



PANAGON
systems

HYDRAULIC PUMP MANUFACTURING

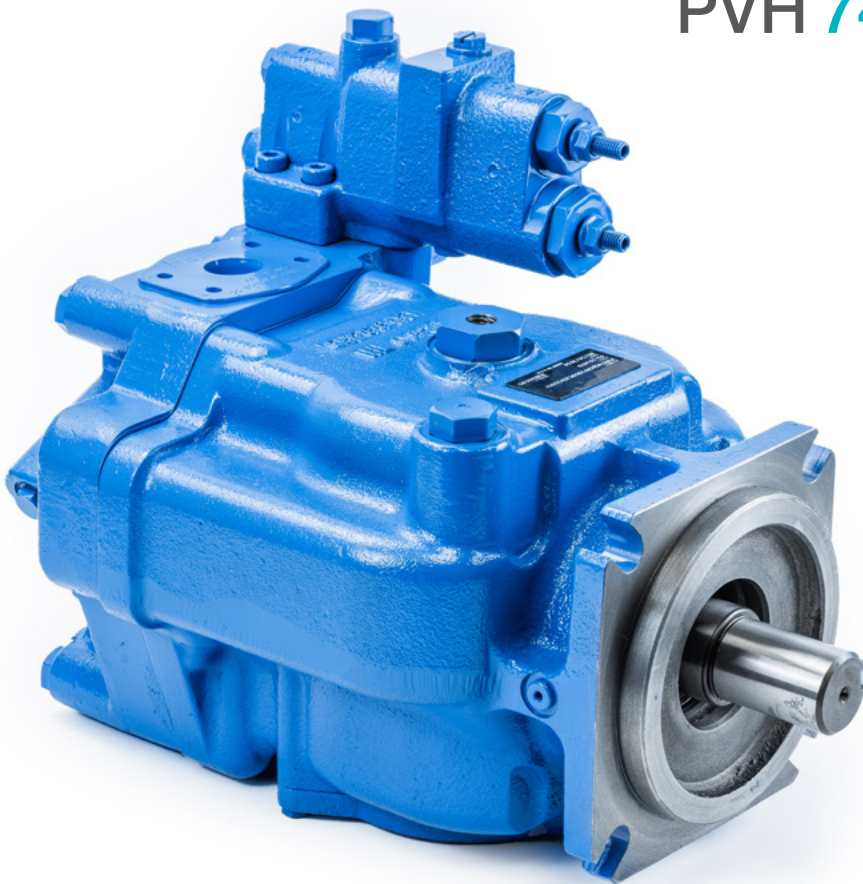
PVH PISTON PUMP MODELS **BUILT BY US**

PVH 57/63

PVH 98/106

PVH 74/81

PVH 131/141



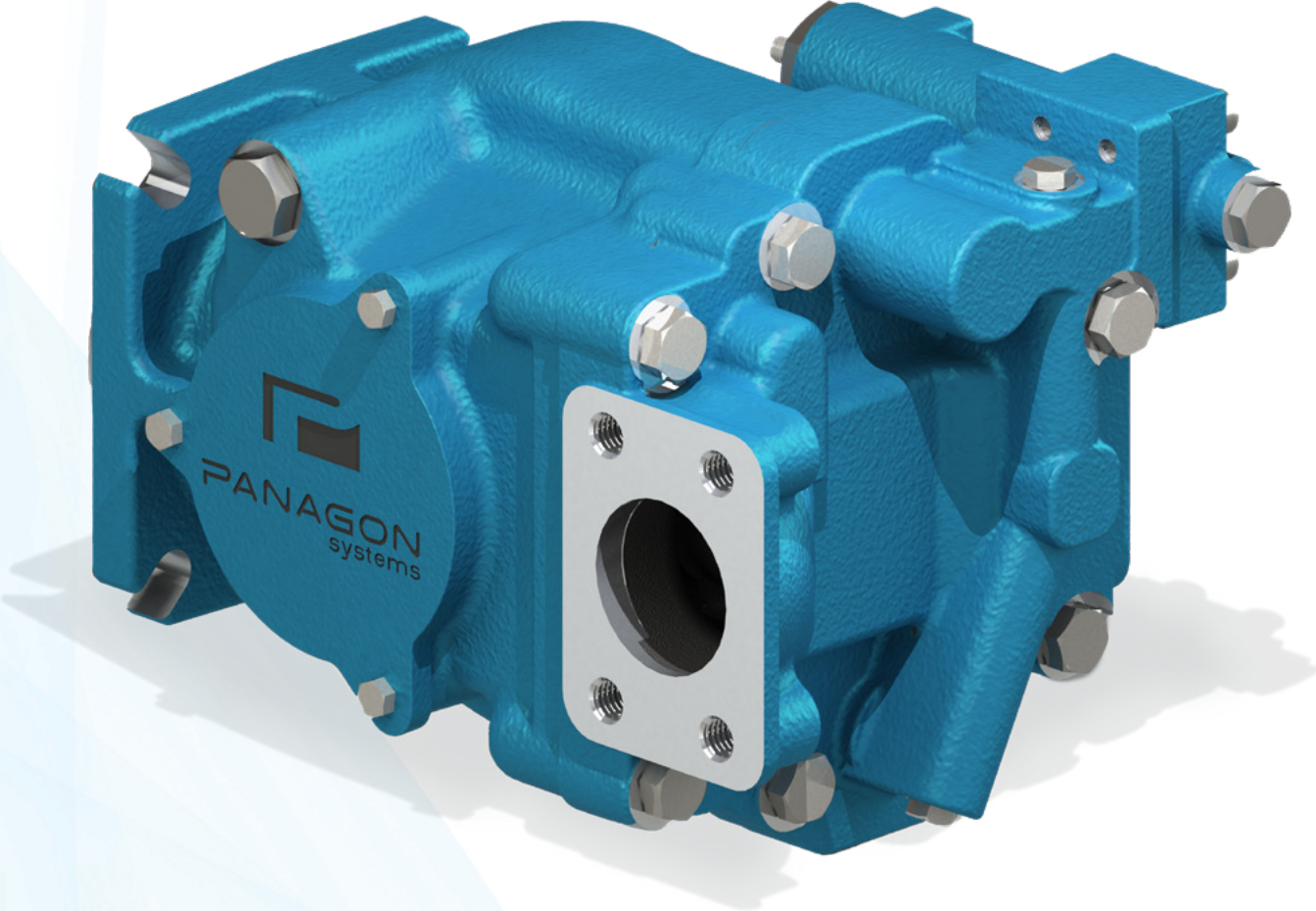
PARTS INFORMATION GUIDE

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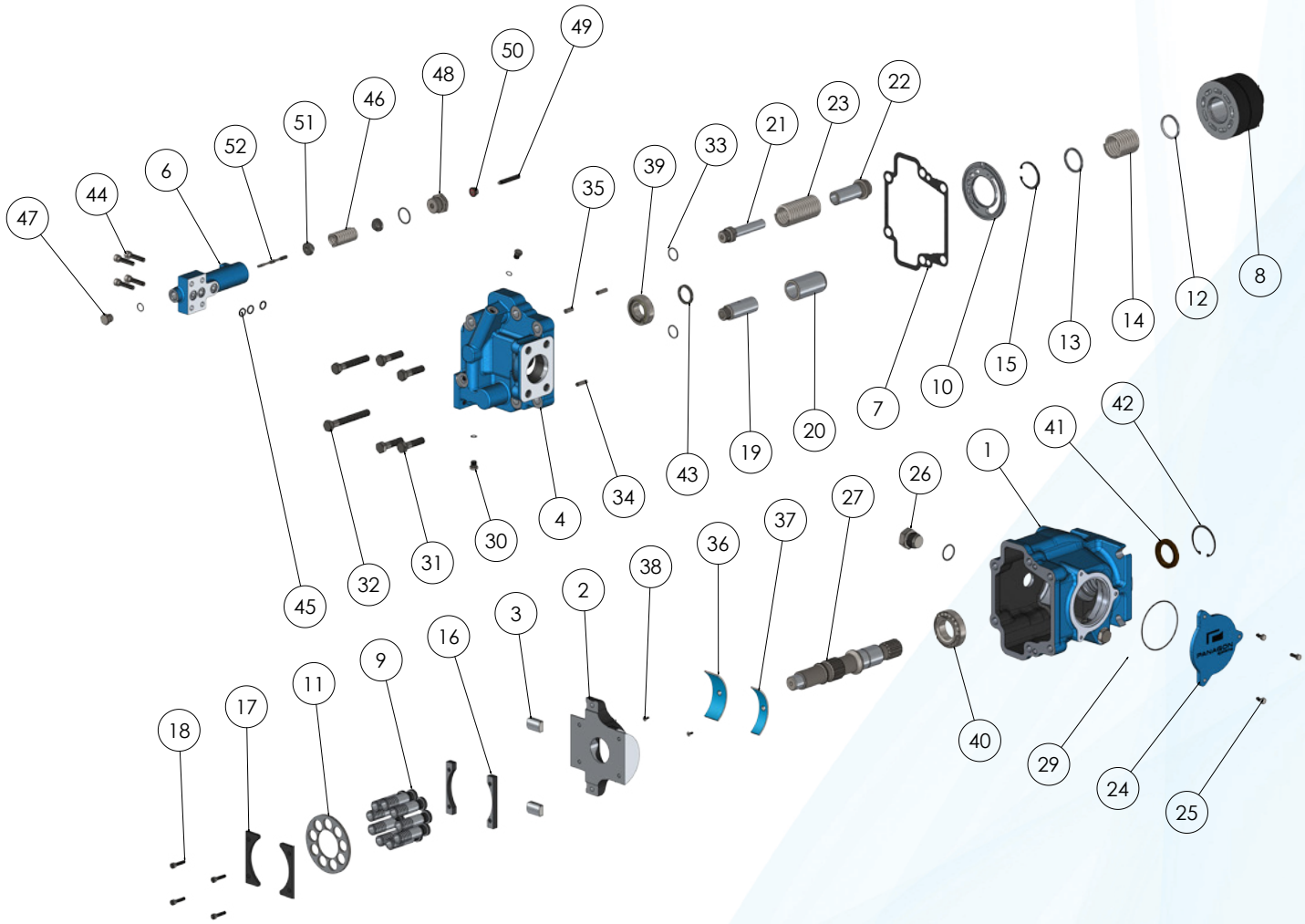


Founded nearly 35 years ago, Panagon Systems has remained a trusted company producing hydraulic parts on demand for a number of shops, manufacturers and industries. The company, located in Macomb, Michigan, is a hydraulic piston pumps and parts manufacturer, providing a vast variety of current and obsolete components. With a variety of CNC machines, Panagon produces finished product from raw materials. Which are then assembled, tested, painted and shipped from our facility. Panagon Systems attempts to fill the void OEM's create by manufacturing the phased out, expensive, unavailable pumps, motors and transmissions.

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Model PVH57/63



Model PVH57/63

ITEM	PART NUMBER		QTY	NOTE	DESCRIPTION
	Panagon	OEM			
1	See Table 1		1		Housing
2	PS100131	690832	1		Yoke
3	PS113861	937046	1		Yoke Bumper
4	See Table 2		1	B	Valve Block
5			1	B	Instruction Plate
6	See Table 3		1	C	Pressure Compensator Body
7	PS3145	513846	1	A/B	Gasket
8	PS91022	937023	1	D	Cylinder Block (57)
(8)	PS577725	937024	1	E	Cylinder Block (63)
9	PS113959	02-306362	9	D	Piston/Shoe S/A (57)
(9)	PS137634	02-306363	9	E	Piston/Shoe S/A (63)
10	See Table 4		1	D/E	Control Plate
11	PS1304	584512	1	D/E	Shoe Plate
12	PS1307	680624	1	D/E	Inner Spring Guide
13	PS1305	584524	1	D/E	Outer Spring Guide
14	PS1306	627524	1	D/E	Spring
15	PS1956	102038	1	D/E	Retaining Ring
16	PS5890	690801	2		Spacer
17	PS1309	690218	2		Limiter
18	PS1969	473741	4		Socket Head Cap Screw
19	PS5849	690210	1		Control Rod
20	PS5848	690211	1		Control Piston
21	PS5869	526685	1	F	Bias Rod
22	PS5896	526668	1	F	Bias Piston
23	PS5897	526665	1		Spring
24	PS5900	526616	1		Cover - Cap
25	PS5899	470793	3		Hex Head Cap Screw
26	PS5898	513602	1		O-Ring Plug S/A M27
27	See Table 5		1		Drive Shaft
28	See Table 5		1	J	Key
29	PS135421	335659	1	A	O-Ring
30	PS5873	689461	2		O-Ring Plug S/A M10
31	PS5871	470866	4		Hex Head Cap Screw
32	PS6018	474753	2		Hex Head Cap Screw
33	PS135155	262355	2	A	O-Ring
34	PS5874	471512	2		Roll Pin
35	PS5571	248935	1		Pin
36	PS3212	513886	1		Saddle Bearing
37	PS3211	513885	1		Saddle Bearing
38	PS3199	690339	2		Flat Head Screw
39	PS3204	413603	1		Bearing
40	PS3201	388154	1		Bearing
41	PS136803	513439	1	A	Shaft Seal
42	PS5901	103824	1		Retaining Ring
42	PS5875	926258	1		Shaft Spacer

ITEM	PART NUMBER		QTY	NOTE	DESCRIPTION
	Panagon	OEM			
44	PS3259	473765	4	C	Screw
45	PS135119	177969	3	C	O-Ring
46	PS3254	857681	1	C	Spring
47	PS3261	627391	1	C	O-Ring Plug S/A #6
48	PS3256	860749	1	C	O-Ring Plug S/A #12
49	PS3255	860750	1	C	Adjusting Screw
50	PS3257	860747	1	C	Lock Nut
51	PS3258	857734	2	C	Seat
52	PS3260	857672	1	C	Spool
53	PS135407	576601	1	J	O-Ring
54	PS89040	864460	1	J	Coupling
55	See Table 6		1	J/K	Adapter Pad Kit
56	PS137826	928448	1	G/J	Torque Bias Sleeve
57	PS137631	928446	1	G/J	Torque Bias Piston
58	PS95726	928447	1	G/J	Torque Bias Cap
59	PS95727	928456	1	G/J	Lock Ring
60	PS136660	263069	1	G/J	O-Ring
61	PS134833	262339	1	G/J	O-Ring
62	PS81131	197577	1	G/J	Back-Up Ring
63	PS5850	860741	1	H/J	Max Stop Adjustment Screw
64	PS5851	913341	1	H/J	Lock Nut

- A Included in 02-102244 / PS8051 Double Shaft Seal Kit
- B Included in Valve Plate S/A
- C Included in Pressure Compensator Kit
- D Included in Rotating Group
- E Included in Rotating Group
- F Non-Torque Control Models
- G Torque Models Only
- H Maximum Adjustable Stop Models Only
- J Part Not Shown
- K Used to Convert A Pilot to B or C

Model PVH57/63

Table 1 - Housing		
Model Code	Panagon	OEM
Model	Housing	
-C-*S	PS5891	526614
-C-*D	PS5892	864204
-C2-*S	PS5893	883084
-C2-*D	PS103877	864313
-C3-*S	PS5894	860808
-M-*S	PS5895	860815
-130 suffix	PS89029	864203

Table 2 - Valve Block				
Model Code	Panagon	OEM	Panagon	OEM
Model	RH		LH	
F-11-C	PS113550	928631	PS116039	928679
M-11-C	PS117477	928632	PS139175	928680
SF-11-C	PS113417	928618	PS137869	928667
SM-11-C	PS139172	928619	PS139176	928668
F-11-CT	PS139173	860846	PS139177	860855
M-11-CT	PS139174	860847	PS139178	860856
F-10-C	PS5878	513915	PS5876	690854
M-10-C	PS5879	864150	PS5877	857772
SF-10-C	PS5886	860786	PS5884	860794
SM-10-C	PS5887	860787	PS5885	860795
F-10-CT	PS139173	860846	PS5880	526621
M-10-CT	PS5883	860514	PS5881	860513
AF-11-C	PS137871	928730	PS137019	928705
AM-11-C	PS5800809	928731	PS5800885	928706
AF-11-CT	PS137873	860828	PS5800812	860837
AM-11-CT	PS5800810	860829	PS5800811	860838
AF-10-C	PS5911	526658	PS5909	526660
AM-10-C	PS5912	864239	PS5910	864257
AF-10-CT	PS5915	526661	PS5800813	526662
AM-10-CT	PS5916	860516	PS5914	860515

Table 3 - Pressure Compensator				
Model Code	Panagon	OEM	Panagon	OEM
Model	Compensator Body		Compensator S/A	
C	PS3253	857722	PS3247	02-125160
CM			PS3248	02-125162
CV	PS5906	857733	PS3249	02-125161
CVB	PS103881	928442	PS103879	02-160591
CMV	PS5906	857733	PS3250	02-306056
IC (inch)	PS5981	883386	PS93341	02-151906
IC (metric)	PS5982	860628	PS103915	02-151907
C**T**31	PS103893	860653	PS93535	02-314944
C**T**S-31			PS103880	02-335254

Table 4 - Control Plate				
Model Code	Panagon	OEM	Panagon	OEM
Model	RH		LH	
57	PS3181	680630	PS3180	680631
57QI	PS3183	514128	PS3182	514121
57QP	PS90324	913696	--	--
63	PS5800840	934442	PS5819039	934439
63QI	PS577743	928579	PS5819040	860774
63QP	PS137893	934443	--	--

Table 6 - Adapter Pad Kit								
Model Code	Panagon	OEM	Panagon	OEM	Panagon	OEM	Panagon	OEM
Model	Adapter Pad Kit		Adapter Flange		O-Ring		Coupling	
*BF-1**	PS89381	876390	PS5917	526670	PS135428	401525	PS5923	526694
*BM-1**	PS89383	876394	PS5918	876393			PS85078	526695
*CF-1**	PS7236	876389	PS5919	692934	PS5800291	353264	PS7235	526696
*CM-1**	PS89382	876392	PS5920	876391				

Table 5 - Drive Shaft				
Model Code	Panagon	OEM	Panagon	OEM
Model	Shaft		Key	
Straight Key	PS1991	527166	PS1978	114516
Splined	PS1993	513839	--	--
Straight Key	PS1995	883083	PS1984	472287
Straight Key Thru	PS1992	864342	PS1978	114516
Splined Thru	PS1994	526684	--	--
Splined -130	PS115554	913978	--	--

Model PVH57/63

P V H * * (Q *) * * - * (*) * - * * * - 1 1 - * * * (* * *) (*) (*) - * * - * * *

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

1 Piston pump, variable displacement

2 Maximum geometric displacement

57 57.4 cm³/r (3.5 in³/r)
63 62.9 cm³/r (3.84 in³/r)

3 Application style

Blank - Mobile application (rated speed & 250/280 bar (3600-4000 psi) pressures)

QI Quiet industrial application (1500 - 1800 rpm & 250/280 bar (3600-4000 psi) pressures)

QP Quiet power unit application (1800 rpm & 140 bar (2000 psi) max. pressures – R.H. rotation only)

4 Mounting flange, prime mover end

C SAE "C" 4-bolt type (SAE J744-127-4)

C2 Optional combination 2- & 4-bolt SAE-C pilot

C3 Optional 4-bolt SAE-C pilot for vertical pump mounting

M Optional metric 4-bolt pilot ISO 3019/2-125B4HW (Must be used with 'N' shaft option)

5 Shaft rotation, viewed at prime mover end

R - Right hand, clockwise

L - Left hand, counterclockwise

6 Configuration

Blank - Non-thru-drive (single pump)

A SAE-A thru-drive pump, standard (SAE J744-82-2)

B SAE-B thru-drive pump, optional (SAE J744-101-2/4)

C SAE-C thru-drive pump, optional (SAE J744-127-2/4)

S Adjustable maximum volume stop ("S" option not available on thru-drive and torque control pump models.)

7 Main ports 13

F SAE 4-bolt flange ports (standard)

M SAE 4-bolt pads with metric mounting bolt threads

8 Shaft-end type, at prime mover end

N Metric ISO short straight key (ISO 3019/2-E32N for "M" pilot only)

1 SAE-C straight key

2 SAE-C 14 tooth spline

8 SAE-BB, 15 tooth spline

9 Shaft seal, prime mover end

S - Single, one-way

D - Double, two-way

10 Pump design number

11 - (Subject to change. Installation dimensions unaltered for design numbers 10 to 19 inclusive.)

11 Pressure control type

C Compensator, 140-280 bar (2000-4000 psi)

CM Compensator, 35-140 bar (500-2000 psi)

IC CETOP 3 interface compensator, 20 bar factory "differential" pressure setting (QI and QP models only)

12 Factory compensator pressure setting

Blank Leave blank for "IC" controls only
7 - 70 bar (1015 psi) normal "CM7" setting (all pump sizes)

23 230 bar (3335 psi) normal "C23" setting (63, 81, 106, 141 models)

25 250 bar (3625 psi) normal "C25" setting (57, 74, 98, 131 models)

Model PVH57/63 - Cont

13 Optional pressure control functions

- Blank Leave blank for basic compensator controls of IC models.
- V Load sensing, 20 bar (290 psi) factory "differential" pressure setting
- T Torque limiting control (Used with sections and .
- VT Load sensing with torque limiting
- VB Load sensing with internal bleed down (0.15" dia. orifice)
- VBT Load sensing with internal bleed down and torque limiting

14 Torque limiting control pressure setting

- Blank Leave blank if no torque limiting control is used
- 4 Standard minimum 40 bar setting of "T" torque control option

15 Torque limiting control summation

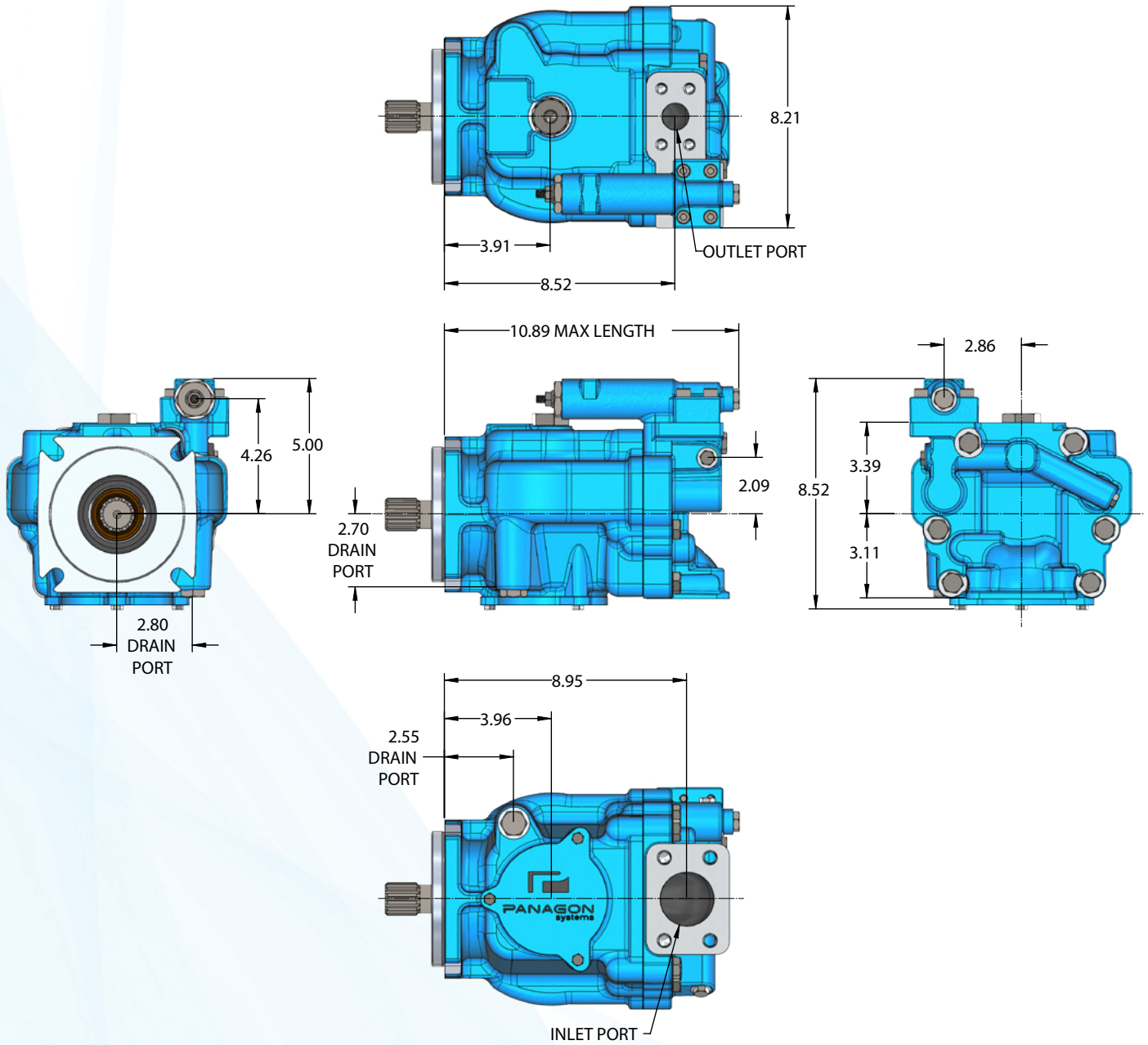
- Blank Standard torque control
- S Optional torque control with summation feature

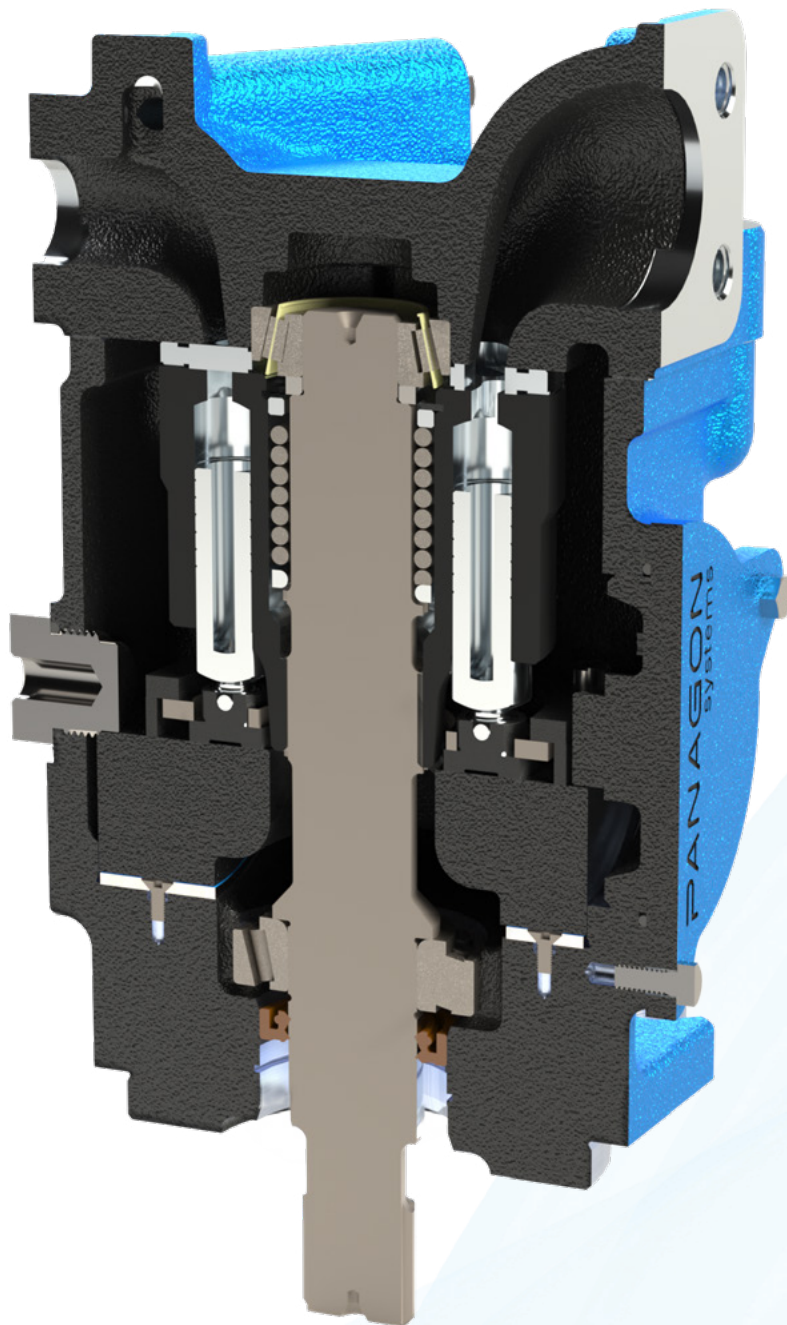
16 Control design number

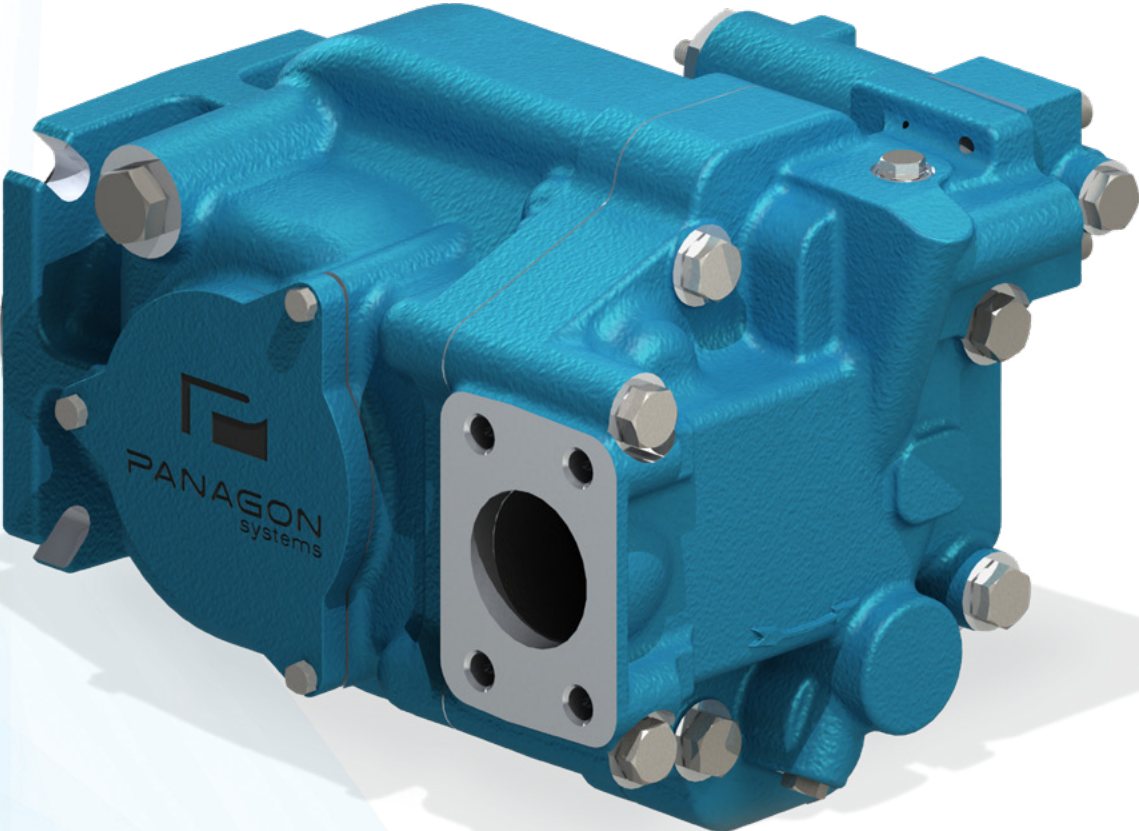
- 31 All control options

17 Special feature suffix

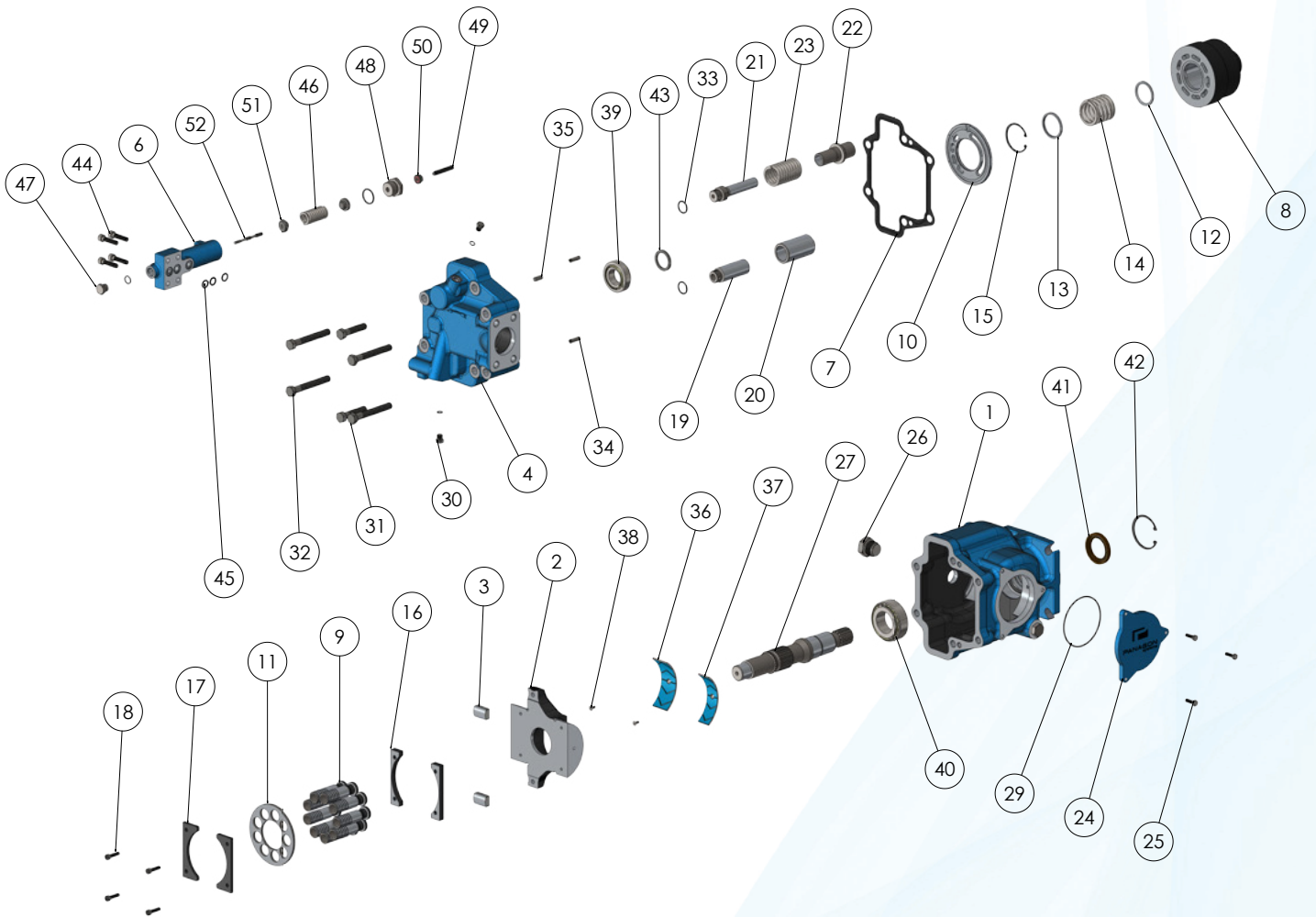
- 031 Mounting with SAE-A, 2-bolt cover plate
- 130 PVH57/63 with SAE-B, 4.00 inch dia. pilot, 2/2-bolt mount. Both 2-bolt patterns are rotated 45 degrees from port center line.







Model PVH74/81



Model PVH74/81

ITEM	PART NUMBER		QTY	NOTE	DESCRIPTION
	Panagon	OEM			
1	See Table 1		1		Housing
2	PS115172	526651	1		Yoke
3	PS113861	937046	1		Yoke Bumper
4	See Table 2		1	B	Valve Block
5			1	B	Instruction Plate
6	See Table 3		1	C	Pressure Compensator Body
7	PS3147	526631	1	A/B	Gasket
8	PS11956	937025	1	D	Cylinder Block (74)
8	PS95739	937026	1	E	Cylinder Block (81)
9	PS98924	02-305857	9	D	Piston/Shoe S/A (74)
9	PS95737	02-306364	9	E	Piston/Shoe S/A (81)
10	See Table 4		1	D/E	Control Plate
11	PS11958	584474	1	D/E	Shoe Plate
11	PS95740	913956	1	D/E	Shoe Plate
12	PS1949	584483	1	D/E	Inner Spring Guide
13	PS8318	631568	1	D/E	Outer Spring Guide
14	PS1950	584454	1	D/E	Spring
15	PS1948	091365	1	D/E	Retaining Ring
16	PS5975	526639	2		Spacer
17	PS1946	690796	2		Limiter
18	PS1969	473741	4		Socket Head Cap Screw
19	PS5947	690805	1		Control Rod
20	PS5946	690804	1		Control Piston
21	PS5958	690806	1	F	Bias Rod
22	PS87774	690816	1	F	Bias Piston
23	PS5977	526667	1		Spring
24	PS5979	526637	1		Cover - Cap
25	PS5980	470794	3		Hex Head Cap Screw
26	PS5898	513602	1		O-Ring Plug S/A M27
27	See Table 5		1		Drive Shaft
28	See Table 5		1	J	Key
29	PS135414	411575	1	A	O-Ring
30	PS5873	689461	2		O-Ring Plug S/A M10
31	PS6018	474753	4		Hex Head Cap Screw
32	PS6019	474746	2		Hex Head Cap Screw
33	PS135155	262355	2	A	O-Ring
34	PS5874	471512	2		Roll Pin
35	PS5571	248935	1		Pin
36	PS3208	513926	1		Saddle Bearing
37	PS3209	513927	1		Saddle Bearing
38	PS3199	690339	2		Flat Head Screw
39	PS3210	388153	1		Bearing
40	PS3207	589093	1		Bearing
41	PS136802	589332	1	A	Shaft Seal
42	PS1354	126911	1		Retaining Ring
43	PS5961	941441	1		Shaft Spacer

ITEM	PART NUMBER		QTY	NOTE	DESCRIPTION
	Panagon	OEM			
44	PS3259	473765	4	C	Socket Head Cap Screw
45	PS135119	177969	3	C	O-Ring
46	PS3254	857681	1	C	Spring
47	PS3261	627391	1	C	O-Ring Plug S/A #6
48	PS3256	860749	1	C	O-Ring Plug S/A #12
49	PS3255	860750	1	C	Adjusting Screw
50	PS3257	860747	1	C	Lock Nut
51	PS3258	857734	2	C	Seat
52	PS3260	857672	1	C	Spool
53	PS135407	576601	1	J	O-Ring
54	PS89040	864460	1	J	Coupling
55	See Table 6		1	J/K	Adapter Pad Kit
56	PS95725	928450	1	G/J	Torque Bias Sleeve
57	PS95728	928449	1	G/J	Torque Bias Piston
58	PS95726	928447	1	G/J	Torque Bias Cap
59	PS95727	928456	1	G/J	Lock Ring
60	PS134833	262339	1	G/J	O-Ring
61	PS136660	263069	1	G/J	O-Ring
62	PS81131	197577	1	G/J	Back-Up Ring
63	PS5850	860741	1	H/J	Max Stop Adjustment Screw
64	PS5851	913341	1	H/J	Lock Nut

- A Included in 02-102262 / PS3142 Double Shaft Seal Kit
- B Included in Valve Plate S/A
- C Included in Pressure Compensator Kit
- D Included in Rotating Group
- E Included in Rotating Group
- F Non-Torque Control Models
- G Torque Models Only
- H Maximum Adjustable Stop Models Only
- J Part Not Shown
- K Used to Convert A Pilot to B or C

Model PVH74/81

Table 1 - Housing		
Model Code	Panagon	OEM
Model	Housing	
-C-*S	PS85077	526649
-C-*D	PS95729	864498
-C2-*S	PS89000	860564
-C2-*D	PS95730	860814
-C3-*S	PS95731	864312
-M-*S	PS89642	883085

Table 3 - Pressure Compensator				
Model Code	Panagon	OEM	Panagon	OEM
Model	Compensator Body		Compensator S/A	
C	PS3253	857722	PS3247	02-125160
CM			PS3248	02-125162
CV	PS5906	857733	PS3249	02-125161
CVB	PS103881	928442	PS103879	02-160591
CMV	PS5906	857733	PS3250	02-306056
IC (inch)	PS5981	883386	PS93341	02-151906
IC (metric)	PS5982	860628	PS103915	02-151907
C**T**31	PS103893	860653	PS93535	02-314944
C**T**S-31			PS103880	02-335254

Table 4 - Control Plate				
Model Code	Panagon	OEM	Panagon	OEM
Model	RH		LH	
74	PS3185	627438	PS3184	627437
74QI	PS3187	513889	PS3186	513890
74QP	PS90332	913741	--	--
81				
81QI	PS95732	928405	PS95734	928406
81QP	PS95733	928824	--	--

Table 5 - Drive Shaft				
Model Code	Panagon	OEM	Panagon	OEM
Model	Shaft		Key	
Straight Key	PS1985	692567	PS1978	114516
Splined	PS1987	513865	--	--
Straight Key	PS1990	883082	PS1984	472287
Straight Key Thru	PS1986	864344	PS1976	140282
Splined Thru	PS1988	883229	--	--
Splined -130	PS1989	864343	--	--

Table 2 - Valve Block				
Model Code	Panagon	OEM	Panagon	OEM
Model	RH		LH	
F-11-C	PS95711	928633	PS95717	928681
M-11-C	PS95712	928634	PS95718	928682
SF-11-C	PS95713	928620	PS95719	928669
SM-11-C	PS95714	928621	PS95720	928670
F-11-CT	PS95715	860848	PS95721	860857
M-11-CT	PS95716	860849	PS95722	860858
F-10-C	PS5964	526652	PS5962	526655
M-10-C	PS5965	864259	PS5963	864278
SF-10-C	PS5972	860788	PS5970	860796
SM-10-C	PS5973	860789	PS5971	860797
F-10-CT	PS5968	526703	PS5966	526698
M-10-CT	PS5969	860518	PS5967	860517
AF-11-C	PS96610	928732	PS103907	928707
AM-11-C	PS103908	928733	PS143058	928708
AF-11-CT	PS103911	860830	PS103909	860839
AM-11-CT	PS103912	860831	PS103910	860840
AF-10-C	PS89032	864240	PS89033	864264
AM-10-C	PS5800884	864241	PS143047	864265
AF-10-CT	PS5800856	860521	PS5800854	860519
AM-10-CT	PS5800857	860522	PS5800855	860520

Table 6 - Adapter Pad Kit								
Model Code	Panagon	OEM	Panagon	OEM	Panagon	OEM	Panagon	OEM
Model	Adapter Pad Kit		Adapter Flange		O-Ring		Coupling	
*BF-1**	PS89381	876390	PS5917	526670	PS135428	401525	PS89037	864457
*BM-1**	PS89383	876394	PS5918	876393			PS89039	864459
*CF-1**	PS7236	876389	PS5919	692934	PS5800291	353264	PS89038	864458
*CM-1**	PS89382	876392	PS5920	876391			PS89041	864461

Model PVH74/81

P V H * * (Q *) * * - * (*) * - * * * - 1 1 - * * * (* * *) (*) (*) - * * - * * *

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

1 Piston pump, variable displacement

2 Maximum geometric displacement

74 73.7 cm³/r (4.5 in³/r)
81 80.9 cm³/r (4.94 in³/r)

3 Application style

Blank Mobile application (rated speed & 250/280 bar (3600-4000 psi) pressures)
QI Quiet industrial application (1500 - 1800 rpm & 250/280 bar (3600-4000 psi) pressures)
QP Quiet power unit application (1800 rpm & 140 bar (2000 psi) max. pressures – R.H. rotation only)

4 Mounting flange, prime mover end

C SAE "C" 4-bolt type (SAE J744-127-4)
C2 Optional combination 2- & 4-bolt SAE-C pilot
C3 Optional 4-bolt SAE-C pilot for vertical pump mounting
M Optional metric 4-bolt pilot ISO 3019/2-125B4HW (Must be used with 'N' shaft option.)

5 Shaft rotation, viewed at prime mover end

R Right hand, clockwise
L Left hand, counterclockwise

6 Configuration

Blank - Non-thru-drive (single pump)
A SAE-A thru-drive pump, standard (SAE J744-82-2)
B SAE-B thru-drive pump, optional (SAE J744-101-2/4)
C SAE-C thru-drive pump, optional (SAE J744-127-2/4)
S Adjustable maximum volume stop ("S" option not available on thru-drive and torque control pump models.)

7 Main ports 13

F SAE 4-bolt flange ports (standard)
M SAE 4-bolt pads with metric mounting bolt threads

8 Shaft-end type, at prime mover end

N Metric ISO short straight key (ISO 3019/2-E32N for "M" pilot only)
1 SAE-C straight key
2 SAE-C 14 tooth spline
3 SAE-CC 17 tooth spline
13 SAE-CC straight key

9 Shaft seal, prime mover end

S Single, one-way
D Double, two-way

10 Pump design number

11 (Subject to change. Installation dimensions unaltered for design numbers 10 to 19 inclusive.)

11 Pressure control type

C Compensator, 140-280 bar (2080-4000 psi)
CM Compensator, 35-140 bar (50-2000 psi)
IC CETOP 3 interface compensator, 20 bar factory "differential" pressure setting (QI and QP models only)

12 Factory compensator pressure setting

Blank Leave blank for "IC" controls only
7 70 bar (1015 psi) normal "CM7" setting (all pump sizes)
23 230 bar (3335 psi) normal "C23" setting (63, 81, 106, 141 models)
25 250 bar (3625 psi) normal "C25" setting (57, 74, 98, 131 models)

Model PVH74/81 - Cont

13 Optional pressure control functions

- Blank Leave blank for basic compensator controls of IC models.
- V Load sensing, 20 bar (290 psi) factory "differential" pressure setting
- T Torque limiting control (Used with sections and .
- VT Load sensing with torque limiting
- VB Load sensing with internal bleed down (0.15" dia. orifice)
- VBT Load sensing with internal bleed down and torque limiting

14 Torque limiting control pressure setting

- Blank Leave blank if no torque limiting control is used
- 4 Standard minimum 40 bar setting of "T" torque control option

15 Torque limiting control summation

- Blank Standard torque control
- S Optional torque control with summation feature

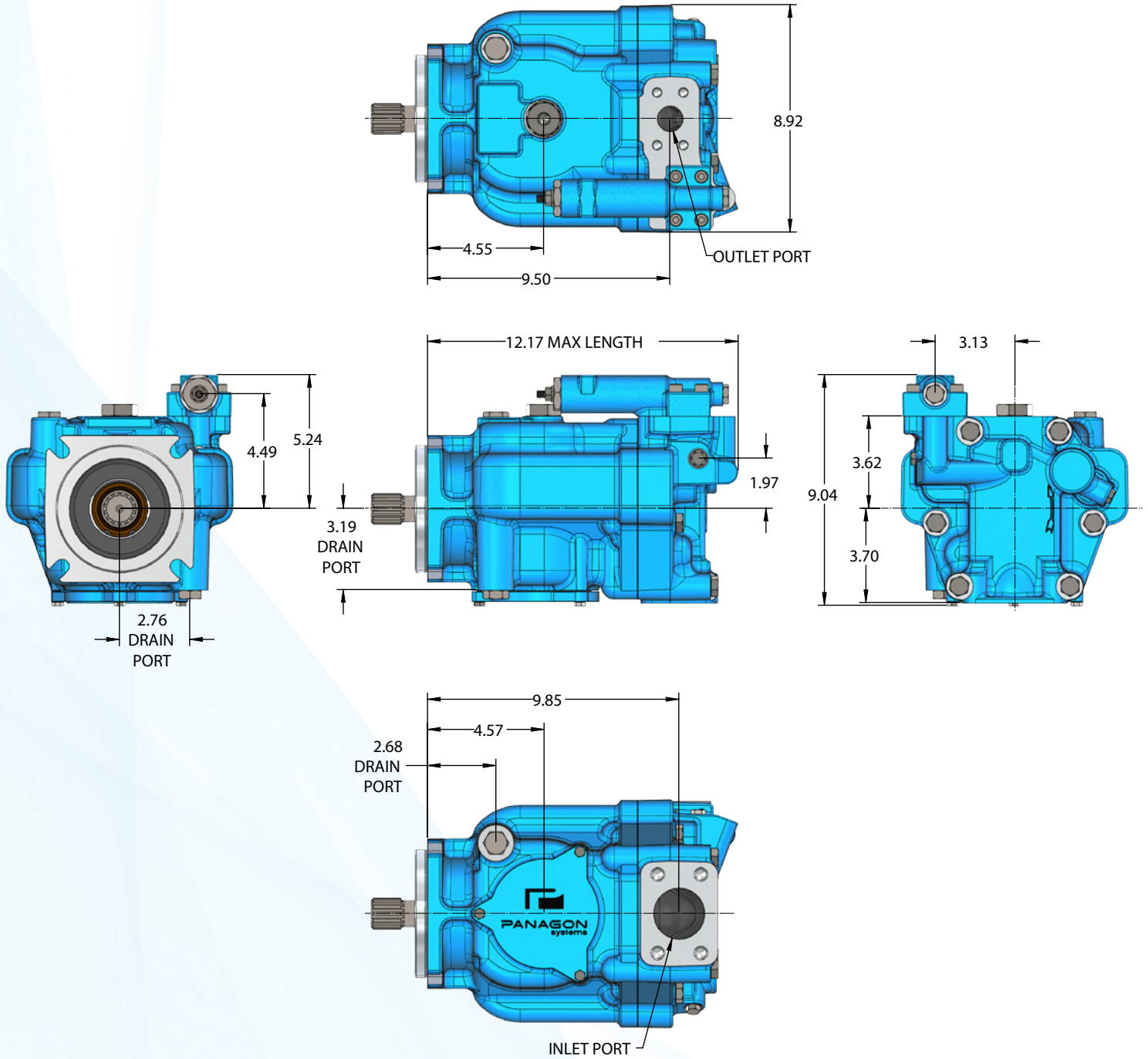
16 Control design number

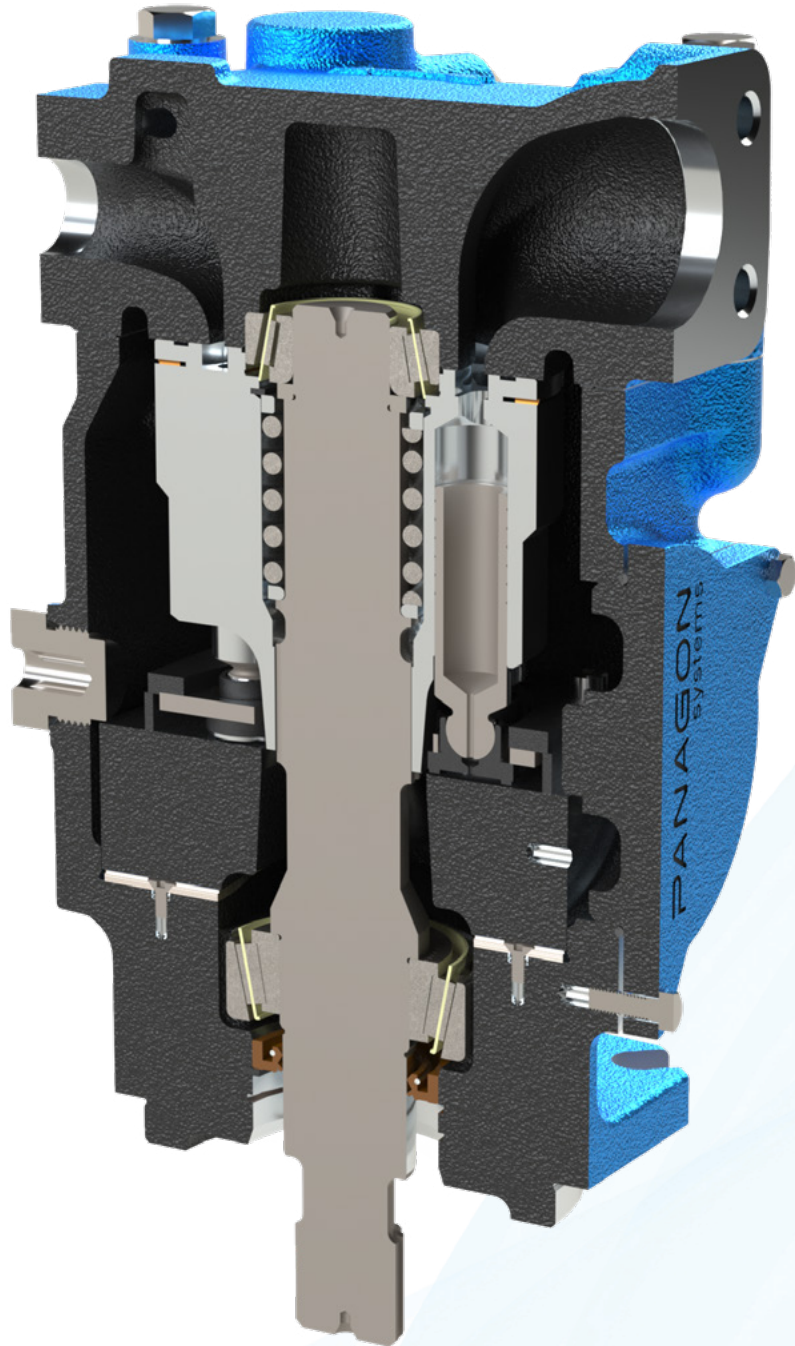
- 31 All control options

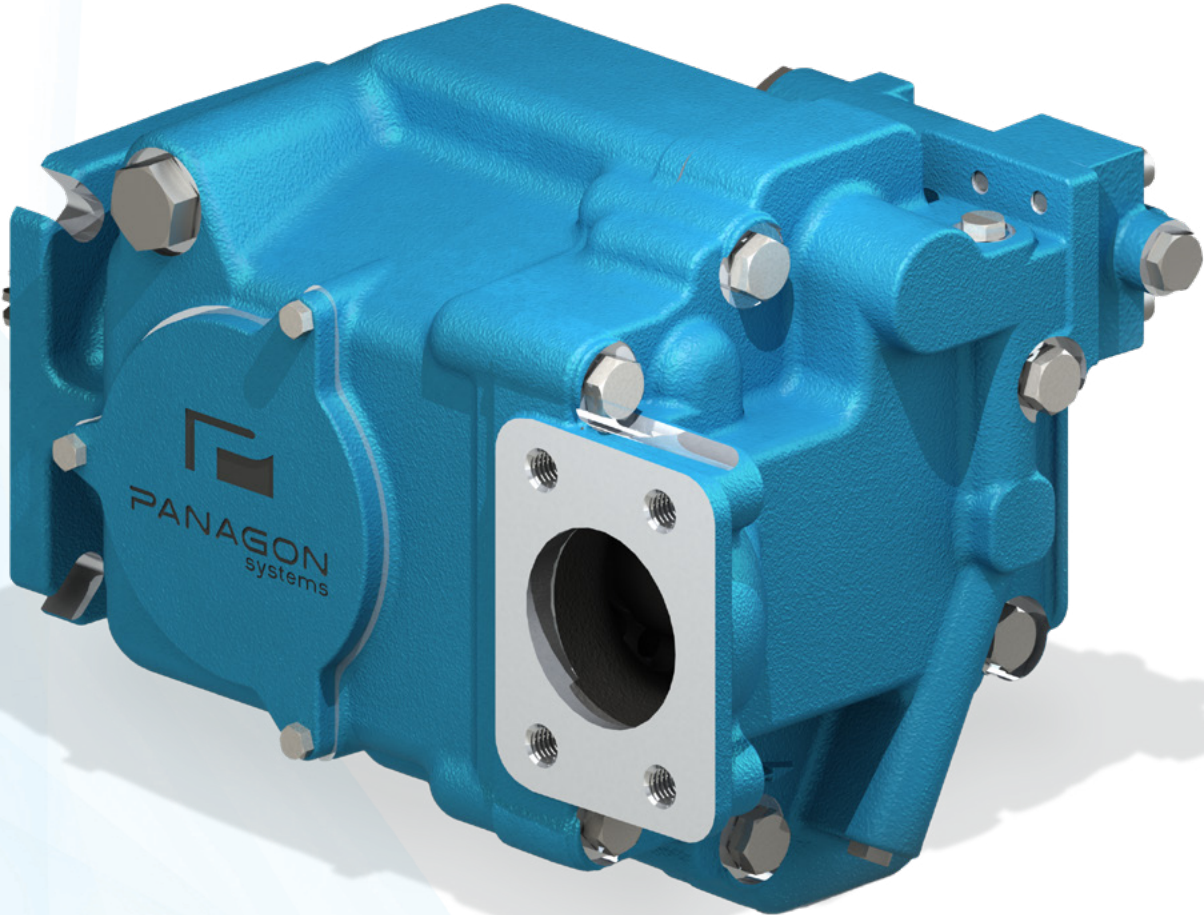
17 Special feature suffix

- 031 Mounting with SAE-A, 2-bolt cover plate
- 036 #2 "C" spline

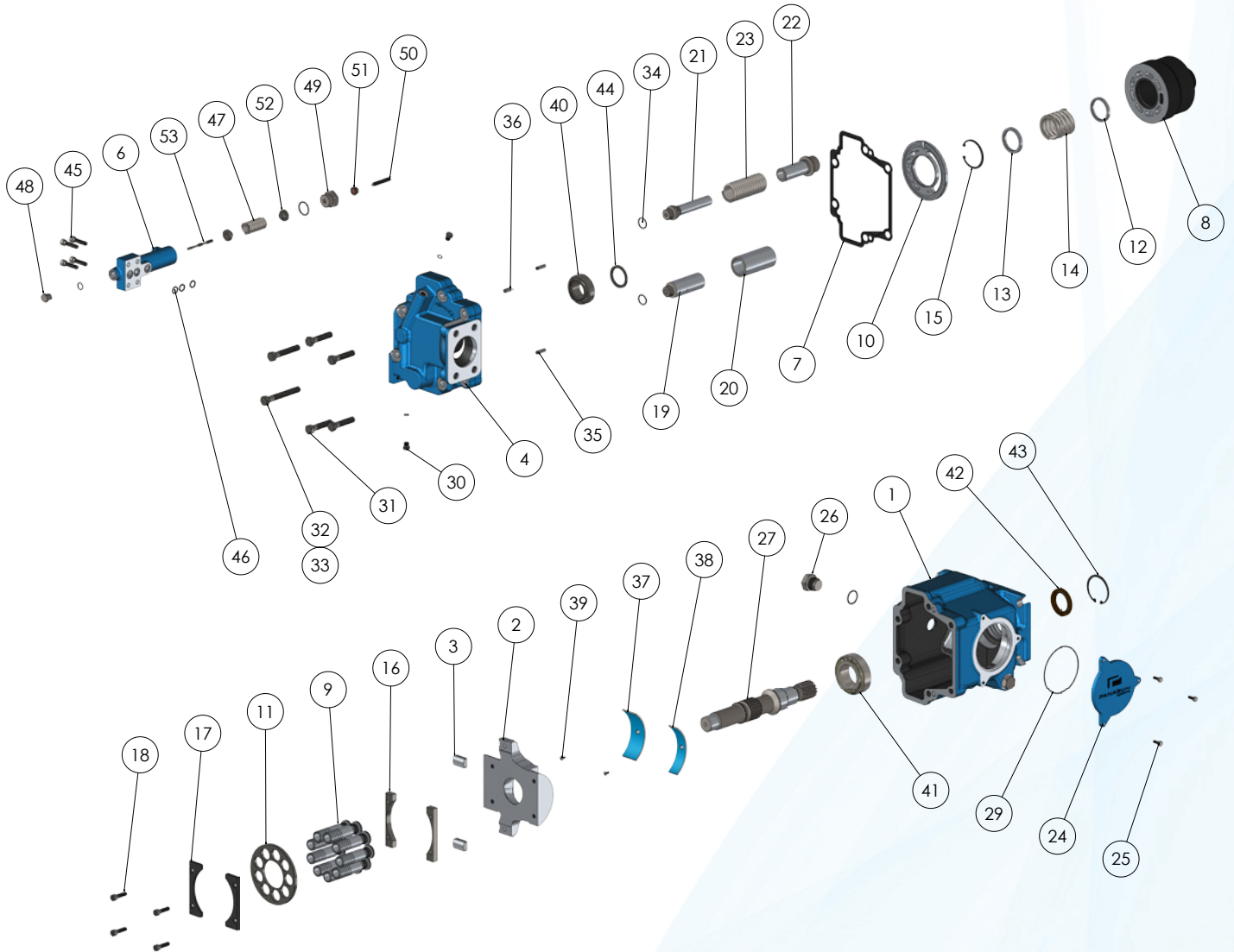
Model PVH74/81







Model PVH98/106



Model PVH98/106

ITEM	PART NUMBER		QTY	NOTE	DESCRIPTION
	Panagon	OEM			
1	See Table 1		1		Housing
2	PS577538	513629	1		Yoke
3	PS113861	937046	1		Yoke Bumper
4	See Table 2		1	B	Valve Block
5			1	B	Instruction Plate
6	See Table 3		1	C	Pressure Compensator Body
7	PS3149	513631	1	A/B	Gasket
8	PS1952	680627	1	D	Cylinder Block (98)
8	PS5812439	688218	1	E	Cylinder Block (106)
9	PS93349	02-152400	9	D	Piston/Shoe S/A (98)
9	PS136986	02-306365	9	E	Piston/Shoe S/A (106)
10	See Table 3		1	D/E	Control Plate
11	PS1957	584539	1	D/E	Shoe Plate
11	PS139611	688217	1	D/E	Shoe Plate
12	PS1953	584546	1	D/E	Inner Spring Guide
13	PS1955	584547	1	D/E	Outer Spring Guide
14	PS1954	627192	1	D/E	Spring
15	PS1956	102038	1	D/E	Retaining Ring
16	PS6034	513625	2		Spacer
17	PS1958	513626	2		Limiter
18	PS1968	473764	4		Socket Head Cap Screw
19	PS6006	526628	1		Control Rod
20	PS3860	526627	1		Control Piston
21	PS6017	513600	1	F	Bias Rod
22	PS6040	526689	1	F	Bias Piston
23	PS6041	526686	1		Spring
24	PS6043	513347	1		Cover - Cap
25	PS5899	470793	3		Hex Head Cap Screw
26	PS5898	513602	1		O-Ring Plug S/A M27
27	See Table 5		1		Drive Shaft
(28)	See Table 5		1	J	Key
29	PS135421	335659	1	A	O-Ring
30	PS5873	689461	2		O-Ring Plug S/A M10
31	PS6019	514573	4		Hex Head Cap Screw
32	PS6018	514574	1		Hex Head Cap Screw
33	PS5872	690406	1		Hex Head Cap Screw
34	PS135155	262355	2	A	O-Ring
35	PS5874	471512	2		Roll Pin
36	PS5571	248935	1		Pin
37	PS3203	513912	1		Saddle Bearing
38	PS3202	513911	1		Saddle Bearing
39	PS3199	690339	2		Flat Head Screw
40	PS3204	413603	1		Bearing
41	PS3201	388154	1		Bearing
42	PS136802	589332	1	A	Shaft Seal
43	PS1354	126911	1		Retaining Ring

ITEM	PART NUMBER		QTY	NOTE	DESCRIPTION
	Panagon	OEM			
44	PS6021	924082	1		Shaft Spacer
45	PS3259	473765	4	C	Socket Head Cap Screw
46	PS135119	177969	3	C	O-Ring
47	PS3254	857681	1	C	Spring
48	PS3261	627391	1	C	O-Ring Plug S/A #6
49	PS3256	860749	1	C	O-Ring Plug S/A #12
50	PS3255	860750	1	C	Adjusting Screw
51	PS3257	860747	1	C	Lock Nut
52	PS3258	857734	2	C	Seat
53	PS3260	857672	1	C	Spool
54	PS135407	576601	1	J	O-Ring
55	PS89040	864460	1	J	Coupling
56	See Table 6		1		J/K Adapter Pad Kit
57	PS95725	928450	1	G/J	Torque Bias Sleeve
58	PS95728	928449	1	G/J	Torque Bias Piston
59	PS95726	928447	1	G/J	Torque Bias Cap
60	PS95727	928456	1	G/J	Lock Ring
61	PS134833	262339	1	G/J	O-Ring
62	PS136660	263069	1	G/J	O-Ring
63	PS81131	197577	1	G/J	Back-Up Ring
64	PS5850	860741	1	H/J	Max Stop Adjustment Screw
65	PS5851	913341	1	H/J	Lock Nut

- A Included in 02-102264 / PS3143 Double Shaft Seal Kit
- B Included in Valve Plate S/A
- C Included in Pressure Compensator Kit
- D Included in Rotating Group
- E Included in Rotating Group
- F Non-Torque Control Models
- G Torque Models Only
- H Maximum Adjustable Stop Models Only
- J Part Not Shown
- K Used to Convert A Pilot to B or C

Model PVH98/106

Table 1 - Housing		
Model Code	Panagon	OEM
Model	Housing	
-C-*S	PS6035	513645
-C-*D	PS6036	864341
-C2-*S	PS6038	913253
-C2-*D	PS143007	860681
-C3-*S	PS6037	864311

Table 3 - Pressure Compensator				
Model Code	Panagon	OEM	Panagon	OEM
Model	Compensator Body		Compensator S/A	
C	PS3253	857722	PS3247	02-125160
CM			PS3248	02-125162
CV	PS5906	857733	PS3249	02-125161
CVB	PS103881	928442	PS103879	02-160591
CMV	PS5906	857733	PS3250	02-306056
IC (inch)	PS5981	883386	PS93341	02-151906
IC (metric)	PS5982	860628	PS103915	02-151907
C**T**S-31	PS103893	860653	PS93535	02-314944
C**T**S-31			PS103880	02-335254

Table 4 - Control Plate				
Model Code	Panagon	OEM	Panagon	OEM
Model	RH		LH	
98	PS577337	627371	PS3188	584540
98QI	PS3191	514122	PS3190	514120
98QP	PS90333	913742	--	--
106	PS139612	688219	PS576560	688220
106QI	PS137646	934319		934318
106QP		934317	--	--

Table 5- Drive Shaft				
Model Code	Panagon	OEM	Panagon	OEM
Model	Shaft		Key	
Straight Key	PS1980	527167	PS1978	114516
Splined	PS1982	513627	--	--
Splined Thru	PS1981	864453	--	--
Splined Thru -036	PS89006	860679	--	--
Straight Key Thru	PS1983	864454	PS1976	140282

Table 2 - Valve Block				
Model Code	Panagon	OEM	Panagon	OEM
Model	RH		LH	
F-11-C	PS115446	928635	PS113790	928684
M-11-C	PS117340	928636	PS117341	928685
SF-11-C	PS115447	928622	PS117342	928671
SM-11-C	PS117343	928623	PS117344	928672
F-11-CT	PS117345	860850	PS117346	860859
M-11-CT	PS117347	860851	PS117348	860860
F-10-C	PS6024	513603	PS6022	513632
M-10-C	PS6025	864258	PS6023	864279
SF-10-C	PS6032	860790	PS6030	860798
SM-10-C	PS6033	860791	PS6031	860799
F-10-CT	PS6028	860524	PS6026	513635
M-10-CT	PS6029	860525	PS6027	860523
AF-11-C	PS113431	928734	PS117377	928710
AM-11-C	PS5800147	928735	PS5800868	928711
AF-11-CT	PS137883	860832	PS143067	860841
AM-11-CT	PS5800867	860833	PS5800869	860842
AF-10-C	PS6071	864242	PS6069	526692
AM-10-C	PS6072	864243	PS6070	864266
AF-10-CT	PS6075	883350	PS6073	526693
AM-10-CT	PS6076	860528	PS6074	860526

Table 6 - Adapter Pad Kit								
Model Code	Panagon	OEM	Panagon	OEM	Panagon	OEM	Panagon	OEM
Model	Adapter Pad Kit		Adapter Flange		O-Ring		Coupling	
BF-1.*	PS89381	876390	PS5917	526670	PS135428	401525	PS89037	864457
BM-1.*	PS89383	876394	PS5918	876393			PS89039	864459
CF-1.*	PS7236	876389	PS5919	692934	PS5800291	353264	PS89038	864458
CM-1.*	PS89382	876392	PS5920	876391			PS89041	864461

Model PVE98/106

P V H * * (Q *) * * - * (*) * - * * * - 1 1 - * * * (* * *) (*) (*) - * * - * * *

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

1 Piston pump, variable displacement

2 Maximum geometric displacement

98 98.3 cm³/r (6.0 in³/r)
106 106.5 cm³/r (6.50 in³/r)

3 Application style

Blank Mobile application (rated speed & 250/280 bar (3600-4000 psi) pressures)
QI Quiet industrial application (1500 - 1800 rpm & 250/280 bar (3600-4000 psi) pressures)
QP Quiet power unit application (1800 rpm & 140 bar (2000 psi) max. pressures – R.H. rotation only)

4 Mounting flange, prime mover end

C SAE "C" 4-bolt type (SAE J744-127-4)
C2 Optional combination 2- & 4-bolt SAE- C pilot
C3 Optional 4-bolt SAE-C pilot for vertical pump mounting

5 Shaft rotation, viewed at prime mover end

R Right hand, clockwise
L Left hand, counterclockwise

6 Configuration

Blank Non-thru-drive (single pump)
A - SAE-A thru-drive pump, standard (SAE J744-82-2)
B SAE-B thru-drive pump, optional (SAE J744-101-2/4)
C SAE-C thru-drive pump, optional (SAE J744-127-2/4)
S Adjustable maximum volume stop ("S" option not available on thru-drive and torque control pump models.)

7 Main ports

F SAE 4-bolt flange ports (standard)
M SAE 4-bolt pads with metric mounting bolt threads

8 Shaft-end type, at prime mover end

1 SAE C straight key
2 SAE C 14 tooth spline
3 SAE CC 17 tooth spline
13 SAE CC straight key

9 Shaft seal, prime mover end

S Single, one-way
D Double, two-way

10 Pump design number

11 (Subject to change. Installation dimensions unaltered for design numbers 10 to 19 inclusive.)

11 Pressure control type

C Compensator, 140-280 bar (2000-4000 psi)
CM Compensator, 35-140 bar (500-2000 psi)
IC CETOP 3 interface compensator, 20 bar factory "differential" pressure setting (QI and QP models only)

12 Factory compensator pressure setting

Blank - Leave blank for "IC" controls only
7 70 bar (1015 psi) normal "CM7" setting (all pump sizes)
23 230 bar (3335 psi) normal "C23" setting (63, 81, 106, 141 models)
25 250 bar (3625 psi) normal "C25" setting (57, 74, 98, 131 models)

13 Optional pressure control functions

Blank Leave blank for basic compensator controls of IC models.
V Load sensing, 20 bar (290 psi) factory "differential" pressure setting
T Torque limiting control (Used with sections and .
VT Load sensing with torque limiting
VB Load sensing with internal bleed down (0.15" dia. orifice)
VBT Load sensing with internal bleed down and torque limiting

Model PVE98/106 - Cont

14 Torque limiting control pressure setting

- Blank Leave blank if no torque limiting control is used
- 4 Standard minimum 40 bar setting of "T" torque control option

15 Torque limiting control summation

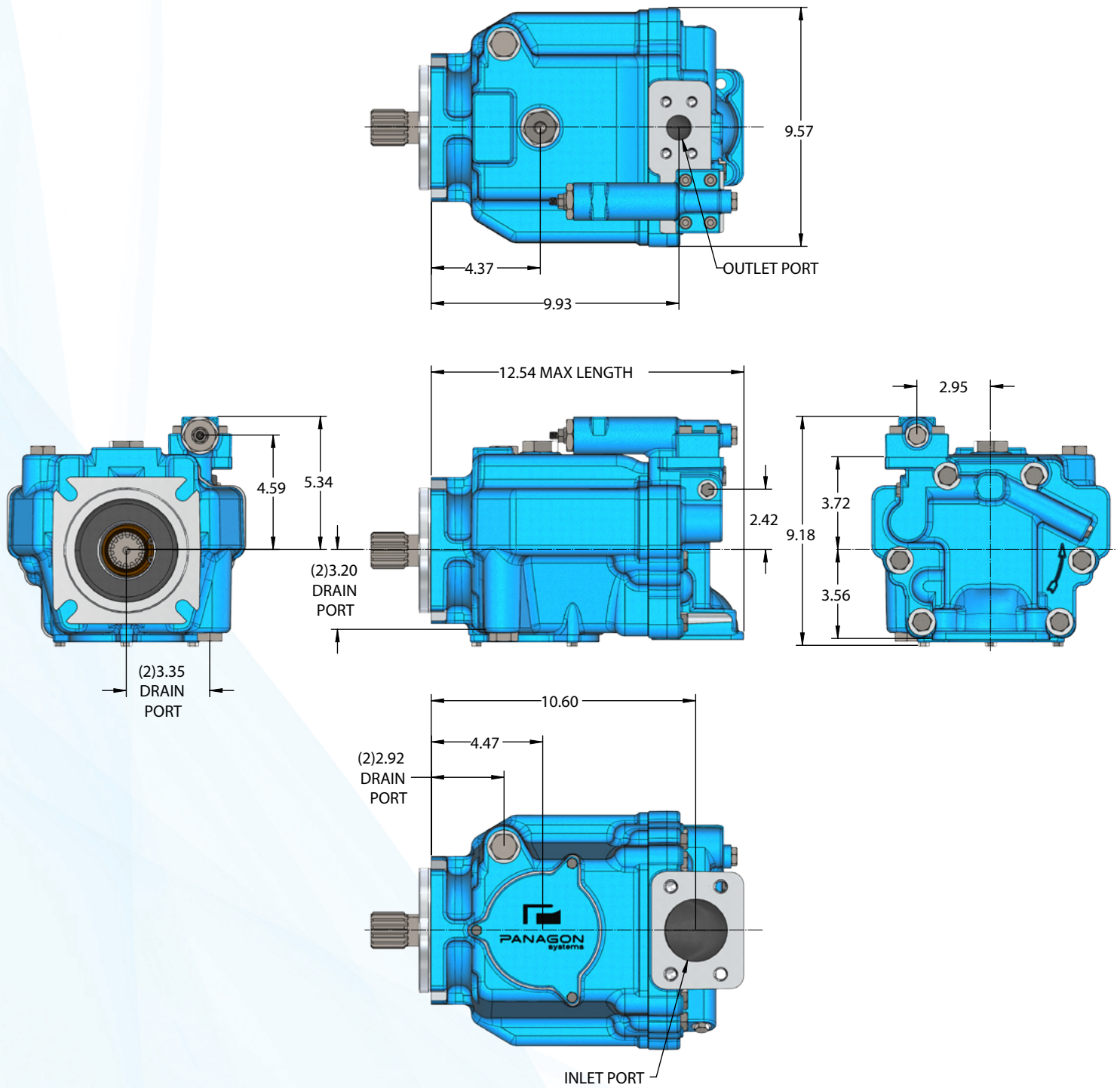
- Blank Standard torque control
- S Optional torque control with summation feature

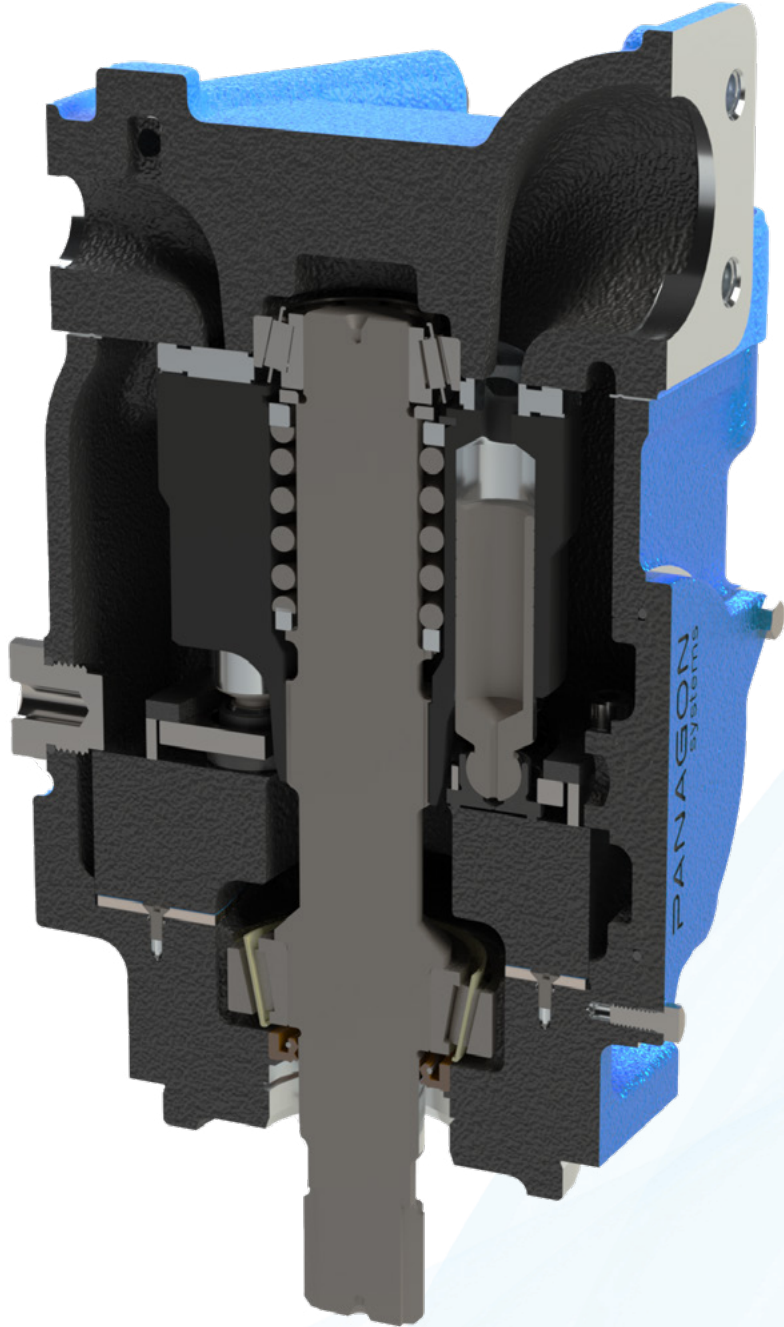
16 Control design number

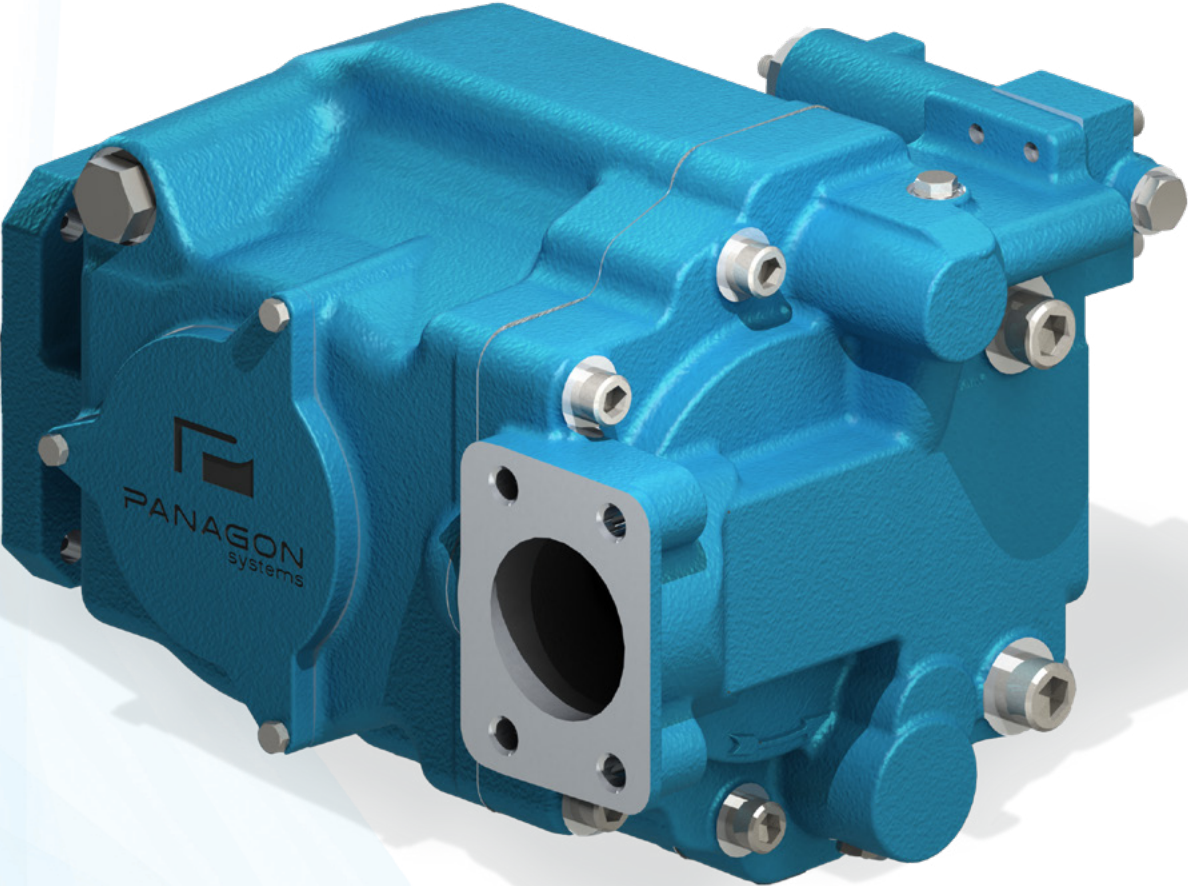
- 31 All control options

17 Special feature suffix

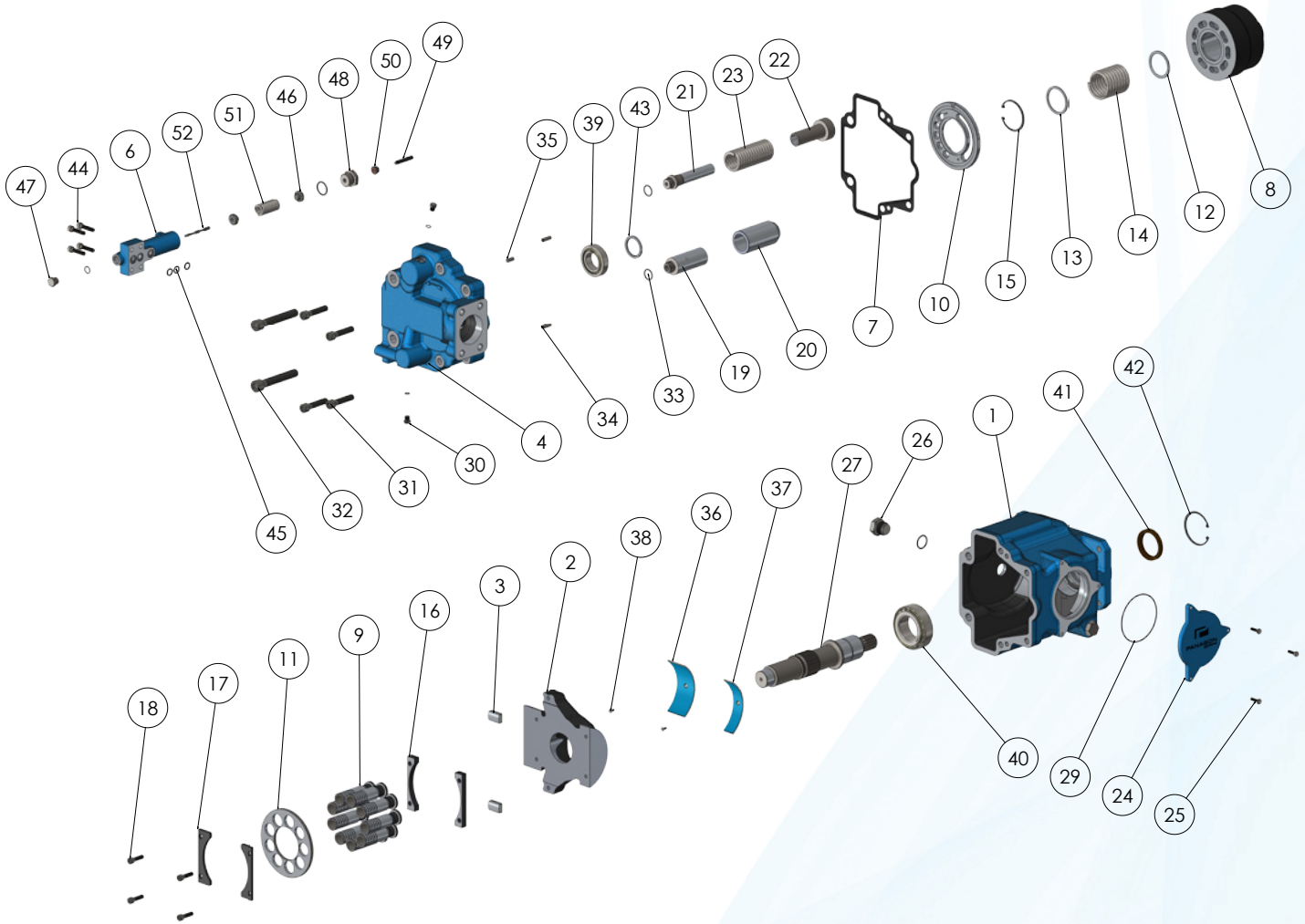
- 031 Mounting with SAE-A, 2-bolt cover plate
- 036 #2 "C" spline







Model PVH131/141



Model PVH131/141

ITEM	PART NUMBER		QTY	NOTE	DESCRIPTION
	Panagon	OEM			
1	See Table 1		1		Housing
2	PS577538	513629	1		Yoke
3	PS113861	937046	1		Yoke Bumper
4	See Table 2		1	B	Valve Block
5			1	B	Instruction Plate
6	See Table 3		1	C	Pressure Compensator Body
7	PS3151	526760	1	A/B	Gasket
8	PS1960	680628	1	D	Cylinder Block (131)
8	PS137549	928786	1	E	Cylinder Block (141)
9	PS92295	02-159749	9	D	Piston/Shoe S/A (131)
9	PS116517	02-306332	9	E	Piston/Shoe S/A (141)
10	See Table 4		1	D/E	Control Plate
11	PS1965	683791	1	D/E	Shoe Plate (131)
11	PS116519	928776	1	D/E	Shoe Plate (141)
12	PS1961	417667	1	D/E	Inner Spring Guide
13	PS1963	581104	1	D/E	Outer Spring Guide
14	PS1962	626111	1	D/E	Spring
15	PS1964	135066	1	D/E	Retaining Ring
16	PS85084	526757	2		Spacer
17	PS1966	526758	2		Limiter
18	PS1968	473764	4		Socket Head Cap Screw
19	PS85083	526754	1		Control Rod
20	PS85082	526753	1		Control Piston
21	PS11777	526752	1	F	Bias Rod
22	PS11775	692152	1	F	Bias Piston
23	PS11776	526690	1		Spring
24	PS87974	692946	1		Cover - Cap
25	PS5980	470794	3		Hex Head Cap Screw
26	PS5898	513602	1		O-Ring Plug S/A M27
27	See Table 5		1		Drive Shaft
28	See Table 5		1	J	Key
29	PS135421	335659	1	A	O-Ring
30	PS5873	689461	2		O-Ring Plug S/A M10
31	PS94221	473806	4		Soc Head Cap Screw
32	PS84406	473833	2		Soc Head Cap Screw
33	PS135155	262355	2	A	O-Ring
34	PS5874	471512	2		Roll Pin
35	PS5571	248935	1		Pin
36	PS3198	692948	1		Saddle Bearing
37	PS3197	692949	1		Saddle Bearing
38	PS3199	690339	2		Flat Head Screw
39	PS3200	513433	1		Bearing
40	PS3196	388206	1		Bearing
41	PS136801	864200	1	A	Shaft Seal
42	PS6095	194030	1		Retaining Ring
43	PS93277	02-142690	1		Shaft Spacer

ITEM	PART NUMBER		QTY	NOTE	DESCRIPTION
	Panagon	OEM			
44	PS3259	473765	4	C	Socket Head Cap Screw
45	PS135119	177969	3	C	O-Ring
46	PS3254	857681	1	C	Spring
47	PS3261	627391	1	C	O-Ring Plug S/A #6
48	PS3256	860749	1	C	O-Ring Plug S/A #12
49	PS3255	860750	1	C	Adjusting Screw
50	PS3257	860747	1	C	Lock Nut
51	PS3258	857734	2	C	Seat
52	PS3260	857672	1	C	Spool
53	PS135407	576601	1	J	O-Ring
54	PS89040	864460	1	J	Coupling
55	See Table 6		1	J/K	Adapter Pad Kit
56	PS95725	928450	1	G/J	Torque Bias Sleeve
57	PS95728	928449	1	G/J	Torque Bias Piston
58	PS95726	928447	1	G/J	Torque Bias Cap
59	PS95727	928456	1	G/J	Lock Ring
60	PS134833	262339	1	G/J	O-Ring
61	PS136660	263069	1	G/J	O-Ring
62	PS81131	197577	1	G/J	Back-Up Ring
63	PS5850	860741	1	H/J	Max Stop Adjustment Screw
64	PS5851	913341	1	H/J	Lock Nut

- A Included in 02-102266 / PS3144 Double Shaft Seal Kit
- B Included in Valve Plate S/A
- C Included in Pressure Compensator Kit
- D Included in Rotating Group
- E Included in Rotating Group
- F Non-Torque Control Models
- G Torque Models Only
- H Maximum Adjustable Stop Models Only
- J Part Not Shown
- K Used to Convert A Pilot to B or C

Model PVH131/141

Table 1 - Housing		
Model Code	Panagon	OEM
Model	Housing	
-C-*S	PS87973	692944
-C-*D	PS89380	876277
-C3-*S	PS96343	864310

Table 3 - Pressure Compensator				
Model Code	Panagon	OEM	Panagon	OEM
Model	Compensator Body		Compensator S/A	
C	PS3253	857722	PS3247	02-125160
CM			PS3248	02-125162
CV	PS5906	857733	PS3249	02-125161
CVB	PS103881	928442	PS103879	02-160591
CMV	PS5906	857733	PS3250	02-306056
IC (inch)	PS5981	883386	PS93341	02-151906
IC (metric)	PS5982	860628	PS103915	02-151907
C**T**S-31	PS103893	860653	PS93535	02-314944
C**T**S-31			PS103880	02-335254

Table 4 - Control Plate				
Model Code	Panagon	OEM	Panagon	OEM
Model	RH		LH	
131	PS3193	527164	PS3192	527163
131QI	PS3195	864381	PS3194	876045
131QP	PS90315	913578	--	--
141	PS90777	928774	PS138173	934240
141QI	PS110993	934242	PS138426	934243
141QP	PS138427	934241	--	--

Table 2 - Valve Block				
Model Code	Panagon	OEM	Panagon	OEM
Model	RH		LH	
F-11-C	PS114466	928637	PS114645	928687
M-11-C	PS143157	928638	PS5800874	928688
SF-11-C	PS137872	928624	PS5800875	928673
SM-11-C	PS5800872	928625	PS5800876	928674
F-11-CT	PS137185	860852	PS137870	860861
M-11-CT	PS5800873	860853	PS5800877	860862
F-10-C	PS6084	876046	PS6082	876156
M-10-C	PS6085	514382	PS6083	876157
SF-10-C	PS6092	860792	PS6090	860800
SM-10-C	PS6093	860793	PS6091	860801
F-10-CT	PS6088	860530	PS6086	860529
M-10-CT	PS6089	860531	PS6087	692107
AF-11-C	PS114524	928736	PS113605	928713
AM-11-C	PS5800880	928737	PS5800878	928714
AF-11-CT	PS137884	860834	PS137880	860843
AM-11-CT	PS5800882	860835	PS5800881	860844
AF-10-C	PS6098	876149	PS6096	876145
AM-10-C	PS6099	876150	PS6097	876304
AF-10-CT	PS6102	860533	PS6100	860532

Table 5 - Drive Shaft				
Model Code	Panagon	OEM	Panagon	OEM
Model	Shaft		Key	
Splined Thru	PS1971	876177	--	--
Splined Thru	PS1973	860594	--	--
Straight Key Thru	PS1975	876176	PS1044	633260
Splined	PS89012	860802	--	--
Splined	PS1970	877042	--	--
Splined	PS1972	860593	--	--
Straight Key	PS1974	876175	PS1976	140282

Table 6 - Adapter Pad Kit								
Model Code	Panagon	OEM	Panagon	OEM	Panagon	OEM	Panagon	OEM
Model	Adapter Pad Kit		Adapter Flange		O-Ring		Coupling	
*BF-1**	PS89381	876390	PS5917	526670	PS135428	401525	PS89037	864457
*BM-1**	PS89383	876394	PS5918	876393			PS89039	864459
*CF-1**	PS7236	876389	PS5919	692934	PS5800291	353264	PS89038	864458
*CM-1**	PS89382	876392	PS5920	876391			PS89041	864461

Model PVE131/141

P V H * * (Q *) * * - * (*) * - * * * - 1 1 - * * * (* * *) (*) (*) - * * - * * *

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

1 Piston pump, variable displacement

2 Maximum geometric displacement

131 131.1 cm³/r (8.0 in³/r)
141 141.6 cm³/r (8.64 in³/r)

3 Application style

Blank Mobile application (rated speed & 250/280 bar (3600-4000 psi) pressures)
QI Quiet industrial application (1500 - 1800 rpm & 250/280 bar (3600-4000 psi) pressures)
QP Quiet power unit application (1800 rpm & 140 bar (2000 psi) max. pressures – R.H. rotation only)

4 Mounting flange, prime mover end

C SAE "C" 4-bolt type (SAE J744-127-4)
C3 Optional 4-bolt SAE-C pilot for vertical pump mounting

5 Shaft rotation, viewed at prime mover end

R Right hand, clockwise
L Left hand, counterclockwise

6 Configuration

Blank Non-thru-drive (single pump)
A SAE-A thru-drive pump, standard (SAE J744-82-2)
B SAE-B thru-drive pump, optional (SAE J744-101-2/4)
C SAE-C thru-drive pump, optional (SAE J744-127-2/4)
S Adjustable maximum volume stop ("S" option not available on thru-drive and torque control pump models.)

7 Main ports

F SAE 4-bolt flange ports (standard)
M SAE 4-bolt pads with metric mounting bolt threads

8 Shaft-end type, at prime mover end

2 SAE-C 14 tooth spline
3 SAE-CC 17 tooth spline
12 SAE-D 13 tooth spline
13 SAE-CC straight keyed
16 SAE-D straight keyed

9 Shaft seal, prime mover end

S Single, one-way
D Double, two-way

10 Pump design number

11 (Subject to change. Installation dimensions unaltered for design numbers 10 to 19 inclusive.)

11 Pressure control type

C Compensator, 140-280 bar (2000-4000 psi)
CM Compensator, 35-140 bar (500-2000 psi)
IC CETOP 3 interface compensator, 20 bar factory "differential" pressure setting (QI and QP models only)

12 Factory compensator pressure setting

Blank Leave blank for "IC" controls only
7 70 bar (1015 psi) normal "CM7" setting (all pump sizes)
23 230 bar (3335 psi) normal "C23" setting (63, 81, 106, 141 models)
25 250 bar (3625 psi) normal "C25" setting (57, 74, 98, 131 models)

13 Optional pressure control functions

Blank Leave blank for basic compensator controls of IC models.
V Load sensing, 20 bar (290 psi) factory "differential" pressure setting
T Torque limiting control (Used with sections and .
VT Load sensing with torque limiting
VB Load sensing with internal bleed down (0.15" dia. orifice)
VBT Load sensing with internal bleed down and torque limiting

Model PVE131/141 - Cont

14 Torque limiting control pressure setting

- Blank Leave blank if no torque limiting control is used
- 4 Standard minimum 40 bar setting of "T" torque control option

15 Torque limiting control summation

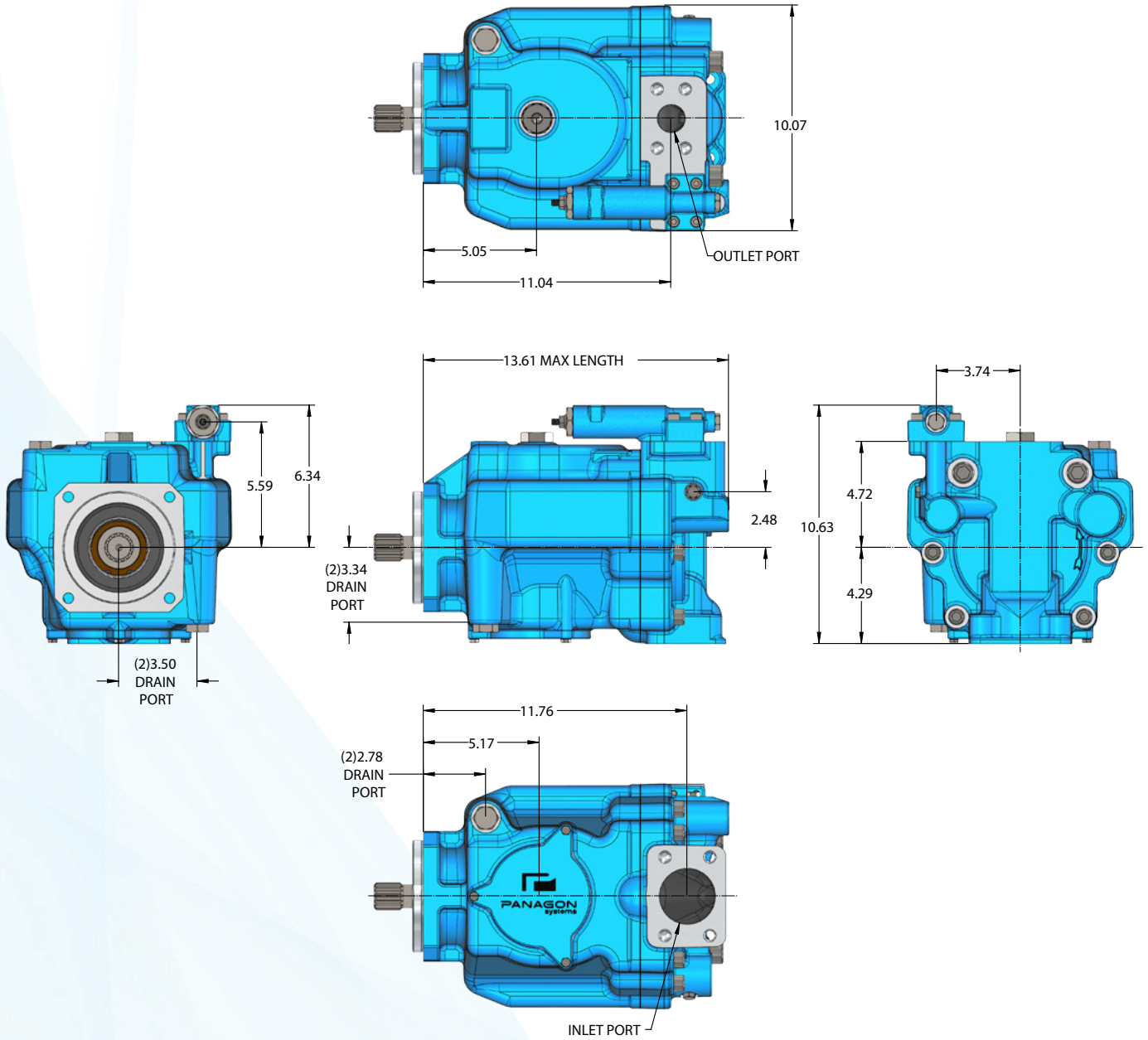
- Blank Standard torque control
- S Optional torque control with summation feature

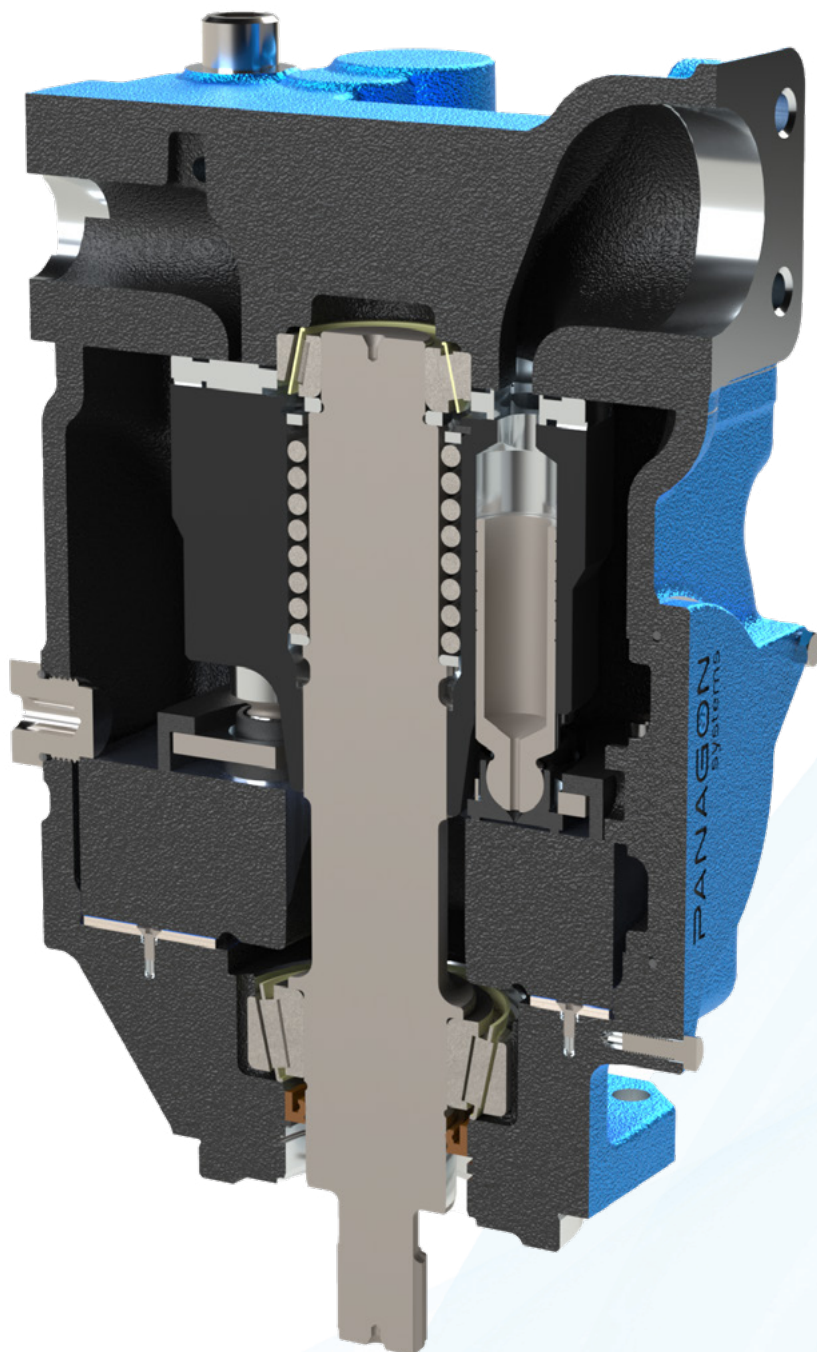
16 Control design number

- 31 All control options

17 Special feature suffix

- 031 Mounting with SAE-A, 2-bolt cover plate







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