



# JANUS PUMPS

## POWER UNIT SELECTION

### **Design**

The Janus axial piston pumps are totally oil free, clean and completely safe to use in all locations including Atex environments. Advanced material technology ensures high velocity and heavily loaded surfaces can operate effectively with water as their only coolant/lubricant. The elimination of lubricating oil within the mechanics of the pumps removes the requirement for piston sealing which in turn reduces the need of servicing seals in the high cyclic loaded components.

The 9 piston design combined with direct 4 pole motor operation produces a very smooth output flow and removes the requirement for output accumulation or pulsation damping. Pressure ripple-free performance against a fixed orifice make the product ideal for fire fighting applications. System component fatigue is rare due to the smooth low noise performance of the advanced technology. Light weight and compact design reduces powerpack size and the all 316L stainless steel construction ensures exceptional corrosion resistance and unsurpassed life expectancy even in harsh environments

### **Noise Level**

81dBa on 100l pump @ 130 bar.

### **Motor Pump Assembly's**

The units are available as a motor/ pump assembly or as a complete power pack including electrical control system. See below for further information on potential combinations including pump, motor, bellhousing and coupling as a complete assembly.

A full range of safety relief and valves are also available, please ask for data sheet for further information.

### **Temperature**

The units will generate full performance from 2°C to 50°C. For temperatures below freezing, an environmentally friendly antifreeze is available; ask for the Monopropylene Glycol datasheet. Operation above 50°C is possible however, the volumetric efficiency of the unit will be affected. Consult TWHC and specify the maximum operating temperature.

### **Filters**

All incoming water to the pumps must be pre-filtered to a nominal rating of 10µm (25µm absolute) with a filter element rating of  $\beta_{10} = 75$  or better. Return line filtration is advisable on closed loop systems. High pressure filtration may also be considered but as these are manufactured in stainless steel, we consider this an expensive option.

### **Fluid**

Drinking water quality conforming to the EEC-directive 98/83/EC should be used as standard. Consult TWHC if you are unsure of the water quality. The standard product will operate happily on technical water i.e. distilled, RO water or demineralised. Changes may need to be made to the seal material or construction depending on the operating environment. The pumps also operate on non-flammable fluids such as Glycol 95/5 mixtures; internal clearances must be adjusted when functioning on such fluids. It is imperative the exact operating fluid is specified on all enquiries and orders. The standard construction will operate on sea water however, due to the increased corrosion potential of the fluid, a more noble material construction may be required for long term operation.

### **ATEX**

This unit is used globally in FM approved systems and is ATEX approved to comply with regulations of Directive 94/9/EC (ATEX) for equipment or protection systems

intended for use in potentially explosive atmospheres.

Product group, category, zones:

II 2GD ck T6 T85°C +1°C≤TA≤+40°C

# JANUS PUMPS POWER UNIT SELECTION

## PUMP MOTOR SELECTION

PUMP	(CC/REV)	PRESSURE - BARG								
		10	20	40	60	80	100	120	140	160
P1	0.8 (1.2 l/min @ 1500 rpm) PC100-0.8W	1.1 l/min 0.12 KW	1.0 l/min 0.12 KW	0.9 l/min 0.12 KW	0.8 l/min 0.18 KW	0.7 l/min 0.18 KW	0.6 l/min 0.25 KW			
		P1-008-M01			P1-008-M02		P1-008-M03			
P1	1.2 (1.8 l/min @ 1500 rpm) PC100-1.2W	1.7 l/min 0.12 KW	1.6 l/min 0.12 KW	1.5 l/min 0.18 KW	1.4 l/min 0.25 KW	1.2 l/min 0.37 KW	1.1 l/min 0.37 KW			
		P1-012-M01		P1-012-M02	P1-012-M03	P1-012-M04				
P3	3.0 (4.95 l/min @ 1500 rpm) PC160-3.0W	4.5 l/min 0.25 KW	4.4 l/min 0.25 KW	4.2 l/min 0.37 KW	4.1 l/min 0.55 KW	4.0 l/min 0.75 KW	3.9 l/min 1.1 KW	3.8 l/min 1.1 KW	3.7 l/min 1.5 KW	3.5 l/min 1.5 KW
		P3-030-M03		P3-030-M04	P3-030-M05	P3-030-M06	P3-030-M07		P3-030-M08	
P6	4.6 (6.9 l/min @ 1500 rpm) PC160-4.6W	6.7 l/min 0.37 KW	6.6 l/min 0.37 KW	6.4 l/min 0.55 KW	6.1 l/min 1.1 KW	5.9 l/min 1.1 KW	5.7 l/min 1.5 KW	5.5 l/min 2.2 KW	5.2 l/min 2.2 KW	5.0 l/min 2.2 KW
		P6-046-M04		P6-046-M05	P6-046-M07		P6-046-M08	P6-046-M09		
P6	6.0 (9.0 l/min @ 1500 rpm) PC160-6.0W	8.8 l/min 0.37 KW	8.6 l/min 0.55 KW	8.2 l/min 1.1 KW	7.9 l/min 1.1 KW	7.5 l/min 1.5 KW	7.2 l/min 2.2 KW	6.8 l/min 2.2 KW	6.5 l/min 3.0 KW	6.1 l/min 3.0 KW
		P6-060-M04	P6-060-M05	P6-060-M07		P6-060-M08	P6-060-M09		P6-060-M10	
P15	12.0 (18.75 l/min @ 1500 rpm) PC160-12W	18.4 l/min 0.55 KW 80 Frame	18.2 l/min 0.75 KW 80 Frame	17.6 l/min 1.5 KW 90L Frame	17.1 l/min 2.2 KW 100L Frame	16.5 l/min 3.0 KW 100L Frame	16.0 l/min 4.0 KW 112M Frame	15.5 l/min 5.5 KW 132S Frame	14.9 l/min 5.5 KW 132S Frame	14.4 l/min 7.5 KW 132M Frame
		P15-012-M05	P15-012-M06	P15-012-M08	P15-012-M09	P15-012-M10	P15-012-M11	P15-012-M12		P15-012-M13
P15	15.0 (22.5 l/min @ 1500 rpm) PC160-15W	22.1 l/min 0.55 KW 80 Frame	21.8 l/min 1.55 KW 90L Frame	21.1 l/min 2.2 KW 100L Frame	20.5 l/min 3.0 KW 100L Frame	19.8 l/min 4.0 KW 112M Frame	19.2 l/min 5.5 KW 132S Frame	18.5 l/min 5.5 KW 132S Frame	17.8 l/min 7.5 KW 132M Frame	17.2 l/min 7.5 KW 132M Frame
		P15-015-M05	P15-015-M08	P15-015-M09	P15-015-M10	P15-015-M11	P15-015-M12		P15-015-M13	
P15	19.0 (22.5 l/min @ 1500 rpm) PC160-19W	28.0 l/min 0.55 KW 80 Frame	27.6 l/min 1.5 KW 90L Frame	26.8 l/min 2.2 KW 100L Frame	26.0 l/min 4.0 KW 112M Frame	25.1 l/min 5.5 KW 132S Frame	24.3 l/min 5.5 KW 132S Frame	23.5 l/min 7.5 KW 132M Frame	22.7 l/min 7.5 KW 132M Frame	21.8 l/min 11.0 KW 160M Frame
		P15-019-M05	P15-019-M08	P15-019-M09	P15-019-M11	P15-019-M12		P15-019-M13		P15-019-M14

Select a combination to satisfy, pressure and flow requirement. Electric motors specifying 'M', E.g. P6-060-M09 denotes 3 Phase, 400V. To specify single phase, 240V up to 2.2 KW only use 'E' E.g. P6-060-E09. Note: All electric motors conform to IE3 requirements.

# JANUS PUMPS POWER UNIT SELECTION

## PUMP MOTOR SELECTION

PUMP	(CC/REV)	PRESSURE - BARG								
		10	20	40	60	80	100	120	140	160
P30	<b>23.0</b> (34.5 l/min @ 1500 rpm) <b>PC160-23W</b>	34 l/min	33.7 l/min	33 l/min	32.3 l/min	31.6 l/min	30.9 l/min	30.2 l/min	29.5 l/min	28.8 l/min
		1.5 KW	2.2 KW	4.0 KW	5.5 KW	5.5 KW	7.5 KW	11 KW	11 KW	11 KW
		90L Frame	100L Frame	112M Frame	132S Frame	132S Frame	132M Frame	160M Frame	160M Frame	160M Frame
		<b>P30-023-M08</b>	<b>P30-023-M09</b>	<b>P30-023-M11</b>	<b>P30-023-M12</b>	<b>P30-023-M12</b>	<b>P30-023-M13</b>	<b>P30-023-M14</b>		
	<b>30.0</b> (45 l/min @ 1500 rpm) <b>PC160-30W</b>	44.5 l/min	44.2 l/min	43.5 l/min	42.8 l/min	42.1 l/min	41.4 l/min	40.7 l/min	40 l/min	39.3 l/min
		1.5 KW	2.2 KW	4.0 KW	5.5 KW	7.5 KW	11 KW	11 KW	15 KW	15 KW
		90L Frame	100L Frame	112M Frame	132S Frame	132M Frame	160M Frame	160M Frame	160L Frame	160L Frame
		<b>P30-030-M08</b>	<b>P30-030-M09</b>	<b>P30-030-M11</b>	<b>P30-030-M12</b>	<b>P30-030-M13</b>	<b>P30-030-M14</b>		<b>P30-030-M15</b>	
	<b>35.0</b> (52.5 l/min @ 1500 rpm) <b>PC160-35W</b>	52 l/min	51.7 l/min	51 l/min	50.3 l/min	49.6 l/min	48.9 l/min	48.2 l/min	47.5 l/min	46.8 l/min
1.5 KW		4.0 KW	5.5 KW	7.5 KW	11 KW	11 KW	15 KW	15 KW	18.5 KW	
90L Frame		112M Frame	132S Frame	132M Frame	160M Frame	160M Frame	160L Frame	160L Frame	180M	
	<b>P30-035-M08</b>	<b>P30-035-M11</b>	<b>P30-035-M12</b>	<b>P30-035-M13</b>	<b>P30-035-M14</b>		<b>P30-035-M15</b>		<b>P30-035-M16</b>	
P60	<b>51.0</b> (76.5 l/min @ 1500 rpm) <b>PC160-51W</b>	76 l/min	75.5 l/min	75 l/min	74.5 l/min	73.5 l/min	72.5 l/min	71.5 l/min	70.5 l/min	69.5 l/min
		2.2 KW	4.0 KW	7.5 KW	11 KW	15 KW	15 KW	18.5 KW	22 KW	30 KW
		100L Frame	112M Frame	132M Frame	160M Frame	160L Frame	160L Frame	180M Frame	180L Frame	200L Frame
		<b>P60-051-M09</b>	<b>P60-051-M11</b>	<b>P60-051-M13</b>	<b>P60-051-M14</b>	<b>P60-051-M15</b>		<b>P60-051-M16</b>	<b>P60-051-M17</b>	<b>P60-051-M18</b>
	<b>63.0</b> (94.5 l/min @ 1500 rpm) <b>PC160-63W</b>	94 l/min	93.5 l/min	93 l/min	92.5 l/min	91.5 l/min	90.5 l/min	89.5 l/min	88.5 l/min	87.5 l/min
		4.0 KW	5.5 KW	11 KW	15 KW	15 KW	18.5 KW	22 KW	30 KW	30 KW
		112M Frame	132S Frame	160M Frame	160L Frame	160L Frame	180M Frame	180L Frame	200L Frame	200L Frame
		<b>P60-063-M11</b>	<b>P60-063-M12</b>	<b>P60-063-M14</b>	<b>P60-063-M15</b>	<b>P60-063-M15</b>	<b>P60-063-M16</b>	<b>P60-063-M17</b>	<b>P60-063-M18</b>	<b>P60-063-M18</b>
	<b>70.0</b> (105 l/min @ 1500 rpm) <b>PC160-70W</b>	104.5 l/min	104 l/min	103.5 l/min	103 l/min	102 l/min	101 l/min	100 l/min	99 l/min	98 l/min
4.0 KW		5.5 KW	11 KW	15 KW	18.5 KW	22 KW	30 KW	30 KW	37 KW	
112M Frame		132S Frame	160M Frame	160L Frame	180M Frame	180L Frame	200L Frame	200L Frame	225S Frame	
	<b>P60-060-M11</b>	<b>P60-070-M12</b>	<b>P60-070-M14</b>	<b>P60-070-M15</b>	<b>P60-070-M16</b>	<b>P60-070-M17</b>	<b>P60-070-M18</b>		<b>P60-060-M19</b>	

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## PUMP MOTOR SELECTION

PUMP	(CC/REV)	PRESSURE - BARG								
		10	20	40	60	80	100	120	140	160
P180	<b>135</b> (202.5 l/min @ 1500 rpm) <b>PC160-135W</b>	201 l/min	200.5 l/min	199.5 l/min	198.5 l/min	196.5 l/min	194.5 l/min	192.5 l/min	189.5 l/min	186.5 l/min
		7.5 KW	11 KW	18.5 KW	30 KW	30 KW	45 KW	55 KW	55 KW	75 KW
		132M Frame	160M Frame	180M Frame	200L Frame	200L Frame	225M Frame	250M Frame	250M Frame	280S Frame
		<b>P180-135-M13</b>	<b>P180-135-M14</b>	<b>P180-135-M16</b>	<b>P180-135-M18</b>		<b>P180-135-M20</b>	<b>P180-135-M21</b>		<b>P180-135-M22</b>
	<b>180</b> (270 l/min @ 1500 rpm) <b>PC160-180W</b>	269 l/min	268 l/min	267 l/min	266 l/min	264 l/min	262 l/min	260 l/min	257 l/min	254 l/min
		7.5 KW	15 KW	30 KW	37 KW	45 KW	55 KW	75 KW	75 KW	90 KW
		132M Frame	160L Frame	200L Frame	225S Frame	225M Frame	250M Frame	280S Frame	280S Frame	280M Frame
		<b>P180-180-M13</b>	<b>P180-180-M15</b>	<b>P180-180-M18</b>	<b>P180-180-M19</b>	<b>P180-180-M20</b>	<b>P180-180-M21</b>	<b>P180-180-M22</b>		<b>P180-180-M23</b>
	<b>225</b> (337.5 l/min @ 1500 rpm) <b>PC160-225W</b>	336.5 l/min	336 l/min	335.5 l/min	333.5 l/min	331.5 l/min	329.5 l/min	327.5 l/min	324.5 l/min	321.5 l/min
11 KW		18.5 KW	30 KW	45 KW	55 KW	75 KW	75 KW	90 KW	110 KW	
160M Frame		180M Frame	200L Frame	225M Frame	250M Frame	280S Frame	280S Frame	280M Frame	315M Frame	
	<b>P180-225-M14</b>	<b>P180-225-M16</b>	<b>P180-225-M18</b>	<b>P180-225-M20</b>	<b>P180-225-M21</b>	<b>P180-225-M22</b>		<b>P180-225-M23</b>	<b>P180-225-M24</b>	

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