

STUART

VM 1500 Series Centrifugal Vertical Multistage Pumps

A range of 15m³/hour nominal flow vertical multistage pumps featuring a compact, robust design and heavy duty oversized motor bearing.

Featuring AISI 304 stainless steel pump head construction, these robust and durable pumps are available in single phase and three phase options.

Capable of flow rates up to 24 m³/h and models available providing up to 134.5 metres head, these pumps are suitable for use in a wide range of water boosting applications.



Features

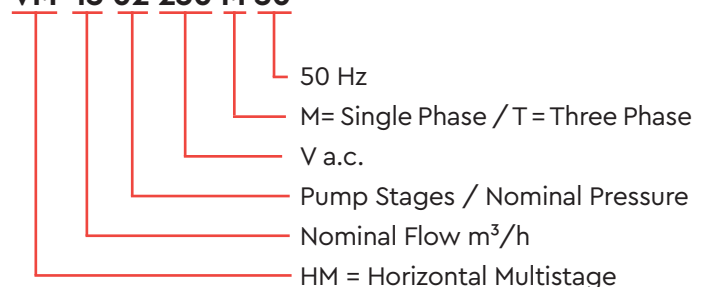
- Multistage centrifugal pump
- Flow rates up to 24 m³/h
- Heads up to 134.5 metres
- Single phase and three phase options
- Compact design
- Easy disassembly and seal replacement
- Standard mechanical seal (EN 12756 ex DIN 24960)
- Easy to replace floating neck rings and stainless steel impeller wear ring
- Oversize motor bearing
- Stainless steel pump head housing, shaft, impellers and diffusers
- Tungsten carbide shaft bearing, intermediate bearing and journal sleeve
- Continuously rated induction motor
- Efficiency class IE3
- 1 year warranty

Applications

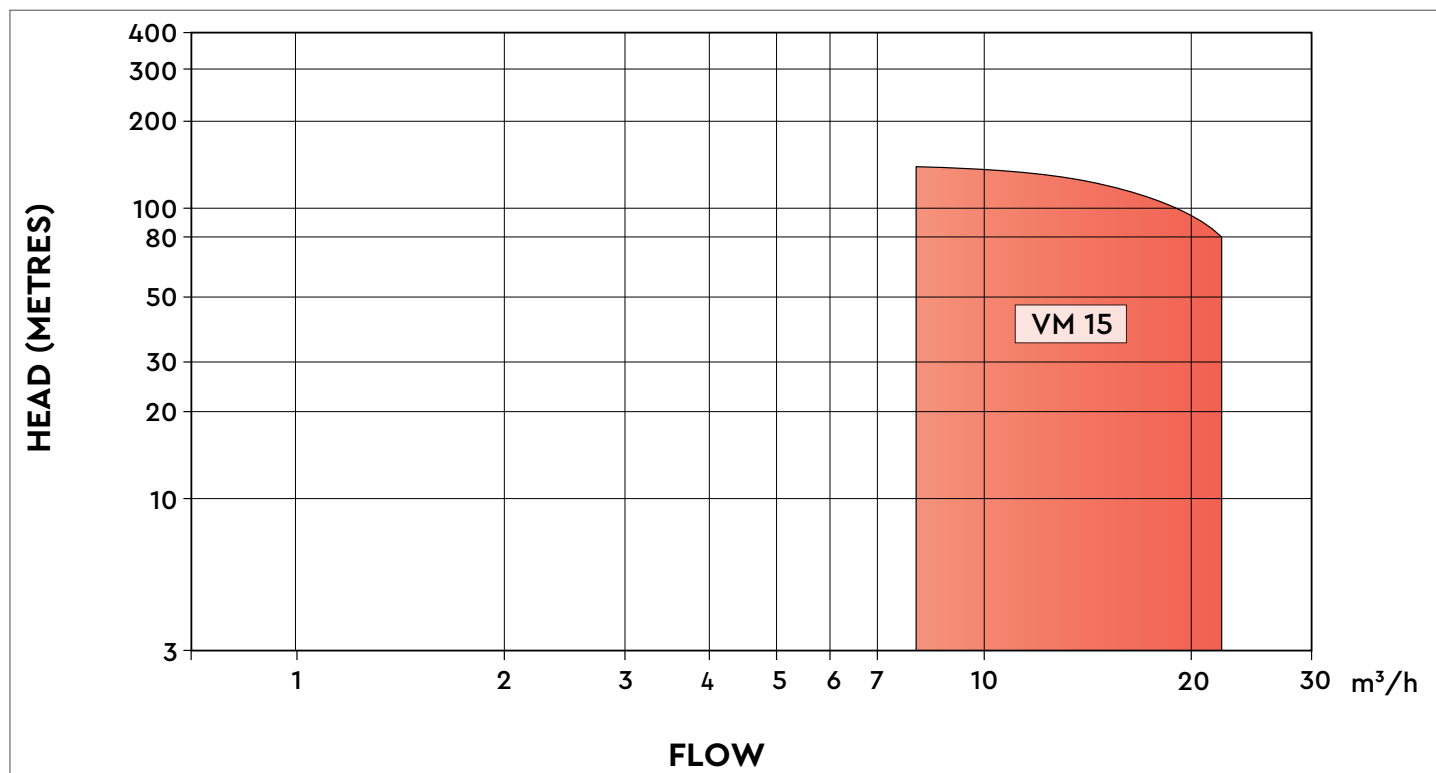
- Domestic and commercial water supply
- Industrial systems, plant and processing
- Wash down units
- Water distribution
- Irrigation and rainwater recovery
- Temperature control and air conditioning systems

Product Code

VM 15 02 230 M 50

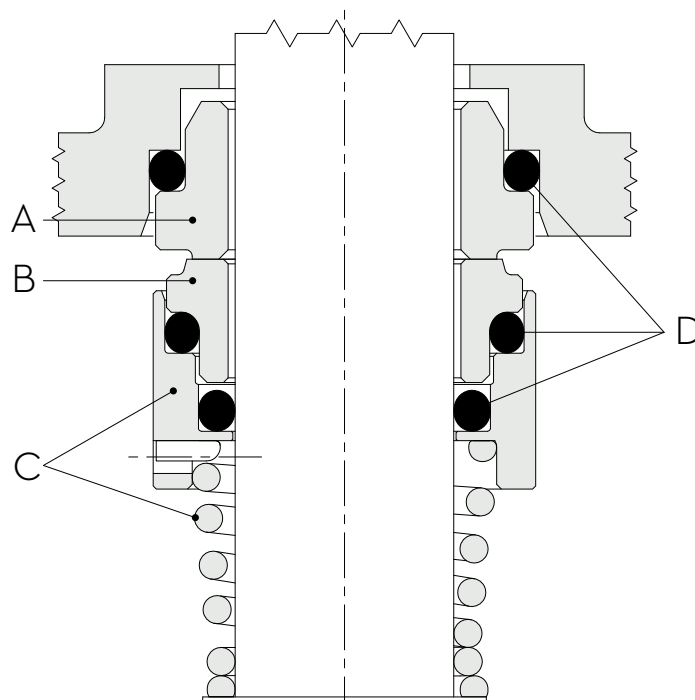


Stuart VM 1500 Series Performance Summary



		Q = Delivery													
l/min	Rated Power		H1	0	133	167	200	233	266	300	333	367	400		
m³/h	kW	Hp	Bar	0	8	10	12	14	16	18	20	22	24		
		H = Total Head (metres)													
VM 1501	1.1	1.5	20	14.5	13	12.5	12	11.5	10.5	9.5	8.5	7	5.5		
VM 1502	2.2	3.0	20	29.0	26	25	24	23	21.5	19.5	17	14	11		
VM 1503	3.0	4.0	20	43.5	39	38	36.5	34.5	32.5	29.5	26	21.5	17		
VM 1504	4.0	5.5	20	58.0	52.5	51	49	46.5	44	40.5	35.5	29.5	23.5		
VM 1505	4.0	5.5	20	72.5	65.5	63.5	60.5	57.5	54.5	49.5	43	36	28.5		
VM 1506	5.5	7.5	20	87.5	75.5	77	74	71	67	61.5	54	46	36.5		
VM 1507	5.5	7.5	20	102	92	89	86	82	77.5	70.5	62	52.5	41.5		
VM 1508	7.5	10	20	117	106.5	103	99.5	95	90	82.5	72.5	62	49		
VM 1509	7.5	10	20	131.5	119	115.5	111	106	100.5	92	81	69	54.5		
VM 1510	11	15	20	147.5	134.5	131	126.5	121	115	106	94	80.5	65		

Stuart VM 1500 Series Mechanical Seal Specifications



Seal Component Materials

Stationary Part	Rotating Part	Other Components	Elastomers	Temperature
A	B	C	D	
Graphite	Silicon Carbide	Stainless Steel AISI 316	EPDM	-15°C – +120°C

Stuart VM 1500 Series Motor Specifications

- Protection degree: IP55
- Max ambient temperature 40°C
- Insulation class: F
- Size B14 up to 4 kW, size B5 from 5.5 kW and above

Single Phase Models

- Standard voltage 220–240 V \pm 5%
- Integral capacitor

IEC Size	Power		Design	Input Current I_N (A) 230V	230V 50 Hz					
	(kW)	(HP)			min^{-1}	M_N (Nm)	$\eta\%$	$\cos \phi$	I_A / I_N	M_A / M_N
80	1.1	1.5	B14	6.5	2730	3.8	74.0	0.97	3.6	0.5
90	2.2	3	B14	14.6	2770	7.6	73.0	0.90	4.3	0.2

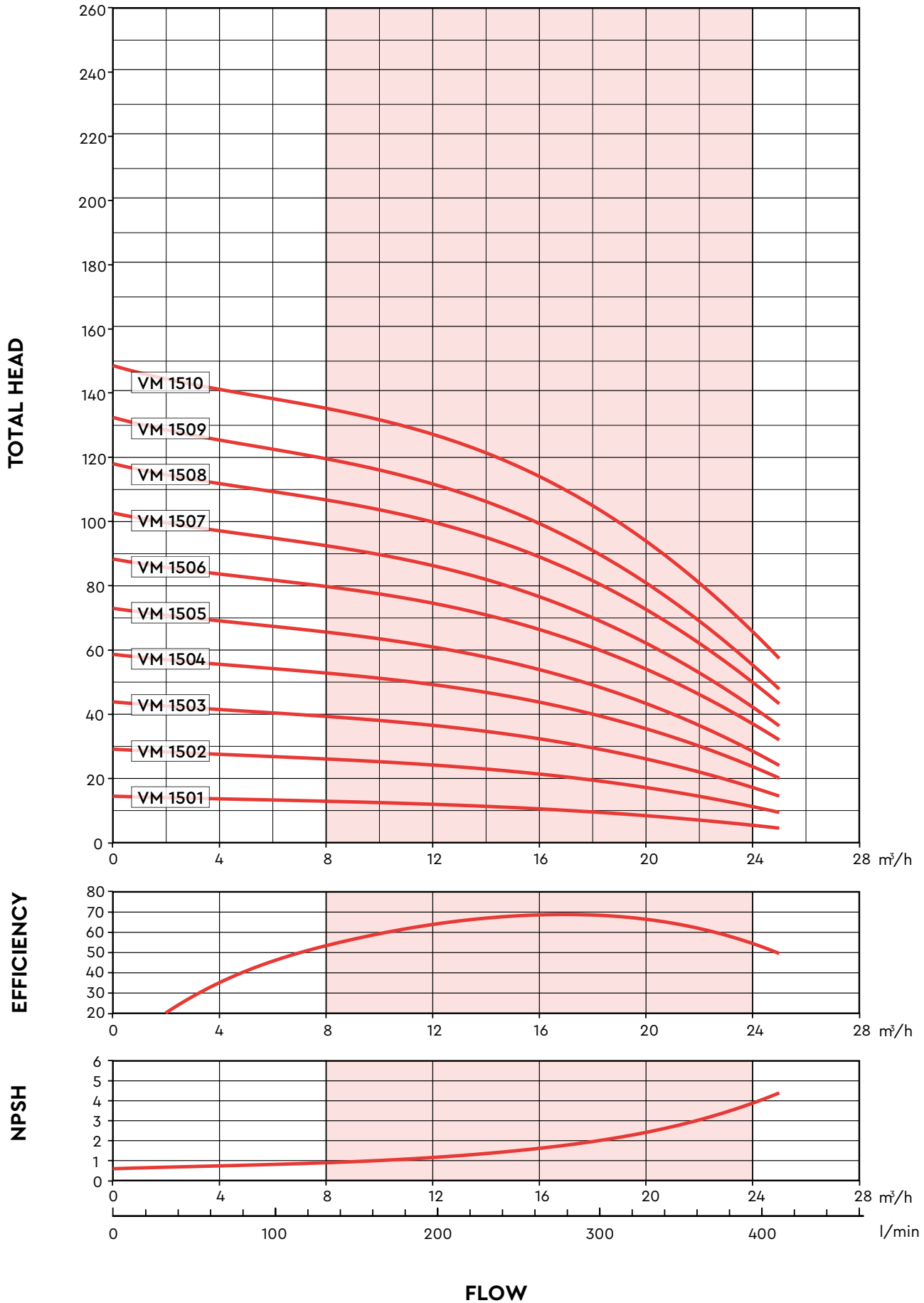
Three Phase Models

- Premium efficiency IE3 motors
- Multi-mount construction for an easy change of terminal box position
- Terminal box rotates by 90° to allow cable entry from any direction
- Easy-to-change flanges with over-sized and smaller-sized dimensions
- Standard voltage up to 3 kW 230/400 V, 400/690 V from 4 kW and above

Class	Power		Motor Size	Design	Input Current I_N (A)				230V 50 Hz					
	(kW)	(HP)			Δ 230 V	Y 400 V	Δ 400 V	Y 690 V	min^{-1}	M_N (Nm)	$\eta\%$	$\cos \phi$	I_A / I_N	M_A / M_N
IE3	1.1	1.5	80	B14	4.2	2.4	-	-	2870	3.7	82.7	0.76	9.3	5.0
	2.2	3	90	B14	8.0	4.6	-	-	2880	7.3	86.5	0.82	9.2	4.0
	3	4	100	B14	9.7	5.6	-	-	2900	9.9	87.1	0.89	8.8	5.5
	4	5.5	112	B14	-	-	8.0	4.6	2900	13.0	88.1	0.83	10.7	5.1
	5.5	7.5	132	B5	-	-	10.2	5.9	2935	17.9	89.2	0.87	11.2	4.2
	7.5	10	132	B5	-	-	14.4	8.3	2930	24.5	90.1	0.84	10.4	4.5
	11	15	160	B5	-	-	19.9	11.5	2935	35.8	91.2	0.89	9.7	4.4

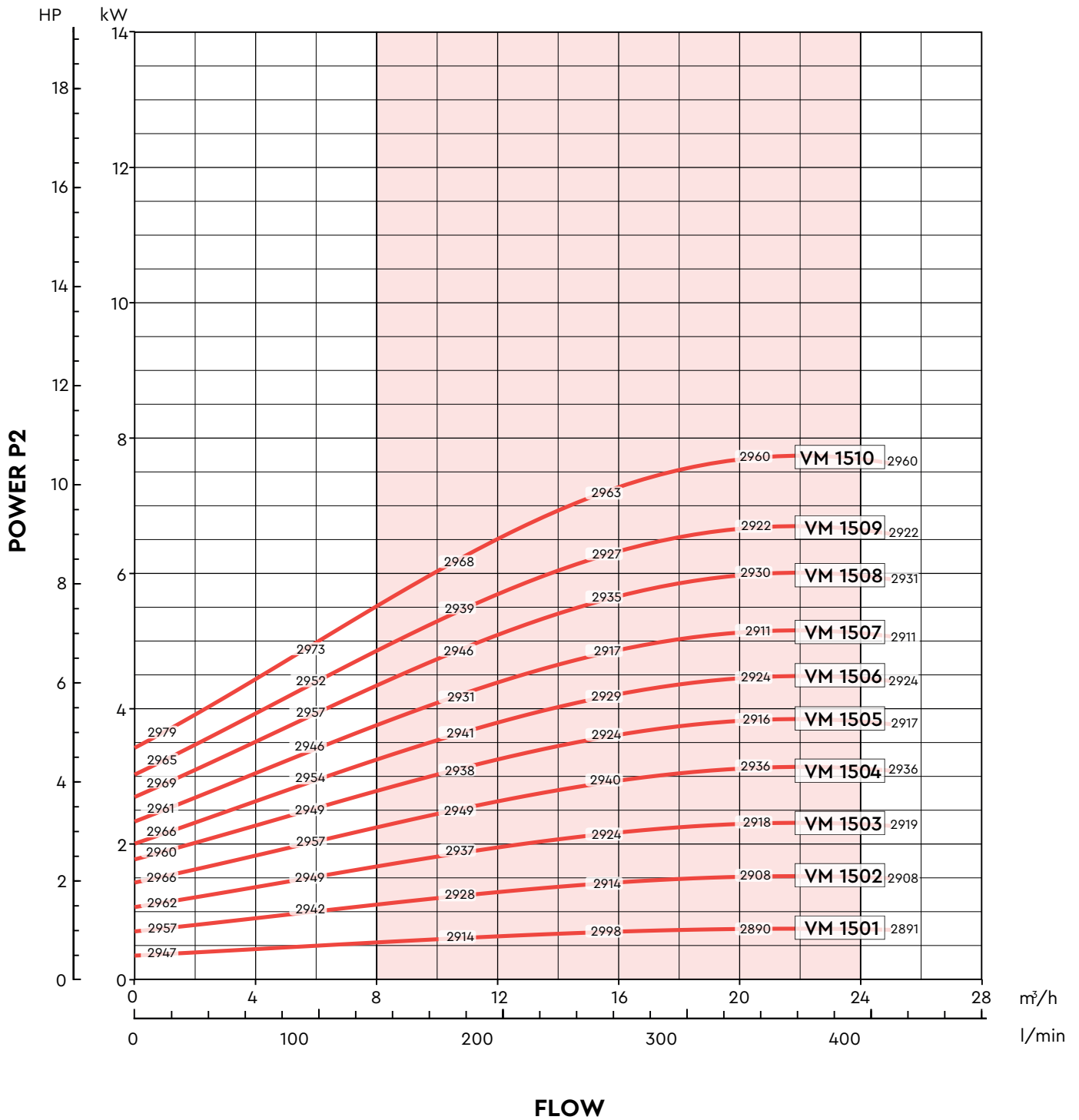
Stuart VM 1500 Series Performance

MEI ≥ 0.70



Stuart VM 1500 Series Performance

MEI ≥ 0.70



Stuart VM 1500 230 M 50 Technical Specifications

VM 1500 230 M 50	1501	1502
Part No	47198	47199
General		
Warranty	1 Year	
Approvals	CE	
Pump type	Centrifugal Multistage	
Features		
Impeller stages	1	2
Compact, robust design	✓	
Heavy duty oversized bearings	✓	
Easy maintenance	✓	
Performance		
Flow rate - nominal (m ³ /h)	15	
Flow rate range (m ³ /h)	8 - 24	
Maximum head - closed valve (metres)	14.5	29.0
Head range (metres)	5.5 - 13	11 - 26
Working pressure - maximum (bar)	26	
Motor		
Motor type	Induction (Manual reset thermal trip)	
Power supply (Vac/Ph/Hz)	230 V a.c. / 1 / 50 Hz	
Power - motor nominal P2 (kW)	1.1	1.2
Power - motor nominal P2 (hp)	1.5	3.0
Input current - 220-240v (A)	6.5	14.6
Efficiency (%)	74	73
Insulation class	F	
Duty rating	Continuous (S1)	
Starts per hour	60	
IP rating	IP 55	
Materials		
Pump head housing	AISI 304 stainless steel	
Impellers and diffusers	AISI 304 stainless steel	
Pump shaft	AISI 304 stainless steel	
Pump seal	Graphite/Silicon Carbide/AISI316/EPDM	
Connections		
Connection - inlet	DN50	DN50
Connection - outlet	DN50	DN50
Operating Conditions		
Operating ambient temperature range (°C)	-5 to +40 °C	
Liquid temperature range (°C)	-5 to +120 °C	
Dimensions		
Height (mm)	633	678
Width (mm)	300	310
Depth (mm)	250	250
Weight (Kg)	30.6	37.0

Stuart VM 1500 230-400 T 50 Technical Specifications

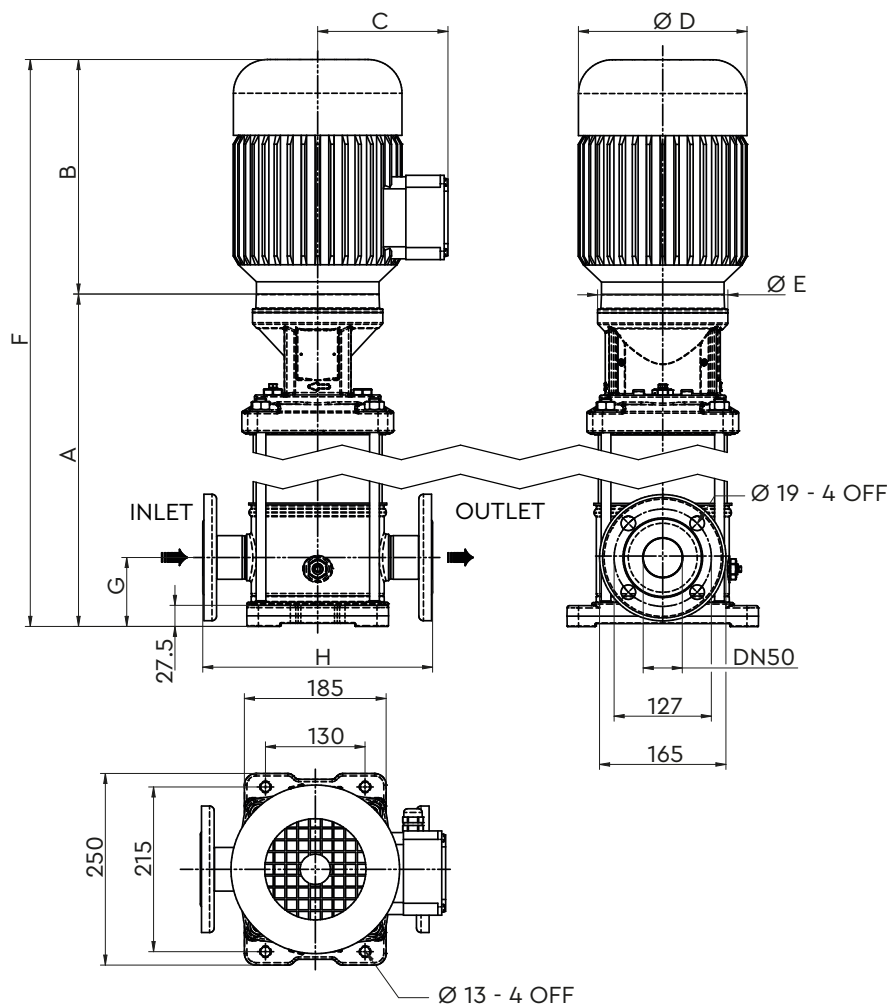
VM 1500 230-400 T 50	1501	1502	1503
Part No	47042	47043	47044
General			
Warranty	1 Year		
Approvals	CE		
Pump type	Centrifugal Multistage		
Features			
Impeller stages	1	2	3
Compact, robust design	✓		
Heavy duty oversized bearings	✓		
Easy maintenance	✓		
Performance			
Flow rate - nominal (m ³ /h)	15		
Flow rate range (m ³ /h)	8 - 24		
Maximum head - closed valve (metres)	14.5	29.0	43.5
Head range (metres)	5.5 - 13	11 - 26	17 - 39
Working pressure - maximum (bar)	26		
Motor			
Motor type	Induction		
Power supply (Vac/Ph/Hz)	230-400 V a.c. / 3 / 50 Hz		
Power - motor nominal P2 (kW)	1.1	2.2	3.0
Power - motor nominal P2 (hp)	1.5	3	4
Input current - 220-240v (A)	4.2	8.0	9.7
Input current - 380-415v (A)	2.4	4.6	5.6
Efficiency Class	IE3	IE3	IE3
Efficiency (%)	82.7	86.5	87.1
Insulation class	F		
Duty rating	Continuous (S1)		
Starts per hour	60		
IP rating	IP 55		
Materials			
Pump head housing	AISI 304 stainless steel		
Impellers and diffusers	AISI 304 stainless steel		
Pump shaft	AISI 304 stainless steel		
Pump seal	Graphite/Silicon Carbide/AISI316/EPDM		
Connections			
Connection - inlet	DN50	DN50	DN50
Connection - outlet	DN50	DN50	DN50
Operating Conditions			
Operating ambient temperature range (°C)	-5 to +40 °C		
Liquid temperature range (°C)	-5 to +120 °C		
Dimensions			
Height (mm)	633	678	775
Width (mm)	300	300	300
Depth (mm)	250	250	250
Weight (Kg)	30.6	37.0	45.8

Stuart VM 1500 400-690 T 50 Technical Specifications

VM 1500 400-690 T 50	1504	1505	1506	1507	1508	1509	1510
Part No	47045	47046	47047	47048	47049	47050	47051
General							
Warranty	1 Year						
Approvals	CE						
Pump type	Centrifugal Multistage						
Features							
Impeller stages	4	5	6	7	8	9	10
Compact, robust design	✓						
Heavy duty oversized bearings	✓						
Easy maintenance	✓						
Performance							
Flow rate - nominal (m ³ /h)	15						
Flow rate range (m ³ /h)	8 - 24						
Maximum head - closed valve (metres)	58	72.5	87.5	102	117	131.5	147.5
Head range (metres)	23.5-52.5	28.5-65.5	36.5-79.5	41.5-92	49-106.5	54.5-119	65-134.5
Working pressure - maximum (bar)	26						
Motor							
Motor type	Induction						
Power supply (Vac/Ph/Hz)	400-690 V a.c./3/50						
Power - motor nominal P2 (kW)	4.0	4.0	5.5	5.5	7.5	7.5	11.0
Power - motor nominal P2 (hp)	5.4	5.4	7.4	7.4	10	10	14.8
Input current 380-415v (A)	8.0	8.0	10.2	10.2	14.4	14.4	19.9
Input current 660-690v (A)	4.6	4.6	5.9	5.9	8.3	8.3	11.5
Efficiency Class	IE3	IE3	IE3	IE3	IE3	IE3	IE3
Efficiency (%)	88.1	88.1	89.2	89.2	90.1	90.1	91.2
Insulation class	F						
Duty rating	Continuous (S1)						
Starts per hour	60						
IP rating	IP 55						
Materials							
Pump head housing	AISI 304 stainless steel						
Impellers and diffusers	AISI 304 stainless steel						
Pump shaft	AISI 304 stainless steel						
Pump seal	Graphite/Silicon Carbide/AISI316/EPDM						
Connections							
Connection - inlet	DN50	DN50	DN50	DN50	DN50	DN50	DN50
Connection - outlet	DN50	DN50	DN50	DN50	DN50	DN50	DN50
Operating Conditions							
Operating ambient temperature range (°C)	-5 to +40 °C						
Liquid temperature range (°C)	-5 to +120 °C						
Dimensions							
Height (mm)	823	871	1128	1176	1246	1294	1437
Width (mm)	300	300	310	310	310	310	344
Depth (mm)	250	250	250	250	250	250	250
Weight (Kg)	51.0	52.5	81.1	82.6	86.5	88.0	115.0

Stuart VM 1500 230 M 50 Dimensions

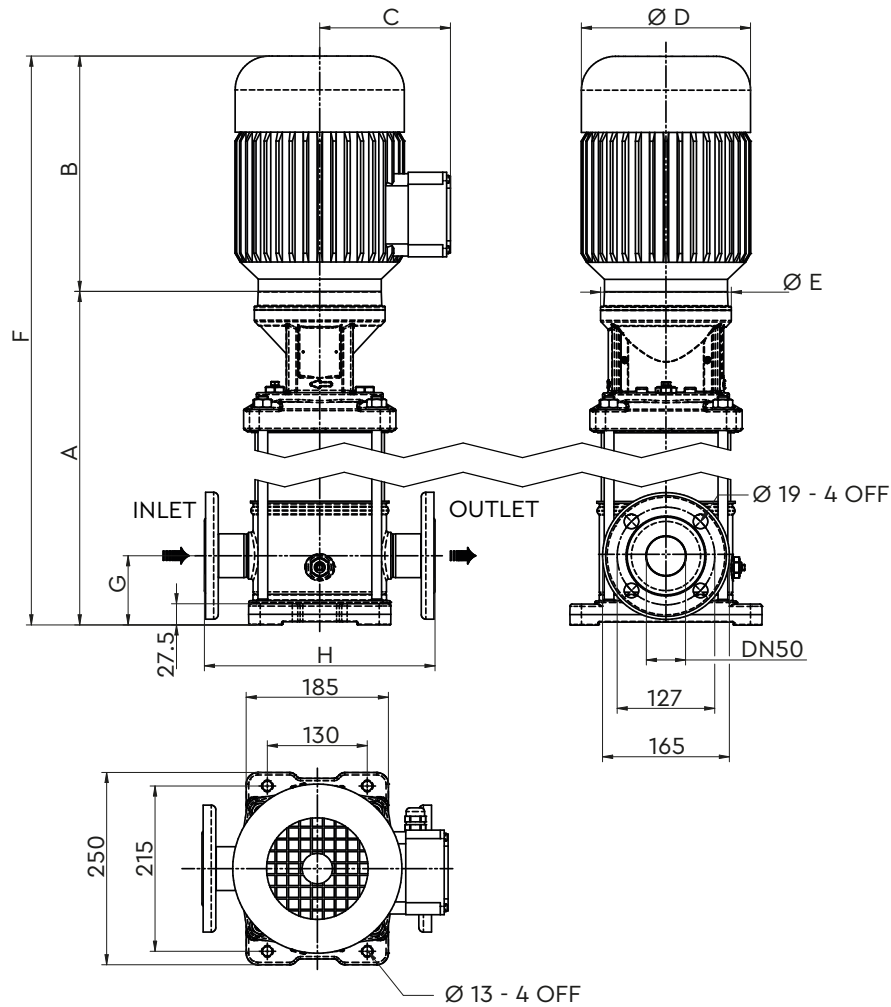
Dimensions: VM 1500 230 M 50



Part No	Description	Dimensions (mm)									Motor Weight	Pump Weight	Total Weight
		A	B	C	Ø D	Ø E	F	G	H				
47198	VM 1501 230 M 50	401	232	150	160	170	633	90	300	11.1 Kg	19.5 Kg	30.6 Kg	
47199	VM 1502 230 M 50	411	267	160	180	170	678	90	300	16.0 Kg	21.0 Kg	37.0 Kg	

Stuart VM 1500 230-400 / 400-690 T 50 Dimensions

Dimensions: VM 1500 230-400 / 400-690 T 50



Part No	Description	Dimensions (mm)									Motor Weight	Pump Weight	Total Weight
		A	B	C	Ø D	Ø E	F	G	H				
47042	VM 1501 230-400 T 50	401	232	129	160	170	633	90	300	11.1 Kg	19.5 Kg	30.6 Kg	
47043	VM 1502 230-400 T 50	411	267	138	180	170	678	90	300	16.0 Kg	21.0Kg	37.0 Kg	
47044	VM 1503 230-400 T 50	469	306	145	196	170	775	90	300	22.8 Kg	23.0 Kg	45.8 Kg	
47045	VM 1504 400-690 T 50	517	306	145	196	170	823	90	300	26.5 Kg	24.5 Kg	51.0 Kg	
47046	VM 1505 400-690 T 50	565	306	145	196	170	871	90	300	26.5 Kg	26.0 Kg	52.5 Kg	
47047	VM 1506 400-690 T 50	800	328	160	225	300	1128	90	300	33.6Kg	47.5 Kg	81.1 Kg	
47048	VM 1507 400-690 T 50	848	328	160	225	300	1176	90	300	33.6Kg	49.0 Kg	82.6 Kg	
47049	VM 1508 400-690 T 50	896	350	160	225	300	1246	90	300	36.0 Kg	55.5 Kg	86.5 Kg	
47050	VM 1509 400-690 T 50	944	350	160	225	300	1294	90	300	36.0 Kg	52.0 Kg	88.0 Kg	
47051	VM 1510 400-690 T 50	1012	425	194	248	350	1437	90	300	59.0 Kg	56.0 Kg	115.0 Kg	

Stuart Turner Limited reserves the right to amend specifications without notice.

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