

Identity code: Vario

Series:											
VAM b	Vario Version b										
	12017* 07063 12026* 06047 12042* 05057 10025 04120 09039	Pump version: * for PVDF versions, max. 145 psig (10 bar)									
		PVT SST	Liquid end materials: PVDF with PTFE packing seals Stainless steel with PTFE packing seals								
			0 1 4 5	Valve springs: without springs with 2 springs (1.5 psig) Hastelloy C4 with pressure relief valve, without springs (for PVT) with pressure relief valve, with springs (for PVT)							
			C D	Hydraulic Connector: Clamping nut & insert with NPT connections (PVDF) Clamping nut & insert with NPT connections (SST)							
			0	Labeling: Standard with logo							
			A D U S	Electrical connection: (with 6 ft. (2 m) power cord) A 1 ph 230 V 50/60 Hz Euro plug D 1 ph 115 V 60 Hz N. American plug U 1 ph 230 V 50/60 Hz N. American plug S 3 ph 230/400 V 50/60 Hz Comes with junction box on motor (basic only)							
			0 1 2 3	Control type: 0 Basic type with 3 ph or 1 ph motor (1 ph w/ power switch + fuse) 1 External contact (pulse) input + power switch + fuse + two-stage float switch connector + pause function as N/C contact + flow monitor input + tri color function display 2 Same as control type 1 + memory function 3 Analog input + power switch + fuse + two-stage float switch connector + pause function as N/C contact + flow monitor input + tri color function display <i>Note: When selecting control type "0", control version must be "0" also.</i>							
			0 1 2 3 4 5 6 A B H I K M	Control version: For control type "0" only 0 Standard For control type "1" and "2" only, maximum contact closures 1 6000 pulses/h 2 2000 pulses/h 3 4000 pulses/h 4 8000 pulses/h 5 10000 pulses/h 6 12000 pulses/h For control type "3" only A 0 - 20 mA B 4 - 20 mA Stoke length adjustment H With 3 P stroke positioning motor, 230 V, 50/60 Hz I With 3 P stroke positioning motor, 115 V, 50/60 Hz K With stroke positioning motor, 4-20 mA, 230 V, 50/60 Hz M With stroke positioning motor, 4-20 mA, 115 V, 50/60 Hz							
			0 1 2 3	Switching mode relay: Without relay (standard) Fault annunciating relay, drops out (N/C contact) Pacing relay, pulls in (N/O contact) Fault annunciating relay, pulls in (N/O contact)							
VAMb	05075	PVT	1	1	0	D	1	1	1		

Technical Data: Vario

60 Hz (3450 RPM motor)				50 Hz (2830 RPM motor)								
Pump version Vario/b	Capacity at max. backpressure		Max. stroking rate	Capacity at max. backpressure		Max. stroking rate	Dis- place- ment	Suc- tion lift	Permissible suction side pressure	Suction/ discharge connector		Shipping weight
	psig (bar)	U.S. gph (L/h)		psig (bar)	U.S. gph (L/h)					mL/ stroke	ft.	
12017 PVDF	145 (10)	5.3 (20)	92	145 (10)	4.4 (16.6)	77	3.6	19.7	40.6 (2.8)	1/2M	5/8	14.5 (6.6)
12017 SS	174 (12)	5.3 (20)	92	174 (12)	4.4 (16.6)	77	3.6	19.7	40.6 (2.8)	3/8F	NPT	18.9 (8.6)
12026 PVDF	145 (10)	8.3 (31.4)	146	145 (10)	7.0 (26.2)	122	3.6	19.7	40.6 (2.8)	1/2M	5/8	14.5 (6.6)
12026 SS	174 (12)	8.3 (31.4)	146	174 (12)	7.0 (26.2)	122	3.6	19.7	40.6 (2.8)	3/8F	NPT	18.9 (8.6)
12042 PVDF	145 (10)	13.3 (50.4)	234	145 (10)	11.1 (42)	195	3.6	19.7	40.6 (2.8)	1/2M	5/8	14.5 (6.6)
12042 SS	174 (12)	13.3 (50.4)	234	174 (12)	11.1 (42)	195	3.6	19.7	40.6 (2.8)	3/8F	NPT	18.9 (8.6)
10025 PVDF	145 (10)	7.9 (29.8)	92	145 (10)	6.6 (24.8)	77	5.4	13.0	24.6 (1.7)	1/2M	5/8	14.5 (6.6)
10025 SS	145 (10)	7.9 (29.8)	92	145 (10)	6.6 (24.8)	77	5.4	13.0	24.6 (1.7)	3/8F	NPT	18.9 (8.6)
09039 PVDF	123 (8.5)	12.5 (47.3)	146	123 (8.5)	10.4 (39.4)	122	5.4	13.0	24.6 (1.7)	1/2M	5/8	14.5 (6.6)
09039 SS	123 (8.5)	12.5 (47.3)	146	123 (8.5)	10.4 (39.4)	122	5.4	13.0	24.6 (1.7)	3/8F	NPT	18.9 (8.6)
07063 PVDF	94 (6.5)	20 (75.6)	234	94 (6.5)	16.6 (63)	195	5.4	13.0	24.6 (1.7)	1/2M	5/8	14.5 (6.6)
07063 SS	94 (6.5)	20 (75.6)	234	94 (6.5)	16.6 (63)	195	5.4	13.0	24.6 (1.7)	3/8F	NPT	18.9 (8.6)
06047 PVDF	80 (5.5)	15 (56.9)	92	80 (5.5)	12.5 (47.4)	77	10.2	6.6	11.6 (0.8)	3/4M	3/4	16.5 (7.5)
06047 SS	80 (5.5)	15 (56.9)	92	80 (5.5)	12.5 (47.4)	77	10.2	6.6	11.6 (0.8)	1/2F	NPT	29.7 (13.5)
05075 PVDF	65 (4.5)	23.8 (90)	146	65 (4.5)	19.8 (75)	122	10.2	6.6	11.6 (0.8)	3/4M	3/4	16.5 (7.5)
05075 SS	65 (4.5)	23.8 (90)	146	65 (4.5)	19.8 (75)	122	10.2	6.6	11.6 (0.8)	1/2F	NPT	29.7 (13.5)
04120 PVDF	50(3.5)/33(2.3)*	38 (144)	234	50(3.5)/33(2.3)*	31.7 (120)	195	10.2	6.6	11.6 (0.8)	3/4M	3/4	16.5 (7.5)
04120 SS	50(3.5)/33(2.3)*	38 (144)	234	50(3.5)/33(2.3)*	31.7 (120)	195	10.2	6.6	11.6 (0.8)	1/2F	NPT	29.7 (13.5)

*The 33 psig (2.3 bar) value specifies the maximum permissible start-up pressure for 230 V models only. The 50 psig (3.5 bar) backpressure rating is for 115 V models which feature a longer start capacitor.

Media-contacted materials:

	<u>Liquid end</u>	<u>Suction/discharge connections</u>	<u>Seals</u>	<u>Valve balls</u>
SST	316 stainless steel	316 stainless steel	PTFE	304 SS
PVT	PVDF	PVDF	PTFE	Ceramic

DEVELOPAN® pump diaphragm is reinforced EPDM with PTFE face on fluid-contact side.

When the pump is switched off by means of the power switch or power supply, the max. possible start-up pressure is 50% of the maximum working pressure specified.

Cross-Reference: Obsolete Vario model numbers to current Vario pump versions

HM 38-042 = 12017	HM 38-063 = 10025	HM 38-120 = 06047
HM 24-042 = 12026	HM 24-063 = 09039	HM 24-120 = 05075
HM 15-042 = 12042	HM 15-063 = 07063	HM 15-120 = 04120

Specifications: Vario

Maximum stroke length:	0.12" (3.0 mm)									
Materials of construction										
Housing:	Glass-filled Luranyl™ (PPE)									
Diaphragm:	PTFE faced EPDM with steel core and Nylon reinforcement									
Liquid end options:	PVDF and 316 SS									
Enclosure rating:	NEMA 4 (IP 65)									
Motor HP:	1/8 HP (0.10 kW)									
Motor voltage:	230 ±10% VAC (50/60 Hz), 1 phase 115 -6% +15% VAC (60 Hz), 1 phase 220 /460 V, 60 Hz, 3 phase									
Current drain:	1 ph: 1.6 A (115 V), 0.8 A (230 V) startup current about 2.5 times nominal current. 3 ph: 0.5 A (230 V), 0.32 A (400 V)									
Full load RPM:	3450 RPM (60 Hz), 2830 RPM (50 Hz) (Note: different performance with 50 and 60 Hz power)									
Allowable motor start/stops:	2000/hour									
Motor insulation class:	F									
Motor enclosure:	Fan-cooled open motor									
Thermal overload protection:	Yes (176°F, 80°C)									
Check valves:	Single ball									
Repeatability:	When used according to the operating instructions ±2%.									
Power cord:	6 foot (2 m) 2 wire + ground									
Relay cable (optional):	6 foot (2 m) 3 wire (SPDT) 250 VAC, 2 A									
Ambient temperature range:	14°F (-10°C) to 104°F (40°C)									
Lubrication:	Sealed grease lubricated bearings and gearing									
Max. fluid operating temperatures:	<table><tr><td><u>Material</u></td><td><u>Constant</u></td><td><u>Short Term</u></td></tr><tr><td>PVDF</td><td>149°F (65°C)</td><td>212°F (100°C)</td></tr><tr><td>316 SS</td><td>122°F (50°C)</td><td>248°F (120°C)</td></tr></table>	<u>Material</u>	<u>Constant</u>	<u>Short Term</u>	PVDF	149°F (65°C)	212°F (100°C)	316 SS	122°F (50°C)	248°F (120°C)
<u>Material</u>	<u>Constant</u>	<u>Short Term</u>								
PVDF	149°F (65°C)	212°F (100°C)								
316 SS	122°F (50°C)	248°F (120°C)								
Maximum solids size in fluid:	0.2 mm									
Remote pause and/or contact input voltage level with open contact:	Approximately +5 VDC supply voltage									
Impedance:	10 kOhm									
Controlling contact:	With voltage-free contact, or semiconductor sink logic control (not source logic) with a residual voltage of <700 mV, the contact load is approximately 0.5 mA at +5 VDC. (Note: Semiconductor contacts that require >700 mV across a closed contact should not be used).									
Max. pulse frequency:	25 pulses/sec									
Max. pulse memory:	65,535 pulses									
Necessary contact duration:	20 ms									
Analog - current input burden:	Approximately 70 Ohm									
Max. allowable input current:	50 mA									
Warranty:	Two years on drive; one year on liquid end.									
Factory testing:	Each pump is tested for rated flow and pressure									
Industry standards:	CSA approval available at additional cost in U.S., standard in Canada. CE approved.									