

ROTARY LOBE PRODUCT LINE: STAINLESS STEEL PUMPS

Classic+ Series™

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SERIES DESCRIPTION

Due to its cleanability, superior performance, and ease of maintenance, the Classic+ Series™ is the perfect solution for Food and Beverage, Personal Care, Pharmaceutical, Confectionary and a wide range of Light Chemical Applications.

US 3-A, European CE, UKCA and ATEX compliant models and specifications are available.

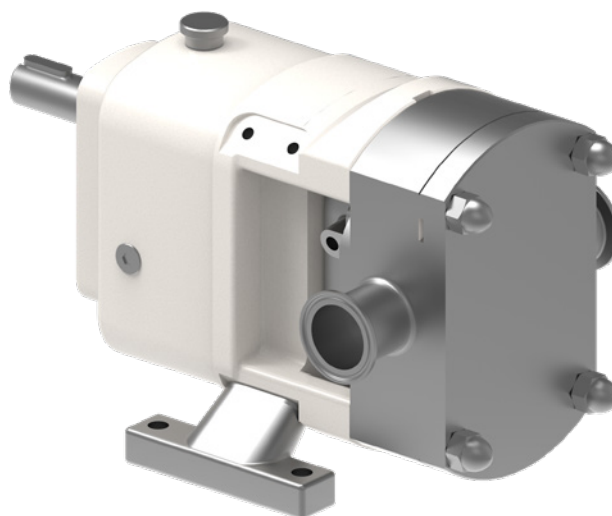
It can handle flows up to 832 GPM (189 m³/h).



RELATED PRODUCTS

Stainless Steel, SteriLobe® Series: Catalog Section 1725

Stainless Steel, Revolution® Series: Catalog Section 1726



Classic+ Series™

OPERATING RANGE

SERIES	NOMINAL FLOW		MAXIMUM PRESSURE		TEMPERATURE		VISCOSITY RANGE	
	GPM	m³/h	PSI	Bar	°F	°C	SSU	cSt
Classic+	0 - 832	0 - 189	174	12	to +355	to +180	to 910,000	to 200,000

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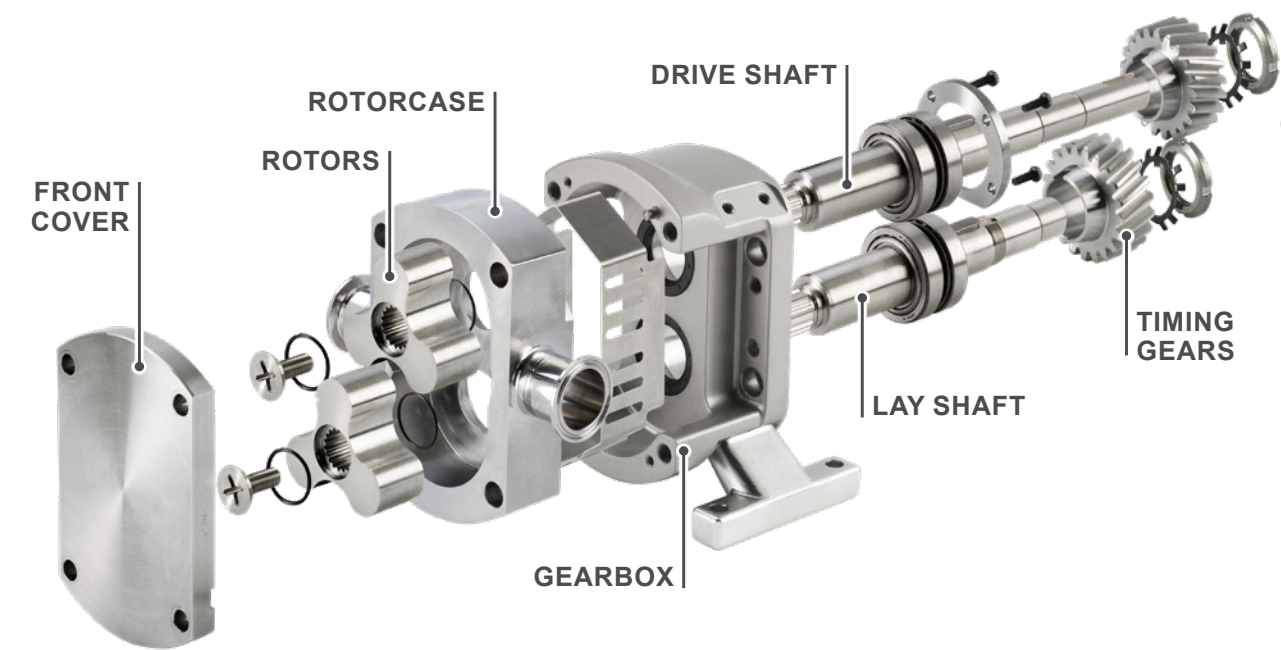
FEATURES & BENEFITS

- Cleanability
 - » Modular pump design promotes easy disassembly for COP (Clean Out of Place) & CIP (Clean In Place)
 - » Casing profile cusps maximize efficiency & draining capability
 - Ease of Maintenance
 - » Removable foot for easier placement
 - » Classic RLP design
- Performance
 - » Timed, non-contacting rotors minimize shear while providing extended run-dry capability
 - » Helical timing gears provide high torque & quieter operation for extended pump life
 - » Tapered roller bearings provide higher operating speeds & better discharge pressures

STANDARD MATERIALS OF CONSTRUCTION

Component	Standard Material				
	CP10	CP20	CP30	CP40	CP50
Rotorcase	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel
Front Cover	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel
Rotors	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel
Rotor Retainers	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel
Shafts	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	316L Stainless Steel	416 Stainless Steel
Shaft Sleeves	N/A	N/A	N/A	N/A	316L Stainless Steel
Gearbox	Cast Iron	Cast Iron	Cast Iron	Cast Iron	Cast Iron
Bearing Housing	Cast Iron	Cast Iron	Cast Iron	N/A	N/A
Gearbox Cover	N/A	N/A	N/A	Mild Steel	Mild Steel

CUTAWAY VIEW & PUMP FEATURES



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MODEL NUMBER KEY

C	P	3	0	/	0	0	6	9	/	1	2
Pump Range		Model Size:				Displacement (Liters/Rev)				Max Pressure (BAR)	
		10	40			0005 0020 0069 0180 0351				05 07 08 12	
		20	50			0008 0031 0113 0250 0525					
		30				0011					

SPECIFICATIONS

Model Number	Standard Port Size		Theoretical Displacement			Maximum Differential Pressure		Maximum Speed	Maximum Speed @ Maximum Differential Pressure	Maximum Differential Pressure @ Maximum Speed		Approximate Shipping Weight with Grease	
	In	mm	ltr/rev	Imp.gal /100 rev	US gal /100 rev	PSI	BAR	rev/min	rev/min	PSI	BAR	Lbs.	Kg.
CP10/0005/12	1	25	0.046	1.01	1.22	175	12	1400	1000	120	8.5	28.6	13
CP10/0008/08	1.5	38	0.083	1.83	2.19	120	8	1400	1000	75	5.5	30.8	14
CP10/0011/05	1.5	38	0.111	2.44	2.93	70	5	1400	1000	50	3.5	33.0	15
CP20/0020/12	1.5	38	0.202	4.44	5.34	175	12	1000	750	120	8.5	61.6	28
CP20/0031/07	2	50	0.313	6.89	8.27	100	7	1000	750	70	5	68.2	31
CP30/0069/12	2	50	0.694	15.27	18.34	175	12	750	550	120	8.5	156.2	71
CP30/0113/07	3	76	1.125	24.75	29.72	100	7	750	550	70	5	169.4	77
CP40/0180/12	3	76	1.8	39.6	47.56	175	12	700	520	120	8.5	330	150
CP40/0250/07	4	101	2.5	55	66.05	100	7	700	520	70	5	356.4	162
CP50/0351/12	4	101	3.514	77.31	92.84	175	12	650	420	120	8.5	554.4	252
CP50/0525/08	6	152	5.25	115.5	138.7	115	8	600	420	75	5.5	602.8	274

CP20/CP30 High Efficiency Operating Parameters.

CP20/0020/07	1.5	38	0.202	4.44	5.34	100	7	1000	750	70	5	61.6	28
CP20/0031/04	2	50	0.313	6.89	8.27	55	4	1000	750	40	3	68.2	31
CP30/0069/07	2	50	0.694	15.27	18.34	100	7	750	520	70	5	156.2	71
CP30/0113/04	3	76	1.125	24.75	29.72	55	4	750	520	40	3	169.4	77

INTEGRAL PRESSURE RELIEF VALVES

The Classic+ models CP10, CP20, CP30 and CP40 can be supplied with integral pressure relief valves. These valves are of a spring loaded piston design.

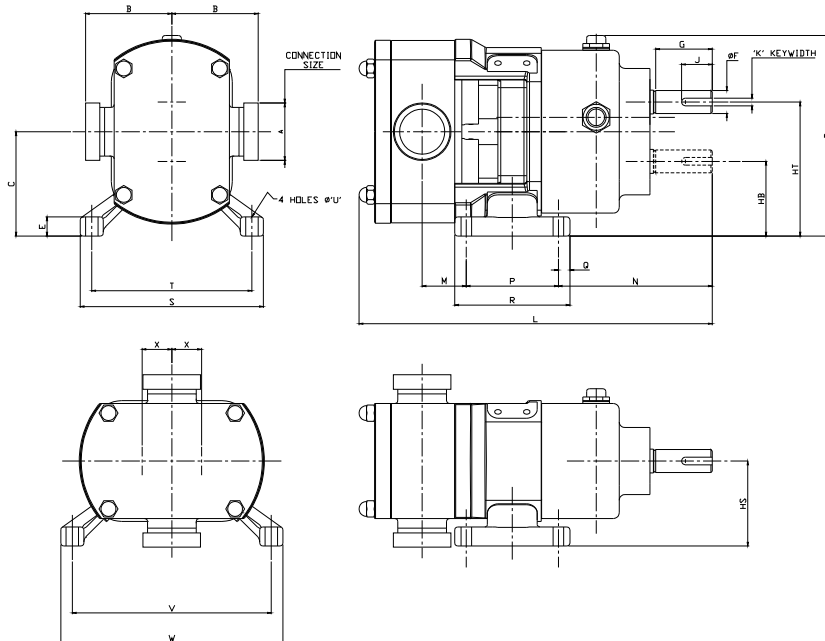
Where the pump is mounted onto a portable base plate, complete with motor and drive to be used as a mobile set, an integral pressure relief valve should be installed.

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DIMENSIONS – ALL MODELS – INCHES



Model	A	B1	B2	B3	B4	B5	C	D	E	F (mm)	G	HB	HS	HT
CP10/0005	0.984	3.5	3.5	4.06	4.06	4.06	2.9134	5.984	0.39	18 j6	1.1	1.89	2.4803	3.937
CP10/0008	1.5	3.5	4.37	4.06	4.06	4.06	2.9134	5.984	0.39	18 j6	1.1	1.89	2.4803	3.937
CP10/0011	1.5	3.5	4.37	4.06	4.06	4.06	2.9134	5.984	0.39	18 j6	1.1	1.89	2.4803	3.937
CP20/0020	1.5	3.86	4.72	4.41	4.41	4.41	4.2913	8.138	0.79	24 j6	2.32	3.071	3.5039	5.512
CP20/0031	2	3.86	4.72	4.41	4.41	4.72	4.2913	8.138	0.79	24 j6	2.32	3.071	3.5039	5.512
CP30/0069	2	4.88	5.75	5.43	5.43	5.75	5.248	10.43	0.98	38 k6	2.74	3.417	4.3858	7.079
CP30/0113	3	4.88	6.14	5.43	5.75	5.94	5.248	10.43	0.98	38 k6	2.74	3.417	4.3858	7.079
CP40/0180 Horizontal	3	6.26	7.52	6.81	7.13	7.32	6.9685	13.7	0.98	48 k6	4.33	4.488	6.8898	9.449
CP40/0180 Vertical														
CP40/0250 Horizontal	4	6.42	8.11	6.81	7.13	7.32	6.9685	13.7	0.98	48 k6	4.33	4.488	6.8898	9.449
CP40/0250 Vertical														
CP50/0351 Horizontal	4	7.4	9.25	7.95	8.27	8.46	8.4646	16.61	1.18	60 m6	4.09	5.315	8.0709	11.61
CP50/0351 Vertical														
CP50/0525 Horizontal	6	N/A	N/A	7.17	7.17	N/A	8.4646	16.61	1.18	60 m6	4.09	5.315	8.0709	11.61
CP50/0525 Vertical														

Model	J	K (mm)	L	M	N	P	Q	R	S	T	U	V	W	X
CP10/0005	0.98	6	9.882	1.8898	4.5787	1.77	0.39	2.559	5.748	4.961	0.33	6.4	7.2087	1.02
CP10/0008	0.98	6	10.51	2.1654	4.5787	1.77	0.39	2.559	5.748	4.961	0.33	6.4	7.2087	1.02
CP10/0011	0.98	6	10.94	2.5984	4.5787	1.77	0.39	2.559	5.748	4.961	0.33	6.4	7.2087	1.02
CP20/0020	1.26	8	13.96	1.3858	6.3189	3.78	0.47	4.724	7.677	6.575	0.43	8.157	9.2598	1.22
CP20/0031	1.26	8	14.75	1.8189	6.3189	3.78	0.47	4.724	7.677	6.575	0.43	8.157	9.2598	1.22
CP30/0069	1.57	10	17.54	2.4213	7.7402	4.53	0.59	5.709	10.17	8.992	0.51	10.72	11.902	1.83
CP30/0113	1.57	10	18.93	3.2205	7.7402	4.53	0.59	5.709	10.17	8.992	0.51	10.72	11.902	1.83
CP40/0180 Horizontal	3.54	14	25.49	6.4409	10.344	4.72	0.89	6.496	8.661	7.244	0.71	-	-	2.48
CP40/0180 Vertical				5.1811	9.0846	7.24	0.71	8.661	-	-	-	8.976	10.748	
CP40/0250 Horizontal	3.54	14	26.75	7.1102	10.344	4.72	0.89	6.496	8.661	7.244	0.71	-	-	2.48
CP40/0250 Vertical				5.8504	9.0846	7.24	0.71	8.661	-	-	-	8.976	10.748	
CP50/0351 Horizontal	2.32	18	29.78	8.3858	11.232	5.91	0.98	7.874	10.24	8.661	0.79	-	-	3.15
CP50/0351 Vertical				6.6535	9.5	9.37	0.79	10.94	-	-	-	9.843	11.811	
CP50/0525 Horizontal	2.32	18	32.1	9.4488	11.232	5.91	0.98	7.874	10.24	8.661	0.79	-	-	3.15
CP50/0525 Vertical				7.7165	9.4882	9.37	0.79	10.94	-	-	-	9.843	11.811	

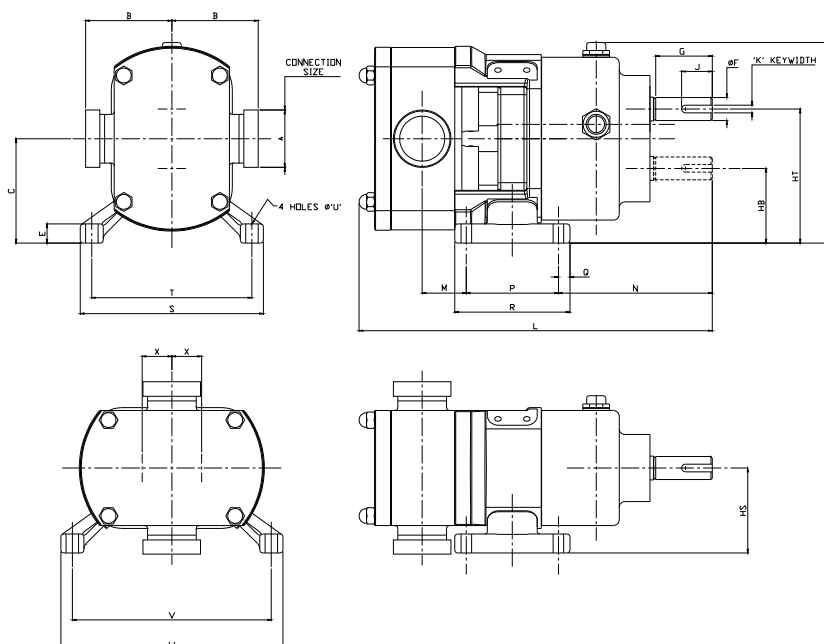
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DIMENSIONS – ALL MODELS – MILLIMETERS



Model	A	B1	B2	B3	B4	B5	C	D	E	F (mm)	G	HB	HS	HT
CP10/0005	25	89	89	103	103	103	74	152	10	18 j6	28	48	63	100
CP10/0008	40	89	111	103	103	103	74	152	10	18 j6	28	48	63	100
CP10/0011	40	89	111	103	103	103	74	152	10	18 j6	28	48	63	100
CP20/0020	40	98	120	112	112	112	109	206.7	20	24 j6	59	78	89	140
CP20/0031	50	98	120	112	112	120	109	206.7	20	24 j6	59	78	89	140
CP30/0069	50	124	146	138	138	146	133.3	264.8	25	38 k6	69.5	86.8	111.4	179.8
CP30/0113	80	124	156	138	146	151	133.3	264.8	25	38 k6	69.5	86.8	111.4	179.8
CP40/0180 Horizontal	80	159	191	173	181	186	177	348	25	48 k6	110	114	175	240
CP40/0180 Vertical														
CP40/0250 Horizontal	100	163	206	173	181	186	177	348	25	48 k6	110	114	175	240
CP40/0250 Vertical														
CP50/0351 Horizontal	100	188	235	202	210	215	215	422	30	60 m6	104	135	205	295
CP50/0351 Vertical														
CP50/0525 Horizontal	150	N/A	N/A	182	182	N/A	215	422	30	60 m6	104	135	205	295
CP50/0525 Vertical														

Model	J	K (mm)	L	M	N	P	Q	R	S	T	U	V	W	X
CP10/0005	125	6	251	48	116.3	45	10	65	146	126	8.5	162.6	183.1	26
CP10/0008	25	6	267	55	116.3	45	10	65	146	126	8.5	162.6	183.1	26
CP10/0011	25	6	278	66	116.3	45	10	65	146	126	8.5	162.6	183.1	26
CP20/0020	32	8	354.5	35.2	160.5	96	12	120	195	167	11	207.2	235.2	31
CP20/0031	32	8	374.6	46.2	160.5	96	12	120	195	167	11	207.2	235.2	31
CP30/0069	40	10	445.6	61.5	196.6	115	15	145	258.4	228.4	13	272.3	302.3	46.5
CP30/0113	40	10	480.8	81.8	196.6	115	15	145	258.4	228.4	13	272.3	302.3	46.5
CP40/0180 Horizontal	90	14	647.4	163.6	262.75	120	22.5	165	220	184	18	-	-	63
CP40/0180 Vertical				131.6	230.75	184	18	220	-	-		228	273	
CP40/0250 Horizontal	90	14	679.4	180.6	262.75	120	22.5	165	220	184	18	-	-	63
CP40/0250 Vertical				148.6	230.75	184	18	220	-	-		228	273	
CP50/0351 Horizontal	59	18	756.3	213	285.3	150	25	200	260	220	20	-	-	80
CP50/0351 Vertical				169	241.3	238	20	278	-	-		250	300	
CP50/0525 Horizontal	59	18	815.3	240	285.3	150	25	200	260	220	20	-	-	80
CP50/0525 Vertical				196	241	238	20	278	-	-		250	300	

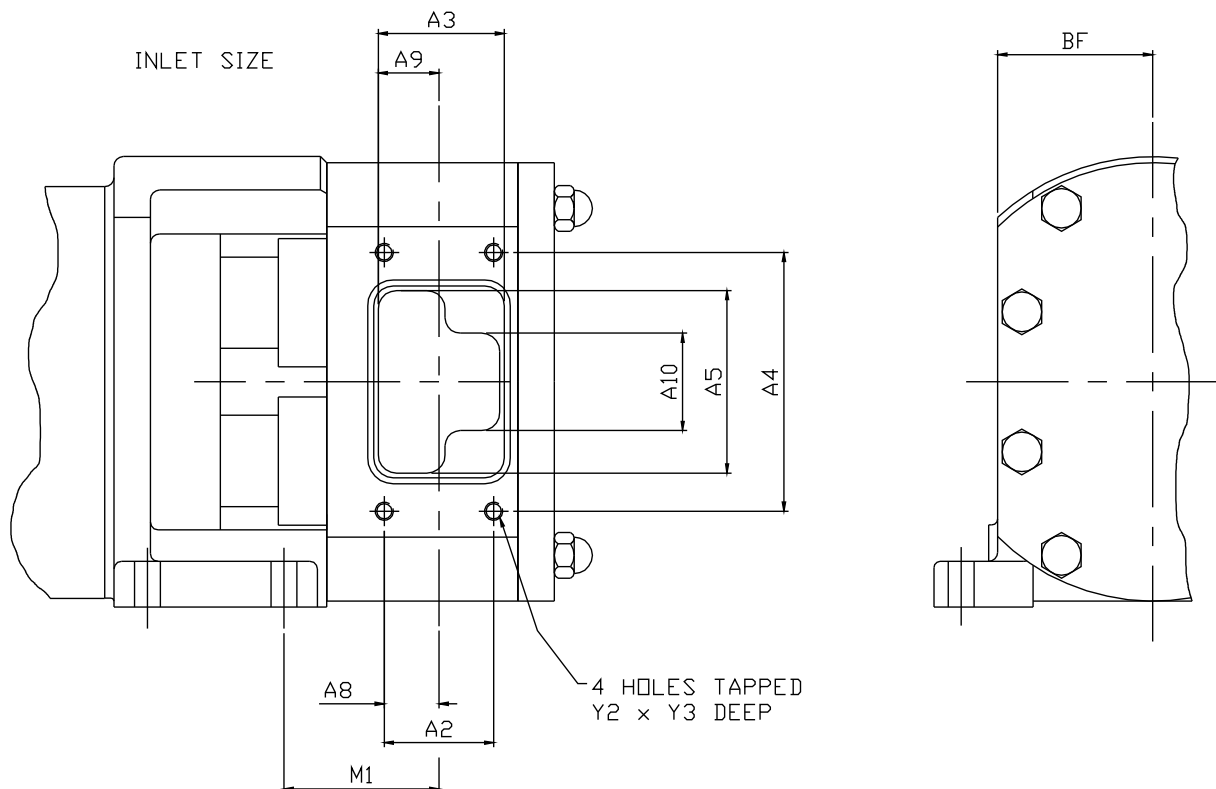
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DIMENSIONS – RECTANGULAR INLET (IN)



MODEL	A2	A3	A4	A5	A8	A9	A10	BF	M1	Y2	Y3	Inlet Area (In ²)	Equivalent Bore Diameter (In)
CP10/0005/12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CP10/0008/08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CP10/0011/05	1.42	1.57	3.35	2.36	0.71	0.79	1.26	2.01	2.50	M6	0.4	73.23	1.92
CP20/0020/12	0.98	1.10	4.13	3.15	0.49	0.55	NA	2.36	1.42	M8	0.4	86.97	2.09
CP20/0031/07	1.77	1.89	4.13	3.15	0.89	0.94	NA	2.36	1.81	M8	0.4	149.96	2.74
CP30/0069/12	1.57	1.69	5.71	4.49	0.79	0.85	NA	3.37	2.35	M10	0.5	190.83	3.09
CP30/0113/07	2.76	3.07	5.71	4.49	1.38	1.54	NA	3.37	3.05	M10	0.5	347.91	4.18
CP40/0180/12	2.44	2.76	7.48	5.98	1.22	1.38	2.76	4.76	6.54	M10	0.6	350.94	4.19
CP40/0250/07	3.70	4.02	7.48	5.98	1.85	2.01	2.76	4.76	7.17	M10	0.6	542.44	5.21
CP50/0351/12	3.15	3.39	9.84	7.87	1.57	1.69	3.86	5.71	8.39	M10	0.6	608.03	5.52
CP50/0525/08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

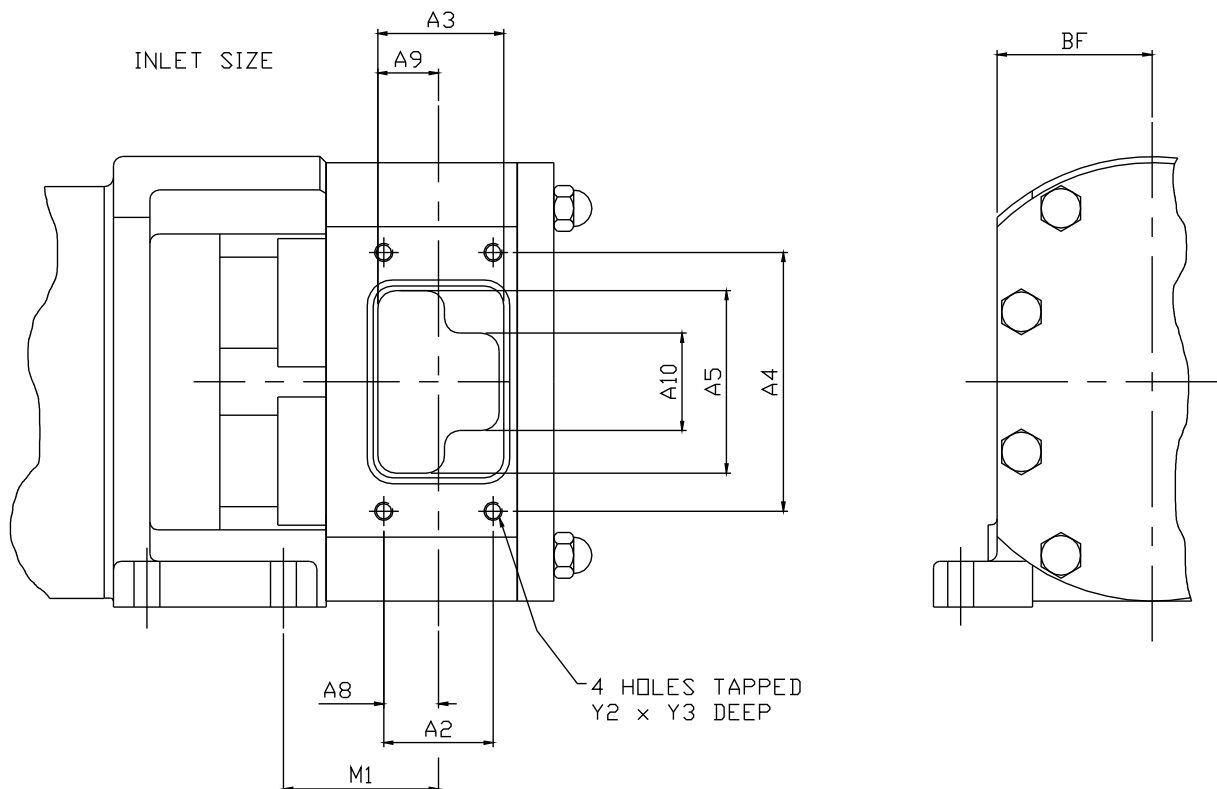
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DIMENSIONS – RECTANGULAR INLET (MM)



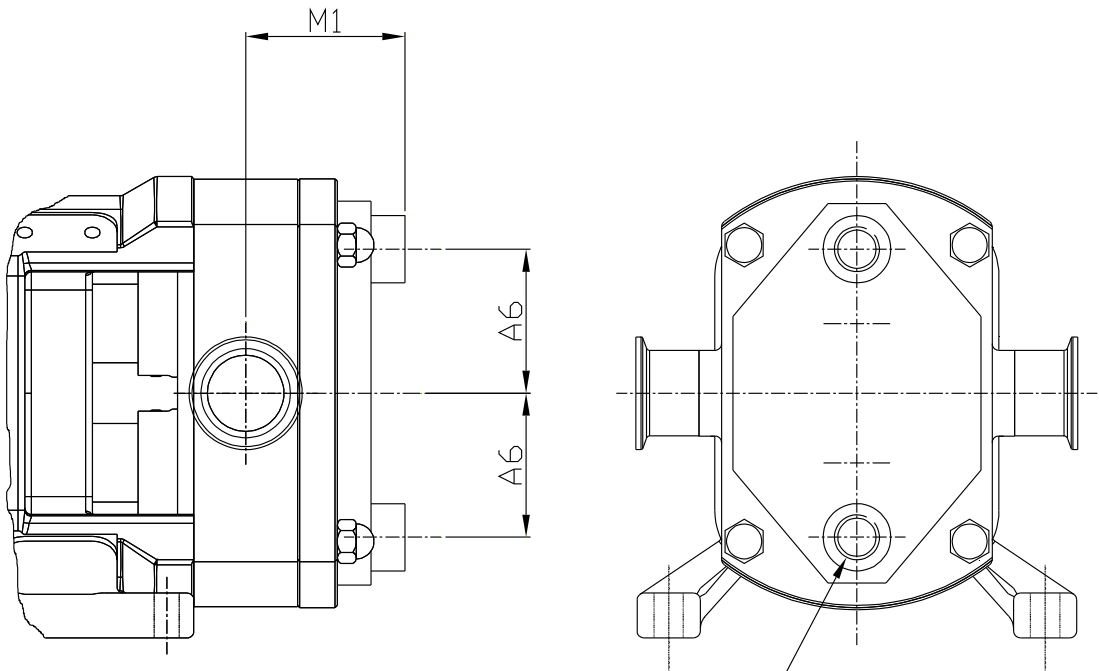
MODEL	A2	A3	A4	A5	A8	A9	A10	BF	M1	Y2	Y3	Inlet Area (mm²)	Equivalent Bore Diameter (mm)
CP10/0005/12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CP10/0008/08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CP10/0011/05	36.0	40.0	85.0	60.0	18.0	20.0	32.0	51.0	63.5	M6	10.0	1860	48.7
CP20/0020/12	25.0	28.0	105.0	80.0	12.5	14.0	N/A	60.0	36.0	M8	10.0	2209	53.0
CP20/0031/07	45.0	48.0	105.0	80.0	22.5	24.0	N/A	60.0	46.0	M8	10.0	3809	69.6
CP30/0069/12	40.0	43.0	145.0	114.0	20.0	21.5	N/A	85.5	59.6	M10	12.0	4847	78.6
CP30/0113/07	70.0	78.0	145.0	114.0	35.0	39.0	N/A	85.5	77.4	M10	12.0	8837	106.1
CP40/0180/12	62.0	70.0	190.0	152.0	31.0	35.0	70.0	121.0	166.0	M10	15.0	8914	106.5
CP40/0250/07	94.0	102.0	190.0	152.0	47.0	51.0	70.0	121.0	182.0	M10	15.0	13778	132.4
CP50/0351/12	80.0	86.0	250.0	200.0	40.0	43.0	98.0	145.0	213.0	M10	15.0	15444	140.2
CP50/0525/08	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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DIMENSIONS – FRONT COVER JACKET FOR HEATING/COOLING



Y4 BSP FEMALE CONNECTIONS

MODEL	Millimetres		Inches		
	A6	M1	A6	M1	Y4
CP10/0005/12	50	52	1.97	2.05	¼"
CP10/0008/08	50	61	1.97	2.4	¼"
CP10/0011/05	50	61	1.97	2.4	¼"
CP20/0020/12	64	71	2.52	2.8	½"
CP20/0031/07	64	81	2.52	3.19	½"
CP30/0069/12	92.5	81	3.64	3.19	½"
CP30/0113/07	92.5	96	3.64	3.78	½"
CP40/0180/12	130	108	5.12	4.25	½"
CP40/0250/07	130	123	5.12	4.84	½"
CP50/0351/12	175	115	6.89	4.53	½"
CP50/0525/08	175	138	6.89	5.43	½"

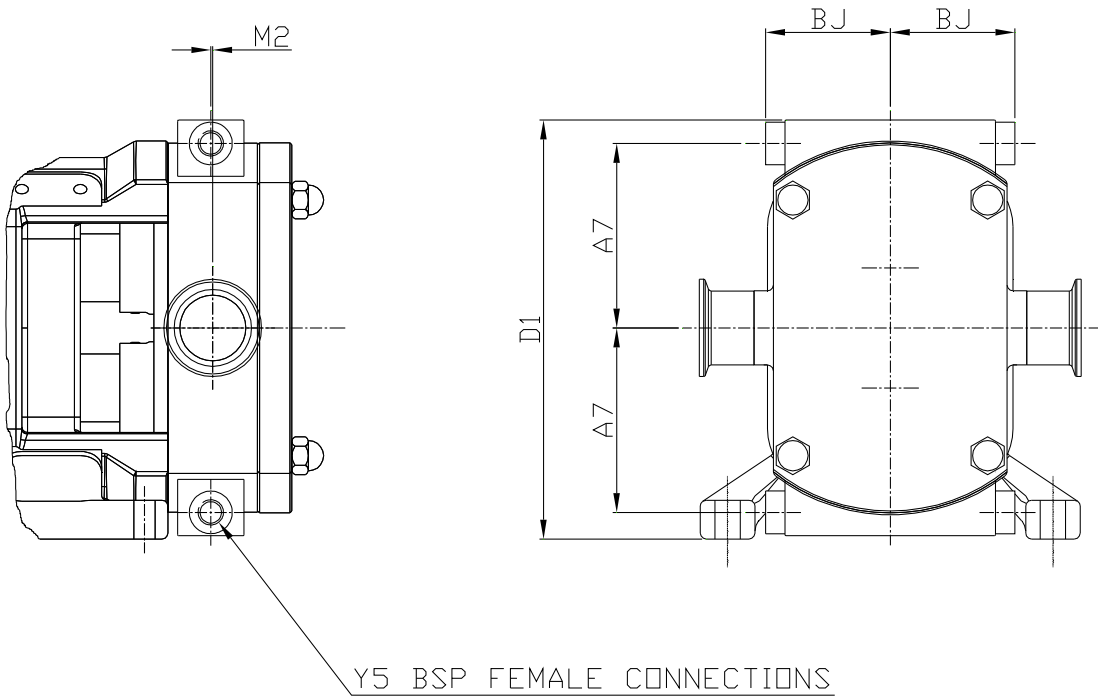
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DIMENSIONS – ROTORCASE JACKET FOR HEATING/COOLING



MODEL	Millimetres				Inches				
	A7	BJ	D1	M2	A7	BJ	D1	M2	Y5
CP10/0005/12	70	56	156	3	2.76	2.2	6.14	0.12	¼
CP10/0008/08	70	56	156	2	2.76	2.2	6.14	0.08	¼
CP10/0011/05	70	56	156	7.5	2.76	2.2	6.14	0.3	¼
CP20/0020/12	80	64	216	0	3.15	2.52	8.5	0	¼
CP20/0031/07	80	64	216	1	3.15	2.52	8.5	0.04	¼
CP30/0069/12	118	93	280	1	4.65	3.66	11.02	0.04	½
CP30/0113/07	118	93	280	3.5	4.65	3.66	11.02	0.14	½
CP40/0180/12	156	125	352	2.5	6.14	4.92	13.86	0.1	½
CP40/0250/07	156	125	352	3.5	6.14	4.92	13.86	0.14	½
CP50/0351/12	191	155	430	8	7.52	6.1	16.93	0.31	½
CP50/0525/08	191	155	430	10	7.52	6.1	16.93	0.39	½

Dimensions given are for guidance only and should **not** be used for installation purposes. Certified dimensions will be supplied on request.

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ROTARY LOBE PRODUCT LINE:
STAINLESS STEEL PUMPS
Classic+ Series™

NPSH REQUIRED

Printed performance curves are not available.

Performance curves can be electronically generated with the Viking Pump Curve Generator on vikingpump.com.

NPSHR data is available in the Viking Pump Hygienic Pump Selector Tool.

