131	121	115	111	107	102	95,5	87,5	79	61,5
MXV 65-3208/D			27,3		15	20		150	138	131	127	123	116	109	100	90	70
MXV 65-3209/D			34		18,5	25		168	155	148	143	138	130	122	112	101	79
MXV 65-3210/D			34		18,5	25		187	172	164	159	154	145	136	125	112	87,5
MXV 65-3212/D			41		22	30		225	207	197	191	185	174	163	150	135	105

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

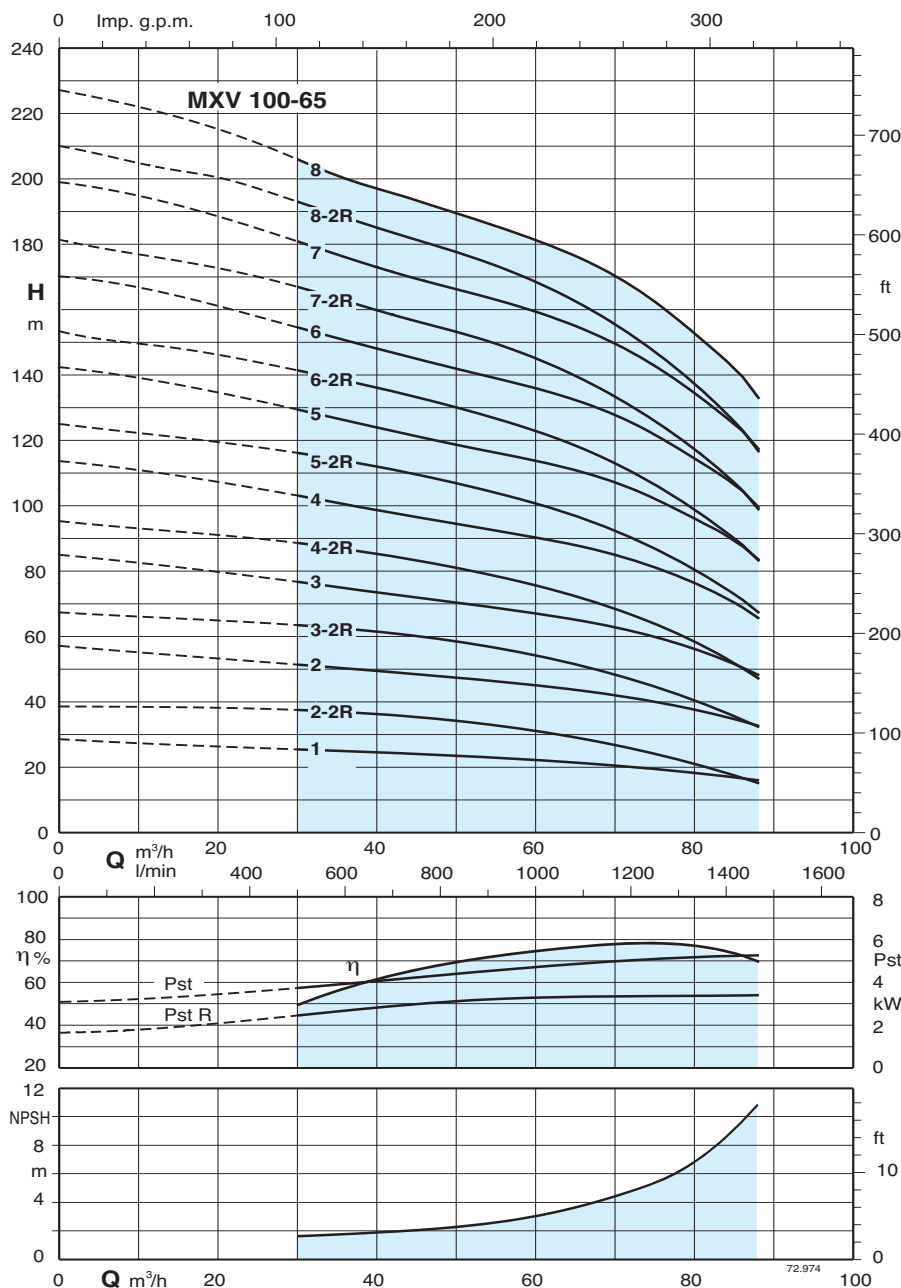
Head and power values valid for liquids with density $\rho = 1,0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = \text{max } 20 \text{ mm}^2/\text{sec}$.

Pst = Power with reference to one stage.

A* Calpeda motor currents

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

Characteristic curves and performance $n \approx 2900$ rpm



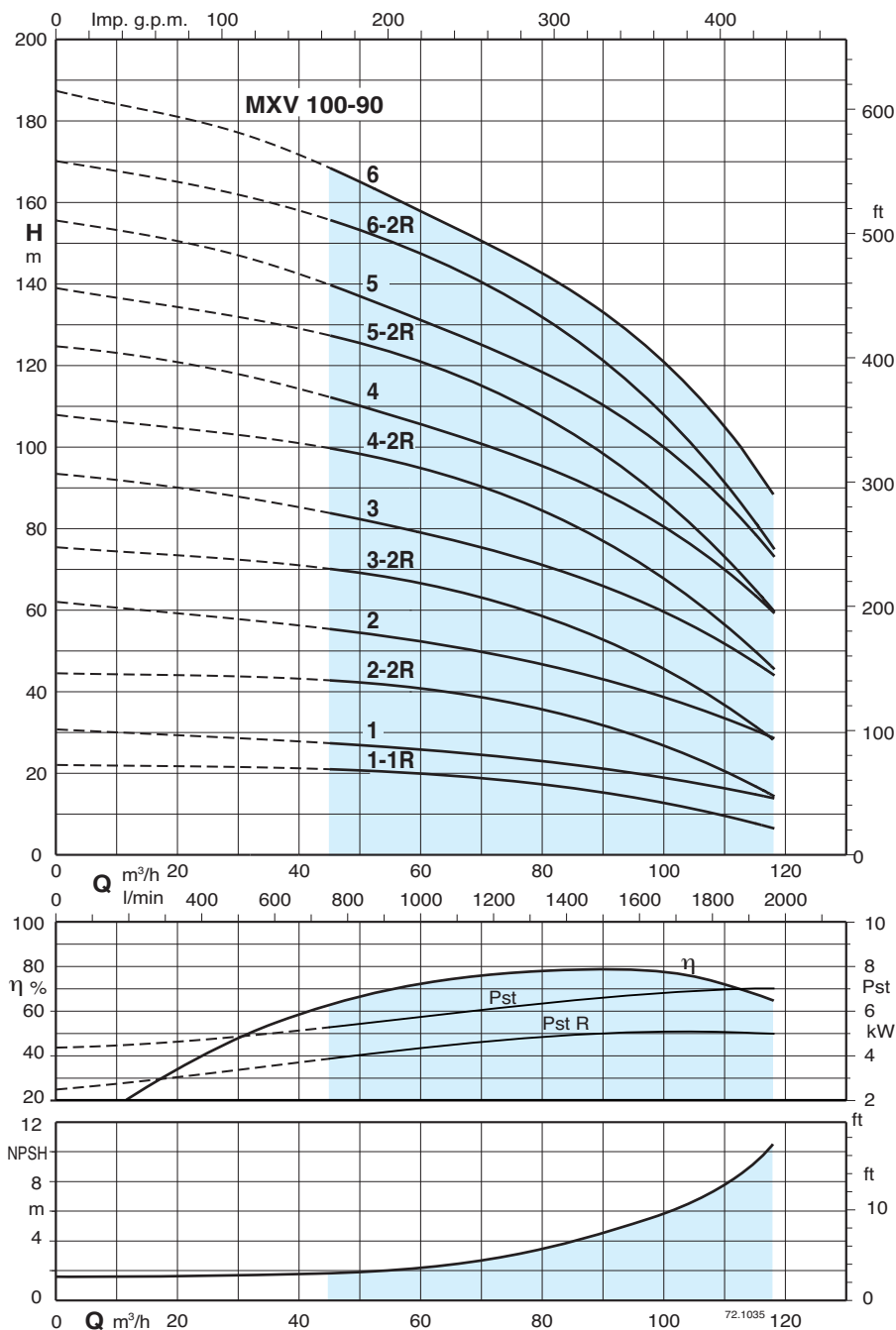
Test results with clean cold water, without gas content.
A safety margin of + 0.5 m is recommended for the NPSH value.
Tolerances in accordance with UNI EN ISO 9906:2012

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	400 V A*	Motor power		Q m³/h l/min	0	30	36	42	45	54	60	72	78	85
		kW	HP		0	500	600	700	750	900	1000	1200	1300	1417
MXV(L) 100-6501	10,9	5,5	7,5	H m	28	25	24,5	24	23,5	22,5	22	20	18,5	16,5
MXV(L) 100-6502-2R	14,3	7,5	10		39	37,5	36,5	35,5	35	33	31	25	22	17,5
MXV(L) 100-6502	21,5	11	15		56,5	51	49,5	48,5	48	46	45	41	38,5	34,5
MXV(L) 100-6503-2R	27,3	15	20		67,5	63,5	62	60,5	59,5	56,5	54	46,5	42	35,5
MXV(L) 100-6503	34	18,5	25		84,5	76	74	72,5	71,5	69	67	61,5	57,5	51,5
MXV(L) 100-6504-2R	34	18,5	25		95,5	88,5	86	84	83	79	75,5	66	60,5	52
MXV(L) 100-6504	41	22	30		113	102	100	97,5	96,5	92,5	90,5	83	78	70
MXV(L) 100-6505-2R	53	30	40		125	116	113	110	109	104	101	90	83	72,5
MXV(L) 100-6505	53	30	40		142	129	125	122	121	116	114	105	98,5	88,5
MXV(L) 100-6506-2R	53	30	40		153	141	137	134	133	127	123	110	102	89,5
MXV(L) 100-6506	65	37	50		170	154	150	147	145	139	136	125	117	105
MXV(L) 100-6507-2R	65	37	50		181	166	162	158	156	150	145	130	120	106
MXV(L) 100-6507	78	45	60		199	180	175	172	169	163	159	147	138	124
MXV(L) 100-6508-2R	78	45	60		210	193	188	184	181	174	168	152	141	125
MXV(L) 100-6508	78	45	60		227	206	200	196	193	186	181	167	157	141

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

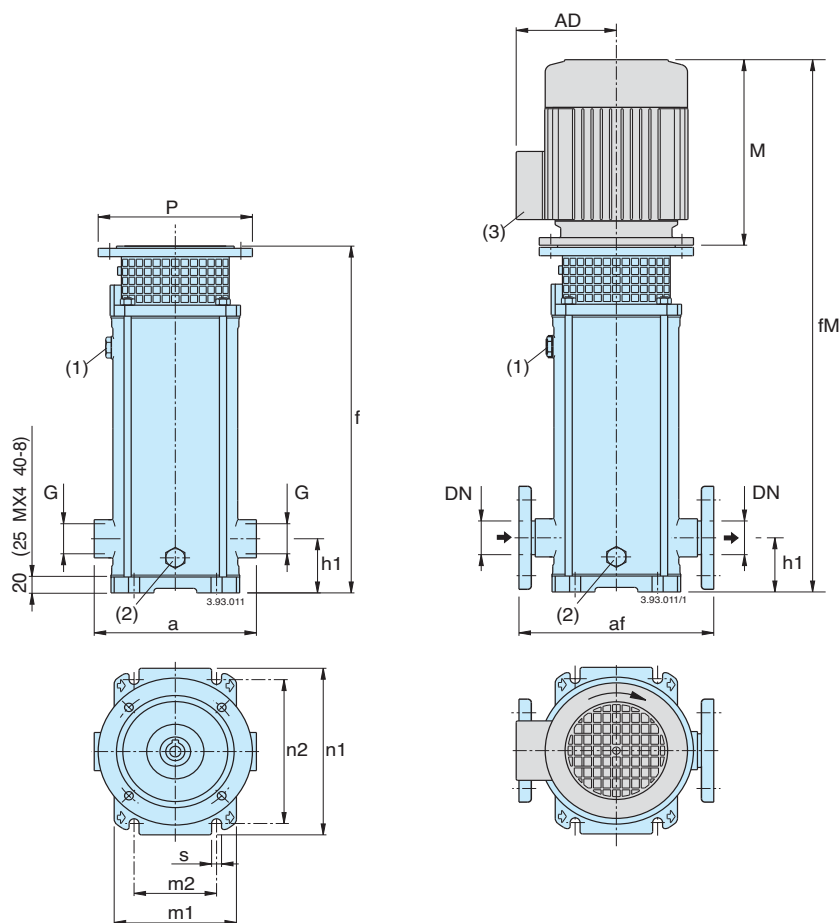
Head and power values valid for liquids with density $\rho = 1,0 \text{ kg/dm}^3$ and kinematic viscosity $\nu = \max 20 \text{ mm}^2/\text{sec}$.

Pst = Power with reference to one stage.

A* Calpeda motor currents

Pump type	400 V A*	Motor power		Q m³/h l/min	H m	0	45	54	60	72	78	85	96	108	118
		kW	HP			0	750	900	1000	1200	1300	1417	1600	1800	1967
MXV(L) 100-9001-1R	10,9	5,5	7,5	H m	22	21	20,5	20	19	17,5	16,5	13,5	10	6,5	
MXV(L) 100-9001	14,3	7,5	10		30,5	27,5	26	25,5	24	23,5	22	20	17	13,5	
MXV(L) 100-9002-2R	21,5	11	15		44,5	43	42	41	38,5	36,5	34	28,5	21,5	15	
MXV(L) 100-9002	27,3	15	20		62	55,5	53	51,5	49	47,5	45	41	35	28,5	
MXV(L) 100-9003-2R	34	18,5	25		75,5	70,5	68	66,5	62,5	59,5	56	48,5	38,5	28,5	
MXV(L) 100-9003	41	22	30		93,5	84	80,5	78	74	72	69	62,5	53,5	44	
MXV(L) 100-9004-2R	53	30	40		108	100	97	94,5	89	85,5	81	71,5	59	46	
MXV(L) 100-9004	53	30	40		125	112	108	105	99,5	96,5	92,5	84	72	60	
MXV(L) 100-9005-2R	65	37	50		139	127	123	120	113	109	103	92	76	60	
MXV(L) 100-9005	65	37	50		156	140	134	130	123	120	114	104	89	74	
MXV(L) 100-9006-2R	78	45	60		170	156	150	146	138	134	127	113	94,5	75,5	
MXV(L) 100-9006	78	45	60		188	169	161	157	149	144	138	126	108	89,5	

Dimensions and weights



Counterflanges in stainless steel

DN	G ISO 228
25	1
32	1 1/4
40	1 1/2

Flanges EN 1092-1 PN 25 - 40

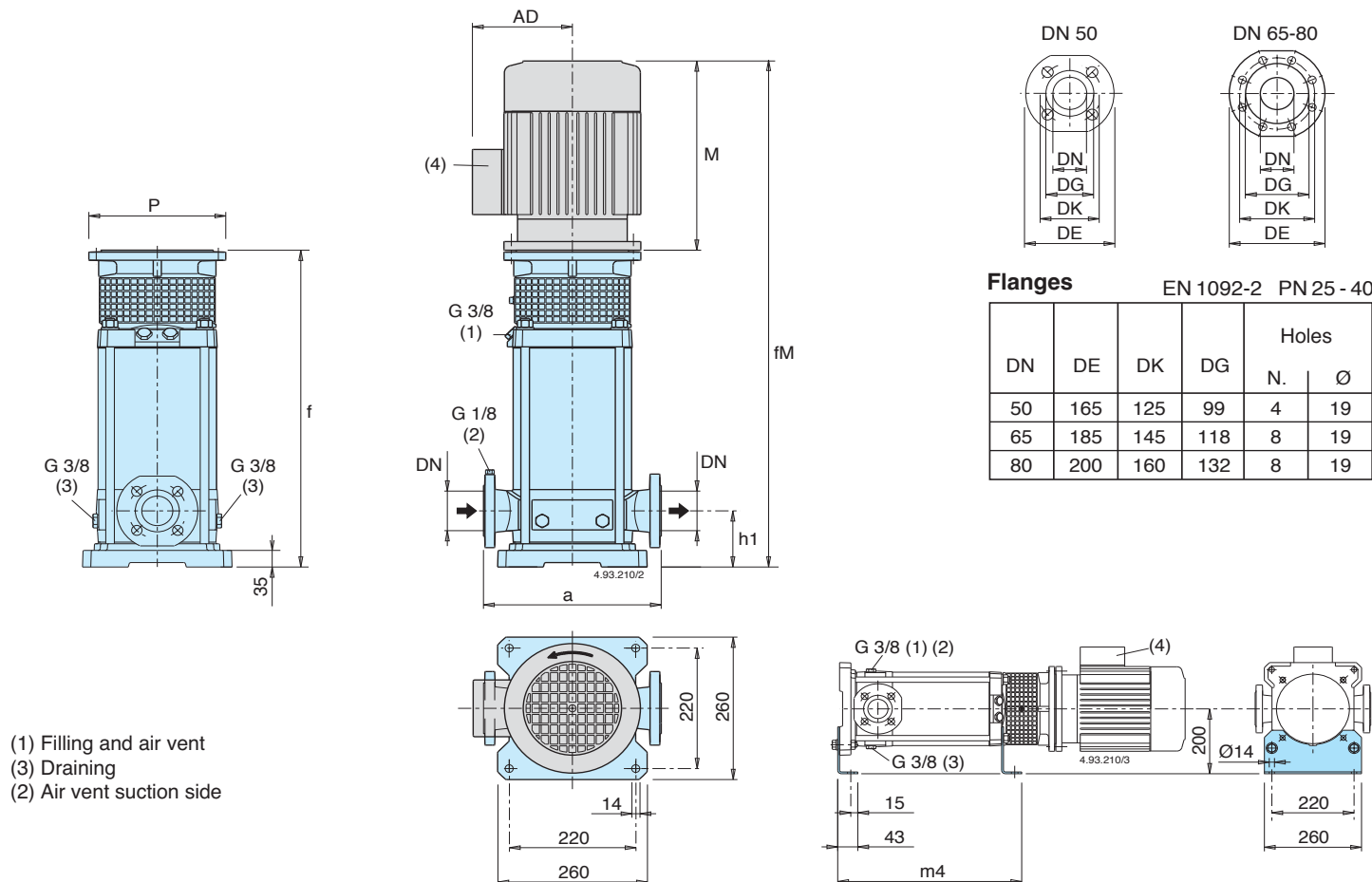
DN	DE	DK	DG	Holes	
				N.	Ø
25	115	85	65	4	14
32	140	100	76	4	19
40	150	110	84	4	19

(1) Filling
(2) Draining

Pump	Motor			MXV (G) threaded ports		MXV (F) flanged ports		mm											without motor	with motor
				G ISO 228	a	DN	af	h1	f	(5) M	fM	P	(5) AD	n1	n2	m1	m2	s	MXV (G) (4) kg(6)	(5) kg(6)
MXV 25-204/C	0,75	1	M80 V1	G 1	215	25	250	75	372	255	627	200	127,5	210	180	150	100	12,5	18	30,2
MXV 25-205/C	0,75	1	M80 V1	G 1	215	25	250	75	396	255	651	200	127,5	210	180	150	100	12,5	19	31,2
MXV 25-206/C	1,1	1,5	M80 V1	G 1	215	25	250	75	420	255	675	200	127,5	210	180	150	100	12,5	20	33,3
MXV 25-207/C	1,1	1,5	M80 V1	G 1	215	25	250	75	444	255	699	200	127,5	210	180	150	100	12,5	21	34,3
MXV 25-208/C	1,5	2	M90 V1	G 1	215	25	250	75	478	255	733	200	127,5	210	180	150	100	12,5	22	37,2
MXV 25-210/C	1,5	2	M90 V1	G 1	215	25	250	75	526	255	781	200	127,5	210	180	150	100	12,5	23	38,2
MXV 25-212/C	2,2	3	M90 V1	G 1	215	25	250	75	574	295	869	200	127,5	210	180	150	100	12,5	25	43,1
MXV 25-214/C	2,2	3	M90 V1	G 1	215	25	250	75	622	295	917	200	127,5	210	180	150	100	12,5	26	44,1
MXV 25-216/C	3	4	M100 V1	G 1	215	25	250	75	680	311	991	250	137,5	210	180	150	100	12,5	29	54,6
MXV 25-218/C	3	4	M100 V1	G 1	215	25	250	75	728	311	1039	250	137,5	210	180	150	100	12,5	31	56,6
MXV 25-220/C	3	4	M100 V1	G 1	215	25	250	75	776	311	1087	250	137,5	210	180	150	100	12,5	32	57,6
MXV 32-404/C	1,1	1,5	M80 V1	G 1 1/4	215	32	250	75	372	255	627	200	127,5	210	180	150	100	12,5	19	31,2
MXV 32-405/C	1,1	1,5	M80 V1	G 1 1/4	215	32	250	75	396	255	651	200	127,5	210	180	150	100	12,5	20	32,2
MXV 32-406/C	1,5	2	M90 V1	G 1 1/4	215	32	250	75	430	255	685	200	127,5	210	180	150	100	12,5	21	36,2
MXV 32-407/C	1,5	2	M90 V1	G 1 1/4	215	32	250	75	454	255	709	200	127,5	210	180	150	100	12,5	22	37,2
MXV 32-408/C	2,2	3	M90 V1	G 1 1/4	215	32	250	75	478	295	773	200	127,5	210	180	150	100	12,5	23	41,1
MXV 32-410/C	2,2	3	M90 V1	G 1 1/4	215	32	250	75	526	295	821	200	127,5	210	180	150	100	12,5	24	42,1
MXV 32-412/C	3	4	M100 V1	G 1 1/4	215	32	250	75	584	311	895	250	137,5	210	180	150	100	12,5	27	52,6
MXV 32-414/C	3	4	M100 V1	G 1 1/4	215	32	250	75	632	311	943	250	137,5	210	180	150	100	12,5	29	54,6
MXV 32-416/C	4	5,5	M112 V1	G 1 1/4	215	32	250	75	680	311	991	250	137,5	210	180	150	100	12,5	30	57,8
MXV 32-418/C	4	5,5	M112 V1	G 1 1/4	215	32	250	75	728	311	1039	250	137,5	210	180	150	100	12,5	31	58,8
MXV 40-804/C	1,5	2	M90 V1	G 1 1/2	225	40	280	80	411	255	666	200	127,5	246	215	190	130	14	21	36,2
MXV 40-805/C	2,2	3	M90 V1	G 1 1/2	225	40	280	80	441	295	736	200	127,5	246	215	190	130	14	22	40,1
MXV 40-806/C	2,2	3	M90 V1	G 1 1/2	225	40	280	80	471	295	766	200	127,5	246	215	190	130	14	23	41,1
MXV 40-807/C	3	4	M100 V1	G 1 1/2	225	40	280	80	511	311	822	250	137,5	246	215	190	130	14	25	50,6
MXV 40-808/C	3	4	M100 V1	G 1 1/2	225	40	280	80	541	311	852	250	137,5	246	215	190	130	14	26	51,6
MXV 40-810/C	4	5,5	M112 V1	G 1 1/2	225	40	280	80	601	311	912	250	137,5	246	215	190	130	14	28	55,8
MXV 40-811/C	4	5,5	M112 V1	G 1 1/2	225	40	280	80	631	311	942	250	137,5	246	215	190	130	14	29	56,8
MXV 40-813/C	5,5	7,5	M132 V1	G 1 1/2	225	40	280	80	711	339	1050	300	159,5	246	215	190	130	14	35	77,3
MXV 40-815/C	5,5	7,5	M132 V1	G 1 1/2	225	40	280	80	771	339	1110	300	159,5	246	215	190	130	14	36	78,3
MXV 40-817/C	7,5	10	M132 V1	G 1 1/2	225	40	280	80	831	339	1170	300	159,5	246	215	190	130	14	38	85,7
MXV 40-819/C	7,5	10	M132 V1	G 1 1/2	225	40	280	80	891	339	1230	300	159,5	246	215	190	130	14	39	86,7

(3) Standard position of terminal box. (for other positions rotate motor through 90° or 180°) (4) MXV (F) = MXV (G) + 1 kg (5) With standard motor (6) Net weight

Dimensions and weights



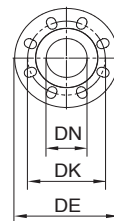
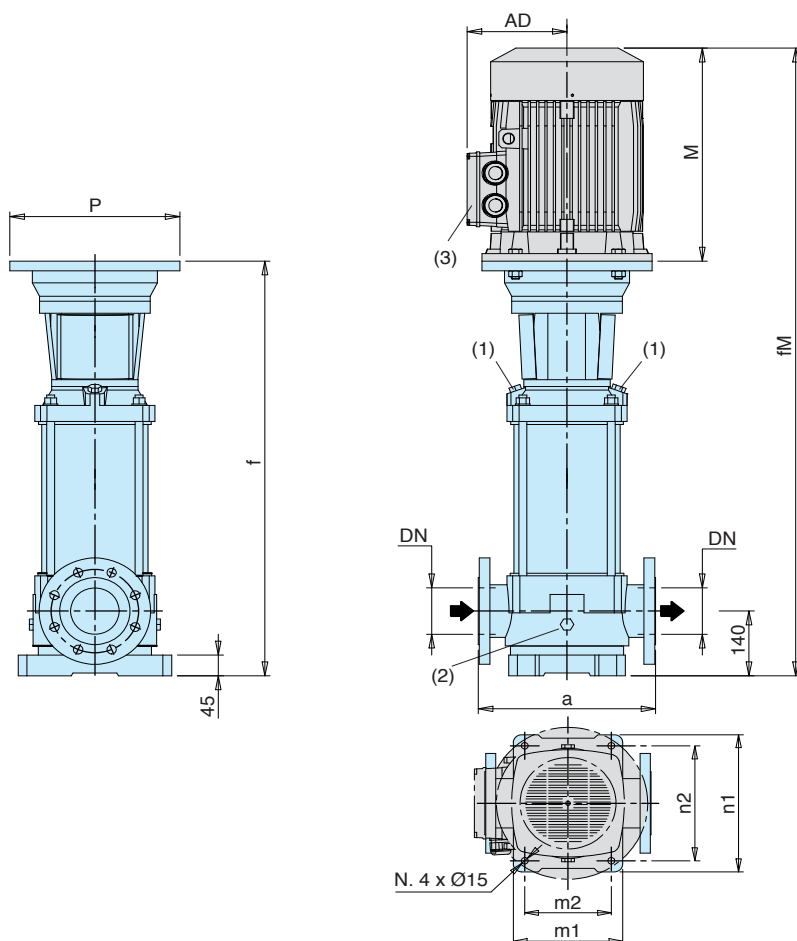
Pump	Motor			mm									without motor	with motor
				DN	a	h1	f	(6) M	fM	P	(6) AD	m4	MXV (5) kg (7)	(6) kg (7)
MXV 50-1603/C	3	4	M100 V1	50	300	90	395	311	706	250	137,5	322	42	67,6
MXV 50-1604/C	4	5,5	M112 V1	50	300	90	430	311	741	250	137,5	357	43	70,8
MXV 50-1605/C	5,5	7,5	M132 V1	50	300	90	484	339	823	300	159,5	391	49	91,3
MXV 50-1606/C	5,5	7,5	M132 V1	50	300	90	519	339	858	300	159,5	426	51	93,3
MXV 50-1607/C	7,5	10	M132 V1	50	300	90	553	339	892	300	159,5	460	52	99,7
MXV 50-1608/C	7,5	10	M132 V1	50	300	90	588	339	927	300	159,5	495	53	100,7
MXV 50-1609/D	11	15	M160 V1	50	300	90	652	459	1111	350	186	529	62	138
MXV 50-1610/D	11	15	M160 V1	50	300	90	687	459	1146	350	186	564	64	140
MXV 50-1611/D	11	15	M160 V1	50	300	90	721	459	1180	350	186	598	65	141
MXV 50-1612/D	15	20	M160 V1	50	300	90	756	484	1240	350	186	633	67	169
MXV 50-1614/D	15	20	M160 V1	50	300	90	825	484	1309	350	186	702	70	172
MXV 50-1616/D	18,5	25	M160 V1	50	300	90	894	484	1378	350	186	771	73	179,5
MXV 65-3202/C	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/D	18,5	25	M160 V1	65	320	105	779	484	1236	350	186	656	70	176,5
MXV 65-3210/D	18,5	25	M160 V1	65	320	105	825	484	1309	350	186	702	72	178,5
MXV 65-3212/D	22	30	M180 V1	65	320	105	917	538	1455	350	206	794	75	204
MXV 80-4801/C	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/D	18,5	25	M160 V1	80	320	105	802	484	1286	350	186	679	72	178,5
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
MXV (H) : + 3 kg

(6) With standard motor

(7) Net weight

Dimensioni e pesi



Flanges

EN 1092-2

DN	PN	DE	DK	Holes	
				N.	Ø
100	16	230	180	8	19
100	25	225	190	8	23

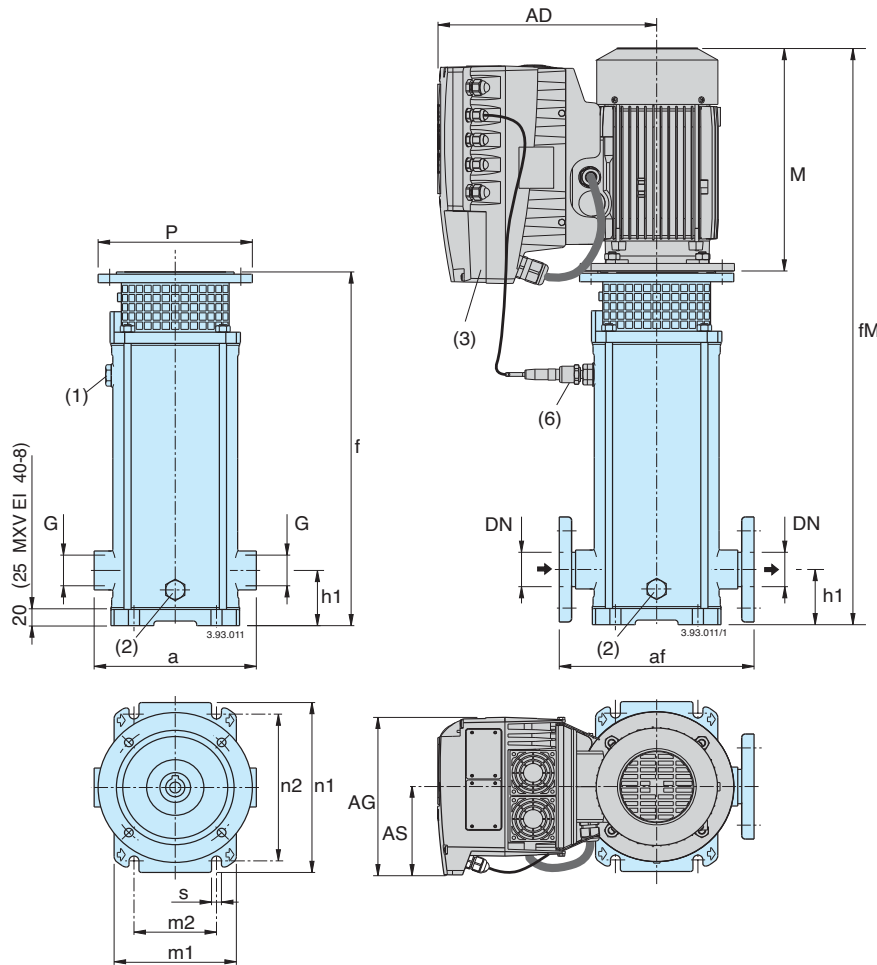
Pump	Motor				mm										without motor	with motor
	kW	HP	PN	Size	a	f	n1	n2	m1	m2	(4) M	fm	P	AD	MXV kg (5)	(4) kg (5)
MXV 100-6501	5,5	7,5	16	M132 V1	365	737	316	265	240	190	339	1076	300	159,5	81	123,3
MXV 100-6502-2R	7,5	10	16	M132 V1	365	829	316	265	240	190	339	1168	300	159,5	85,5	127,8
MXV 100-6502	11	15	16	M160 V1	365	849	316	265	240	190	459	1308	350	186	88,5	164,5
MXV 100-6503-2R	15	20	16	M160 V1	365	941	316	265	240	190	484	1425	350	186	93	195
MXV 100-6503	18,5	25	16	M160 V1	365	941	316	265	240	190	484	1425	350	186	93	199,5
MXV 100-6504-2R	18,5	25	16	M160 V1	365	1033	316	265	240	190	484	1517	350	186	97,5	204
MXV 100-6504	22	30	16	M180 V1	365	1033	316	265	240	190	538	1571	350	206	98	227
MXV 100-6505-2R	30	40	16	M200 V1	365	1131	316	265	240	190	721	1852	400	315	105,5	330,5
MXV 100-6505	30	40	16	M200 V1	365	1131	316	265	240	190	721	1852	400	315	105,5	330,5
MXV 100-6506-2R	30	40	16	M200 V1	365	1223	316	265	240	190	721	1944	400	315	110	335
MXV 100-6506	37	50	25	M200 V1	365	1223	316	265	240	190	721	1944	400	315	110	360
MXV 100-6507-2R	37	50	25	M200 V1	365	1315	316	265	240	190	721	2036	400	315	114,5	364,5
MXV 100-6507	45	60	25	M225 V1	365	1315	316	265	240	190	818	2133	450	338	117,5	432,5
MXV 100-6508-2R	45	60	25	M225 V1	365	1407	316	265	240	190	818	2225	450	338	122	437
MXV 100-6508	45	60	25	M225 V1	365	1407	316	265	240	190	818	2225	450	338	122	437
MXV 100-9001-1R	5,5	7,5	16	M132 V1	380	737	341	280	260	199	339	1076	300	159,5	82,5	124,8
MXV 100-9001	7,5	10	16	M132 V1	380	737	341	280	260	199	339	1076	300	159,5	82,5	124,8
MXV 100-9002-2R	11	15	16	M160 V1	380	849	341	280	260	199	459	1308	350	186	89	165
MXV 100-9002	15	20	16	M160 V1	380	849	341	280	260	199	484	1333	350	186	89	191
MXV 100-9003-2R	18,5	25	16	M160 V1	380	941	341	280	260	199	484	1425	350	186	93	199,5
MXV 100-9003	22	30	16	M180 V1	380	941	341	280	260	199	538	1479	350	206	93	222
MXV 100-9004-2R	30	40	16	M200 V1	380	1038	341	280	260	199	721	1759	400	315	100	325
MXV 100-9004	30	40	16	M200 V1	380	1038	341	280	260	199	721	1759	400	315	100	325
MXV 100-9005-2R	37	50	16	M200 V1	380	1131	341	280	260	199	721	1852	400	315	104	354
MXV 100-9005	37	50	16	M200 V1	380	1131	341	280	260	199	721	1852	400	315	104	354
MXV 100-9006-2R	45	60	25	M225 V1	380	1223	341	280	260	199	818	2041	450	338	110,5	425,5
MXV 100-9006	45	60	25	M225 V1	380	1223	341	280	260	199	818	2041	450	338	110,5	425,5

(4) Standard position of terminal box. (for other positions rotate motor through 90° or 180°) (5) MXV (L) : + 3 kg

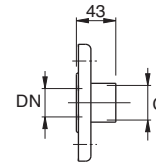
(6) With standard motor

(7) Net weight

Dimensions and weights



Counterflanges in stainless steel



DN	G ISO 228
25	1
32	1 1/4
40	1 1/2

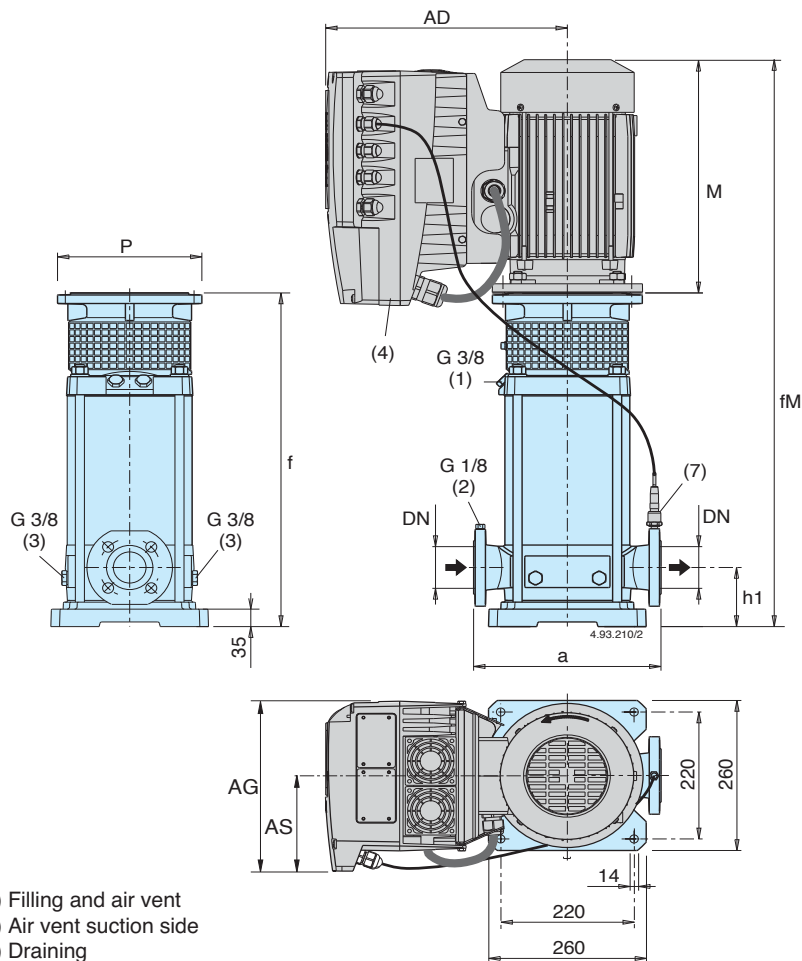
Flanges in accordance EN 1092-2 PN 25 - 40

DN	DE	DK	DG	Holes	
				N.	Ø
25	115	85	65	4	14
32	140	100	76	4	19
40	150	110	84	4	19

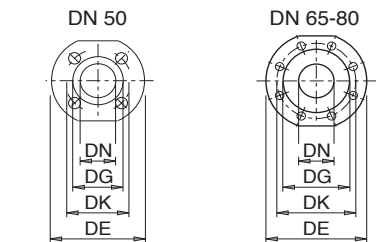
- (1) Filling
- (2) Draining
- (3) Standard position of I-MAT
(for other positions rotate motor through 90° or 180°)
- (4) MXV EI (F) = MXV EI (G) + 1 kg
- (5) Net weight
- (6) Pressure transducer

Pump	Motor			MXV EI (G) threaded ports		MXV EI (F) flanged ports		mm														MXV EI (G) (4) kg (5)	
								h1	f	M	fM	P	AD	AG	AS	n1	n2	m1	m2	s			
	kW	HP		G ISO 228	a	DN	af																
MXV EI 25-204	0,75	1	M80 V1	G1	215	25	250	75	372	255	627	200	286	190	105	210	180	150	100	12,5	36,6		
MXV EI 25-205	0,75	1	M80 V1	G1	215	25	250	75	396	255	651	200	286	190	105	210	180	150	100	12,5	37,6		
MXV EI 25-206	1,1	1,5	M80 V1	G1	215	25	250	75	420	255	675	200	286	190	105	210	180	150	100	12,5	39,7		
MXV EI 25-207	1,1	1,5	M80 V1	G1	215	25	250	75	444	255	699	200	286	190	105	210	180	150	100	12,5	40,7		
MXV EI 25-208	1,5	2	M90 V1	G1	215	25	250	75	478	255	733	200	286	190	105	210	180	150	100	12,5	43,8		
MXV EI 25-210	1,5	2	M90 V1	G1	215	25	250	75	526	255	781	200	286	190	105	210	180	150	100	12,5	44,8		
MXV EI 25-212	2,2	3	M90 V1	G1	215	25	250	75	574	295	869	200	286	210	118	210	180	150	100	12,5	50,6		
MXV EI 25-214	2,2	3	M90 V1	G1	215	25	250	75	622	295	917	200	286	210	118	210	180	150	100	12,5	51,6		
MXV EI 25-216	3	4	M100 V1	G1	215	25	250	75	680	311	991	250	294	210	118	210	180	150	100	12,5	62,1		
MXV EI 25-218	3	4	M100 V1	G1	215	25	250	75	728	311	1039	250	294	210	118	210	180	150	100	12,5	64,1		
MXV EI 25-220	3	4	M100 V1	G1	215	25	250	75	776	311	1087	250	294	210	118	210	180	150	100	12,5	65,1		
MXV EI 32-404	1,1	1,5	M80 V1	G 1 1/4	215	32	250	75	372	255	627	200	286	190	105	210	180	150	100	12,5	37,6		
MXV EI 32-405	1,1	1,5	M80 V1	G 1 1/4	215	32	250	75	396	255	651	200	286	190	105	210	180	150	100	12,5	38,6		
MXV EI 32-406	1,5	2	M90 V1	G 1 1/4	215	32	250	75	430	255	685	200	286	190	105	210	180	150	100	12,5	42,8		
MXV EI 32-407	1,5	2	M90 V1	G 1 1/4	215	32	250	75	454	255	709	200	286	190	105	210	180	150	100	12,5	43,8		
MXV EI 32-408	2,2	3	M90 V1	G 1 1/4	215	32	250	75	478	295	773	200	286	210	118	210	180	150	100	12,5	48,6		
MXV EI 32-410	2,2	3	M90 V1	G 1 1/4	215	32	250	75	526	295	821	200	286	210	118	210	180	150	100	12,5	49,6		
MXV EI 32-412	3	4	M100 V1	G 1 1/4	215	32	250	75	584	311	895	250	294	210	118	210	180	150	100	12,5	60,1		
MXV EI 32-414	3	4	M100 V1	G 1 1/4	215	32	250	75	632	311	943	250	294	210	118	210	180	150	100	12,5	62,1		
MXV EI 32-416	4	5,5	M112 V1	G 1 1/4	215	32	250	75	680	311	991	250	294	210	118	210	180	150	100	12,5	65,8		
MXV EI 32-418	4	5,5	M112 V1	G 1 1/4	215	32	250	75	728	311	1039	250	294	210	118	210	180	150	100	12,5	66,8		
MXV EI 40-804	1,5	2	M90 V1	G 1 1/2	225	40	280	80	411	255	666	200	286	190	105	246	215	190	130	14	42,8		
MXV EI 40-805	2,2	3	M90 V1	G 1 1/2	225	40	280	80	441	295	736	200	286	210	118	246	215	190	130	14	47,6		
MXV EI 40-806	2,2	3	M90 V1	G 1 1/2	225	40	280	80	471	295	766	200	286	210	118	246	215	190	130	14	48,6		
MXV EI 40-807	3	4	M100 V1	G 1 1/2	225	40	280	80	511	311	822	250	294	210	118	246	215	190	130	14	58,6		
MXV EI 40-808	3	4	M100 V1	G 1 1/2	225	40	280	80	541	311	852	250	294	210	118	246	215	190	130	14	59,6		
MXV EI 40-810	4	5,5	M112 V1	G 1 1/2	225	40	280	80	601	311	912	250	294	210	118	246	215	190	130	14	63,8		
MXV EI 40-811	4	5,5	M112 V1	G 1 1/2	225	40	280	80	631	311	942	250	294	210	118	246	215	190	130	14	64,8		
MXV EI 40-813	5,5	7,5	M132 V1	G 1 1/2	225	40	280	80	711	339	1050	300	321	210	118	246	215	190	130	14	85,3		
MXV EI 40-815	5,5	7,5	M132 V1	G 1 1/2	225	40	280	80	771	339	1110	300	321	210	118	246	215	190	130	14	86,3		
MXV EI 40-817	7,5	10	M132 V1	G 1 1/2	225	40	280	80	831	339	1170	300	368	281	153	246	215	190	130	14	100,5		
MXV EI 40-819	7,5	10	M132 V1	G 1 1/2	225	40	280	80	891	339	1230	300	368	281	153	246	215	190	130	14	101,5		

Dimensions and weights

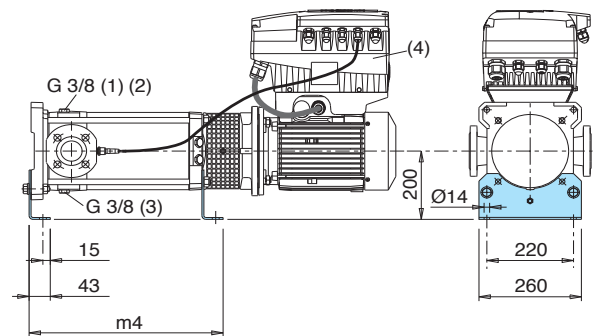


- (1) Filling and air vent
- (2) Air vent suction side
- (3) Draining
- (4) Standard position of I-MAT
(for other positions rotate motor through 90° or 180°)
- (5) MXV (L) : + 3 kg, MXV (H) : + 3 kg
- (6) Net weight
- (7) Pressure transducer



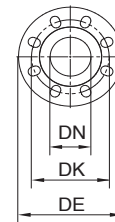
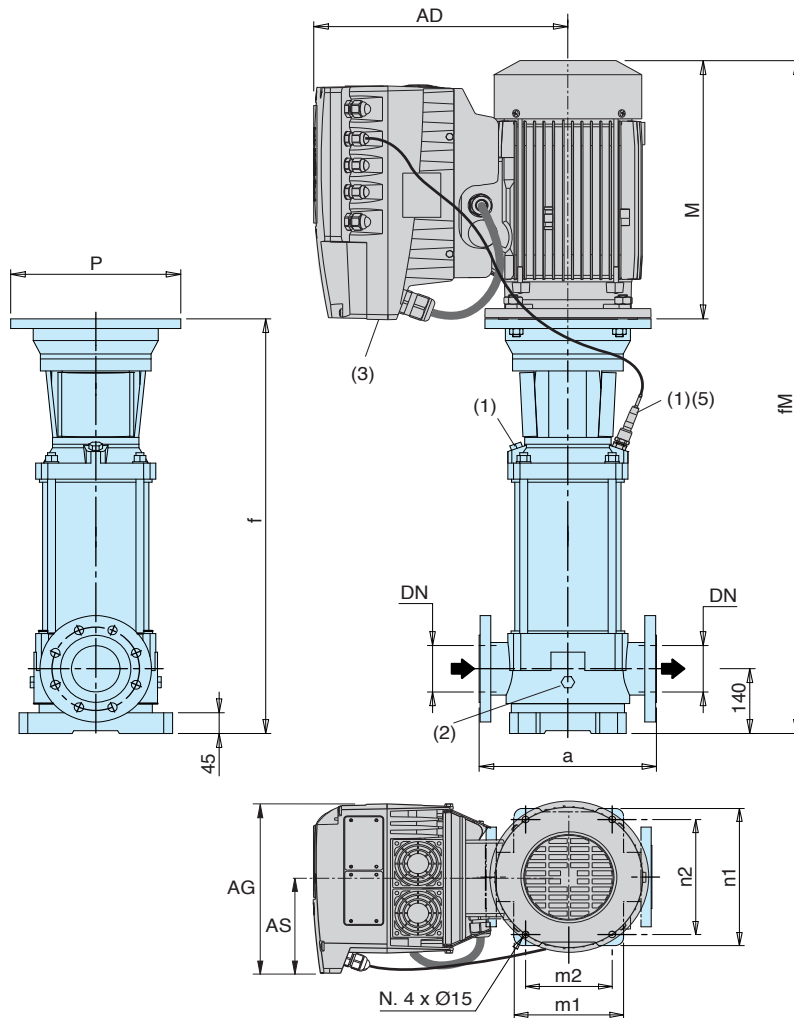
Flanges in accordance
EN 1092-2 PN 25 - 40

DN	DE	DK	DG	Holes	
				N.	Ø
50	165	125	99	4	19
65	185	145	118	8	19
80	200	160	132	8	19



Pump	Motor			mm										MXV EI (5)	
				DN	a	h1	f	M	fM	P	AD	AG	AS	m4	kg (6)
MXV EI 50-1603	3	4	M100 V1	50	300	90	395	311	706	250	294	210	118	322	75,1
MXV EI 50-1604	4	5,5	M112 V1	50	300	90	430	311	741	250	294	210	118	357	78,8
MXV EI 50-1605	5,5	7,5	M132 V1	50	300	90	484	339	823	300	321	210	118	391	99,3
MXV EI 50-1606	5,5	7,5	M132 V1	50	300	90	519	339	858	300	321	210	118	426	101,3
MXV EI 50-1607	7,5	10	M132 V1	50	300	90	553	339	892	300	368	281	153	460	114,5
MXV EI 50-1608	7,5	10	M132 V1	50	300	90	588	339	927	300	368	281	153	495	115,5
MXV EI 50-1609	11	15	M160 V1	50	300	90	652	459	1111	350	393	281	153	529	152,8
MXV EI 50-1610	11	15	M160 V1	50	300	90	687	459	1146	350	393	281	153	564	154,8
MXV EI 50-1611	11	15	M160 V1	50	300	90	721	459	1180	350	393	281	153	598	155,8
MXV EI 65-3202	4	5,5	M112 V1	65	320	105	407	311	718	250	294	210	118	334	80,8
MXV EI 65-3203	5,5	7,5	M132 V1	65	320	105	473	339	812	300	321	210	118	380	101,3
MXV EI 65-3204	7,5	10	M132 V1	65	320	105	519	339	858	300	368	281	153	426	115,5
MXV EI 65-3205	11	15	M160 V1	65	320	105	595	459	1054	350	393	281	153	472	152,8
MXV EI 65-3206	11	15	M160 V1	65	320	105	641	459	1100	350	393	281	153	518	154,8
MXV EI 80-4801	4	5,5	M112 V1	80	320	105	411	311	722	250	294	210	118	338	80,8
MXV EI 80-4802	5,5	7,5	M132 V1	80	320	105	466	339	805	300	321	210	118	373	101,3
MXV EI 80-4803	7,5	10	M132 V1	80	320	105	527	339	866	300	368	281	153	434	116,5
MXV EI 80-4804	11	15	M160 V1	80	320	105	618	459	1077	350	393	281	153	495	154,8

Dimensions and weights



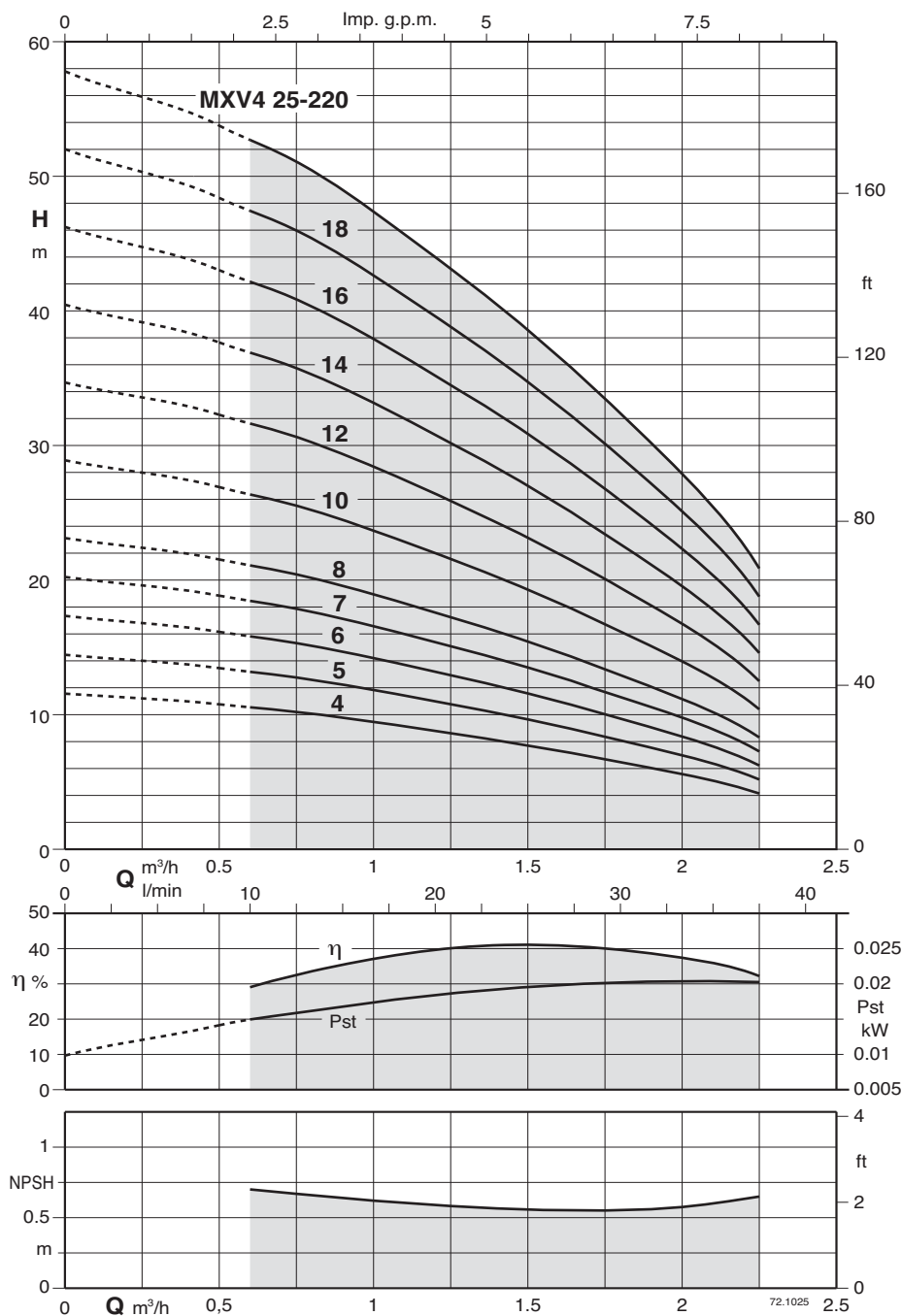
Flanges in accordance
EN 1092-2

DN	PN	DE	DK	Holes	
				N.	Ø
100	16	230	180	8	19
100	25	225	190	8	23

- (1) Filling and air vent
- (2) Draining
- (3) Standard position of I-MAT
(for other positions rotate motor through 90° or 180°)
- (4) Net weight
- (5) Pressure transducer

Pump	Motor				mm												MXV EI kg (4)
	kW	HP	PN	Size	a	f	n1	n2	m1	m2	M	fm	P	AD	AG	AS	
MXV EI 100-6501	5,5	7,5	16	M132 V1	365	737	316	265	240	190	339	1076	300	321	210	118	131,3
MXV EI 100-6502-2R	7,5	10	16	M132 V1	365	829	316	264	240	190	339	1168	300	368	281	153	142,6
MXV EI 100-6502	11	15	16	M160 V1	365	849	316	265	240	190	459	1308	350	393	281	153	179,3
MXV EI 100-9001-1R	5,5	7,5	16	M132 V1	380	737	341	280	260	199	339	1076	300	321	210	118	132,8
MXV EI 100-9001	7,5	10	16	M132 V1	380	737	341	280	260	199	339	1076	300	368	281	153	139,6
MXV EI 100-9002-2R	11	15	16	M160 V1	380	849	341	280	260	199	459	1308	350	393	281	153	179,8

Characteristic curves and performance $n \approx 1450$ rpm



Test results with clean cold water, without gas content.

A safety margin of + 0.5 m is recommended for the NPSH value.

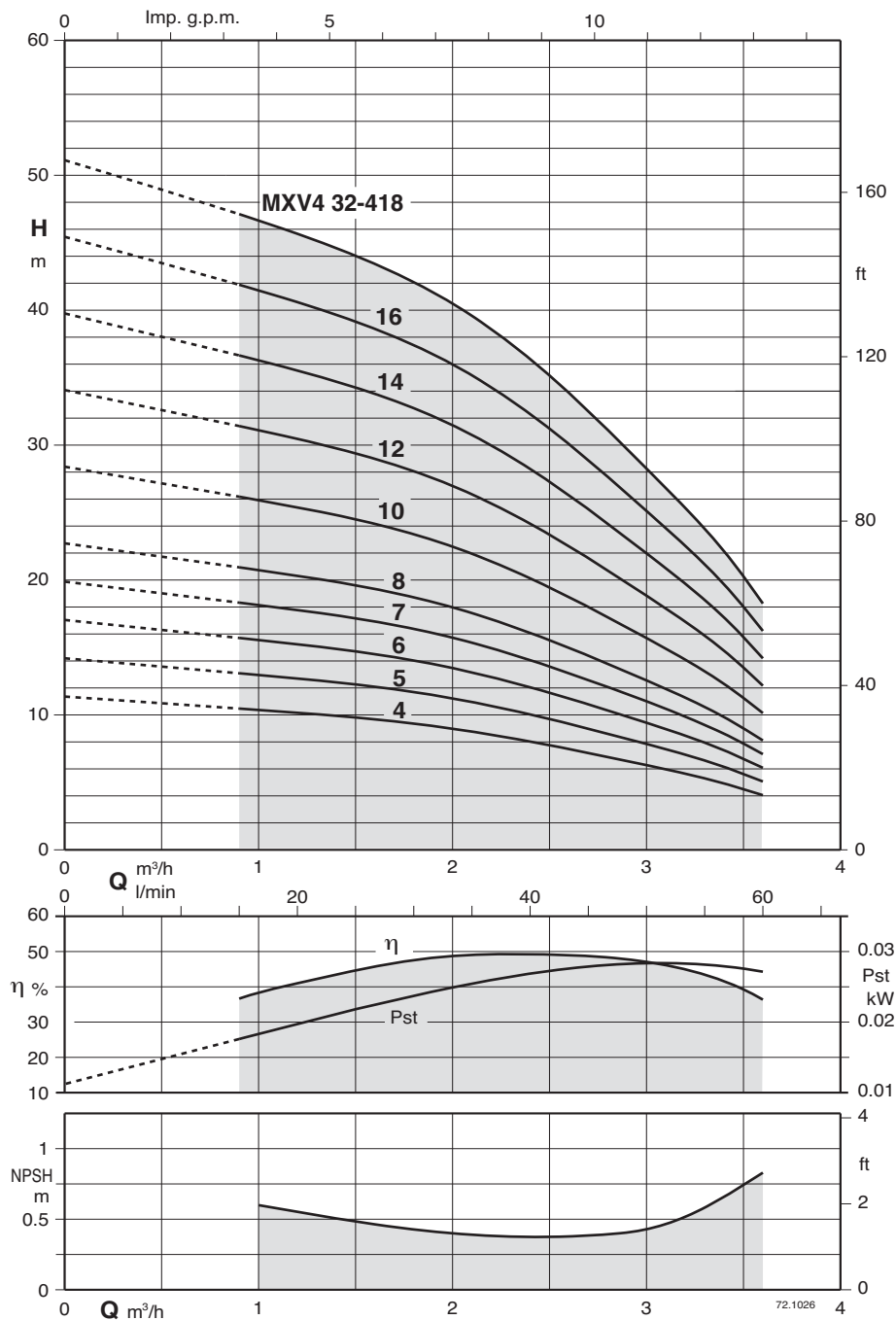
Tolerances in accordance with UNI EN ISO 9906:2012

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.

Pump type	Motor power		Q m³/h l/min	0	0,6	0,9	1,2	1,5	1,8	2,2		
	kW	HP		0	10	15	20	25	30	36,6		
MXV4 25-204	0,55	0,75	H m	11,5	10,5	10	9	7,5	6,5	4		
MXV4 25-205	0,55	0,75		14,5	13	12	11	9,5	8	5		
MXV4 25-206	0,55	0,75		17,5	16	14,5	13	11,5	9,5	6		
MXV4 25-207	0,55	0,75		20,5	18,5	17	15,5	13,5	11	7		
MXV4 25-208	0,55	0,75		23	21	19,5	17,5	15	13	8		
MXV4 25-210	0,55	0,75		29	26,5	24,5	22	19	16	10		
MXV4 25-212	0,55	0,75		35	31,5	29,5	26,5	23	19	12		
MXV4 25-214	0,55	0,75		40,5	37	34,5	31	26,5	22,5	14		
MXV4 25-216	0,55	0,75		46,5	42	39	35	30,5	25,5	16,5		
MXV4 25-218	0,55	0,75		52	47,5	44	39,5	34	29	18,5		
MXV4 25-220	0,55	0,75		58	52,5	49	44	38	32	21		

Characteristic curves and performance $n \approx 1450$ rpm



Test results with clean cold water, without gas content.

A safety margin of + 0.5 m is recommended for the NPSH value.

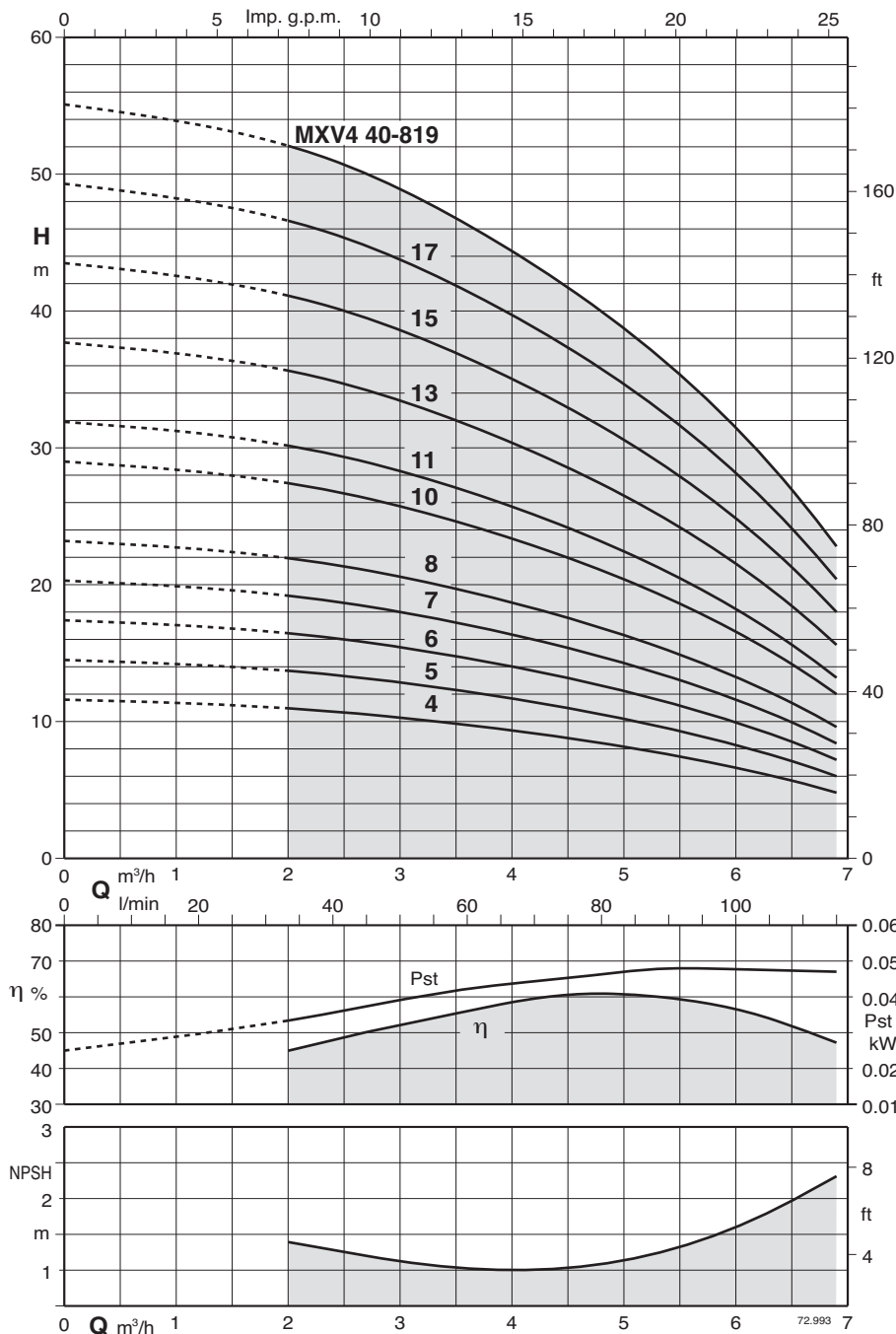
Tolerances in accordance with UNI EN ISO 9906:2012

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.

Pump type	Motor power		Q m³/h l/min	0	0,9	1,2	1,8	2,4	3	3,6		
	kW	HP		0	15	20	30	40	50	60		
MXV4 32-404	0,55	0,75	H m	11	10,5	10	9,5	8	6,5	4		
MXV4 32-405	0,55	0,75		14	13	12,5	12	10	8	5		
MXV4 32-406	0,55	0,75		17	15,5	15	14	12	9,5	6		
MXV4 32-407	0,55	0,75		19,5	18	17,5	16,5	14	11	7		
MXV4 32-408	0,55	0,75		22,5	21	20	19	16	13	8		
MXV4 32-410	0,55	0,75		28	26	25	23,5	20	16	10		
MXV4 32-412	0,55	0,75		33,5	31	30	28	24	19	12		
MXV4 32-414	0,55	0,75		39	36,5	35	33	28	22,5	14		
MXV4 32-416	0,55	0,75		45	41,5	40	37,5	32	25,5	16		
MXV4 32-418	0,55	0,75		51	47	45	42	36	29	18		

Characteristic curves and performance $n \approx 1450$ rpm



Test results with clean cold water, without gas content.

A safety margin of + 0.5 m is recommended for the NPSH value.

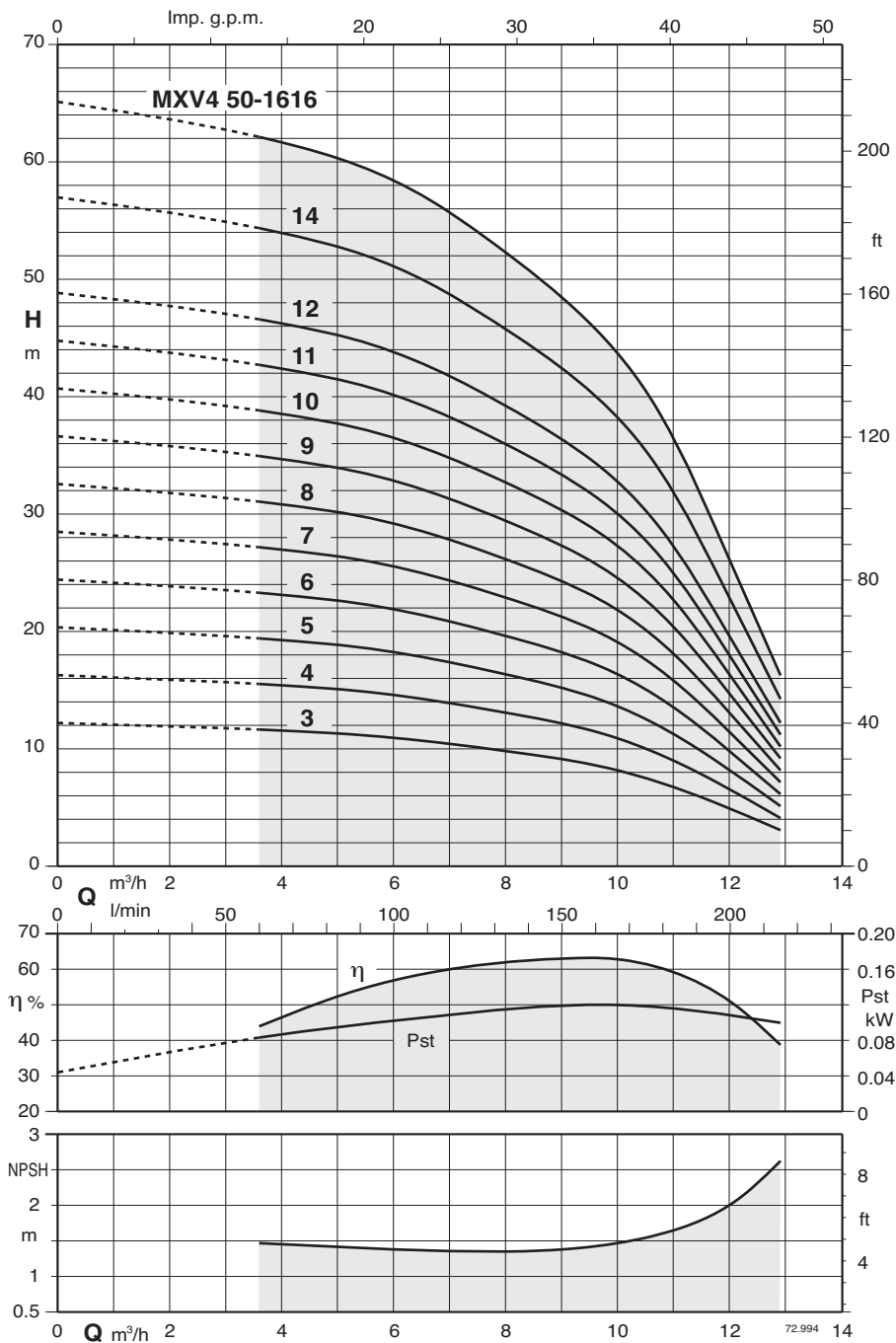
Tolerances in accordance with UNI EN ISO 9906:2012

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.

Pump type	Motor power		Q m³/h l/min	0	2	2,7	3,6	4,2	4,8	5,4	6	6,9
	kW	HP		0	33,5	45	60	70	80	90	100	115
MXV4 40-804	0,55	0,75	H m	11,5	11	10,5	9,5	9	8,5	7,5	6,5	5
MXV4 40-805	0,55	0,75		14,5	14	13	12	11,5	10,5	9,5	8	6
MXV4 40-806	0,55	0,75		17,5	16,5	16	14,5	13,5	12,5	11,5	10	7
MXV4 40-807	0,55	0,75		20	19	18,5	17	16	15	13,5	11,5	8,5
MXV4 40-808	0,55	0,75		23	22	21	19,5	18	17	15	13	9,5
MXV4 40-810	0,55	0,75		29	27,5	26	24	23	21	19	16,5	12
MXV4 40-811	0,55	0,75		32	30	29	26,5	25	23	21	18	13
MXV4 40-813	0,75	1		38	36	34	31,5	29,5	27	25	21,5	15,5
MXV4 40-815	0,75	1		43,5	41	39,5	36,5	34	31,5	28,5	25	18
MXV4 40-817	1,1	1,5		49	47	44,5	41	39	36	32	28	20,5
MXV4 40-819	1,1	1,5		55	52	50	46	43	40	36	31,5	23

Characteristic curves and performance $n \approx 1450$ rpm



Test results with clean cold water, without gas content.

A safety margin of + 0.5 m is recommended for the NPSH value.

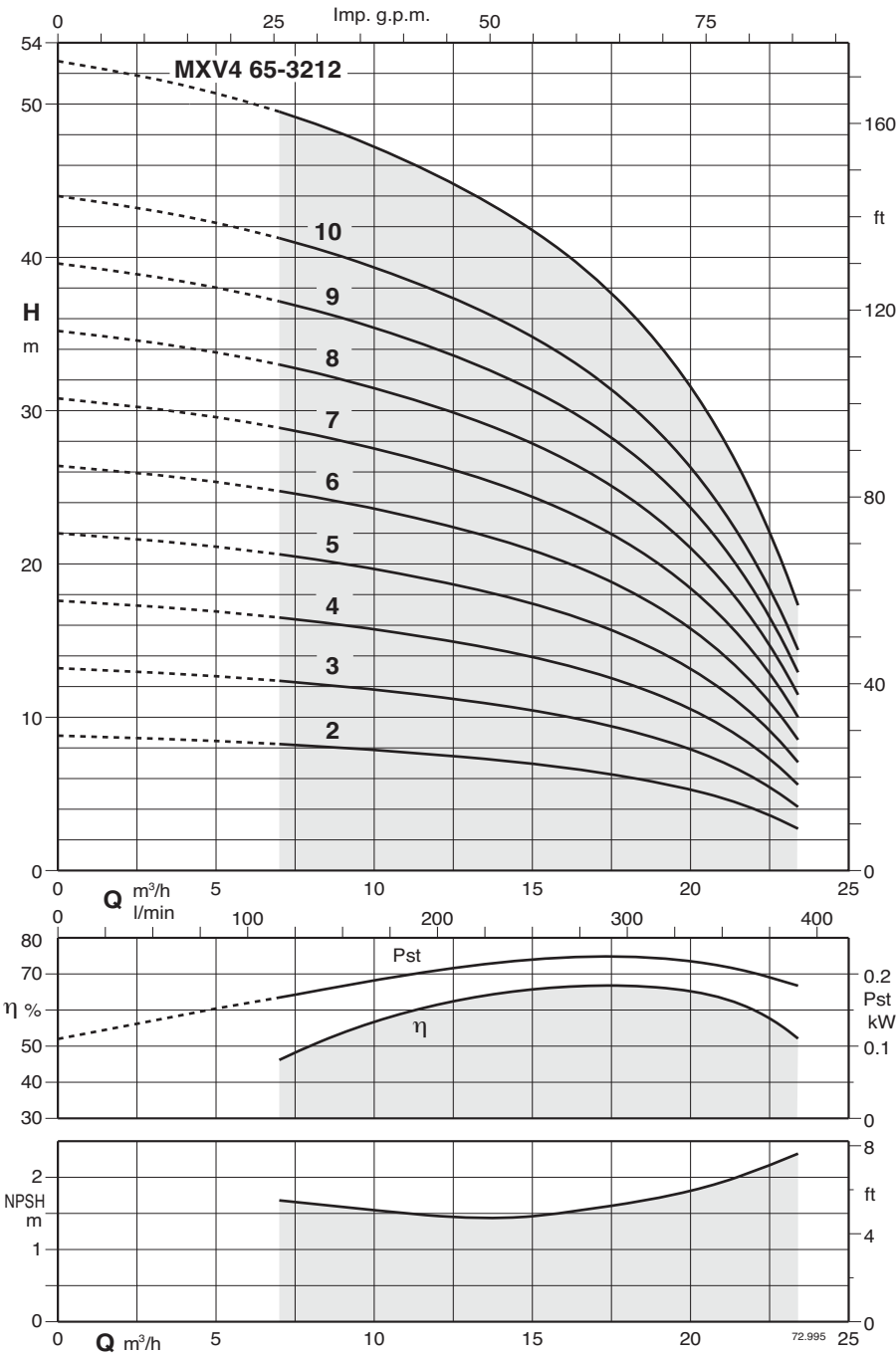
Tolerances in accordance with UNI EN ISO 9906:2012

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.

Pump type	Motor power		Q m³/h l/min	0	3,6	4,5	6	7,5	9	10,5	12,9		
	kW	HP		0	60	75	100	125	150	175	215		
MXV4 50-1603	2,2	3	H m	12,3	11,5	11,5	11	10	9	7,5	3		
MXV4 50-1604	2,2	3		16,5	15,5	15,5	14,5	13,5	12	10	4		
MXV4 50-1605	2,2	3		20,5	19,5	19	18,5	17	15,5	12,5	5		
MXV4 50-1606	2,2	3		24,5	23	23	22	20,5	18,5	15	6		
MXV4 50-1607	2,2	3		29	27	27	25,5	24	21,5	17,5	7		
MXV4 50-1608	2,2	3		33	31	30,5	29,5	27	24,5	20	8		
MXV4 50-1609	2,2	3		37	35	34,5	33	30,5	27,5	22,5	9		
MXV4 50-1610	2,2	3		41	39	38,5	36,5	34	30,5	25	10		
MXV4 50-1611	2,2	3		45	42,5	42	40,5	37,5	34	27,5	11,5		
MXV4 50-1612	2,2	3		49	46,5	46	44	41	37	30	12,5		
MXV4 50-1614	2,2	3		57,5	54	53,5	51,5	47,5	43	35	14,5		
MXV4 50-1616	2,2	3		65,5	62	61,5	58,5	54,5	49	40	16,5		

Characteristic curves and performance n ≈ 1450 rpm



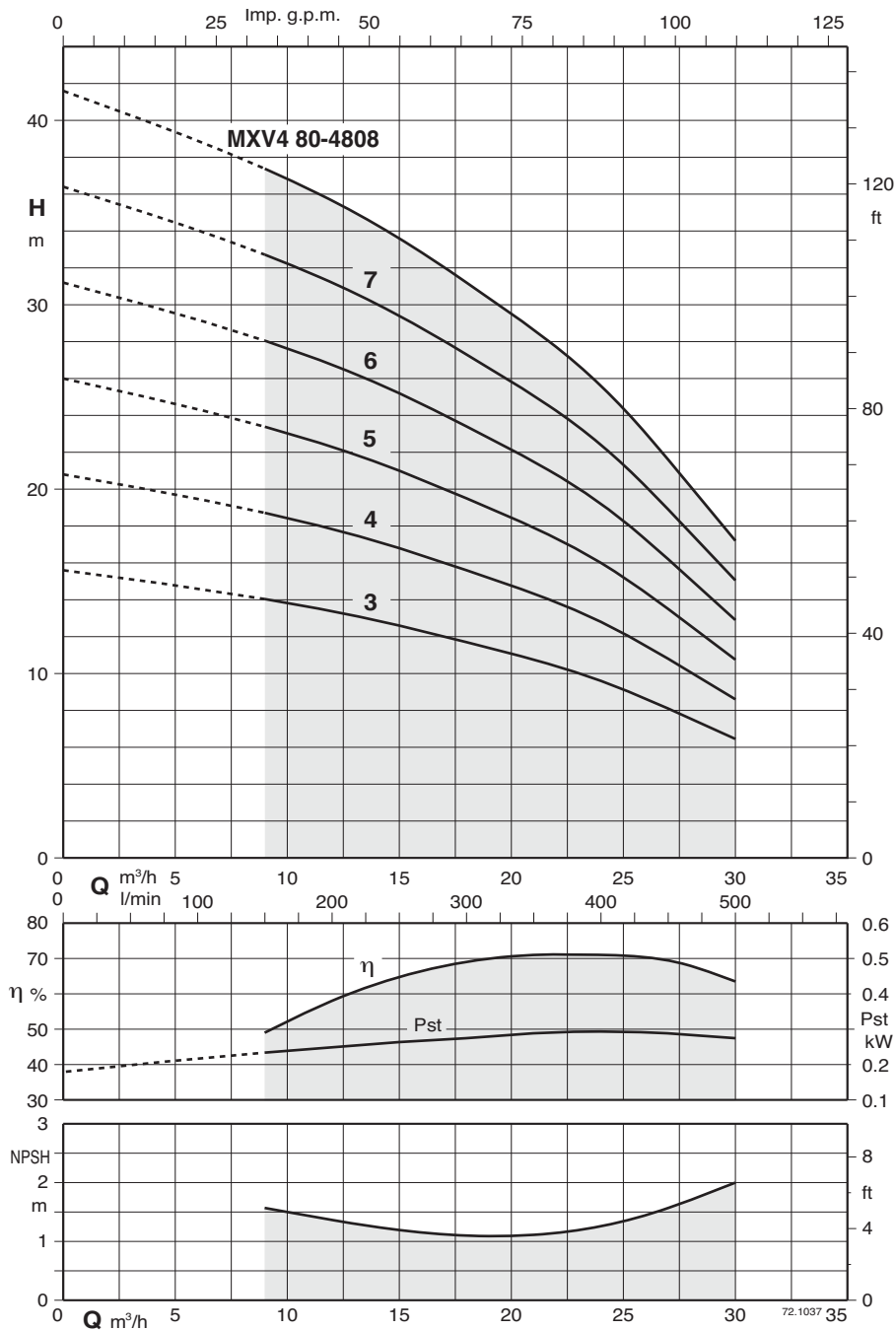
Test results with clean cold water, without gas content.
A safety margin of + 0.5 m is recommended for the NPSH value.
Tolerances in accordance with UNI EN ISO 9906:2012

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.

Pump type	Motor power		Q m³/h l/min	0	7	9	11	13	15	17	19	23,4	
	kW	HP		0	116,6	150	183	216	250	283	316	390	
MXV4 65-3202	2,2	3	H m	9	8,2	8	7,7	7,4	7	6,5	6	3	
MXV4 65-3203	2,2	3		13	12,3	12	11,5	11	10	9,5	8,5	4	
MXV4 65-3204	2,2	3		17,5	16,5	16	15,5	15	13,5	12,5	11,5	6	
MXV4 65-3205	2,2	3		22	20,5	20	19	18	17	16	14	7	
MXV4 65-3206	2,2	3		26	25	24	23	22	20,5	19	17	8,5	
MXV4 65-3207	2,2	3		31	29	28	27	25,5	24	22	20	10	
MXV4 65-3208	2,2	3		35	33	32	30,5	29,5	27	25,5	23	11,5	
MXV4 65-3209	2,2	3		39	37	36	34,5	33	30,5	28,5	25,5	13	
MXV4 65-3210	3	4		44	41	40	38,5	36,5	34	32	28,5	14,5	
MXV4 65-3212	3	4		53	49	48	46	44	41	38	34	17,5	

Characteristic curves and performance $n \approx 1450$ rpm



Test results with clean cold water, without gas content.

A safety margin of + 0.5 m is recommended for the NPSH value.

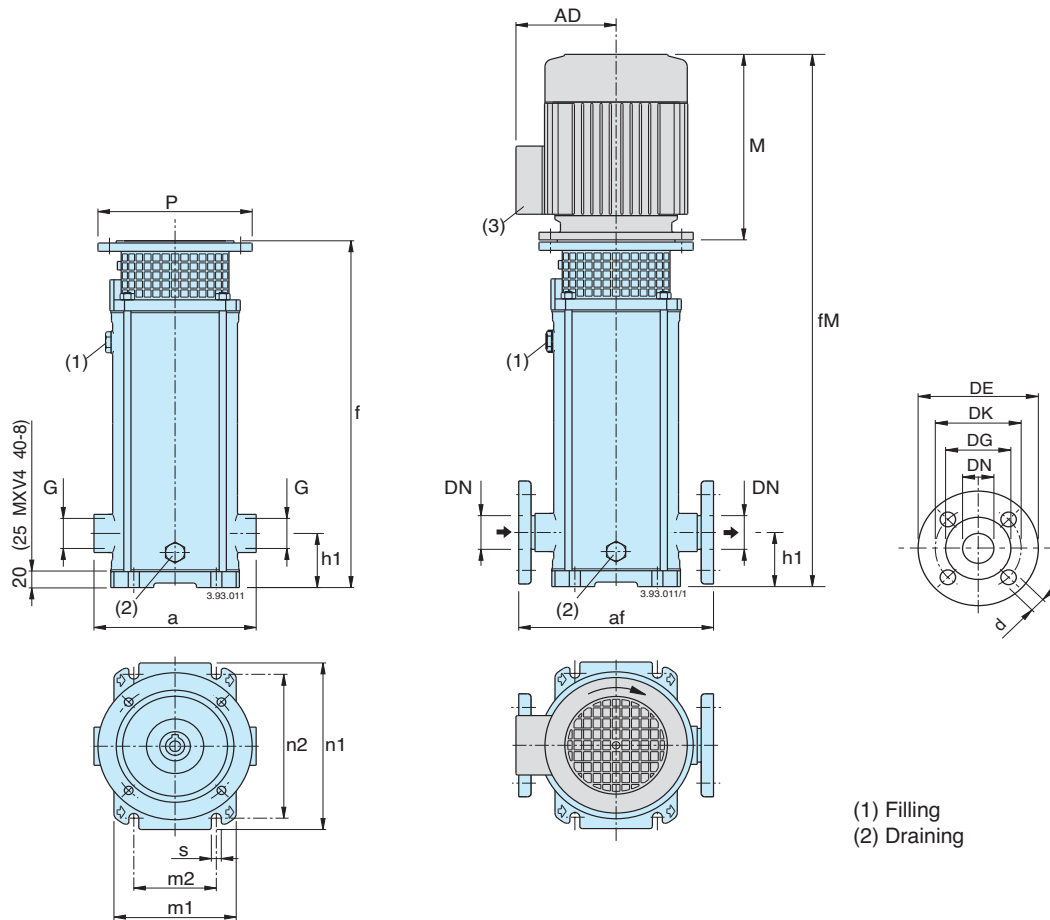
Tolerances in accordance with UNI EN ISO 9906:2012

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.

Pump type	Motor power		Q m³/h l/min	0	9	12	15	18	21	24	27	30	
	kW	HP		0	150	200	250	300	350	400	450	500	
MXV4 80-4803	2,2	3	H m	15,5	14	13	12,5	11,5	11	9,5	8	6,5	
MXV4 80-4804	2,2	3		21	19	18	17	15,5	14,5	13	11	8,5	
MXV4 80-4805	2,2	3		26	23,5	22	21	19,5	18	16	13,5	11	
MXV4 80-4806	2,2	3		31	28	26,5	25	23,5	21,5	19	16	13	
MXV4 80-4807	2,2	3		36,5	33	31	29,5	27	25	22,5	19	15	
MXV4 80-4808	3	4		41,5	37,5	35,5	33,5	31	29	25,5	21,5	17	

Dimensions and weights



Counterflanges in stainless steel

DN	G ISO 228
25	1
32	1 1/4
40	1 1/2

Flanges EN 1092-1 PN 25 - 40

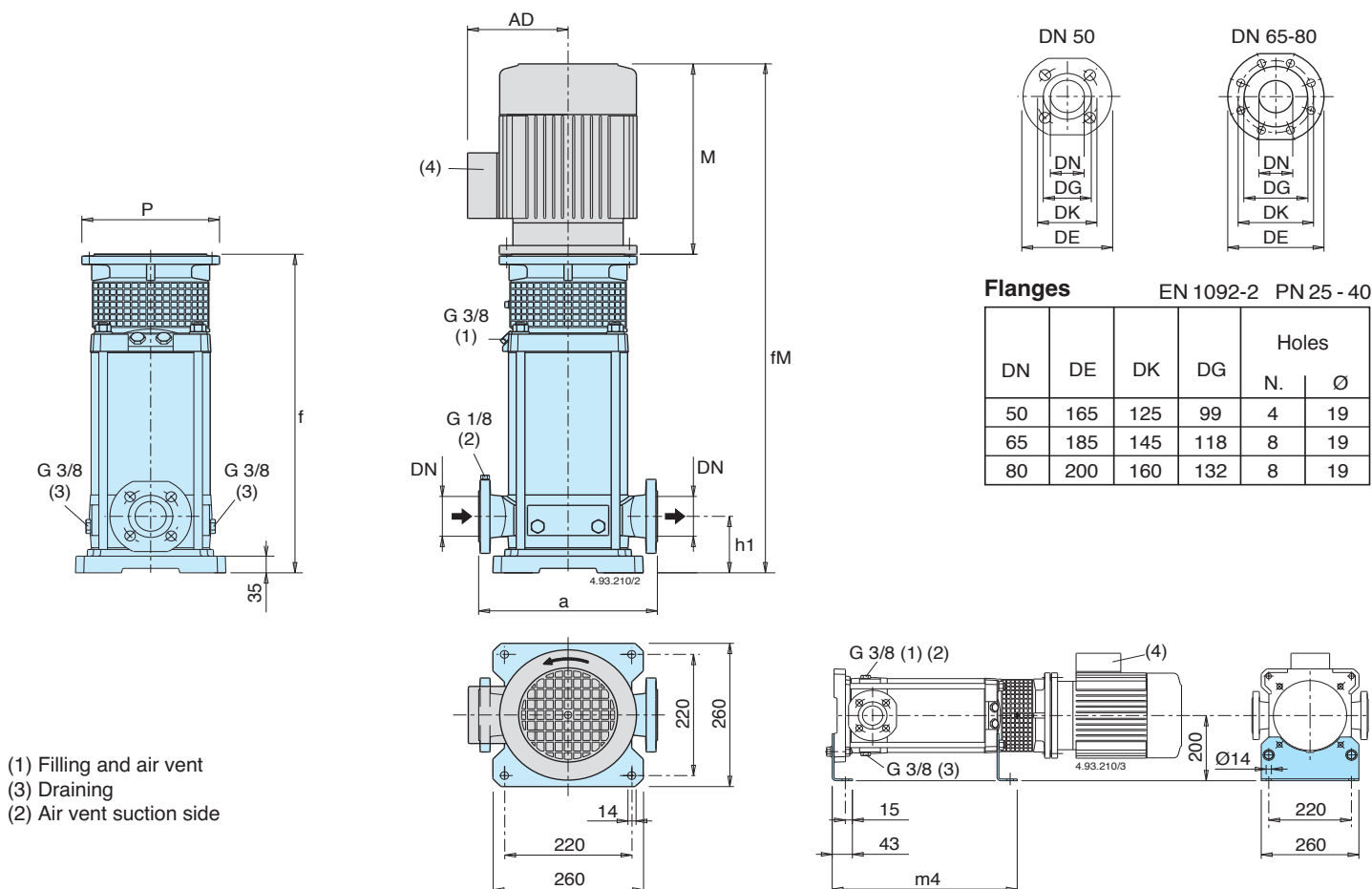
DN	DE	DK	DG	Holes	
				N.	Ø
25	115	85	65	4	14
32	140	100	76	4	19
40	150	110	84	4	19

(1) Filling
(2) Draining

Pump	Motor			MXV (G) threaded ports		MXV (F) flanged ports		mm												without motor	with motor
																				MXV (G) (4) kg (6)	(5) kg (6)
	kW	HP		G ISO 228	a	DN	af	h1	f	(5) M	fM	P	(5) AD	n1	n2	m1	m2	s			
MXV4 25-204	0,55	0,75	80 A4	G1	215	25	250	75	372	234	606	200	120	210	180	150	100	12,5	18	26	
MXV4 25-205	0,55	0,75	80 A4	G1	215	25	250	75	396	234	630	200	120	210	180	150	100	12,5	19	27	
MXV4 25-206	0,55	0,75	80 A4	G1	215	25	250	75	420	234	654	200	120	210	180	150	100	12,5	20	28	
MXV4 25-207	0,55	0,75	80 A4	G1	215	25	250	75	444	234	678	200	120	210	180	150	100	12,5	21	29	
MXV4 25-208	0,55	0,75	80 A4	G1	215	25	250	75	468	234	702	200	120	210	180	150	100	12,5	22	30	
MXV4 25-210	0,55	0,75	80 A4	G1	215	25	250	75	516	234	750	200	120	210	180	150	100	12,5	23	31	
MXV4 25-212	0,55	0,75	80 A4	G1	215	25	250	75	564	234	798	200	120	210	180	150	100	12,5	25	33	
MXV4 25-214	0,55	0,75	80 A4	G1	215	25	250	75	612	234	846	200	120	210	180	150	100	12,5	26	34	
MXV4 25-216	0,55	0,75	80 A4	G1	215	25	250	75	660	234	894	200	120	210	180	150	100	12,5	28	36	
MXV4 25-218	0,55	0,75	80 A4	G1	215	25	250	75	708	234	942	200	120	210	180	150	100	12,5	30	38	
MXV4 25-220	0,55	0,75	80 A4	G1	215	25	250	75	756	234	990	200	120	210	180	150	100	12,5	31	39	
MXV4 32-404	0,55	0,75	80 A4	G1 1/4	215	32	250	75	372	234	606	200	120	210	180	150	100	12,5	19	27	
MXV4 32-405	0,55	0,75	80 A4	G1 1/4	215	32	250	75	396	234	630	200	120	210	180	150	100	12,5	20	28	
MXV4 32-406	0,55	0,75	80 A4	G1 1/4	215	32	250	75	420	234	654	200	120	210	180	150	100	12,5	21	29	
MXV4 32-407	0,55	0,75	80 A4	G1 1/4	215	32	250	75	444	234	678	200	120	210	180	150	100	12,5	22	30	
MXV4 32-408	0,55	0,75	80 A4	G1 1/4	215	32	250	75	468	234	702	200	120	210	180	150	100	12,5	23	31	
MXV4 32-410	0,55	0,75	80 A4	G1 1/4	215	32	250	75	516	234	750	200	120	210	180	150	100	12,5	25	33	
MXV4 32-412	0,55	0,75	80 A4	G1 1/4	215	32	250	75	564	234	798	200	120	210	180	150	100	12,5	26	34	
MXV4 32-414	0,55	0,75	80 A4	G1 1/4	215	32	250	75	612	234	846	200	120	210	180	150	100	12,5	28	36	
MXV4 32-416	0,55	0,75	80 A4	G1 1/4	215	32	250	75	660	234	894	200	120	210	180	150	100	12,5	30	38	
MXV4 32-418	0,55	0,75	80 A4	G1 1/4	215	32	250	75	708	234	942	200	120	210	180	150	100	12,5	32	42	
MXV4 40-804	0,55	0,75	80 A4	G1 1/2	225	40	280	80	401	234	635	200	120	246	215	190	130	14	21	29	
MXV4 40-805	0,55	0,75	80 A4	G1 1/2	225	40	280	80	431	234	665	200	120	246	215	190	130	14	22	30	
MXV4 40-806	0,55	0,75	80 A4	G1 1/2	225	40	280	80	461	234	695	200	120	246	215	190	130	14	23	31	
MXV4 40-807	0,55	0,75	80 A4	G1 1/2	225	40	280	80	491	234	725	200	120	246	215	190	130	14	25	33	
MXV4 40-808	0,55	0,75	80 A4	G1 1/2	225	40	280	80	521	234	755	200	120	246	215	190	130	14	26	34	
MXV4 40-810	0,55	0,75	80 A4	G1 1/2	225	40	280	80	581	234	815	200	120	246	215	190	130	14	28	38	
MXV4 40-811	0,55	0,75	80 A4	G1 1/2	225	40	280	80	611	234	845	200	120	246	215	190	130	14	29	39	
MXV4 40-813	0,75	1	80 B4	G1 1/2	225	40	280	80	671	234	905	200	120	246	215	190	130	14	31	41	
MXV4 40-815	0,75	1	80 B4	G1 1/2	225	40	280	80	741	234	965	200	120	246	215	190	130	14	33	43	
MXV4 40-817	1,1	1,5	90 S4	G1 1/2	225	40	280	80	801	282	1083	200	128	246	215	190	130	14	35	48	
MXV4 40-819	1,1	1,5	90 S4	G1 1/2	225	40	280	80	861	282	1143	200	128	246	215	190	130	14	37	50	

(3) Standard position of terminal box. (for other positions rotate motor through 90° or 180°) (4) MXV4 (F) = MXV4 (G) + 1kg (5) With standard motor (6) Net weight

Dimensions and weights



Pump	Motor			mm									without motor	with motor
				DN	a	h1	f	(6) M	fM	P	(6) AD	m4	MXV4 (5) kg (7)	(6) kg (7)
MXV4 50-1603	2,2	3	100 LA4	50	300	90	395	336	731	250	166	322	42	66
MXV4 50-1604	2,2	3	100 LA4	50	300	90	430	336	766	250	166	357	43	67
MXV4 50-1605	2,2	3	100 LA4	50	300	90	464	336	800	250	166	391	45	69
MXV4 50-1606	2,2	3	100 LA4	50	300	90	499	336	835	250	166	426	46	70
MXV4 50-1607	2,2	3	100 LA4	50	300	90	533	336	869	250	166	460	48	72
MXV4 50-1608	2,2	3	100 LA4	50	300	90	568	336	904	250	166	495	49	73
MXV4 50-1609	2,2	3	100 LA4	50	300	90	602	336	938	250	166	529	51	75
MXV4 50-1610	2,2	3	100 LA4	50	300	90	637	336	973	250	166	564	52	76
MXV4 50-1611	2,2	3	100 LA4	50	300	90	671	336	1007	250	166	598	54	78
MXV4 50-1612	2,2	3	100 LA4	50	300	90	706	336	1042	250	166	633	55	79
MXV4 50-1614	2,2	3	100 LA4	50	300	90	775	336	1111	250	166	702	58	82
MXV4 50-1616	2,2	3	100 LA4	50	300	90	844	336	1180	250	166	771	61	87
MXV4 65-3202	2,2	3	100 LA4	65	320	105	407	336	743	250	166	334	45	69
MXV4 65-3203	2,2	3	100 LA4	65	320	105	453	336	789	250	166	380	47	71
MXV4 65-3204	2,2	3	100 LA4	65	320	105	499	336	835	250	166	426	49	73
MXV4 65-3205	2,2	3	100 LA4	65	320	105	545	336	881	250	166	472	51	75
MXV4 65-3206	2,2	3	100 LA4	65	320	105	591	336	927	250	166	518	52	76
MXV4 65-3207	2,2	3	100 LA4	65	320	105	637	336	973	250	166	564	54	78
MXV4 65-3208	2,2	3	100 LA4	65	320	105	683	336	1019	250	166	610	56	80
MXV4 65-3209	2,2	3	100 LA4	65	320	105	729	336	1065	250	166	656	58	84
MXV4 65-3210	3	4	100 LB4	65	320	105	775	336	1111	250	166	702	60	86
MXV4 65-3212	3	4	100 LB4	65	320	105	867	336	1203	250	166	794	62	90
MXV4 80-4803	2,2	3	100 LA4	80	320	105	507	336	843	250	166	434	50	74
MXV4 80-4804	2,2	3	100 LA4	80	320	105	568	336	904	250	166	495	53	77
MXV4 80-4805	2,2	3	100 LA4	80	320	105	630	336	966	250	166	557	55	79
MXV4 80-4806	2,2	3	100 LA4	80	320	105	691	336	1027	250	166	618	58	82
MXV4 80-4807	2,2	3	100 LA4	80	320	105	752	336	1088	250	166	679	61	87
MXV4 80-4808	3	4	100 LB4	80	320	105	814	336	1150	250	166	741	63	89

(4) Standard position of terminal box. (for other positions rotate motor through 90° or 180°) (5) MXV4 (L) : + 3 kg
MXV4 (H) : + 3 kg

(6) With standard motor

(7) Net weight

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.

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.

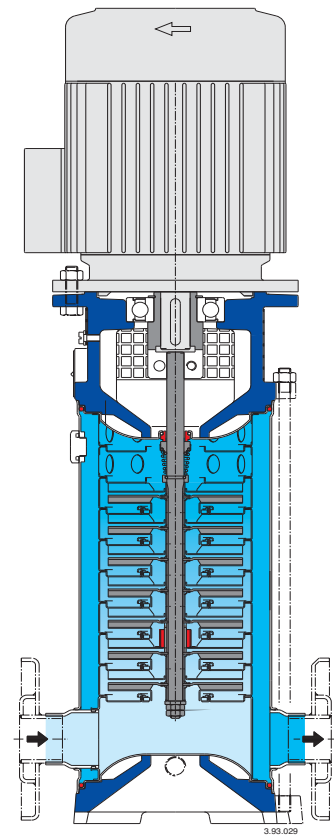
The lantern brackets compact and robust design maintains a sure alignment between rotating and fixed parts, reducing vibration.

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

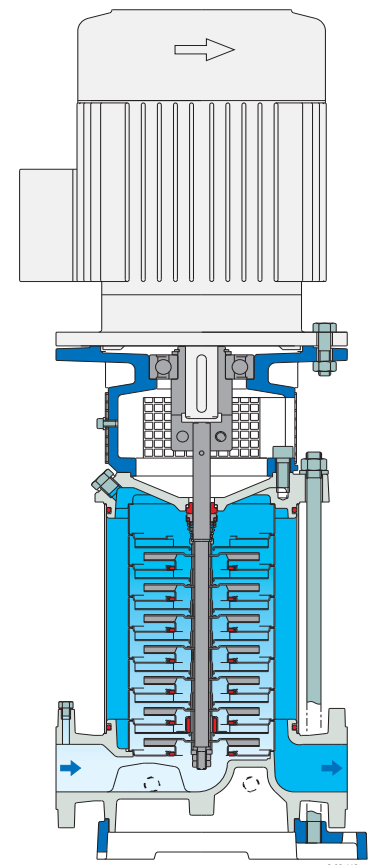
Low-Noise Operation

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

Low-noise standard motor.



MXV 25-2, 32-4, 40-8



MXV 50-16, 65-32, 80-48



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

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. A pump with thrust bearing and sleeve coupling for use of any standard motor with IM V1 construction.

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.
Operating environment temperature: up to 40 °C.
Maximum permissible pressure in pump casing: 25 bar.

Motor

Standard-type: 2-4 pole induction motor, 50 Hz.
Construction IM V1 (EN 60034-7).
Motor suitable for operation with frequency converter.
Classification scheme IE2 for three-phase motors from 0,75 kW to 5,5 kW, IE3 from 7,5 kW.
Insulation class F).
Protection IP 55.
three-phase with rated voltage: up to 3 kW 230/400 V;
from 4 kW 400/690 V.
Rated speed of rotation (50 Hz): **MXVL** ≈ 2900 rpm
MXVL4 ≈ 1450 rpm.

MXVL 25, 32, 40

All parts that come into contact with the liquid, including wet-end covers, are in chrome-nickel-molybdenum stainless steel AISI 316L.

Materials (wetted parts)

Component	Material
Flange External jacket Suction casing Delivery casing Stage casing Impeller Lower cover Upper cover Spacer sleeve	Stainless Steel 1.4404 EN 10088 (AISI 316L)
Pump shaft Plug	
Bearing sleeve Bearing in stage casing	
Mechanical seal ISO 3069 - KU	
Wear ring	
O-rings	

Direction of rotation: clockwise as seen from the motor.

Variants (to be specified when ordering)

Pump with threaded ports (G).
Pump with flanged ports (F).
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.

MXVL 50, 65, 80, 100

Internal parts in contact with the liquid with pump casing and upper cover in chrome-nickel-molybdenum stainless steel AISI 316L.

Materials (wetted parts)

Component	Material
Pump casing Upper cover	Stainless Steel 1.4404 EN 10088 (AISI 316L)
External jacket	
Stage casing Impeller Spacer sleeve	Stainless Steel 1.4404 EN 10088 (AISI 316L)
Pump shaft	
Plug	
Bearing sleeve Bearing in stage casing	Corrosion-resistant, cemented carbide Ceramic alumina (Corrosion-resistant, cemented carbide for MXVL 100)
Mechanical seal ISO 3069 - KU	
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 MXVL 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).

MXVL 25, 32, 40

Designation

Series _____ MXV L 4 EI 25-205 G *

AISI 316L version _____

4 pole (no code = 2 pole) _____

With frequency converter I-MAT _____

DN ports in mm _____

Rated capacity in m³/h (n ≈ 2900 rpm) _____

Number of stages _____

Construction variants

special seal code (no code = standard seal) _____

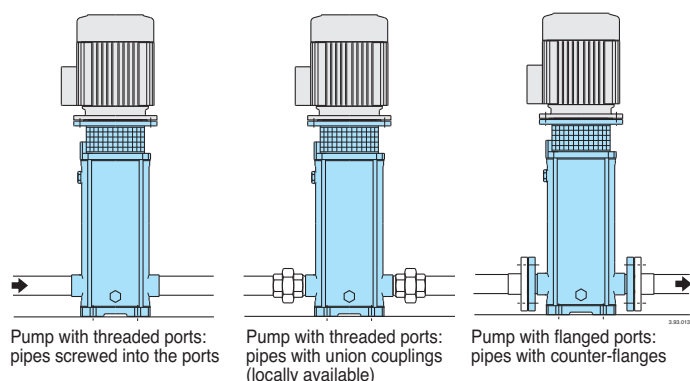
threaded ports _____ G

flanged ports _____ F

with motor (or without motor) _____

* with no further designation = with standard motor

Pipe connection



Variable parts

Pump size MXVL - MXV4L			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
		40 - 813	12	2
		40 - 815	13	2
25 - 214	32 - 414		14	2
25 - 216	32 - 416		15	2
25 - 218	32 - 418		16	2
25 - 220		40 - 817	17	2
		40 - 819	18	3
			19	3
			20	3

MXVL 50, 65, 80, 100

Designation

Series _____ MXV L 4 EI 50-1605 H1 *

AISI 316L version _____

4 pole (no code = 2 pole) _____

With frequency converter I-MAT _____

DN ports in mm _____

Rated capacity in m³/h (n ≈ 2900 rpm) _____

Number of stages _____

Construction variants

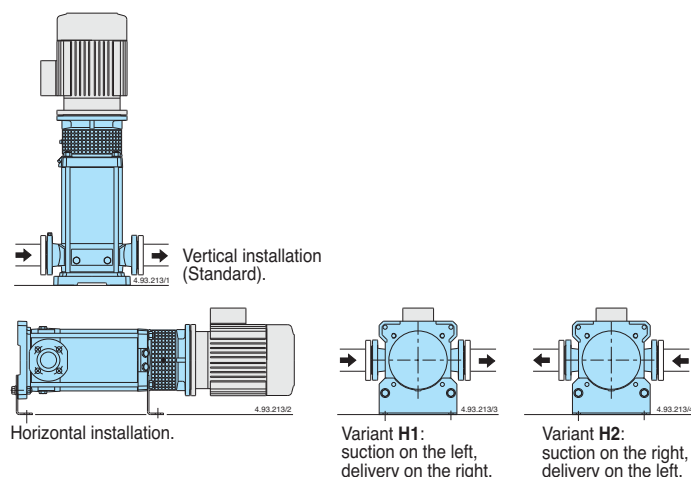
special seal code (no code = standard seal) _____

with support feet for horizontal installation H, variant 1 _____

with motor (or without motor) _____

* with no further designation = with standard motor

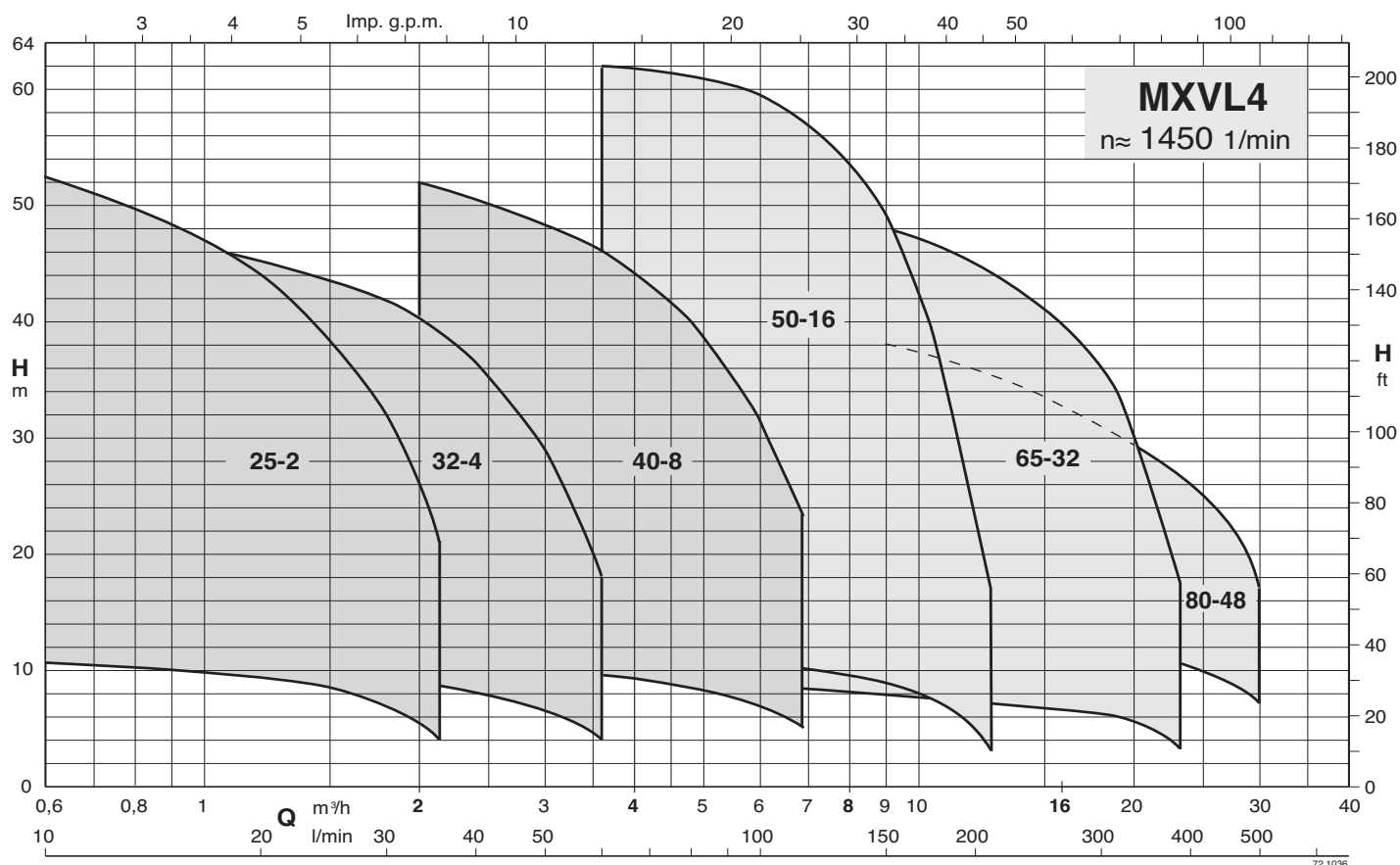
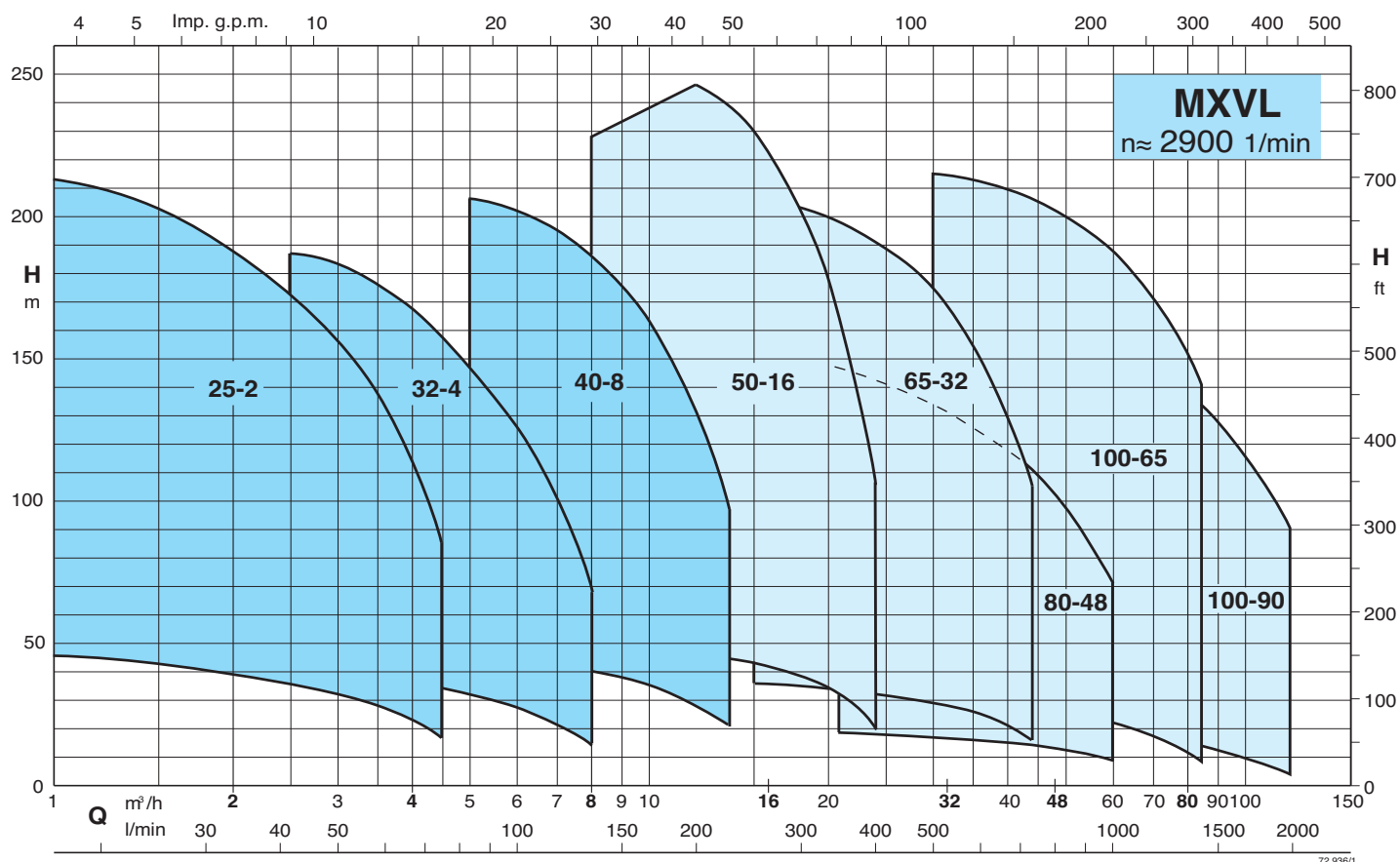
Installations



Variable parts

Pump size MXVL - MXV4L			Number of stages	Stage casings with bearing
50 - 1603 50 - 1604 50 - 1605 50 - 1606 50 - 1607 50 - 1608 50 - 1609 50 - 1610	65 - 3202	80 - 4801	1	1
	65 - 3203	80 - 4802	2	1
	65 - 3204	80 - 4803	3	1
	65 - 3205	80 - 4804	4	1
	65 - 3206	80 - 4805	5	1
	65 - 3207		6	1
			7	1
			8	1
			9	1
			10	1
50 - 1611 50 - 1612 50 - 1614 50 - 1616	65 - 3208 65 - 3209 65 - 3210	80 - 4806	6	2
		80 - 4807	7	2
		80 - 4808	8	2
			9	2
	65 - 3212		10	2
			11	2
			12	2
			14	2
			16	2

Coverage chart



For characteristic curves, dimensions and weights see cap. 11