Surface pumps

MV Multistage Pumps

MV 2 · MV 3 · MV 5 · MV 10

Flow rates up to 15 m³/h and heads up to 160 m for pressure boosting, water supply, treatment and irrigation.



FT-MV · Rev. 1

In-line multistage centrifugal pumps for clean water. The outer sleeve and shaft are stainless steel; the impellers and diffusers are Noryl.

Applications

- Industrial processes and liquid transfer.
- Domestic water supply.
- Hydraulic pressure systems
- Water treatment
- Agricultural irrigation
- Industrial washing systems

Operating conditions

- Installation must be carried out by qualified personnel.
- Make sure the supply voltage is compatible with the mains voltage.
- Operate the pump within the limits stated on the rating plate.
- Never run the pump dry. Not even for a short trial run.

Engineering note	Read the installation manual before commissioning and confirm the voltage, direction of rotation and duty point.
Complementary equipment	Control panels · Pressure tanks · Pressure switches
Resources and support	Pump selection guide · JOVAL technical support
Contact	+351 253 490 740 · joval@joval.pt

Technical specifications

Construction and materials

Type
Multistage centrifugal pump

Standard
In-line

Motor Details
Hermetically sealed electric motor impregnated with protective resin

Voltage
220-230V (1~) / 380-415V (3~)

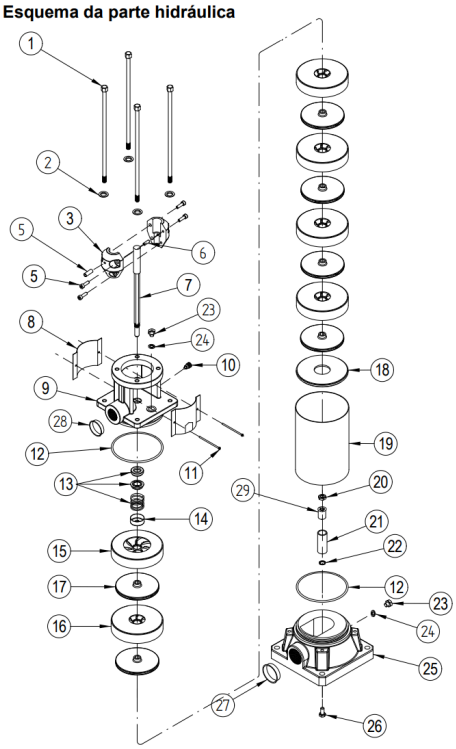
Max Flow
15 m³/h

Max Head
160 m

Protection
IP 55

Insulation
Class F

Operation
S1 (Continuous duty)



List of materials

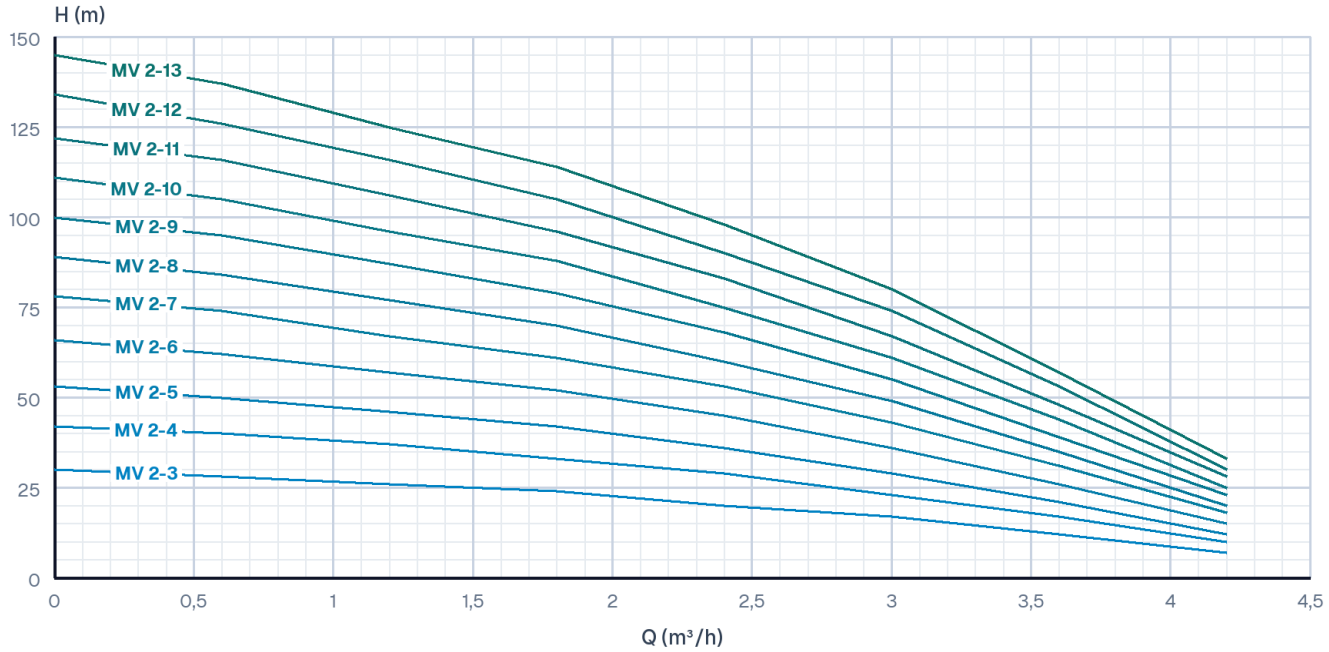
29 positions

Pos.	Description	Material
1	Tie rod	Stainless Steel AISI 304 (1.4301)
2	Ring	Stainless Steel AISI 304 (1.4301)
3	Cardan joint	Cast iron
4	Stud	Steel
5	M6x10 screw	Stainless steel
6	Pin	Stainless Steel AISI 304 (1.4301)
7	Shaft	Stainless Steel AISI 304 (1.4301)
8	Cardan guard	Stainless Steel AISI 304 (1.4301)
9	Motor coupling support	Cast iron
10	Air vent	Brass / stainless steel
11	M4x70 screw	Stainless steel
12	O-ring 124x4	NBR
13	Mechanical seal	SiC / SiC
14	Seal spring guard	Stainless Steel AISI 304 (1.4301)
15	Final-stage diffuser	Noryl

Pos.	Description	Material
16	Diffuser	Noryl
17	Impeller	Noryl
18	Diffuser cover	Noryl
19	Outer sleeve	Stainless Steel AISI 304 (1.4301)
20	M12 R/E nut	Stainless Steel AISI 304 (1.4301)
21	Shaft guide	Stainless Steel AISI 304 (1.4301)
22	O-ring 14,54x2,62	NBR
23	1/4 stainless steel plug	Stainless Steel AISI 304 (1.4301)
24	Ring	Teflon
25	Base	Cast iron
26	M8x20 screw	Stainless steel
27	1 1/4 plastic cap	Plastic
28	1 plastic cap	Plastic
29	Shaft guide bushing	Bronze / graphite

Series MV 2

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
MV 2-3	0,37	0,5	1,0
MV 2-4	0,55	0,75	1,4
MV 2-5	0,55	0,75	1,4
MV 2-6	0,75	1	1,7
MV 2-7	1,1	1,5	2,4
MV 2-8	1,1	1,5	2,4

Model	kW	HP	A (400 V)
MV 2-9	1,5	2	3,2
MV 2-10	1,5	2	3,2
MV 2-11	1,5	2	3,2
MV 2-12	2,2	3	5,0
MV 2-13	2,2	3	5,0

Series MV 2

Hydraulic performance

Total head H in metres

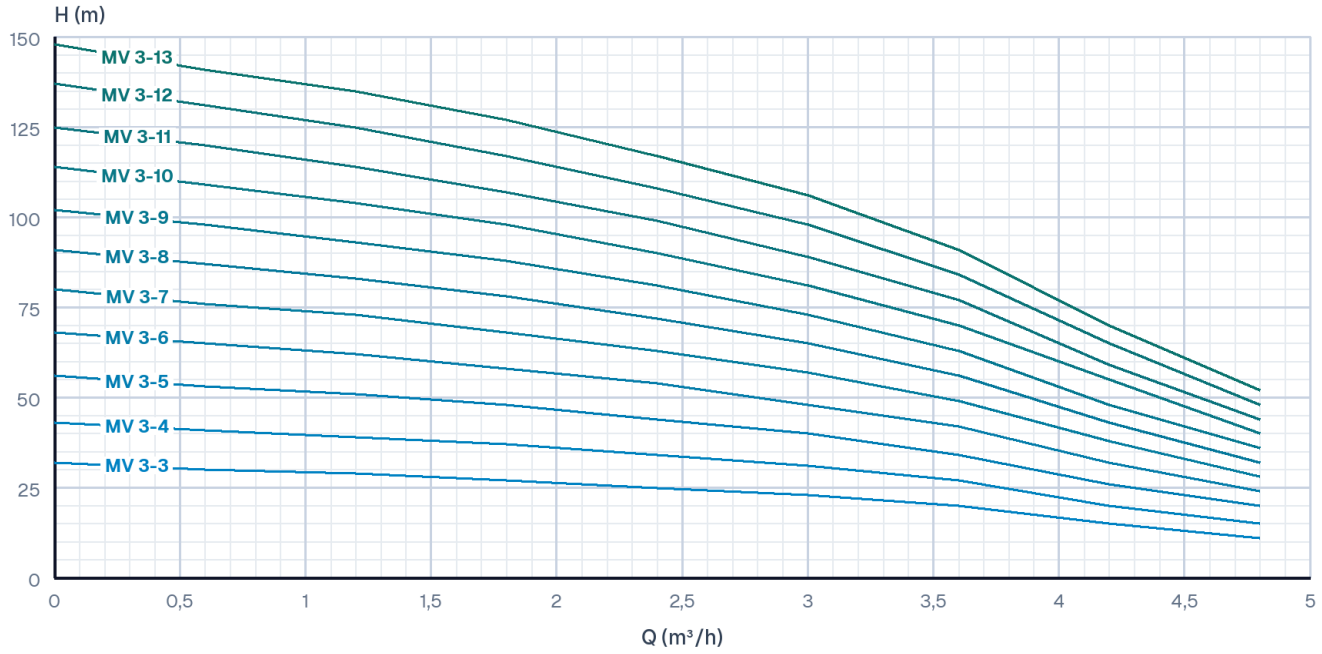
Q · Flow (m³/h)

Model	0	0,6	1,2	1,8	2,4	3	3,6	4,2
MV 2-3	30	28	26	24	20	17	12	7
MV 2-4	42	40	37	33	29	23	17	10
MV 2-5	53	50	46	42	36	29	21	12
MV 2-6	66	62	57	52	45	36	26	15
MV 2-7	78	74	67	61	53	43	31	18
MV 2-8	89	84	77	70	60	49	35	20
MV 2-9	100	95	87	79	68	55	39	23
MV 2-10	111	105	96	88	75	61	44	25
MV 2-11	122	116	106	96	83	67	48	28
MV 2-12	134	126	116	105	90	74	53	30
MV 2-13	145	137	125	114	98	80	57	33

Select the duty point at the intersection of Q and H.

Series MV 3

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
MV 3-3	0,55	0,75	1,4
MV 3-4	0,55	0,75	1,4
MV 3-5	0,75	1	1,7
MV 3-6	1,1	1,5	2,4
MV 3-7	1,1	1,5	2,4
MV 3-8	1,5	2	3,2

Model	kW	HP	A (400 V)
MV 3-9	1,5	2	3,2
MV 3-10	1,5	2	3,2
MV 3-11	2,2	3	5,0
MV 3-12	2,2	3	5,0
MV 3-13	2,2	3	5,0

Series MV 3

Hydraulic performance

Total head H in metres

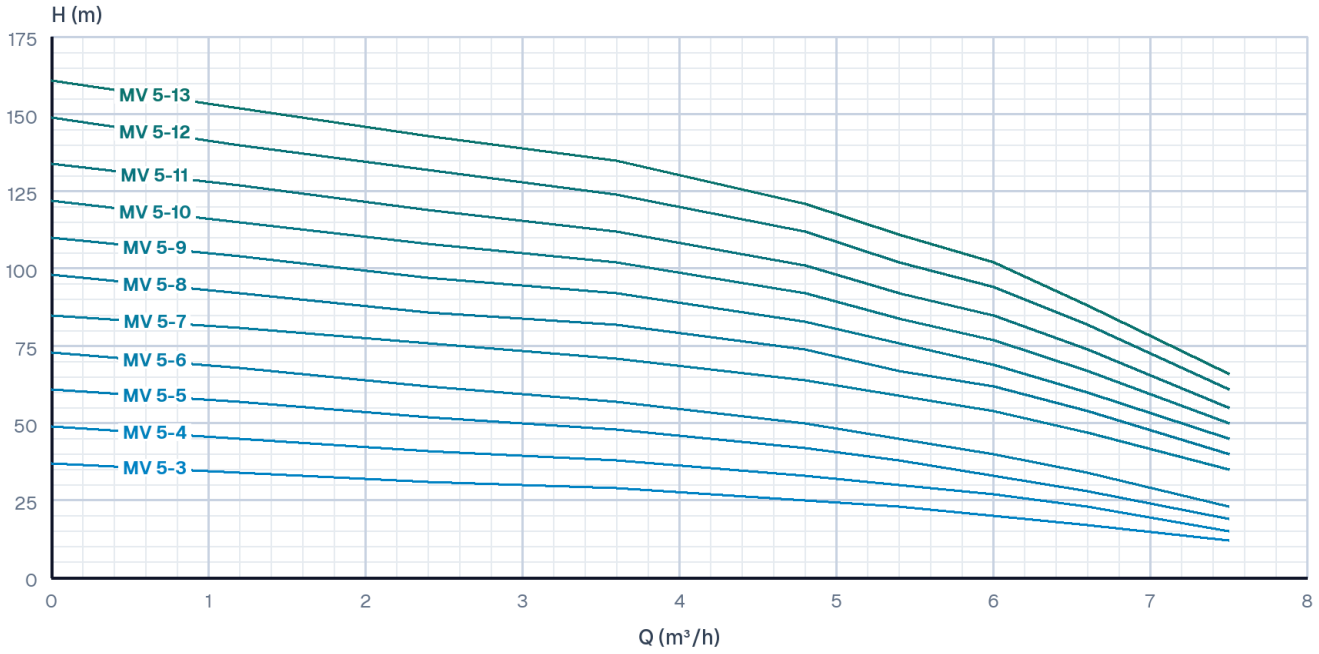
Q · Flow (m³/h)

Model	0	0,6	1,2	1,8	2,4	3	3,6	4,2	4,8
MV 3-3	32	30	29	27	25	23	20	15	11
MV 3-4	43	41	39	37	34	31	27	20	15
MV 3-5	56	53	51	48	44	40	34	26	20
MV 3-6	68	65	62	58	54	48	42	32	24
MV 3-7	80	76	73	68	63	57	49	38	28
MV 3-8	91	87	83	78	72	65	56	43	32
MV 3-9	102	98	93	88	81	73	63	48	36
MV 3-10	114	109	104	98	90	81	70	55	40
MV 3-11	125	120	114	107	99	89	77	59	44
MV 3-12	137	131	125	117	108	98	84	65	48
MV 3-13	148	141	135	127	117	106	91	70	52

Select the duty point at the intersection of Q and H.

Series MV 5

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
MV 5-3	0,55	0,75	1,4
MV 5-4	0,75	1	1,7
MV 5-5	1,1	1,5	2,4
MV 5-6	1,1	1,5	2,4
MV 5-7	1,5	2	3,2
MV 5-8	2,2	3	5,0

Model	kW	HP	A (400 V)
MV 5-9	2,2	3	5,0
MV 5-10	2,2	3	5,0
MV 5-11	2,2	3	5,0
MV 5-12	3	4	5,9
MV 5-13	3	4	5,9

Series MV 5

Hydraulic performance

Total head H in metres

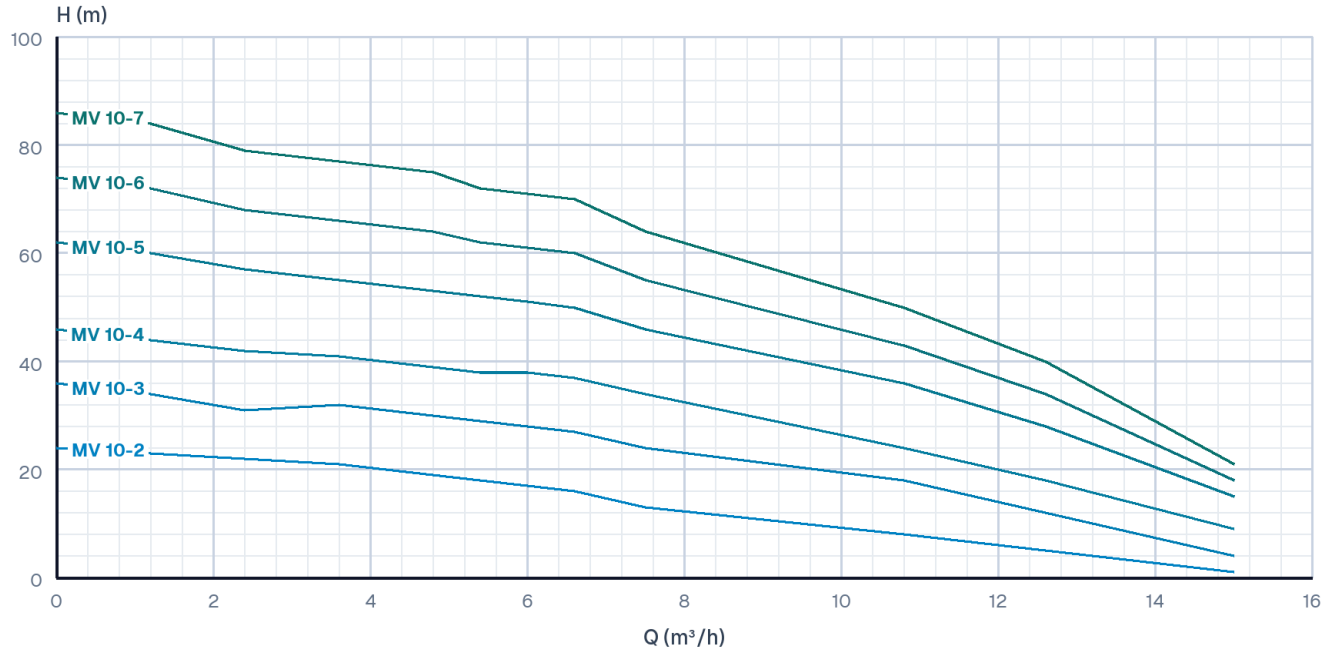
Q · Flow (m³/h)

Model	0	1,2	2,4	3,6	4,8	5,4	6	6,6	7,5
MV 5-3	37	34	31	29	25	23	20	17	12
MV 5-4	49	45	41	38	33	30	27	23	15
MV 5-5	61	57	52	48	42	38	33	28	19
MV 5-6	73	68	62	57	50	45	40	34	23
MV 5-7	85	81	76	71	64	59	54	47	35
MV 5-8	98	92	86	82	74	67	62	54	40
MV 5-9	110	104	97	92	83	76	69	60	45
MV 5-10	122	115	108	102	92	84	77	67	50
MV 5-11	134	127	119	112	101	92	85	74	55
MV 5-12	149	140	132	124	112	102	94	82	61
MV 5-13	161	152	143	135	121	111	102	88	66

Select the duty point at the intersection of Q and H.

Series MV 10

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
MV 10-2	0,75	1	1,7
MV 10-3	1,1	1,5	2,4
MV 10-4	1,5	2	3,2

Model	kW	HP	A (400 V)
MV 10-5	2,2	3	5,0
MV 10-6	2,2	3	5,0
MV 10-7	3	4	5,9

Series MV 10

Hydraulic performance

Total head H in metres

Q · Flow (m³/h)

Model	0	1,2	2,4	3,6	4,8	5,4	6	6,6	7,5	10,8	12,6	15
MV 10-2	24	23	22	21	19	18	17	16	13	8	5	1
MV 10-3	36	34	31	32	30	29	28	27	24	18	12	4
MV 10-4	46	44	42	41	39	38	38	37	34	24	18	9
MV 10-5	62	60	57	55	53	52	51	50	46	36	28	15
MV 10-6	74	72	68	66	64	62	61	60	55	43	34	18
MV 10-7	86	84	79	77	75	72	71	70	64	50	40	21

Select the duty point at the intersection of Q and H.