

## STUART

### HM 0300 Series Centrifugal Horizontal Multistage Pumps

A range of 3m<sup>3</sup>/hour nominal flow horizontal multistage pumps featuring a compact, close-coupled design and heavy duty oversized motor shaft.

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 4.5m<sup>3</sup>/h and models available providing up to 90.5 metres head, these pumps are suitable for use in a wide range of water boosting applications.



#### Features

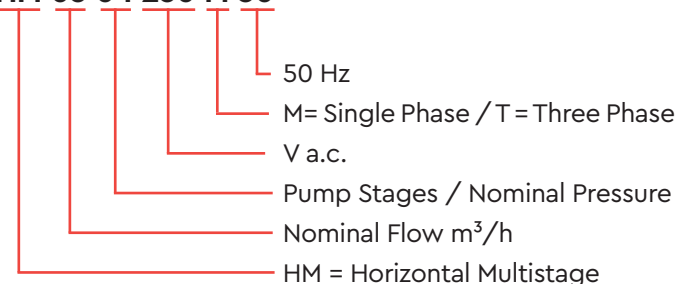
- Multistage centrifugal pump
- Flow rates up to 4.5 m<sup>3</sup>/h
- Heads up to 90.5 metres
- Single phase and three phase options
- Compact, close-coupled design
- AISI 304 stainless steel pump head housing, shaft, impellers and diffusers
- Extended life mechanical seal
- Continuously rated induction motor
- Easy maintenance
- WRAS Approved Product
- 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

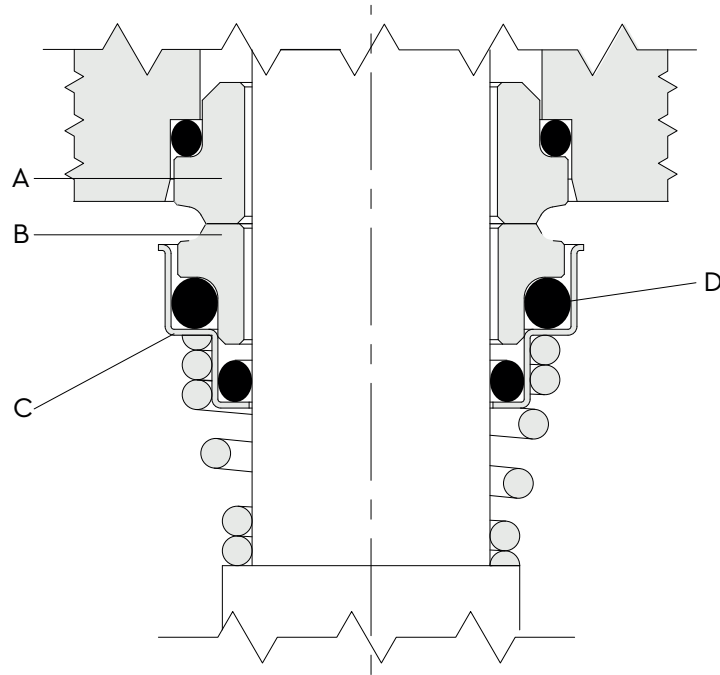
#### Product Code

**HM 03 04 230 M 50**





## Stuart HM 0300 Series Mechanical Seal Specifications



### Seal Component Materials

Stationary Seal Face	Rotating Seal Face	Other Components	Elastomers	Temperature
A	B	C	D	
Ceramic Alumina	Carbon Graphite	Stainless Steel AISI 316	EPDM	-15°C - +110°C

## Stuart HM 0300 Series Motor Specifications

- Asynchronous, TEFC (Totally Enclosed, Fan-Cooled)
- 2 pole
- Protection degree: IP55
- Insulation class: F
- Max. 60 starts/hour for motor power up to 3 kW (with min. 1 minute resting time)

### Single Phase Models (at 50Hz)

- Standard voltage 220–240 V  $\pm$  5%
- Integrated thermal protection

Motor Size	P <sub>N</sub> (kW)	Input Current	Capacitor		230V – 50Hz						
		I <sub>N</sub> (A)	μF	V	n <sub>N</sub> (min <sup>-1</sup> )	I <sub>s</sub> / I <sub>N</sub>	η%	cos φ	T <sub>N</sub> (Nm)	T <sub>s</sub> / T <sub>N</sub>	T <sub>M</sub> / T <sub>N</sub>
71	0.33	2.50	16	450	2920	6.5	64.8	0.88	1.08	1.00	1.60
71	0.45	3.00	16	450	2890	5.4	69.7	0.92	1.50	0.72	1.60
71	0.55	3.50	16	450	2860	4.6	72.6	0.94	1.83	0.59	1.85
71	0.75	4.67	16	450	2790	3.5	72.2	0.97	2.56	0.42	1.87
71	0.90	5.45	30	450	2875	4.8	75.3	0.93	3.00	0.47	1.67
71	1.10	6.60	30	450	2820	3.9	77.0	0.96	3.70	0.38	1.86
80	1.30	7.46	30	450	2860	4.2	80.8	0.94	4.35	0.57	1.86
80	1.50	8.56	30	450	2830	3.6	79.9	0.95	5.05	0.50	1.92

## Three Phase Models (at 50Hz)

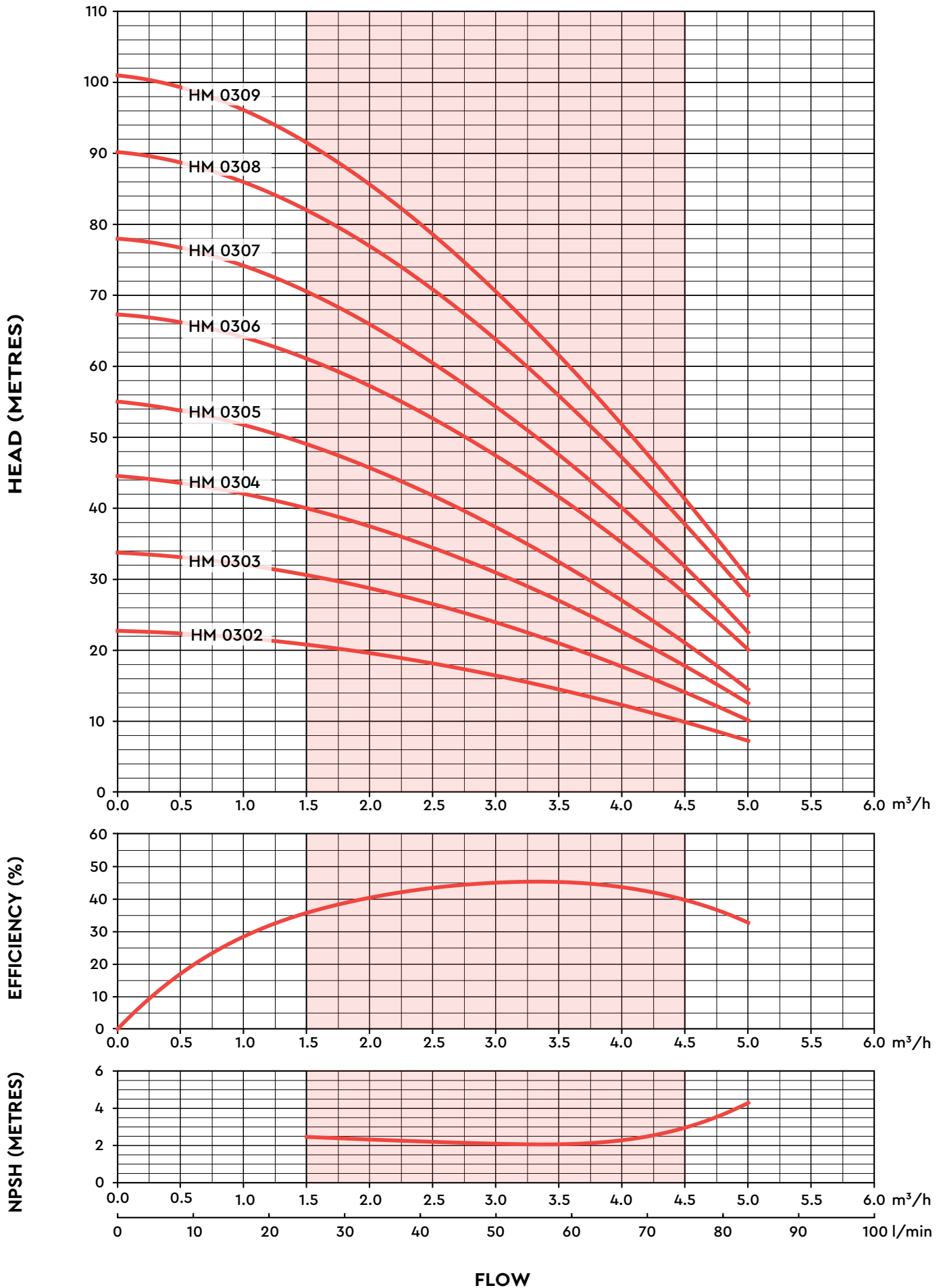
- IE3 premium efficiency motors
- IE efficiency according to IEC 60034-30-1:2014
- Electrical performance according to IEC 60034-2-1:2007
- Standard voltage:  
220-240 / 380-415 V  $\pm$  5 % up to 3 kW  
380-415 / 660-690 V  $\pm$  5 % from 4 kW
- Thermal protection to be provided within the starter panel

P <sub>N</sub> (kW)	Efficiency $\eta_N$ %						IE
	$\Delta$ 230 V Y 400 V			$\Delta$ 400 V Y 690 V			
	4/4	3/4	2/4	4/4	3/4	2/4	
0.75	80.9	81.5	79.6	-	-	-	3
1.10	82.7	84.6	84.2	-	-	-	3
1.50	84.3	85.7	85.3	-	-	-	3

Motor Size	P <sub>N</sub> (kW)	No Poles	f <sub>N</sub> (Hz)	400 V 50Hz				
				cos $\phi$	I <sub>S</sub> / I <sub>N</sub>	T <sub>N</sub> (Nm)	T <sub>S</sub> / T <sub>N</sub>	T <sub>M</sub> / T <sub>N</sub>
71	0.75	2	50	0.83	6.8	2.6	3.6	3.7
71	1.10	2	50	0.82	5.9	3.7	3.2	3.1
80	1.50	2	50	0.79	6.8	5.1	3.2	3.2

P <sub>N</sub> (kW)	Voltage U <sub>N</sub>				n <sub>N</sub> (min <sup>-1</sup> )	Motor Operating Conditions		
	$\Delta$ 230 V	Y 400 V	$\Delta$ 400 V	Y 690 V		Altitude Above Sea Level (m)	T <sub>amb</sub> min/max (°C)	ATEX
	I <sub>N</sub> (A)							
0.75	2.8	1.6	-	-	2800	≤ 1000	-15 / 40	No
1.10	4.1	2.3	-	-	2840	≤ 1000	-15 / 40	
1.50	5.7	3.3	-	-	2830	≤ 1000	-15 / 40	

# Stuart HM 0300 Series Performance



## Stuart HM 0300 230 M 50 Technical Specifications

HM 0300 230 M 50	0302	0303	0304	0305	0306	0307	0308	0309
Part No	46734	46735	46736	46737	46738	46739	46740	46741

General								
Warranty	1 Year							
Approvals	WRAS Approved Product, CE							
Pump type	Centrifugal Multistage							

Features								
Impeller stages	2	3	4	5	6	7	8	9
Compact, close-coupled design	✓							
Heavy duty oversized motor shaft	✓							
Easy maintenance	✓							

Performance								
Flow rate - nominal (m <sup>3</sup> /h)	3							
Flow rate range (m <sup>3</sup> /h)	1.5 - 4.5							
Maximum head - closed valve (metres)	23.0	33.5	44.5	55.0	67.5	78.0	90.0	101.0
Head range (metres)	10-21	14-30.5	18-40	21-49	28-61	32-70.5	38-82	41-91.5
Working pressure - maximum (bar)	10							
Maximum allowable amount of sand	50 g/m <sup>3</sup>							

Motor								
Motor type	Induction (Manual reset thermal trip)							
Power supply (Vac/Ph/Hz)	230 V a.c. / 1 / 50 Hz							
Power - input P1 (kW)	0.46	0.60	0.76	0.91	1.13	1.28	1.43	1.58
Power - motor nominal P2 (kW)	0.33	0.45	0.55	0.75	0.90	1.10	1.30	1.50
Power - motor nominal P2 (hp)	0.4	0.6	0.7	1.0	1.2	1.5	1.7	2.0
Input current - 220-240v (A)	2.5	3.0	3.7	4.3	5.4	6.0	6.9	7.5
Efficiency (%)	64.8	69.7	72.6	72.2	75.3	77.0	80.8	79.9
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	Ceramic Alumina/Carbon Graphite/AISI 316/EPDM							

Connections								
Connection - inlet	Rp 1¼"	Rp 1¼"	Rp 1¼"	Rp 1¼"	Rp 1¼"	Rp 1¼"	Rp 1¼"	Rp 1¼"
Connection - outlet	Rp 1"	Rp 1"	Rp 1"	Rp 1"	Rp 1"	Rp 1"	Rp 1"	Rp 1"

Operating Conditions								
Operating Ambient Temperature Range (°C)	-5 °C to +40 °C							
Liquid temperature range (°C)	-15 to +90 °C (110 °C for industrial applications)							

Dimensions								
Height (mm)	207	207	207	207	207	207	214	214
Width (mm)	203.5	203.5	203.5	203.5	203.5	203.5	203.5	203.5
Depth (mm)	361	361	385	409	433	457	523	547
Weight (Kg)	11.2	11.4	11.8	12.4	14.4	15.0	18.8	19.4

## Stuart HM 0300 230-400 T 50 Technical Specifications

HM 0300 230-400 T 50	0302	0303	0304	0305	0306	0307	0308	0309
Part No	46742	46743	46744	46745	46746	46747	46748	46749

General								
Warranty	1 Year							
Approvals	WRAS Approved Product, CE							
Pump type	Centrifugal Multistage							

Features								
Impeller stages	2	3	4	5	6	7	8	9
Compact, close-coupled design	✓							
Heavy duty oversized motor shaft	✓							
Easy maintenance	✓							

Performance								
Flow rate - nominal (m <sup>3</sup> /h)	3							
Flow rate range (m <sup>3</sup> /h)	1.5 - 4.5							
Maximum head - closed valve (metres)	23.0	33.5	44.5	55.0	67.5	78.0	90.0	101.0
Head range (metres)	10-21	14-30.5	18-40	21-49	28-61	32-70.5	38-82	41-91.5
Working pressure - maximum (bar)	10							
Maximum allowable amount of sand	50 g/m <sup>3</sup>							

Motor								
Motor type	Induction (thermal trip fitted by installer)							
Power supply (Vac/Ph/Hz)	230 - 400 V a.c. / 3 / 50 Hz							
Power - input P1 (kW)	0.41	0.57	0.72	0.87	1.02	1.17	1.39	1.55
Power - motor nominal P2 (kW)	0.75	0.75	0.75	0.75	1.10	1.10	1.50	1.50
Power - motor nominal P2 (hp)	1.0	1.0	1.0	1.0	1.5	1.5	2.0	2.0
Input current 220-240v (A)	1.9	2.1	2.4	2.7	3.3	3.6	4.8	5.1
Input current 380-415v (A)	1.1	1.2	1.4	1.6	1.9	2.1	2.8	3.0
Efficiency class	IE3	IE3	IE3	IE3	IE3	IE3	IE3	IE3
Efficiency 3 Phase 2/4 (%)	79.6	79.6	79.6	79.6	84.2	84.2	85.3	85.3
Efficiency 3 Phase 3/4 (%)	81.5	81.5	81.5	81.5	84.6	84.6	85.7	85.7
Efficiency 3 Phase 4/4 (%)	80.9	80.9	80.9	80.9	82.7	82.7	84.3	84.3
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	Ceramic Alumina/Carbon Graphite/AISI 316/EPDM							

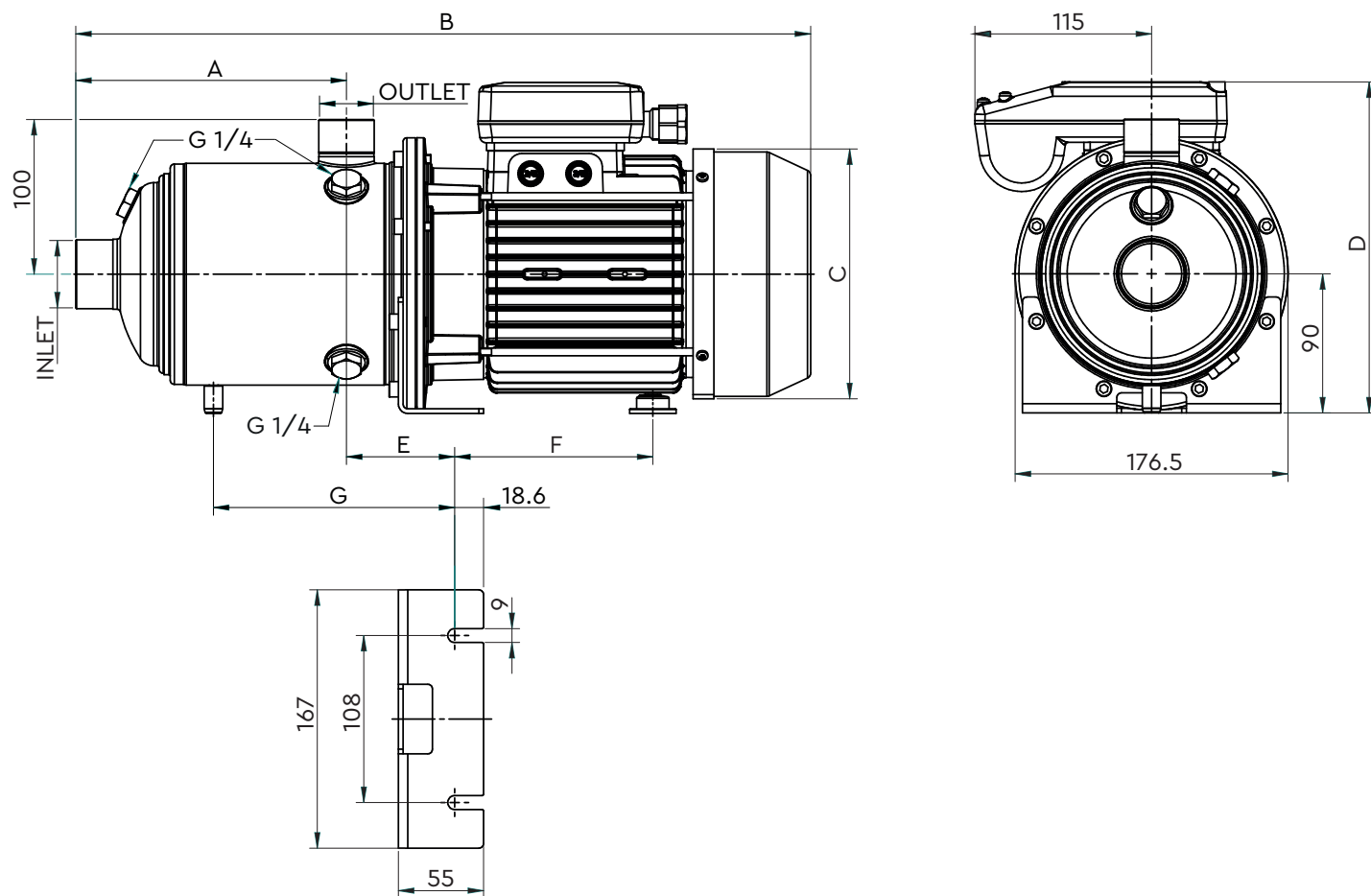
Connections								
Connection - inlet	Rp 1¼"	Rp 1¼"	Rp 1¼"	Rp 1¼"	Rp 1¼"	Rp 1¼"	Rp 1¼"	Rp 1¼"
Connection - outlet	Rp 1"	Rp 1"	Rp 1"	Rp 1"	Rp 1"	Rp 1"	Rp 1"	Rp 1"

Operating Conditions								
Operating Ambient Temperature Range (°C)	-5 °C to +40 °C							
Liquid temperature range (°C)	-15 to +90 °C (110 °C for industrial applications)							

Dimensions								
Height (mm)	207	207	207	207	207	207	214	214
Width (mm)	176.5	176.5	176.5	176.5	176.5	176.5	176.5	176.5
Depth (mm)	363	363	387	411	435	459	520	544
Weight (Kg)	10.8	11.0	11.6	12.0	13.5	13.8	17.6	18.2

## Stuart HM 0300 230 M 50 Dimensions

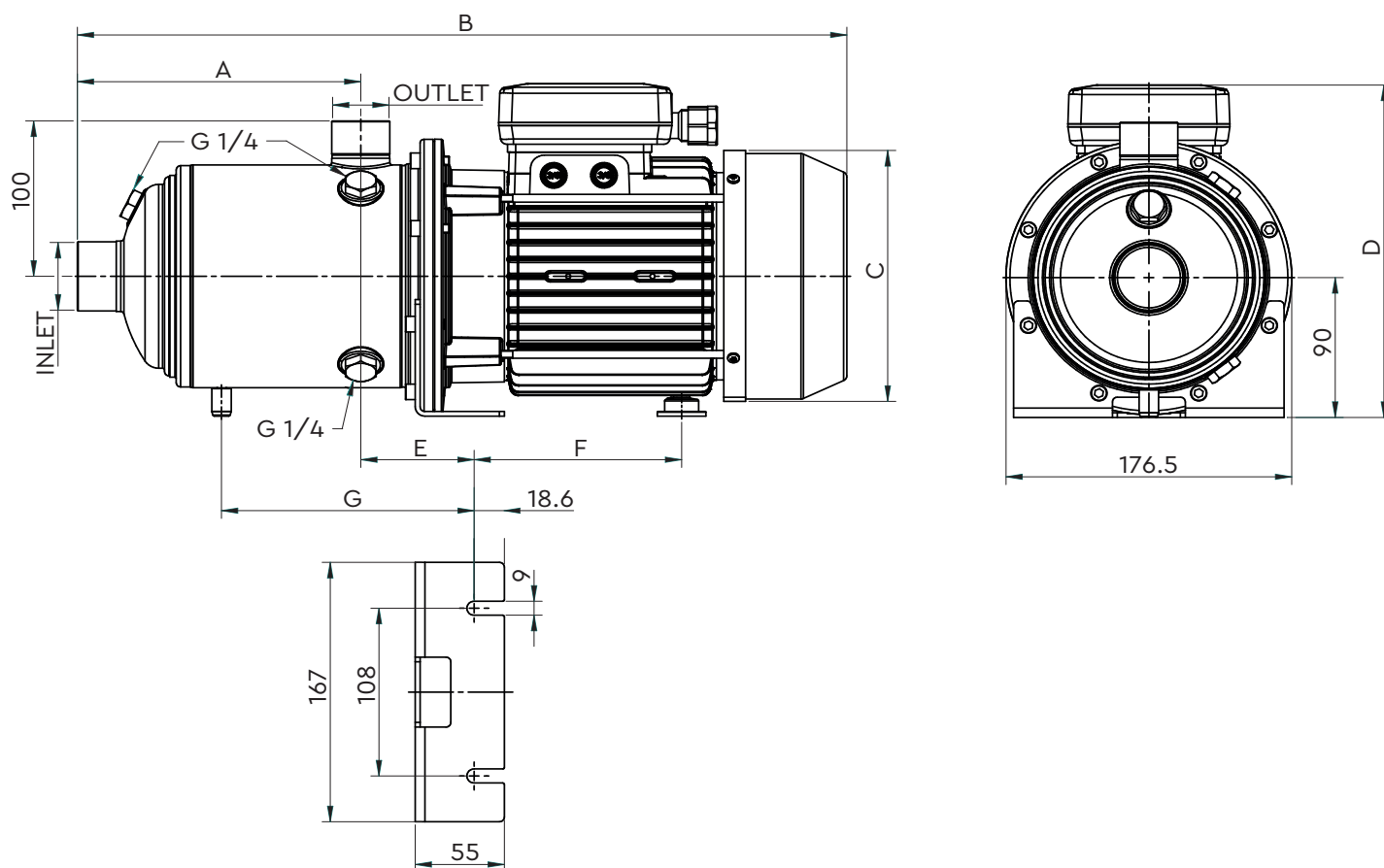
Dimensions: HM 0300 230 M 50



Part No	Description	Dimensions (mm)								Weight (Kg)	Inlet	Outlet
		A	B	C	D	E	F	G				
46734	HM 0302 230 M 50	103	361	144	207	70	101	-	11.2	Rp 1¼"	Rp 1"	
46735	HM 0303 230 M 50	103	361	144	207	70	101	-	11.4	Rp 1¼"	Rp 1"	
46736	HM 0304 230 M 50	127	385	144	207	70	101	-	11.8	Rp 1¼"	Rp 1"	
46737	HM 0305 230 M 50	151	409	144	207	70	101	-	12.4	Rp 1¼"	Rp 1"	
46738	HM 0306 230 M 50	175	433	144	207	70	101	-	14.4	Rp 1¼"	Rp 1"	
46739	HM 0307 230 M 50	199	457	144	207	70	101	180	15.0	Rp 1¼"	Rp 1"	
46740	HM 0308 230 M 50	223	523	162	214	70	128	204	18.8	Rp 1¼"	Rp 1"	
46741	HM 0309 230 M 50	247	547	162	214	70	128	228	19.4	Rp 1¼"	Rp 1"	

## Stuart HM 0300 230-400 T 50 Dimensions

Dimensions: HM 0300 230-400 T 50



Part No	Description	Dimensions (mm)								Weight (Kg)	Inlet	Outlet
		A	B	C	D	E	F	G				
46742	HM0302 230-400 T 50	103	363	144	207	70	101	-	10.8	Rp 1¼"	Rp 1"	
46743	HM0303 230-400 T 50	103	363	144	207	70	101	-	11.0	Rp 1¼"	Rp 1"	
46744	HM0304 230-400 T 50	127	387	144	207	70	101	-	11.6	Rp 1¼"	Rp 1"	
46745	HM0305 230-400 T 50	151	411	144	207	70	101	-	12.0	Rp 1¼"	Rp 1"	
46746	HM0306 230-400 T 50	175	435	144	207	70	101	-	13.2	Rp 1¼"	Rp 1"	
46747	HM0307 230-400 T 50	199	459	144	207	70	101	180	13.8	Rp 1¼"	Rp 1"	
46748	HM0308 230-400 T 50	223	520	162	214	70	128	204	17.6	Rp 1¼"	Rp 1"	
46749	HM0309 230-400 T 50	247	544	162	214	70	128	228	18.2	Rp 1¼"	Rp 1"	

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

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