

CE

MV, MVI, MVIF 1,3,5,10,15,20,32,45,64series

Vertical Multistage Centrifugal
In-line Pumps

50Hz



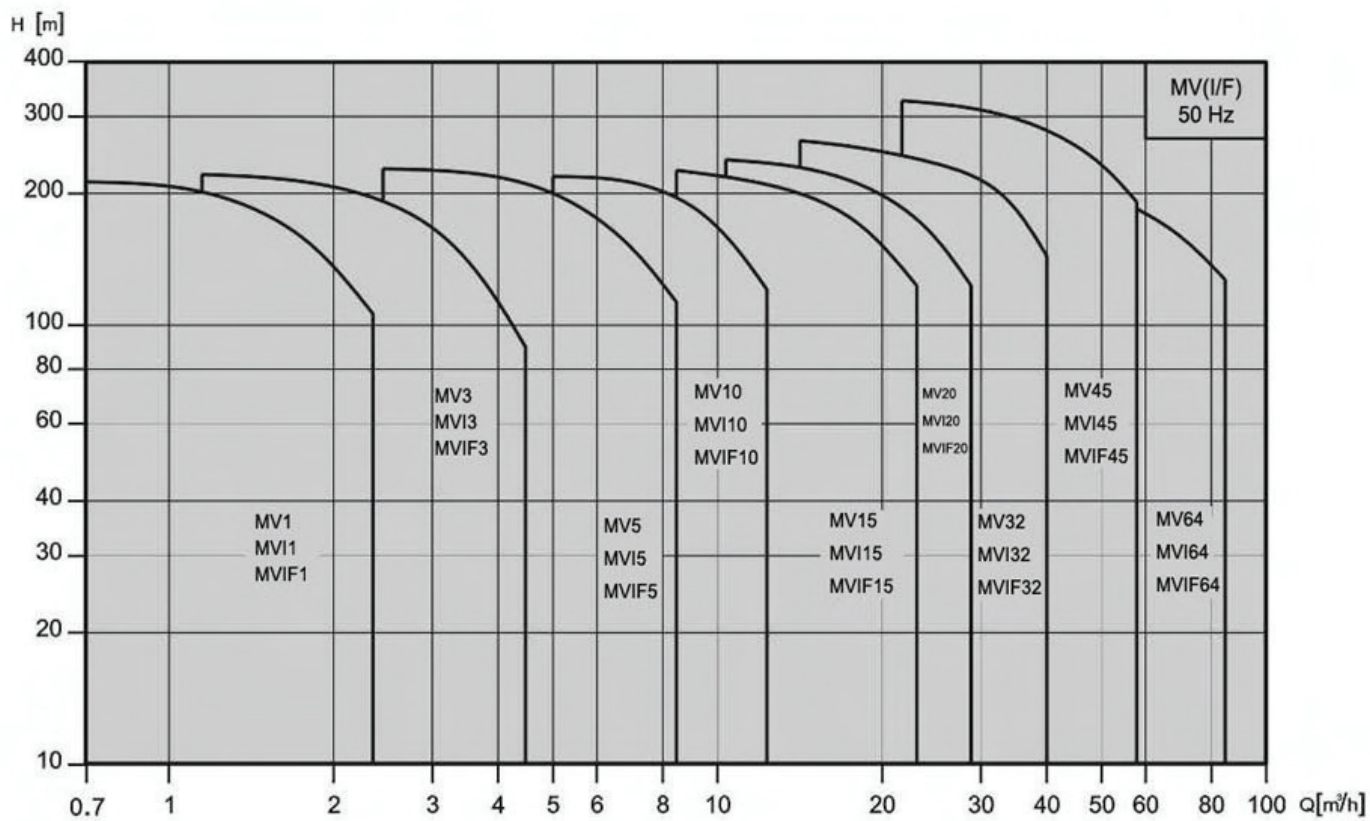
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MV, MVI, MVIF Series Performance range 50 Hz



Product data

Range	MV, MVI, MVIF								
	1	3	5	10	15	20	32	45	64
50Hz									
Nominal flow [m³/h]	1	3	5	10	15	20	32	45	64
Flow range [m³/h]	0.7-2.4	1.2-4.5	2.5-8.5	5-13	8.5-23.5	10.5-29	15-40	22-58	30-85
Max. pressure [bar]	21.5	23	24	21.5	23	24.3	27.5	33	21.8
Fluid temperature [°C]	-15 to +120								
Motor power [kW]	0.37-2.2	0.37-3	0.37-5.5	0.37-7.5	1.1-15	1.1-18.5	1.5-30	3-45	4-45
Version									
MV: Cast iron and stainless steel EN 1.4301/AISI 304	•	•	•	•	•	•	•	•	•
MVI: Stainless steel EN 1.4301/AISI 304	•	•	•	•	•	•	•	•	•
MVIF: Stainless steel EN 1.4401/AISI 316	•	•	•	•	•	•	•	•	•
Motor									
Mains connection 1~ [V/Hz] (Permissible voltage tolerance ± 10%)	220-240 V 50 Hz								
Mains connection 3~ [V/Hz] (Permissible voltage tolerance ± 10%)	0.37-7.5 kW 220-240/380-415 V 50 Hz From 11 kW 380-415 V 50 Hz								
Insulation class	F								
Enclosure class	IP 55								
Ambient temperature	50° C								
MV Pipe Connection									
Flange	DN 25/ DN 32	DN 25/ DN 32	DN 25/ DN 32	DN 40	DN50	DN50	DN65	DN80	DN100
MVI, MVIF Pipe Connection									
Flange	DN 25/ DN 32	DN 25/ DN 32	DN 25/ DN 32	DN 40	DN 50	DN 50	DN 65	DN80	DN100
Victaulic-connections	R 1 1/4 DN32	R 1 1/4 DN 32	R 1 1/4 DN 32	R 2 DN50	R 2 DN50	R 2 DN50	N/A	N/A	N/A
Mechanical Seals									
SiC/SiC	Standard								
Seals									
EPDM	Standard								
Viton									

* Flange standards : Refer to dimensional drawings

Pump



The MV, MVI and MVIF pumps are non-self priming vertical multistage pump of in-line design, flange or with Victaulic coupling with equally sized suction and discharge ports. Stage construction with stainless steel impellers, chambers and pressure casing. Pump stub shaft and motor shaft of the IEC-standards motor are directly close coupled. All pumps are equipped with a cartridge type mechanical seal for easy maintenance.

MV, MVI and MVIF pumps have different pump sizes and various numbers of stages to provide the flow and the pressure required.

Applications

WATER SUPPLY AND PRESSURE BOOSTING

Pressure boosting in buildings, hotels, residential complexes
Pressure booster stations, supply of water networks
Pressure boosting for industrial water supply

IRRIGATION AND AGRICULTURE

Greenhouses
Sprinkler irrigation
Field irrigation (flooding)

LIGHT INDUSTRY

Washing and cleaning systems
Car washing facilities
Fire fighting systems
Process water systems
Machine tools (cooling lubricants)

WATER TREATMENT

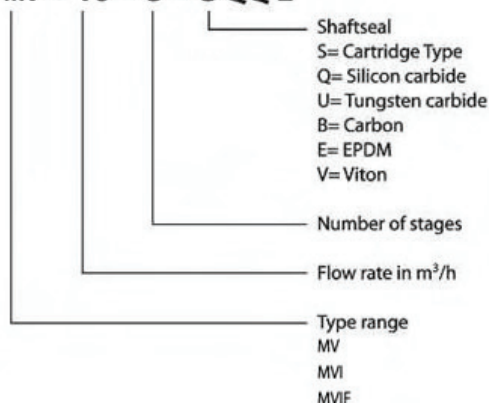
Water softeners and de-mineralization
Reverse Osmosis systems
Distillation systems
Filtration
Ultra-filtration systems

HEATING, VENTILATION AND AIR-CONDITIONING

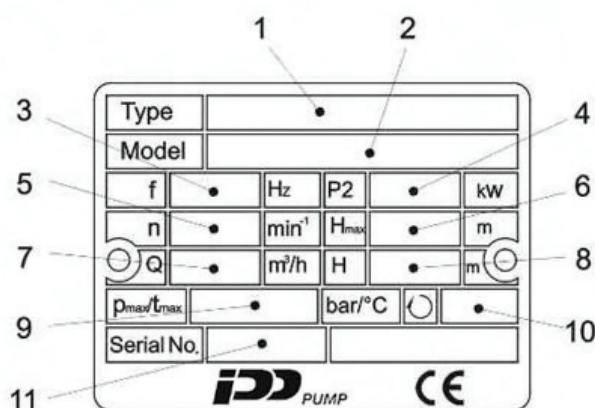
Boilers
Induction heating
Heat exchangers
Refrigerators
Cooling towers and systems
Temperature control systems

Identification Code

MV - 10 - 5 - S Q Q E



Pump nameplate information



1. Pump Type - Seal Type
2. Pump Model
3. Frequency
4. Rated Power
5. Speed
6. Maximum Head
7. Capacity
8. Head Range
9. Maximum Operating Pressure
10. Rotating Direction
11. Serial number

Motor

- Squirrel cage in short circuit, aluminum casing up to 22 kW, totally enclosed, fan-cooled, 2-pole standard motor.
- Standard supply Stairs motors up to 1.1 kW. Other motor brands for higher powers.
- Electrical data
 - ⊗ Enclosure class: IP55
 - ⊗ Insulation class: F
 - ⊗ Standard voltages: P2: 0.37-7.5 KW: 3 x 220-240/380-415 V
 - P2: From 11 KW 3 x 380-415 V
- The motors have efficiency values that fall within the range normally referred to as high efficiency.
- Ambient temperature: Max. +50°C

Motor Data

Motor Type				Nominal current in [A]				
HP	KW	Pole	Flange	Frame	3~220 V	3~240 V	3~380 V	3~415 V
0.5	0.37	2	B14	71	1.7	2	1.1	1.3
0.75	0.55			71	2.5	2.8	1.5	1.7
1.0	0.75			80	3.5	3.9	2.1	2.3
1.5	1.1			90S	4.4	4.7	2.7	2.9
2.0	1.5			90L	5.9	5.7	3.4	3.3
3.0	2.2			90L	8.5	8	4.9	4.6
4.0	3.0			100L	11.4	11.4	6.6	6.6
5.5	4.0			112M	15.4	16.3	8.9	9.4
7.5	5.5			132S	20.8	20.8	12	12
10.0	7.5			132M	27.4	26.7	15.8	15.4
15	11		B5	160M			21.2	20
20.0	15.0			160M			27.7	25.5
25	18.5			160L			35.2	32.4
30	22			180M			41.3	38.2
40	30			180L			54.2	50.4
50	37			200L			70.8	65.6
60	45			200L			83.1	79.2

Mechanical Seal

Standard Cartridge type mechanical seal made of Silicon Carbide/Silicon Carbide/EPDM or Viton. Based on the type of application, alternative materials are available for the seal and the elastomers. The cartridge type mechanical seal can be replaced in minutes without special tools and without dismantling the pump.



List of Materials

Q : Silicon carbide	E : EPDM
U : Tungsten carbide	V : Viton
B : Carbon	

Type of Seal

Seal Type	MV 1/3/5/10/15/20/32/45/64	MVI 1/3/5/10/15/20/32/45/64	MVIF 1/3/5/10/15/20/32/45/64
Mechanical Seals			
S : Cartridge seal	●	●	●
QQ	●	●	●
UU	Optional	Optional	Optional
QB	Optional	Optional	Optional
UB	Optional	Optional	Optional
Seals			
E	●	●	●
V	●	●	●

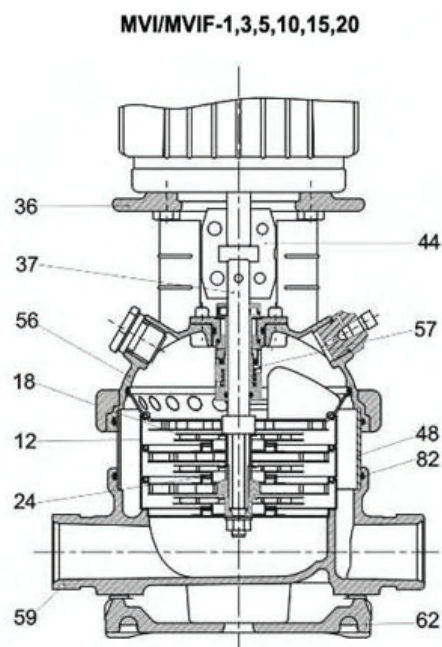
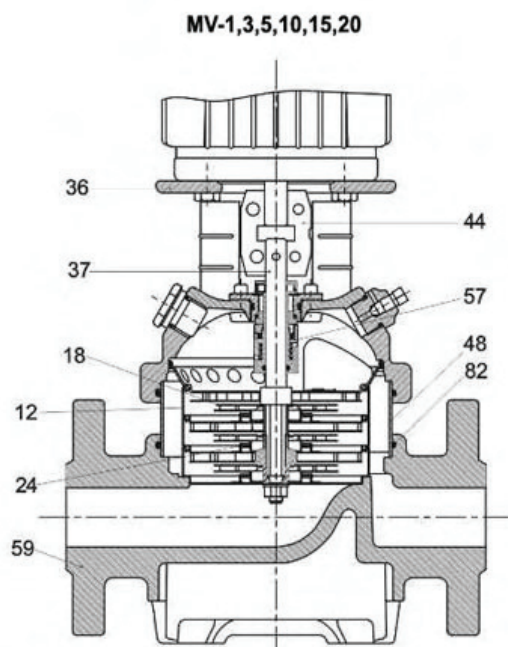
Maximum operating and inlet pressures

50Hz

Stages	Maximum Operating Pressure	Stages	Maximum Inlet Pressures
MV, MVI, MVIF 1			
2-36	25bar	2-36	10bar
MV, MVI, MVIF 3			
2-36	25bar	2-29	10bar
		31-36	15bar
MV, MVI, MVIF 5			
2-36	25bar	2-16	10bar
		18-36	15bar
MV, MVI, MVIF 10			
1-16	16bar	1-6	8bar
17-22	25bar	7-22	10bar
MV, MVI, MVIF 15			
1-10	16bar	1-3	8bar
12-17	25bar	4-17	10bar
MV, MVI, MVIF 20			
1-10	16bar	1-3	8bar
12-17	25bar	4-17	10bar
MV, MVI, MVIF 32			
(1-1)-7	16bar	(1-1)-4	4bar
(8-2)-14	30bar	(5-2)-10	10bar
		(11-2)-14	15bar
MV, MVI, MVIF 45			
(1-1)-5	16bar	(1-1)-2	4bar
(6-2)-11	30bar	(3-2)-5	10bar
(12-2)-(13-2)	33bar	(6-2)-(13-2)	15bar
MV, MVI, MVIF 64			
(1-1)-5	16bar	(1-1)-(2-2)	4bar
(6-2)-(8-1)	30bar	(2-1)-(4-2)	10bar
		(4-1)-(8-1)	15bar

* Rule to follow : The inlet pressure+ the pressure against a closed valve < Max. Operating pressure.

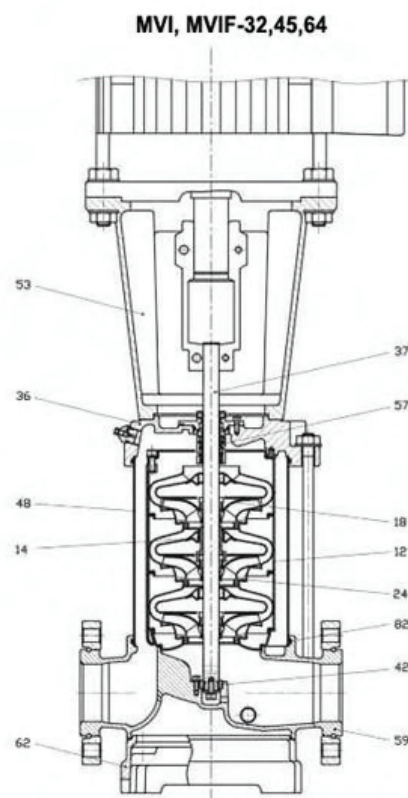
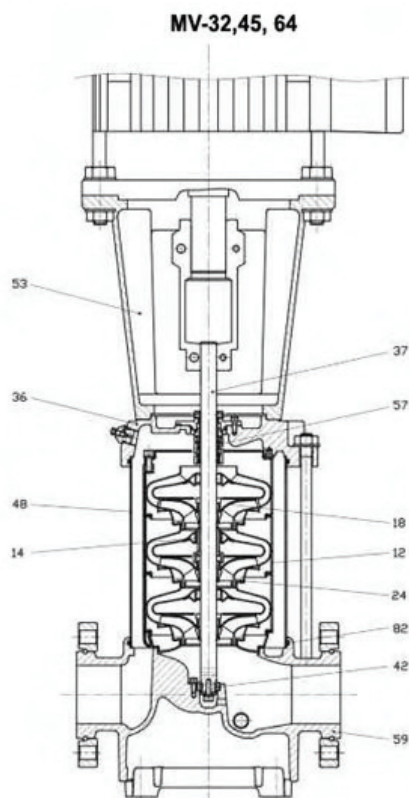
Construction



CONSTRUCTION

Pos.	Name	Material	MV 1,3,5,10,15,20		MVI 1,3,5,10,15,20		MVIF 1,3,5,10,15,20	
			Standard		Standard		Standard	
			Europe	USA	Europe	USA	Europe	USA
36	Pump head	Cast Iron	EN-GJL-200	ASTM 25B	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
56	Pump head cover	Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
18	Impeller	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
37	Shaft	Stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI 316
48	Outer Sleeve	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
82	O-ring for outer sleeve	EPDM						
12	Chamber	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
24	Neck ring	PTFE						
59	Base	Cast Iron	EN-GJL-200	ASTM 25B	N/A			
	Base	Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
62	Base plate	Cast Iron	N/A		EN-GJL-200	ASTM 25B	EN-GJL-200	ASTM 25B
44	Coupling	Fe-Cu-C	SINT C11	MPIF FC0525	SINT C11	MPIF FC0525	SINT C11	MPIF FC0525
57	Mechanical seal	Cartridge type						

Construction



CONSTRUCTION

Pos.	Name	Material	MV 32, 45, 64		MVI 32, 45, 64		MVIF 32, 45, 64	
			Standard		Standard		Standard	
			Europe	USA	Europe	USA	Europe	USA
36	Pump head	Cast Iron	EN-GJL-250	ASTM 35B				
		Stainless steel			1.4301	AISI 304	1.4401	AISI 316
53	Motor Bracket	Cast Iron	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
18	Impeller	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
37	Shaft	Stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI 316
48	Outer Sleeve	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
82	O-ring for outer sleeve	EPDM						
12	Chamber	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
24	Neck ring	Carbon Fiber + POB + PTFE						
59	Base	Cast Iron	EN-GJL-250	ASTM 35B	N/A			
	Base	Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
62	Base plate	Cast Iron	N/A		EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
57	Mechanical seal	Cartridge type						
14	Bearing ring		Bronze				POB+ Graphite+ PTFE	
42	Bottom bearing ring	Tungsten carbide/ Tungsten carbide						