

731+ Process Pumps

SAMengineering

Customised Pump Solutions



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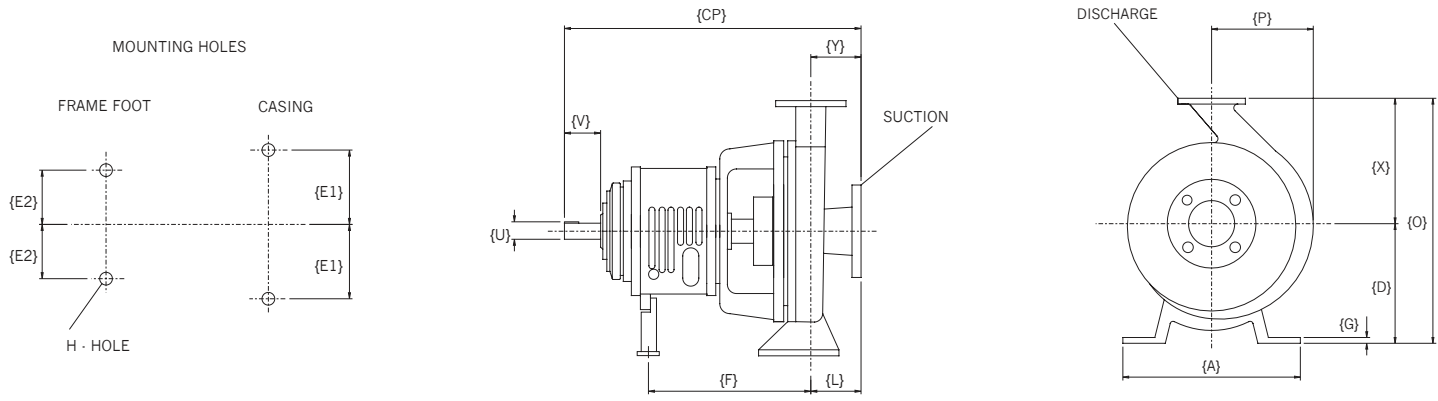
SABS
ISO 9001 : 2008

Alloys to suit all applications

Proud Manufacturers of SAMCO® Pumps



731+ Process Pumps | Technical Information



Standard Dimensions – Millimetres

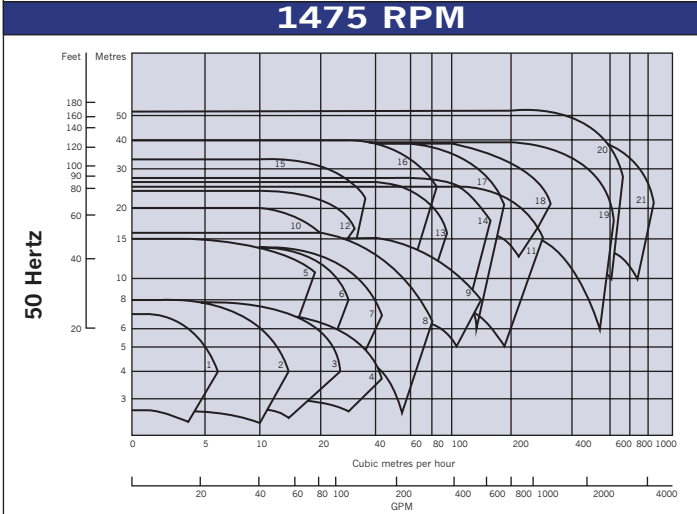
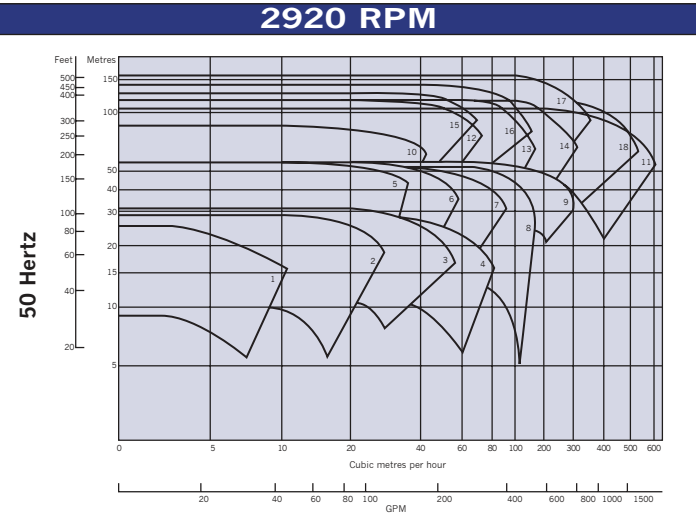
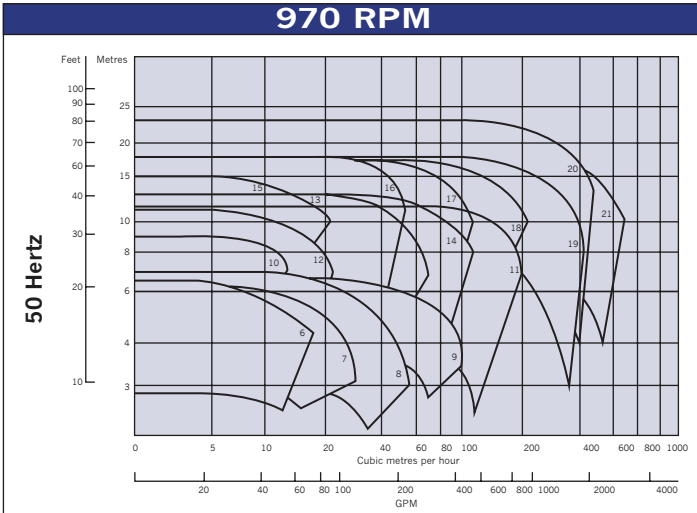
KEY NO.	PUMP SIZE AND TYPE	SUCTION	DISCHARGE	FRAME		CP	D	E1	E2		F	H	L	O	P	U			V	X	Y	A	G
				CP	731+				SHAFT DIMENSION														
									WIDTH	DEPTH						LENGTH							
1.	1x0.75x6	25	19	F15	F4G	445	135	76	0 ^①	33	210	16	130	303	103	6	3.5	38	51	170	102	191	12
2.	1.5x1x6	38	25	F15	F4G	445	133	76	0 ^①	33	210	16	102	298	114	6	3.5	38	51	165	102	191	10
3.	3x1.5x6	76	38	F15	F4G	445	133	76	0 ^①	33	210	16	102	298	123	6	3.5	38	51	165	102	191	10
4.	3x2x6	76	50	F15	F4G	445	133	76	0 ^①	33	210	16	102	298	133	6	3.5	38	51	165	102	216	10
5.	1.5x1x8	38	25	F15	F4G	445	133	76 ^②	0 ^①	33	210	16	102	298	129	6	3.5	38	51	165	102	216	10
6.	3x1.5x8.5	76	38	F35	F4H	597	210	124	92	92	338	16	102	426	154	8	4	45	67	216	102	286	13
7.	3x2x8.5	76	50	F35	F4H	597	210	124	92	92	338	16	102	451	175	8	4	45	67	241	102	286	13
8.	4x3x8.5	102	76	F35	F4H	597	210	124	92	92	338	16	102	489	182	8	4	45	67	279	102	286	13
9.	6x4x8.5	152	102	F35	F4H	597	210	124	92	92	338	16	102	489	216	8	4	45	67	279	102	286	13
10.	2x1x10	50	25	F35	F4H	597	210	124	92	92	338	16	102	426	170	8	4	45	67	216	102	286	13
11.	6x4x10	152	102	F35	F4H	597	254	124	92	92	338	16	102	597	229	8	4	45	67	343	102	286	13
12.	3x1.5x11	76	38	F35	F4H	597	254	124	92	92	338	16	102	521	192	8	4	45	67	267	102	286	13
13.	3x2x11	76	50	F35	F4H	597	254	124	92	92	338	16	102	546	206	8	4	45	67	292	102	286	13
14.	4x3x11	102	76	F35	F4H	597	254	124	92	92	338	16	102	572	217	8	4	45	67	318	102	286	13
15.	3x1.5x13	76	38	F35	F4H	597	254	124	92	92	338	16	102	521	225	8	4	45	67	267	102	286	13
16.	3x2x13	76	50	F35	F4H	597	254	124	92	92	338	16	102	546	225	8	4	45	67	292	102	286	13
17.	4x3x13	102	76	F35	F4H	597	254	124	92	92	338	16	102	572	248	8	4	45	67	318	102	286	13
18.	6x4x13	152	102	F35	F4H	597	254	124	92	92	338	18	102	597	256	8	4	45	67	343	102	286	13
19.	8x6x13	203	152	F45	F4J	860	368	203	152	152	520	25	152	774	232	18	11	102	156	406	152	451	15
20.	8x6x15	203	152	F45	F4J	860	368	203	152	152	520	25	152	825	257	18	11	102	156	457	152	451	19
21.	10x8x15	254	203	F45	F4J	860	368	203	152	152	520	25	152	851	398	18	11	102	156	483	152	451	19

① Frame foot has only one mounting hole on pump centre line. ②CP 30.200-92mm

Process Pump Construction Data

KEY NO.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
CSO / 731+ CP	1x0.75x6 20-150	1.5x1x6 30-150	3x1.5x6 40-150	3x2x6 50-150	1.5x1x8 30-200	3x1.5x8.5 40-216	3x2x8.5 50-216	4x3x8.5 80-216	6x4x8.5 100-216	2x1x10 30-250	6x4x10 100-250
STUFFING BOX DIM.											
Bore	50mm	50mm	50mm	50mm	50mm	70mm	70mm	70mm	70mm	70mm	70mm
Depth	60mm	60mm	60mm	60mm	60mm	70mm	70mm	70mm	70mm	70mm	70mm
Seal Cage Width	13mm	13mm	13mm	13mm	13mm	13mm	13mm	13mm	13mm	13mm	13mm
Packing – No./Size	5/8mm	5/8mm	5/8mm	5/8mm	5/8mm	5/8mm	5/10mm	5/10mm	5/10mm	5/10mm	5/10mm
Sleeve O.D.	35mm	35mm	35mm	35mm	35mm	50mm	50mm	50mm	50mm	50mm	50mm
Mech. Seal Size	35mm	35mm	35mm	35mm	35mm	50mm	50mm	50mm	50mm	50mm	50mm
IMPELLER											
No. Vanes	5	5	5	5	5	6	6	6	6	5	5
Inlet Area	16.77cm ²	17.42cm ²	30.32cm ²	47.15cm ²	22.90cm ²	22.58cm ²	43.22cm ²	70.95cm ²	125.10cm ²	32.25 cm ²	34.31 cm ²
Max. Diameter	152mm	152mm	152mm	152mm	203mm	216mm	216mm	216mm	252mm	252mm	252mm
Min. Diameter	90mm	89mm	102mm	102mm	102mm	140mm	140mm	140mm	152mm	152mm	178mm
Max. Sphere Size	2mm	8mm	10mm	12mm	8mm	9mm	9mm	16mm	8mm	8mm	23mm
SHAFT											
Under Sleeve Dia.	28.6mm	28.6mm	28.6mm	28.6mm	28.6mm	44.5mm	28mm				
At Coupling Dia.	22mm	22mm	22mm	22mm	22mm						
KEY NO.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	
CSO / 731+ CP	3x1.5x11 40-280	3x2x11 50-280	4x3x11 80-280	3x1.5x13 40-330	3x2x13 50-330	4x3x13 80-330	6x4x13 100-330	8x6x13 150-330	8x6x15 150-330	10x8x15 200-330	
STUFFING BOX DIM.											
Bore	70mm	70mm	70mm	70mm	70mm	70mm	70mm	86mm	86mm	86mm	
Depth	70mm	70mm	70mm	70mm	70mm	70mm	70mm	78mm	78mm	78mm	
Seal Cage Width	13mm	13mm	13mm	13mm	13mm	13mm	13mm	16mm	16mm	16mm	
Packing – No./Size	5/10mm	5/10mm	5/10mm	5/10mm	5/10mm	5/10mm	5/10mm	5/11mm	5/11mm	5/11mm	
Sleeve O.D.	50mm	50mm	50mm	50mm	50mm	50mm	50mm	63.5mm	63.5mm	63.5mm	
Mech. Seal Size	50mm	50mm	50mm	50mm	50mm	50mm	50mm	63.5mm	63.5mm	63.5mm	
IMPELLER											
No. Vanes	6	6	6	4	4	6	5	6	4	4	
Inlet Area	27.09cm ²	54.18cm ²	94.17cm ²	38.06cm ²	65.79cm ²	81.27cm ²	183.18cm ²	325.08cm ²	412.80cm ²	567.60 cm ²	
Max. Diameter	279mm	279mm	279mm	330mm	330mm	330mm	330mm	381mm	381mm	381mm	
Min. Diameter	165mm	165mm	178mm	254mm	254mm	178mm	203mm	241mm	254mm	305mm	
Max. Sphere Size	10mm	15mm	22mm	6mm	14mm	17mm	25mm	30mm	44mm	51mm	
SHAFT											
Under Sleeve Dia.	44.5mm	44.5mm	44.5mm	44.5mm	44.5mm	44.5mm	44.5mm	57.2mm	57.2mm	57.2mm	
At Coupling Dia.	28mm	28mm	28mm	28mm	28mm	28mm	28mm	60mm	60mm	60mm	

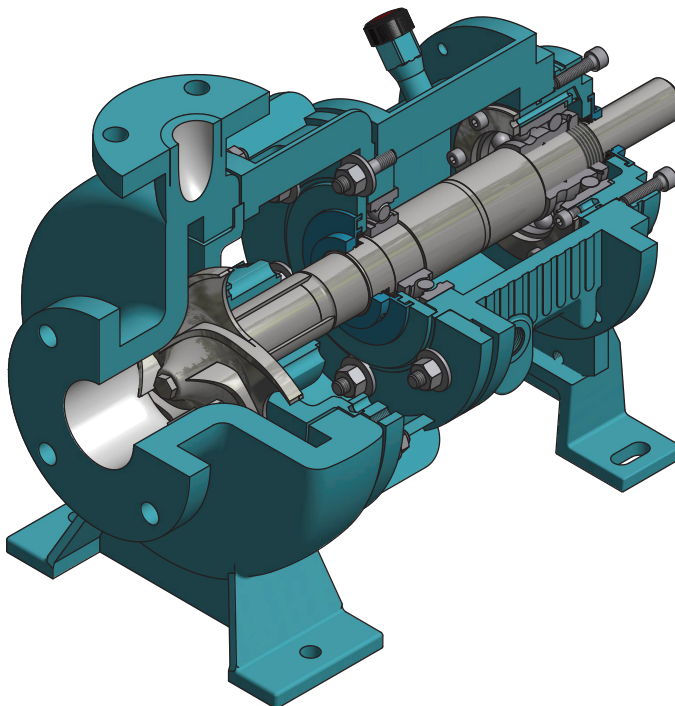
731+ Process Pumps | Range Charts



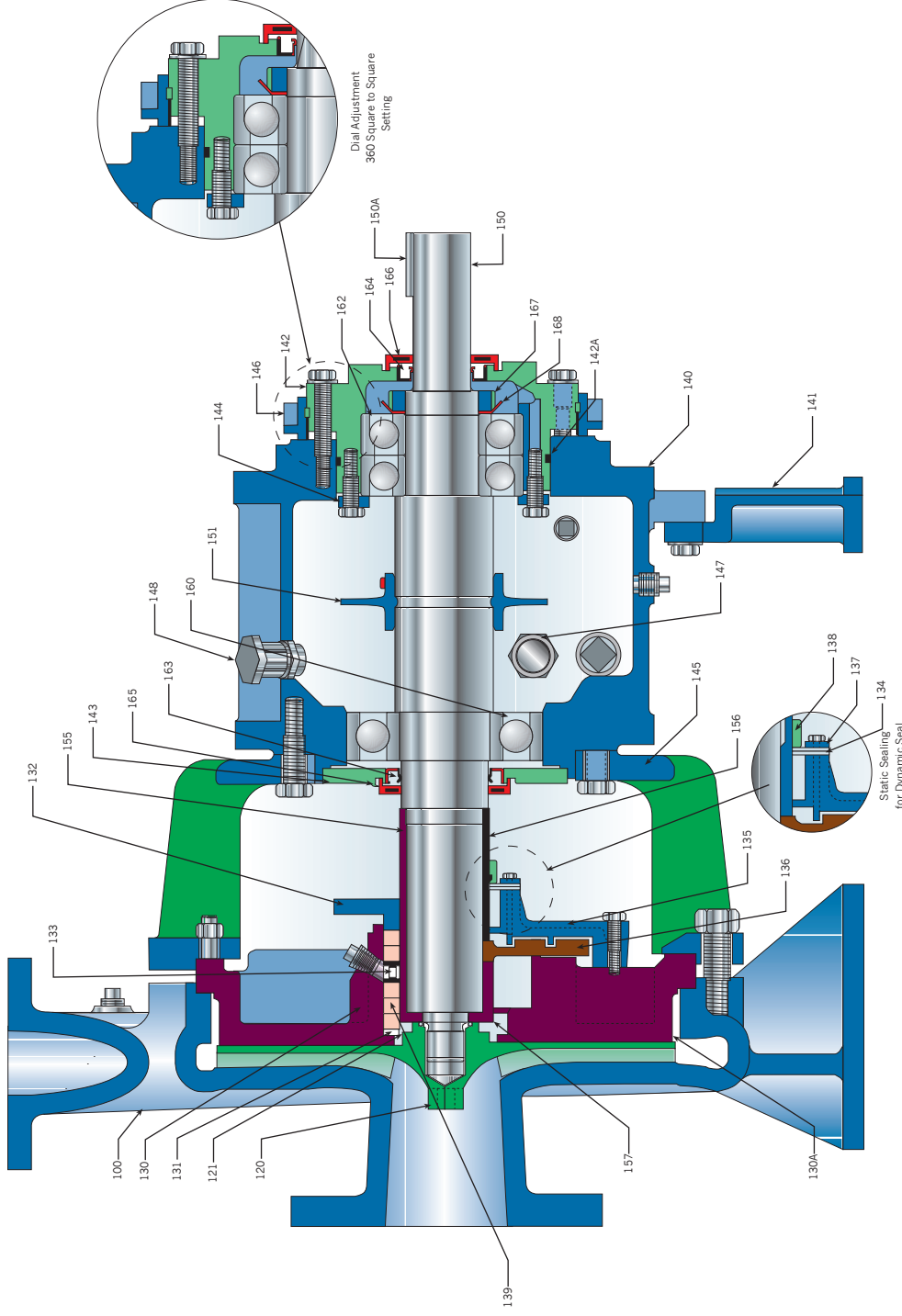
KEY NO.	970 RPM	1475 RPM	2920 RPM
1.	-	1x0.75x6	1x0.75x6
2.	-	1.5x1x6	1.5x1x6
3.	-	3x1.5x6	3x1.5x6
4.	-	3x2x6	3x2x6
5.	-	1.5x1x8	1.5x1x8
6.	3x1.5x8.5	3x1.5x8.5	3x1.5x8.5
7.	3x2x8.5	3x2x8.5	3x2x8.5
8.	4x3x8.5	4x3x8.5	4x3x8.5
9.	6x4x8.5	6x4x8.5	6x4x8.5
10.	2x1x10	2x1x10	2x1x10
11.	6x4x10	6x4x10	6x4x10
12.	3x1.5x11	3x1.5x11	3x1.5x11
13.	3x2x11	3x2x11	3x2x11
14.	4x3x11	4x3x11	4x3x11
15.	3x1.5x13	3x1.5x13	3x1.5x13
16.	3x2x13	3x2x13	3x2x13
17.	4x3x13	4x3x13	-
18.	6x4x13	6x4x13	-
19.	8x6x13	8x6x13	-
20.	8x6x15	8x6x15	-
21.	10x8x15	10x8x15	-

Data is based on approximate characteristics utilising cool clear water.

731+ Series



Chemical Process Pump 731 PLUS Series



PLEASE NOTE:
When ordering spare parts, indicate model size, material of construction and / or pump serial number.

Catalog Code	Part Name
100	Casing
120	Impeller
121	Impeller O-Ring
130	Stuffing Box
130A	Dynamic Seal Cover
131	Packing Base Ring
132	Gland
133	Lantern Ring
134	Static Seal
135	Dynamic Seal Housing
136	Expeller
137	Static Seal Retaining Ring
138	Static Seal Collar
139	Packing Ring
140	Frame
141	Frame Foot
142	Bearing Housing
142A	Bearing Housing O Ring
143	Bearing Cap
144	Retaining Ring
145	Frame Adapter
146	Adjusting Nut
147	Sight Glass
148	Breather
150	Shaft
150A	Keyway
151	Slinger
155	Shaft Sleeve
156	Spacer Sleeve
157	Impeller Seal Sleeve
160	Pump End Bearing
162	Drive End Bearing
163	Bearing Oil Seal
164	Bearing Oil Seal
165	Deflector
166	Deflector
167	Bearing Locknut
168	Bearing Clockwasher

731+ Process Pumps

The pump action in SAM Engineering's process pumps is performed by combining shear forces with the normal lift forces used in conventional centrifugal pumps.

FEATURES	MATERIALS	OTHER OPTIONS
<ul style="list-style-type: none"> Exceeds ANSI B73.1 standards Reduces maintenance costs Extends pump life Improves productivity Reduces operating costs 	<ul style="list-style-type: none"> Cast iron Ductile iron High chrome Stainless Duplex cast Other exotics 	<ul style="list-style-type: none"> "CP" Frames "731+" Frames Wear plates for abrasive duties Flanges: ASA or BS 4504