

**General Information**

Parker's Compact Closed Circuit (PC<sup>3</sup>) line of variable displacement piston pumps has been designed for use in a wide variety of closed circuit applications. Flow direction and volume are controlled by a rugged swashplate and bearing design and are rated to 300 bar (4350 PSI) continuous pressure.

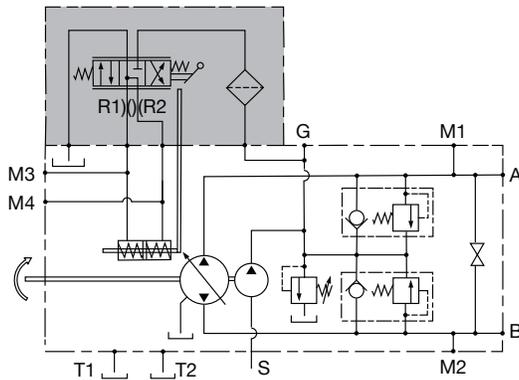
**The PC<sup>3</sup> line of pumps is available with reliable and robust controls including:**

- Direct swashplate manual control
- Manual servo control
- Hydraulic proportional control
- Electric proportional control

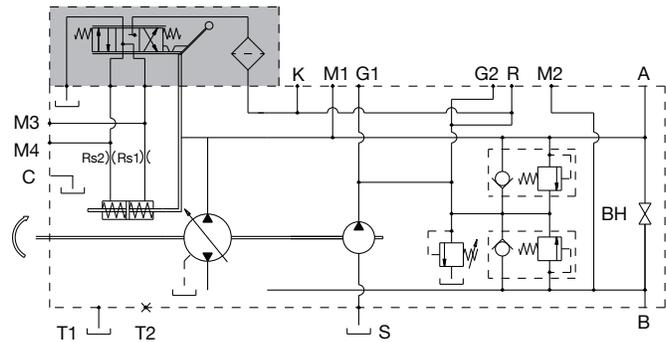
With a full line of accessories and through drives, the PC<sup>3</sup> line of pumps can meet your application's unique needs.



**Frame Size 1**



**Frame Size 2 and 3**



**System Sizing Equations**

	<b>Output flow Q</b>	$= \frac{V_g \cdot n \cdot \eta_v}{1000}$	(l/min)
<b>SI units</b>	<b>Input torque M</b>	$= \frac{V_g \cdot \Delta p}{20 \cdot \pi \cdot \eta_m}$	(N.m)
	<b>Input power P</b>	$= \frac{M \cdot n \cdot \pi}{30\,000} = \frac{Q \cdot \Delta p}{600 \cdot \eta_t}$	(kW)
	<b>Output flow Q</b>	$= \frac{V_g \cdot n \cdot \eta_v}{231}$	[GPM]
<b>US units</b>	<b>Input torque M</b>	$= \frac{V_g \cdot \Delta p}{2 \cdot \pi \cdot \eta_m}$	[lb.ft.in]
	<b>Input power P</b>	$= \frac{M \cdot n \cdot \pi}{198\,000} = \frac{Q \cdot \Delta p}{1714 \cdot \eta_t}$	[hp]

$V_g$  = Displacement per revolution  $\text{cm}^3/\text{tr}$  [ $\text{in}^3/\text{rev}$ ]  
 $\Delta p = p_o - p_i$  (system pressure) bar [PSI]  
 $n$  = Speed  $\text{min}^{-1}$  [rpm]  
 $\eta_v$  = Volumetric efficiency  
 $\eta_m$  = Mechanical efficiency  
 $\eta_t$  = Overall efficiency ( $\eta_v \cdot \eta_m$ )

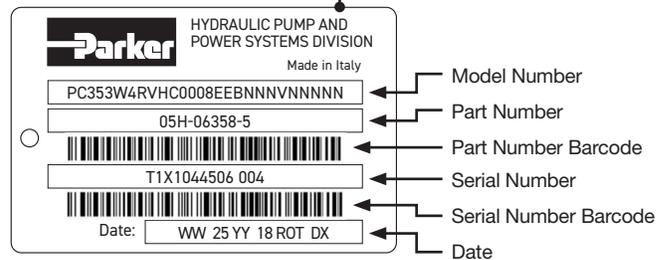
All Parker Hydraulic Pump Division products are supplied with an identification plate. Units can be properly identified only if all information is supplied.

**DO NOT REMOVE, ALTER OR DAMAGE THE DATA PLATE.**

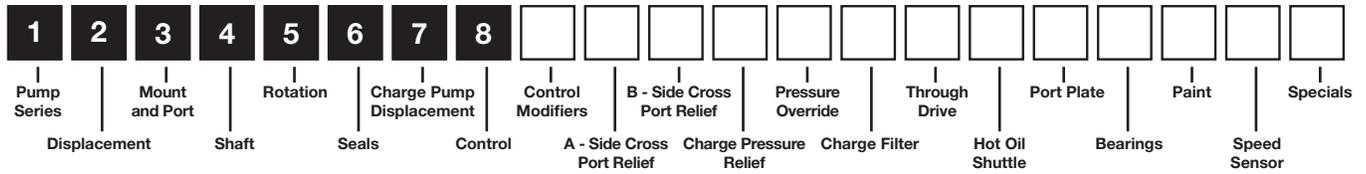
**PC<sup>3</sup> Series Identification Tag**

The identification tag on the PC<sup>3</sup> series pumps will have the following layout:

- The top line of the tag will contain the model code for the unit. The code number is generated by Parker Hydraulic Pump Division and will be specific to a single model code combination.
- The second line of the tag will contain the part number for the unit.
- The third line of the tag will contain the bar code information for the unit.
- The fourth line of the tag will contain the serial number for the unit.
- The fifth line of the tag will contain the serial number of the unit in barcode format.
- The sixth line of the tag will contain the date information. The date information includes the week and year of production as well as the rotation information if needed.



**Model Codes**



1 - Pump Series	
<b>PC3</b>	PC <sup>3</sup> Closed Circuit Pump

6 - Seals		F1	F2	F3
<b>V</b>	Fluorocarbon seals	#	#	#

2 - Displacement		F1	F2	F3
<b>07</b>	Frame 1, 7 cc/rev	#	-	-
<b>11</b>	Frame 1, 11 cc/rev	#	-	-
<b>18</b>	Frame 1, 18 cc/rev	#	-	-
<b>20</b>	Frame 1, 20 cc/rev	#	-	-
<b>25</b>	Frame 2, 25 cc/rev	-	#	-
<b>30</b>	Frame 2, 30 cc/rev	-	#	-
<b>35</b>	Frame 2, 35 cc/rev	-	#	-
<b>40</b>	Frame 3, 40 cc/rev	-	-	#
<b>45</b>	Frame 3, 45 cc/rev	-	-	#
<b>52</b>	Frame 3, 52 cc/rev	-	-	#

7 - Charge Pump Displacement		F1	F2	F3
<b>A</b>	5 cc/rev (0.30 CIR)	#	-	-
<b>B</b>	7 cc/rev (0.43 CIR)	#	-	-
<b>C</b>	8 cc/rev (0.55 CIR)	-	#	-
<b>E</b>	11 cc/rev (0.67 CIR)	-	#	#
<b>H</b>	16 cc/rev (0.96 CIR)	-	#	#
<b>X</b>	No charge pump	#	#	#

3 - Mount and Port		F1	F2	F3
<b>A</b>	SAE A mount, UNF threaded work ports	#	-	-
<b>B</b>	SAE B mount, UNF threaded work ports	#	#	#
<b>W</b>	SAE B mount, ISO 6162 flange work ports	-	#	#

8 - Control		F1	F2	F3
<b>M</b>	Direct swashplate control	#	-	-
<b>A</b>	Manual lever, servo control	#	#	#
<b>C</b>	Hydraulic proportional with feedback	#	#	#
<b>F</b>	Electric proportional with feedback	#	#	#

4 - Shaft		F1	F2	F3
<b>1</b>	SAE A 9T 16/32 D.P	#	-	-
<b>2</b>	11T 16/32 D.P	#	-	-
<b>3</b>	SAE B 13T 16/32 D.P	**	#	#
<b>4</b>	SAE BB 15T 16/32 D.P	-	#	#
<b>5</b>	SAE C 14T 12/24 D.P	-	-	#

5 - Rotation <i>As viewed looking at the shaft</i>		F1	F2	F3
<b>R</b>	CW (clockwise)	#	#	#
<b>L</b>	CCW (counter clockwise)	#	#	#

**Key:**  
 # = Available/standard  
 - = Not available  
 \* = Optional, contact technical support  
 \*\* = SAE B mount only  
 \*\*\* = Requires technical support/approval  
 F1 = Frame Size 1  
 F2 = Frame Size 2  
 F3 = Frame Size 3

