

# JANUS POWER PACKS

PICK A PACK

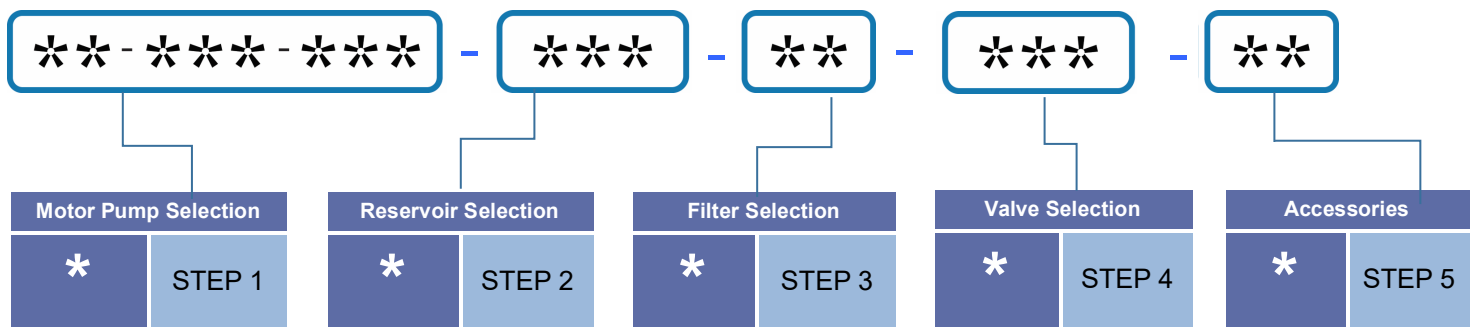
## Design

A system for producing bespoke power units from a range of standard components has been developed.

By using the building blocks from the ordering code below, this will give the designer maximum flexibility, produced in a very short lead time with minimum cost and stock holding.

## ASSEMBLY ORDERING CODE

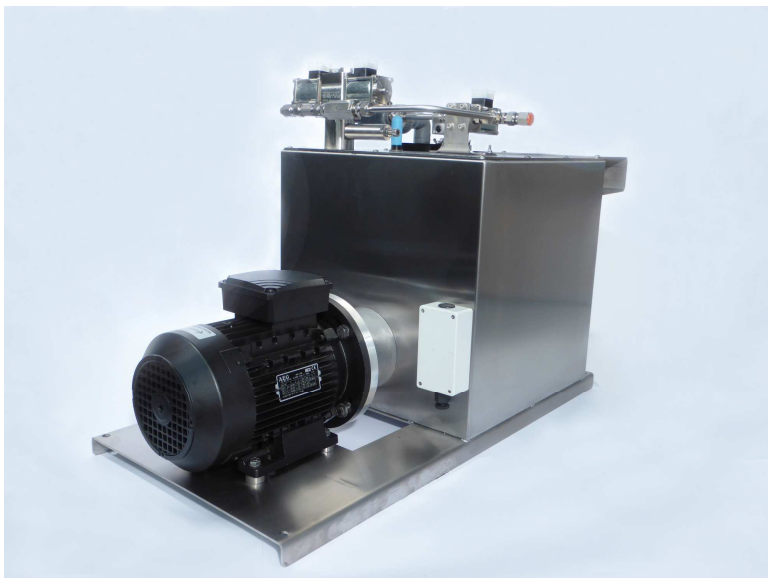
Follow these steps to build your bespoke system



## Example

- (STEP 1) You require a pump assembly to produce 90 bar pressure with a flow rate of 6l/min. (P6-060-M09)
- (STEP 2) The usable volume of the system is 55 litres. (S55)
- (STEP 3) The filter arrangement requires protection switch, temperature switch, low water level cut out & fill valve. (4B)
- (STEP 4) Adding a relief valve and your Janus control valves. (C05)  
*(Note: Janus control valves must be ordered separately, please refer to the Janus control valves ordering codes).*
- (STEP 5) (Accessories) Hand Pump (HP)

Ordering Code:- **P6-060-M09-S55-4B-C05-HP**



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## STEP 1: 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. P30, P60 & P180 power units are available on request, please consult TWHC for details.

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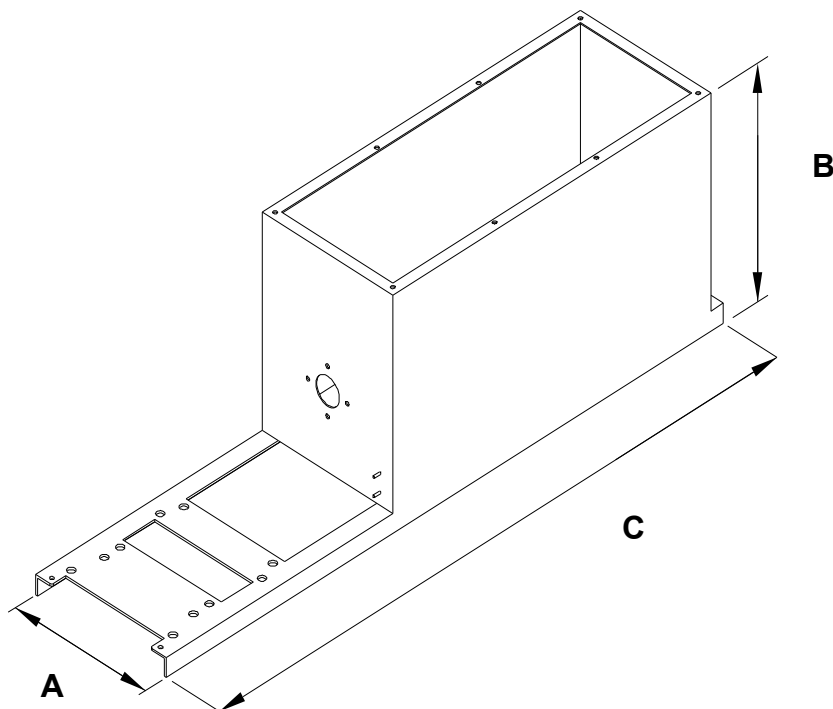
## Step 2 – Reservoir

Reservoirs are available in 316 stainless steel (prefix S) or plastic (Prefix P) as a special. Once you have selected the correct capacity, add the code to your motor pump code. Please note: the motor mounting holes are specific for electric motor frame size, the pump motor assembly code is required for selection if ordered as a kit.

Tanks confirm to WRAS 1999 UK water regulations. Overflow fitted as standard.

**Example:-** 55L stainless reservoir to the motor pump assembly selected **P6-060-M09-S55**

Pump	Code	Useable Volume L	A mm	B mm	C mm
P1	S05	5	120	220	300
P3	S25	25	220	300	870
P6	S25	25	220	300	870
	S55	55	350	550	1050
P15	S55	55	350	550	1050
	S90	90	350	550	1350



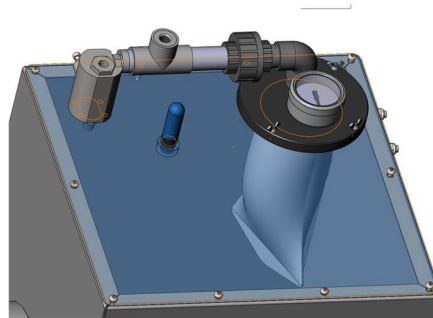
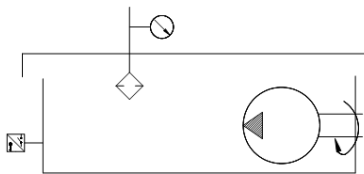
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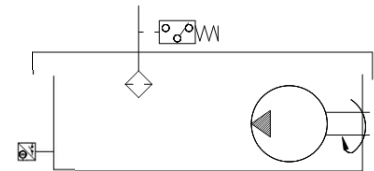
## Step 3 – Filter Condition & Protection

The use of filtration is always advised however, there are a number of optional filtration, tank filling and safety switches which can be selected. The next digit in the code system specifies the filter variants.

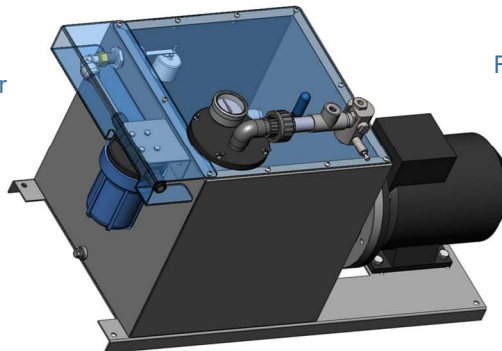
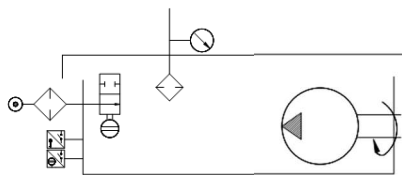
### 1 Example shown with T Return Filter and Gauge



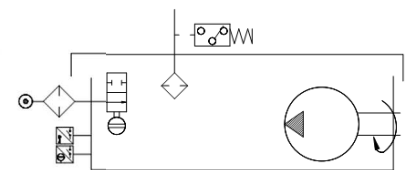
### 2 Example shown with L Return Filter Pressure Switch



### 3 Example shown with B Return Filter Gauge, Incoming Water Filter and Auto Fill Valve



### 4 Example shown with B Return Filter, Switch, Incoming Water Filter and Auto Fill Valve



The bag filter is available for manual filling, but is also used to filter all return water. Available with either a filter condition gauge or filter clogged pressure switch. Shown in diagrams one and two as per example three and four, we do advise that filling of the system is achieved by connecting the water mains directly to the incoming water filter. This can be achieved via a 15mm pipe push in fitting. The ball float valve will ensure that the correct fill level is achieved. The tank can be connected constantly to water mains. The appropriate air gap and water flow to meet EU water regulations apply. Packs are supplied with overflow fittings, connect as required.

The following digit specifies the protection switch, "T" temperature switch 50°C, "L" low water level cut out and "B" for both. If safety switches are not required add "X". If secondary tank return lines are require a, Tee can be added to the return between manifold and filter assembly to ensure all return water is filtered.

**Example:-** taking the previous example and adding a filter, with filter condition switch and fill valve. Also selecting both temperature and level switches the code would be **P6-060-M09-S55-4B**

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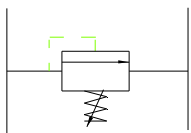
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## Step 4 – Control Valves

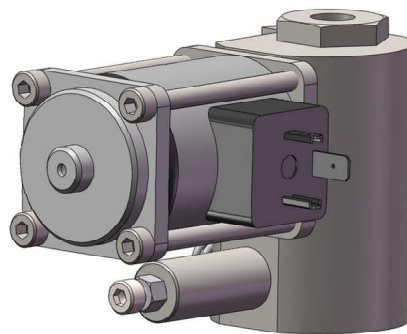
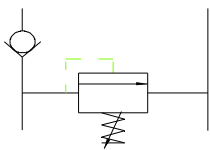
To complete the circuit requirements, the valve assembly has been configured to offer maximum flexibility for the system designer without the need for expensive and time consuming pipe work. The bolt on manifold arrangement can offer up to 4 station operation from a single block. The range offers unload, 3/2, 4/2 and 4/3 valves with actuation by solenoid, hand, air, water or oil pilot including electronic proportional control options as standard. See Janus directional valve data sheet for further information.

The DN3 range of control can be applied up to 10 l/min and 160 bar. C01, 2 and 3 circuits are produced with a single manifold arrangement. C04,5, 6 & 7 are all produced with the DN6 range of valves up to a maximum flow rate of 22 l/min. For higher flow requirements please contact TWHC.

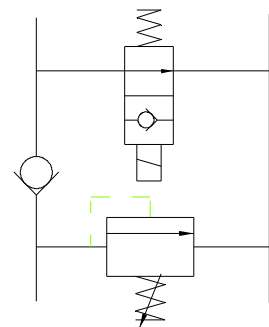
**C01 Relief Valve**



**C02 Relief & Check**

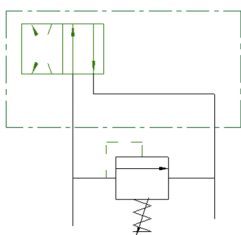


**C03 Relief, Check & Unload**

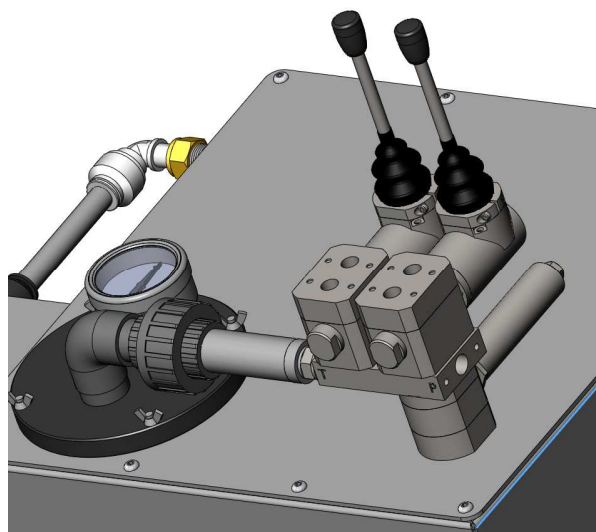
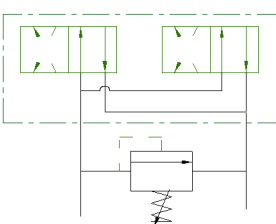


Select the "M" version of directional and relief valve when using manifolds. Order directional valves separately

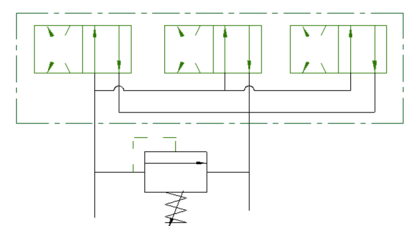
**C04 Relief 1 Station Manifold**



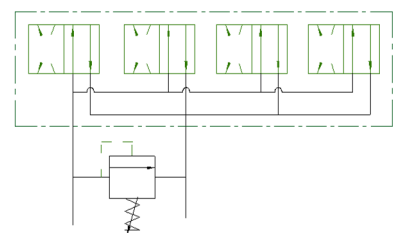
**C05 Relief 2 Station Manifold**



**C06 Relief 3 Station Manifold**



**C07 Relief 4 Station Manifold**



Final Code: Add a relief valve with a 2 station manifold for mounting 2-off 4 port 3 position 24V DC solenoid operated spring return directional control valves with closed P, A, B&T joined at centre.

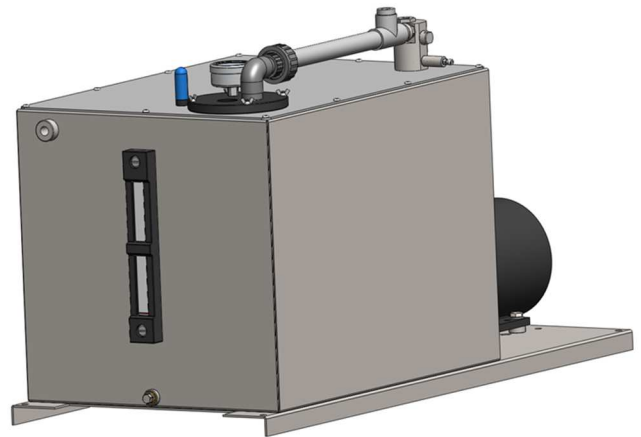
Part number **P6-060-M09-S55-4B-C05.**

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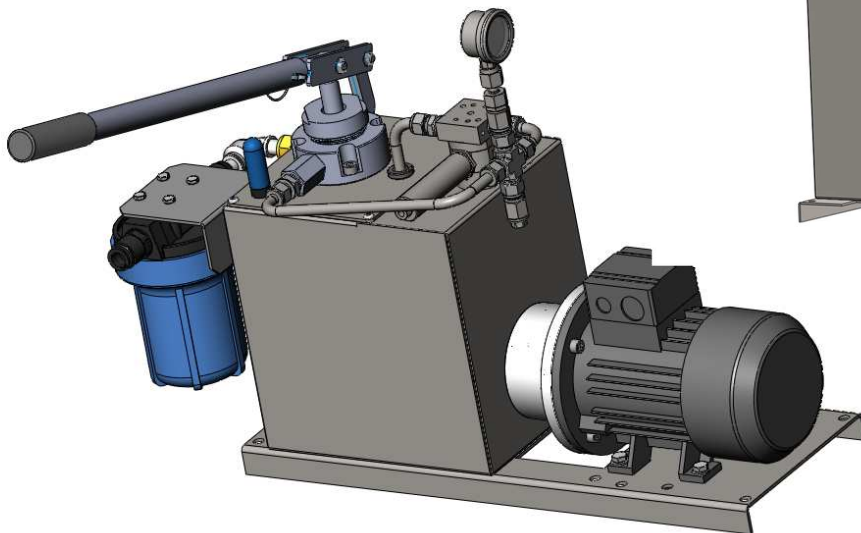
## Step 5— Accessories

### Tank level gauge



### Hand pump

25 cc/stroke



### High pressure system gauge

Accessories	Code
Fan Cooler	FC
Additional tank return	T
Back hand pump	HP
Tank level gauge	LG
High pressure system gauge	SG
Heat exchanger	HE
Miscellaneous (for Misc please advise)	M

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