

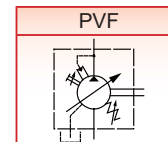
[PVF, PVDF, VD]

※SPECIFICATION

MODEL	MAX. PRES. MPa(Psi)	MAX. FLOW ℓ/min(GPM) at 1800 RPM	WEIGHT (Kg)
PVF-8	7 (1015)	8(1.8)	4.8
PVF-12		12(2.6)	4.8
PVF-15		15(3.3)	5.2
PVF-20		20(4.4)	5.2
PVF-23		23(5.1)	9.0
PVF-26		26(5.7)	9.0
PVF-30		30(6.6)	9.0
PVF-40		40(8.8)	9.0
PVDF-12-*-12*		12(2.6)	9.5
PVDF-15-*-15		15(3.3)	9.5
PVDF-20-*-20		20(4.4)	9.5
PVDF-23-*-23		23(5.1)	16.0
PVDF-26-*-26		26(5.7)	16.0
PVDF-30-30		30(6.6)	16.0
PVDF-40-40		40(8.8)	16.0



※GRAPHIC SYMBOL



SPEED LIMIT : Min. 800 r/min, Max. 1800 r/min.

※MODEL NUMBER DESIGNATION(SINGLE PUMP)

PVF-	12-	70-	10-	S
FRAME SIZE FLANGE MOUNTING	OUTLET FLOW (AT 3.5 Bar, 1800 r/min) 8: 8 (ℓ/min) 12: 12 (ℓ/min) 15: 15 (ℓ/min) 20: 20 (ℓ/min) 23: 23 (ℓ/min) 26: 26 (ℓ/min) 30: 30 (ℓ/min) 40: 40 (ℓ/min)	OPR. PRES. RANGE 20: 8 bar - 20 bar 35: 15 bar - 35 bar 55: 30 bar - 55 bar 70: 50 bar - 70 bar	DESIGN	SHAFTS CODE K1: KEY NO.1 K2: KEY NO.2 (Refer to Dimension) S: SPLINED SHAFTS

※MODEL NUMBER DESIGNATION(DOUBLE PUMP)

PVDF	12	70	12	70	10	S
	SHAFT END PUMP		COVER END PUMP			
FRAME SIZE FLANGE MOUNTING	OUTLET FLOW (AT 3.5 Bar, 1800 r/min) 12: 12 (ℓ/min) 15: 15 (ℓ/min) 20: 20 (ℓ/min) 23: 23 (ℓ/min) 26: 26 (ℓ/min) 30: 30 (ℓ/min) 40: 40 (ℓ/min)	OPR. PRES. RANGE 20: 8 bar - 20 bar 35: 15 bar - 35 bar 55: 30 bar - 55 bar 70: 50 bar - 70 bar	OUTLET FLOW (AT 3.5 Bar, 1800 r/min) 12: 12 (ℓ/min) 15: 15 (ℓ/min) 20: 20 (ℓ/min) 23: 23 (ℓ/min) 26: 26 (ℓ/min) 30: 30 (ℓ/min) 40: 40 (ℓ/min)	OPR. PRES. RANGE 20: 8 bar - 20 bar 35: 15 bar - 35 bar 55: 30 bar - 55 bar 70: 50 bar - 70 bar	DESIGN	SHAFTS CODE 01: KEY NO.1 02: KEY NO.2 (Refer to Dimension) S: SPLINED SHAFTS

※MODEL NUMBER DESIGNATION(SINGLE PUMP)

VD	12	B	10	S
SERIES NO	OUTLET FLOW 08: 8 (cm ³ /rev) 12: 12 (cm ³ /rev) 16: 16 (cm ³ /rev)	OPR. PRES. RANGE A: 8 bar - 20 bar(8) B: 15 bar - 35 bar(15) C: 30 bar - 55 bar(30) D: 50 bar - 70 bar(50)	DESIGN	SHAFTS CODE OMIT: WOODRUFF KEY S: SPLINED SHAFTS

■ STABLE FLOW

Due to use new design "PRESSURE BALANCE MECHANISM" the output flow pressure control systems, the output flow is very stable even in the high pressure ranges.

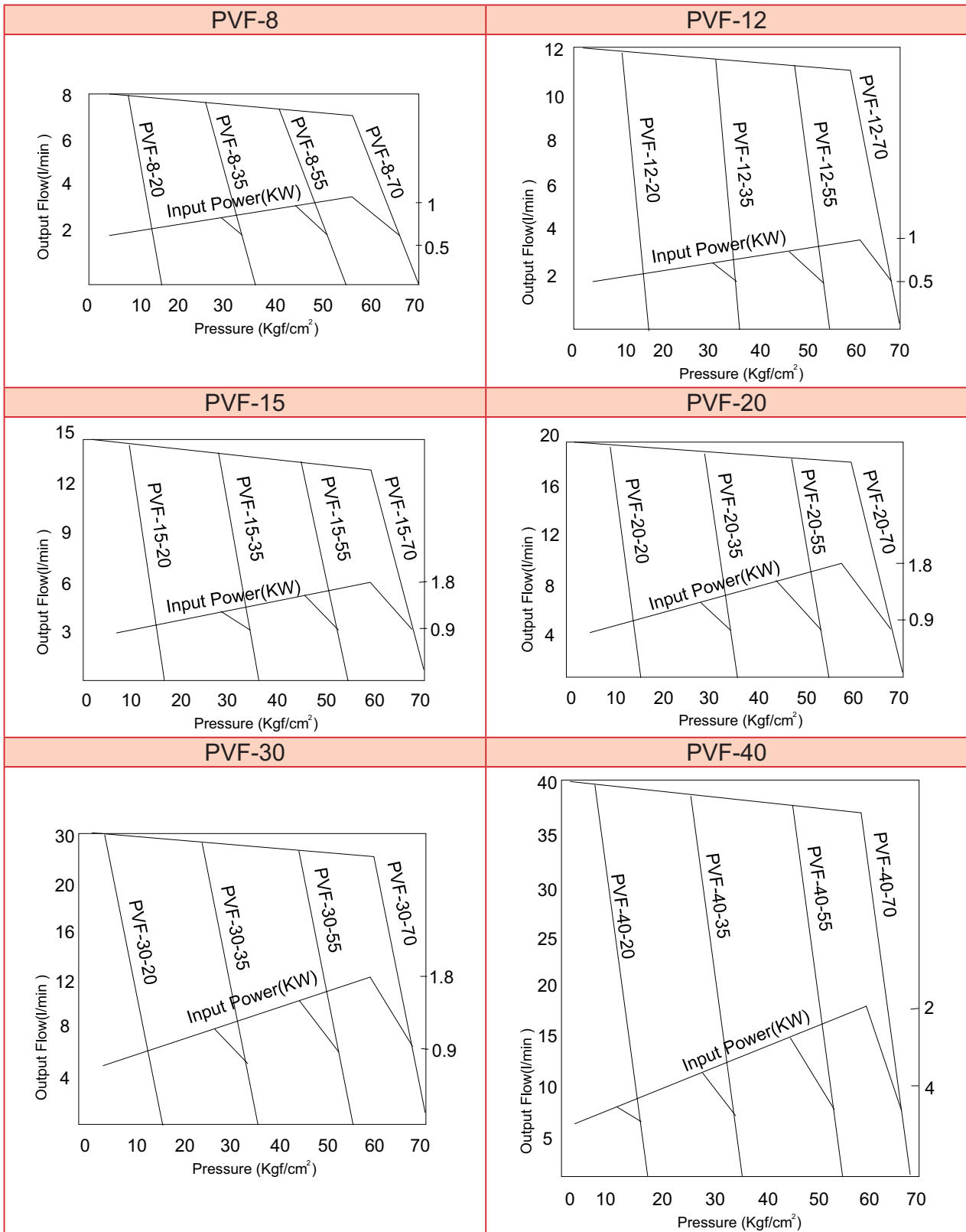
■ ENERGY SAVING TYPE

Power loss has been reduced further by application of our highly advanced precision machining technology to assure the same high efficiency performance. As the "VP5" series with many new mechanisms of our improvement designs. And the power loss at the "dead head" has been reduced by a large degree.

■ NO VIBRATION AND QUIET

The cam ring is specifically designed to have a special curve so the noise level [dB] is very low, even in the high pressure operations.

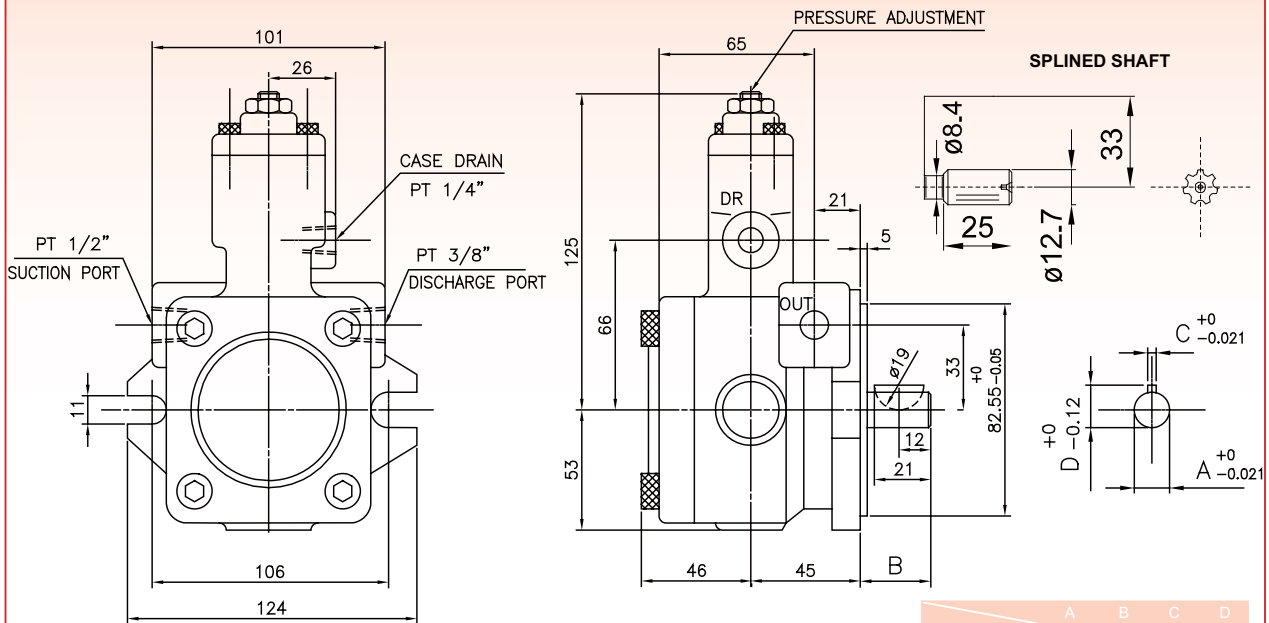
[SPECIFICATION CURVE]



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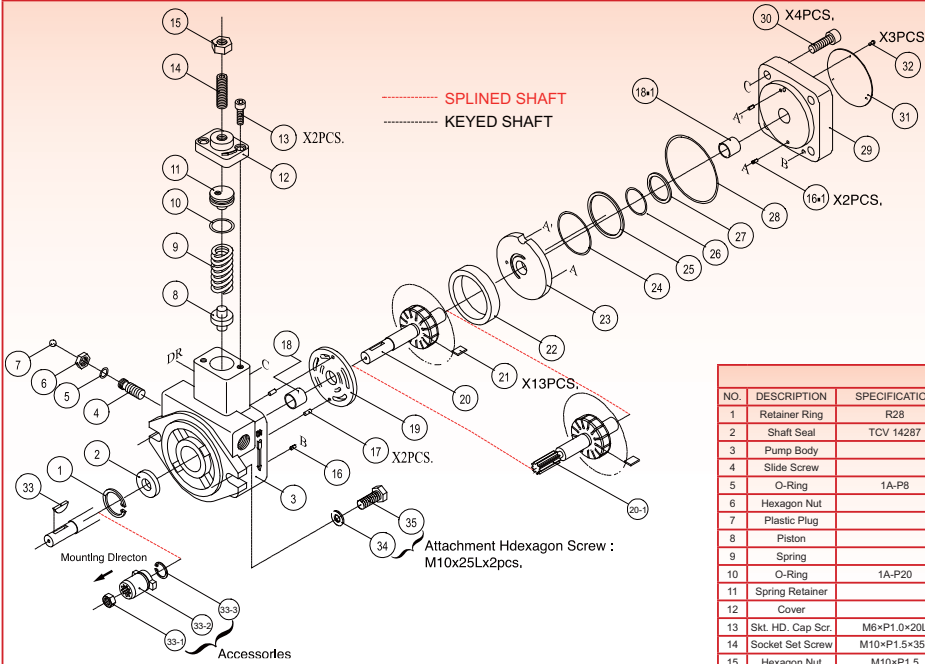
[DIMENSIONS]

PVF-8, 12, 15, 20



	A	B	C	D
K1 SHAFT	Ø12.7	36	3.175	14.3
K2 SHAFT (PVF-20 ONLY)	Ø15.88	32	4	17.6

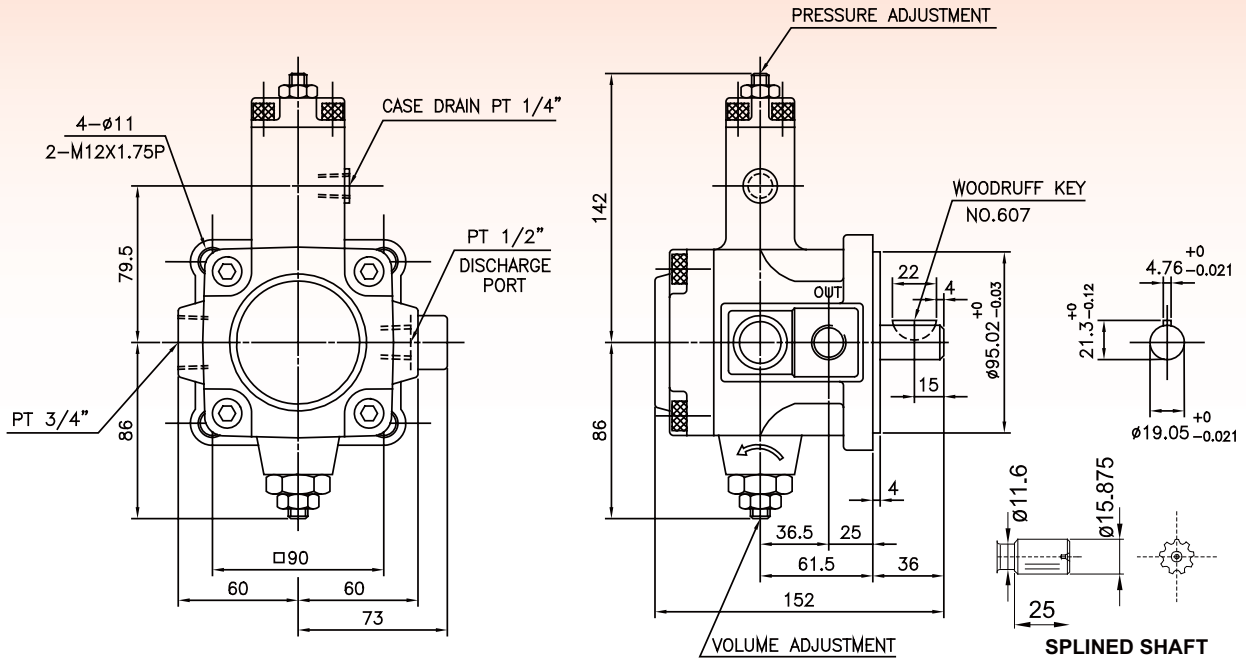
ASSEMBLY & PARTS LIST



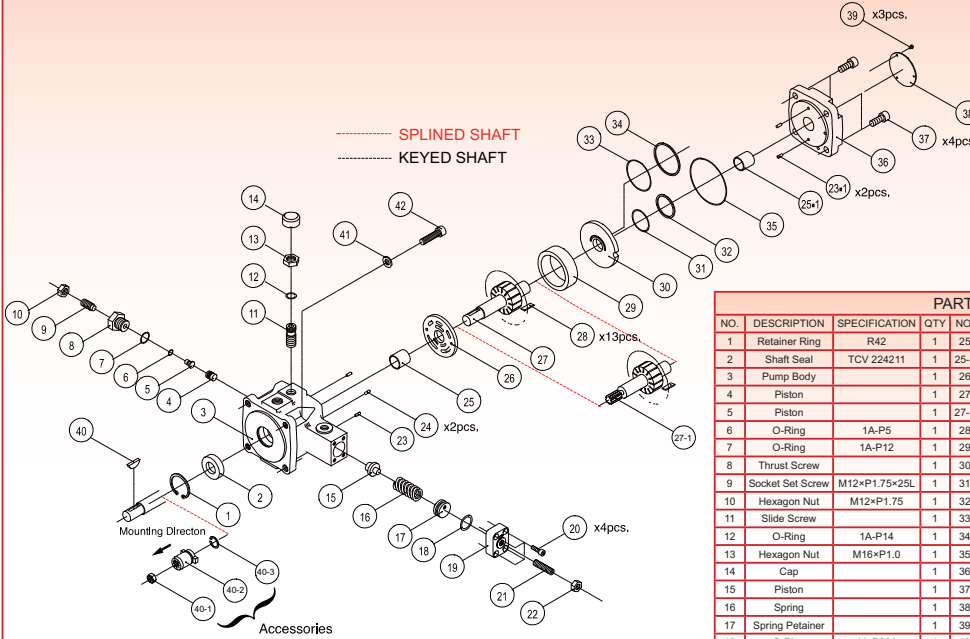
PARTS LIST							
NO.	DESCRIPTION	SPECIFICATION	QTY	NO.	DESCRIPTION	SPECIFICATION	QTY
1	Retainer Ring	R28	1	20	Rotorshaft		1
2	Shaft Seal	TCV 14287	1	21	Vaness		13
3	Pump Body		1	22	Cam Ring		1
4	Slide Screw		1	23	Thrust Plate		1
5	O-Ring	1A-P8	1	24	O-Ring	AS568-031	1
6	Hexagon Nut		1	25	Endless Back-up Ring		1
7	Plastic Plug		1	26	O-Ring	AS568-023	1
8	Piston		1	27	Endless Back-up Ring	Keyed Shaft	1
9	Spring		1	27-1	Endless Back-up Ring	Spined Shaft	1
10	O-Ring	1A-P20	1	28	O-Ring	1A-S71	1
11	Spring Retainer		1	29	Cover		1
12	Cover		1	30	-Skt. HD. cap Scr.	M8×P1.25×30L	4
13	Skt. HD. Cap Scr.	M6×P1.0×20L	2	31	Name Plate		1
14	Socket Set Screw	M10×P1.5×35L	1	32	Fixing Screw		3
15	Hexagon Nut	M10×P1.5	1	33	Woodruff Key	NO.406	1
16	Spring Pin	ø3 8	1	33-1	Hexagon Nut	M10 X P1.2	1
16-1	Spring Pin	ø3 8	2	33-2	Coupling		1
17	Straight Pin	ø3 8	2	33-3	Retainer Ring		1
18	Engine Bush	DIADO(JAPAN)DD1415	1	34	Washer	M10	2
18-1	Engine Bush	DIADO(JAPAN)DD1415	1	35	Hexagon Screw	M10×P1.5×25L	2
19	Port Plate		1		#33-1-35 are Accessories.		

[DIMENSIONS]

PVF-23, 26, 30, 40



ASSEMBLY & PARTS LIST



PARTS LIST							
NO.	DESCRIPTION	SPECIFICATION	QTY	NO.	DESCRIPTION	SPECIFICATION	QTY
1	Retainer Ring	R42	1	25	Engine Bush	DIADO(JAPAN)DD2225	1
2	Shaft Seal	TCV Z24211	1	25-1	Engine Bush	DIADO(JAPAN)DD2225	1
3	Pump Body		1	26	Port Plate		1
4	Piston		1	27	Rotorshaft	Keyed Shaft	1
5	Piston		1	27-1	Port Plate	Splined Shaft	1
6	O-Ring	1A-P5	1	28	Vanes		13
7	O-Ring	1A-P12	1	29	Cam Ring		1
8	Thrust Screw		1	30	Thrust Plate		1
9	Socket Set Screw	M12×P1.75×25L	1	31	O-Ring	ASS68-030	1
10	Hexagon Nut	M12×P1.75	1	32	Endless Back-up Ring		1
11	Slide Screw		1	33	O-Ring	ASS68-035	1
12	O-Ring	1A-P14	1	34	Endless Back-up Ring		1
13	Hexagon Nut	M16×P1.0	1	35	O-Ring	1A-S85	1
14	Cap		1	36	Cover		1
15	Piston		1	37	Skt. HD. cap Scr.	M10×P1.5×25L	4
16	Spring		1	38	Name Plate		1
17	Spring Retainer		1	39	Fixing Screw		3
18	O-Ring	1A-P22A	1	40	Woodruff Key	NO 608	1
19	Cover		1	40-1	Hexagon Nut	M10 X P1.5	1
20	Skt. HD. Cap Scr.	M6×P1.0×20L	4	40-2	Coupling		1
21	Socket Set Screw	M10×P1.5×35L	1	40-3	Retainer Ring	R24	4
22	Hexagon Nut	M10×P1.5	1	41	Spring Washer	M10	4
23	Spring Pin	ø4×10	1	42	Skt. HD. cap Scr.	M10×P1.5×30L	4
23-1	Spring Pin	ø4×10	2				
24	Spring Pin	ø4×10	2				

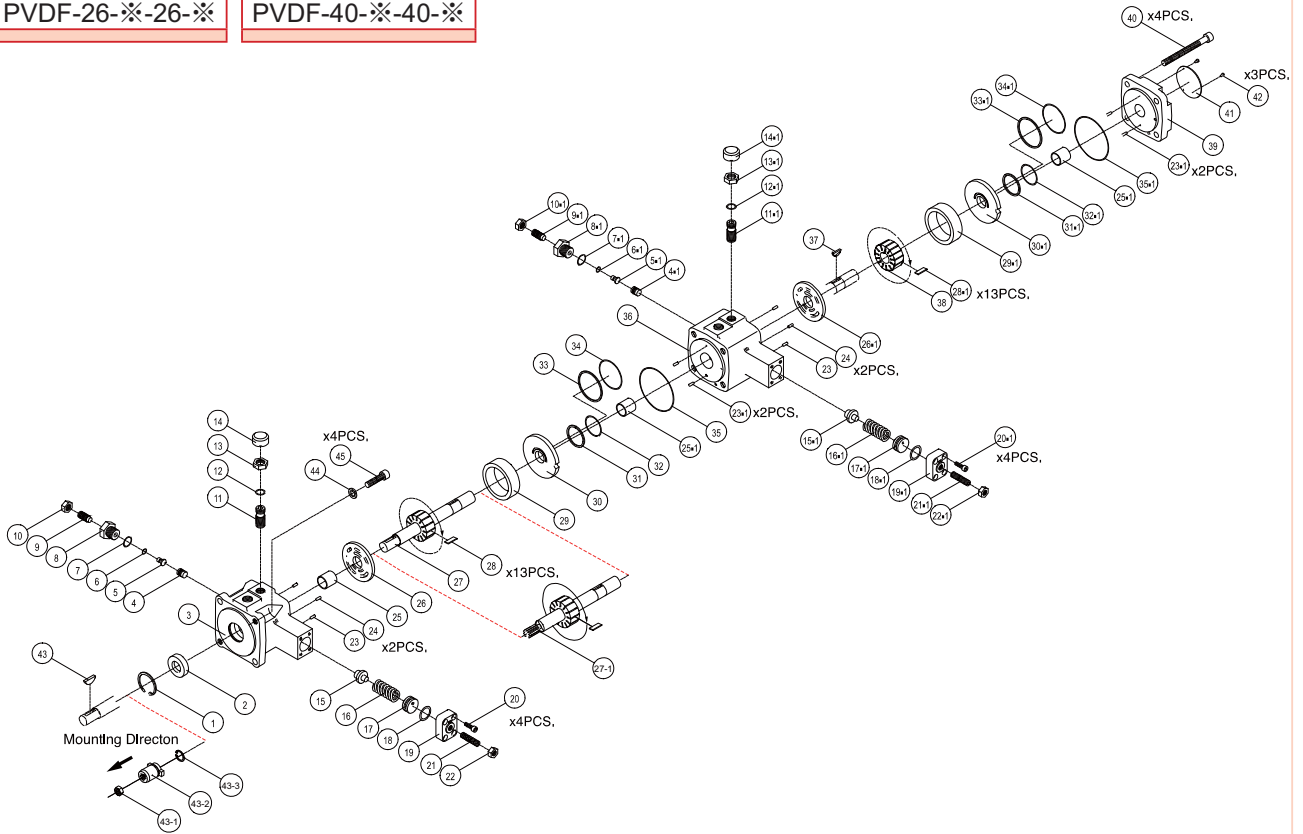
[ASSEMBLY & PARTS LIST]

PVDF-23-※-23-※

PVDF-30-※-30-※

PVDF-26-※-26-※

PVDF-40-※-40-※

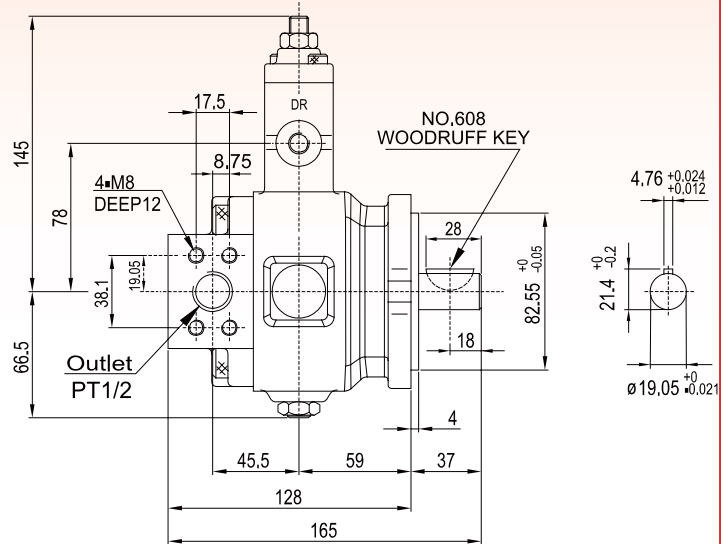
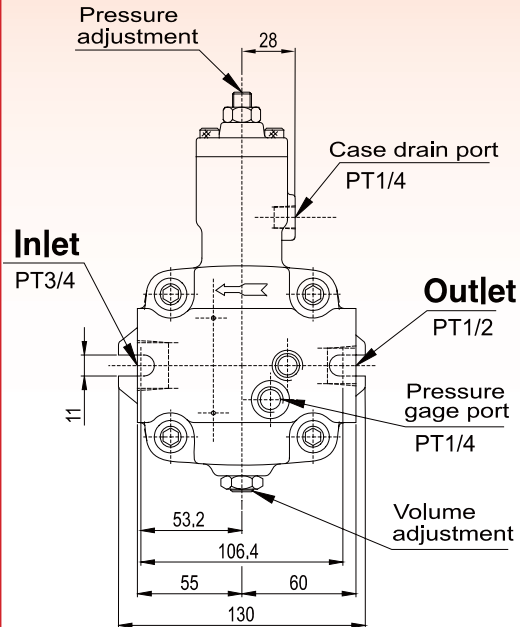


PARTS LIST

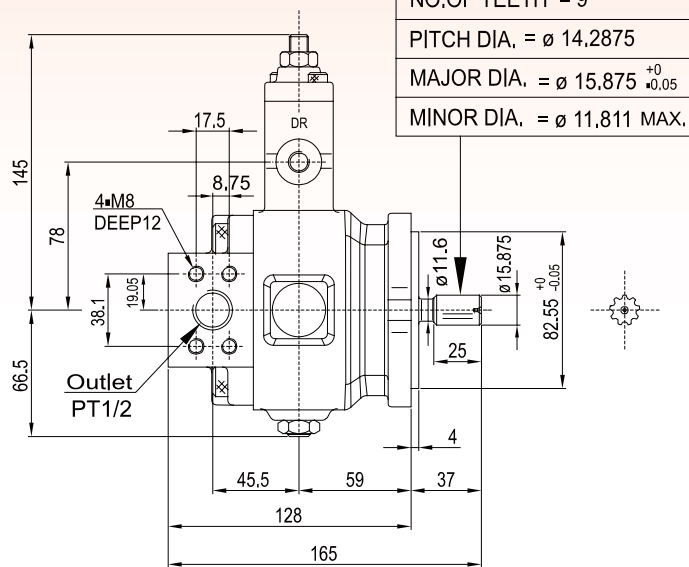
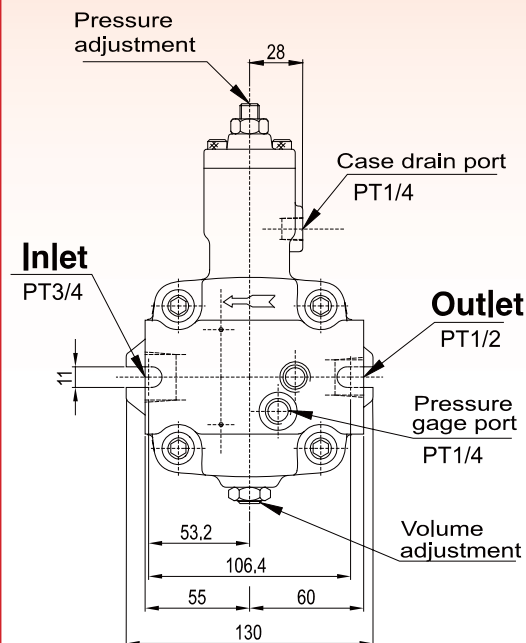
NO.	DESCRIPTION	SPECIFICATION	QTY	NO.	DESCRIPTION	SPECIFICATION	QTY
1	Retainer Ring	R42	1	26	Port Plate		2
2	Shaft Seal	TCV-224211	1	27	Rotorshaft	Keyed Shaft	1
3	Pump Body		1	27-1	Rotorshaft	Splined Shaft	1
4	Piston		2	28	Vaness		26
5	Piston		2	29	Cam Ring		1
6	O-Ring	1A-P5	2	29-1	Cam Ring		1
7	O-Ring	1A-P22	2	30	Thrust Plate		2
8	Thrust Screw		2	31	O-Ring	AS568-030	2
9	Socket Set Screw	M12×P1.75×25L	2	32	Endless Back-up Ring		2
10	Hexagon Nut	M12×P1.75	2	33	O-Ring	AS568-035	2
11	Slide Screw		2	34	Cover		2
12	O-Ring	1A-P14	2	35	Skt. HD. Cap Scr	1A-S85	2
13	Spring Retainer	M16×P1.0	2	36	Piston		1
14	Cap		2	Parts numbers 4-1 26-1 are same as 4 26. Quantity are calculated together.(spring 16-1 is not included)			
15	Piston		2	37	Plug	NO.406	1
16	Spring		1	38	Plug		1
16-1	Spring		1	Parts numbers 28-1 23-1 are same as 28 23-1.Quantity are calculated together.(camring 29-1 is not included)			
17	Spring Retainer		2	39	Cover		1
18	O-Ring	1A-P22A	2	40	Skt. HD. Cap Scr	M10×P1.5×110L	4
19	Cover		2	41	Name Plate		1
20	Skt. HD. Cap Scr.	M6×P1.0×20L	8	42	Fixing Screw		3
21	Socket Set Screw	M10×P1.5×35L	2	43-1	Hexagon Nut	M10×P1.5	1
22	Hexagon Nut	M10×P1.5	2	43-2	Coupling		1
23	Spring Pin	ø4 10	2	43-3	Retainer Ring	IRTW 24	1
23-1	Spring Pin	ø4 10	4	44	Spring Washer	M10	4
24	Straight Pin	ø4 10	4	45	Skt. HD. Cap Scr	M10×P1.5×30L	4
25	Engine Bush	DIADO(JAPAN)DD2225	1				
25-1	Engine Bush	DIADO(JAPAN)DD2225	2	※43~47 are Accessories.			

[DIMENSIONS]

VD*-10 (WOODRUFF KEY)**



VD*-10S (SPLINED SHAFTS)**

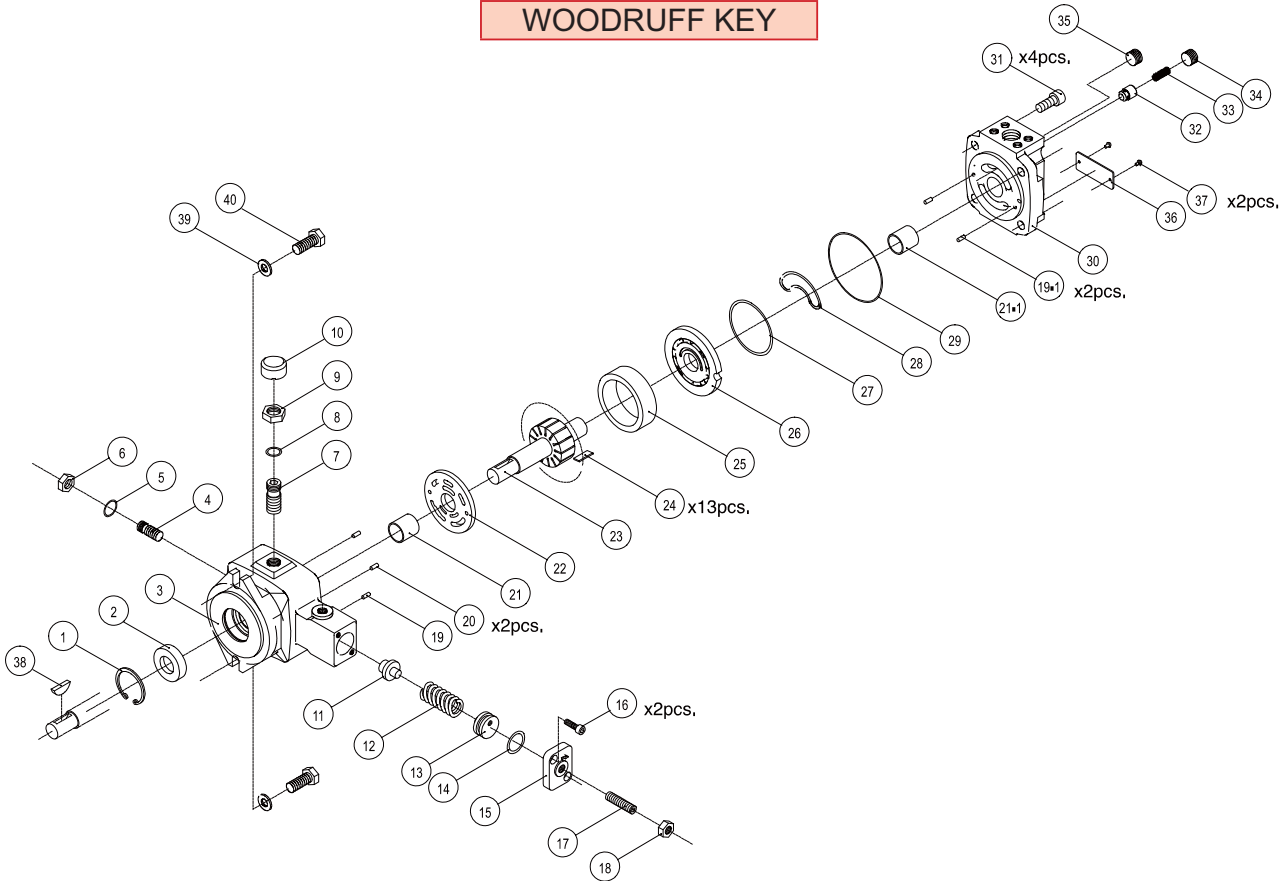


ANSI B92.1
MODULE = D.P.16/32
PRESSURE ANGLE = 30 °
NO.OF TEETH = 9
PITCH DIA. = ø 14.2875
MAJOR DIA. = ø 15.875 ⁺⁰ / _{+0.05}
MINOR DIA. = ø 11.811 MAX.

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[ASSEMBLY & PARTS LIST]

VD***-**-10
WOODRUFF KEY



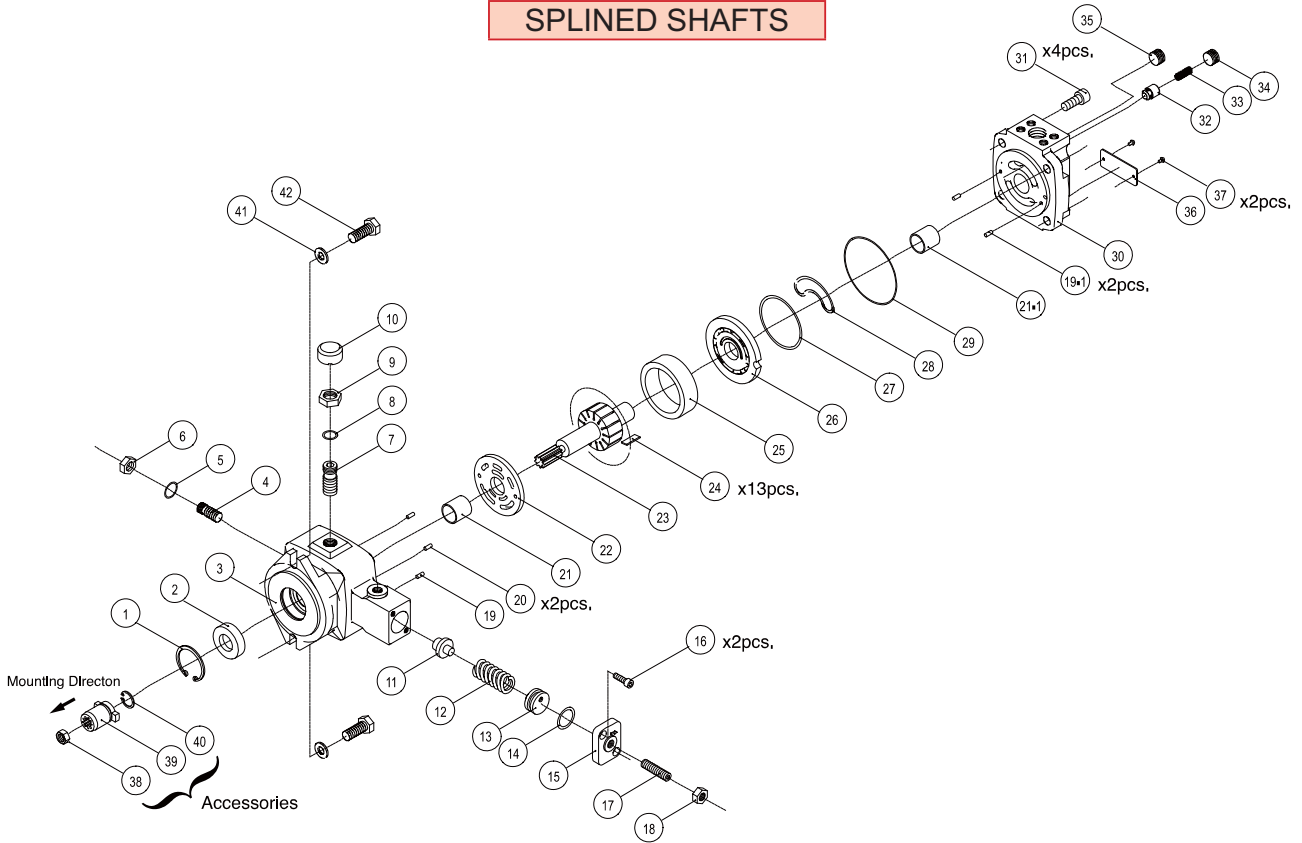
PARTS LIST

NO.	DESCRIPTION	SPECIFICATION	QTY	NO.	DESCRIPTION	SPECIFICATION	QTY
1	Retainer Ring	R42	1	22	Port Plate		1
2	Shaft Seal	TCV-224211	1	23	Rotorshaft		1
3	Pump Body		1	24	Vanes		13
4	Retainer Ring	M12×P1.0×30L	1	25	Cam Ring		1
5	O-Ring	1A-P10	1	26	Thrust Plate		1
6	Hexagon Nut	M12×P1.0	1	27	O-Ring	AS568-034	1
7	Slide Screw	M16×P1.0×32L	1	28	Endless Back-up Ring		1
8	O-Ring	1A-P14	1	29	O-Ring	1A-S85	1
9	Hexagon Nut	M16×P1.0	1	30	Cover		1
10	Cap		1	31	Skt. HD. Cap Scr	M10×P1.5×25L	4
11	Piston		1	32	Piston		1
12	Spring		1	33	Spring		1
13	Spring Retainer		1	34	Plug	PT 3/8"	1
14	O-Ring	1A-P22A	1	35	Plug	PT 1/4"	1
15	Cover		1	36	Name Plate		1
16	Skt. HD. Cap Scr	M6×P1.0×20L	2	37	Fixing Screw	M10×P1.5×25L	2
17	Socket Set Screw	M10×P1.5×35L	1	38	Woodruff Key	NO.608	1
18	Hexagon Nut	M10 P1.5	1	39	Washer	M10	2
19	Spring Pin	ø4×10	1	40	Hexagon Screw	M10×P1.5×25L	2
19-1	Spring Pin	ø4×10	2				
20	Straight Pin	ø4×10	2				
21	Engine Bush	DIADO(JAPAN)DD2225	1				
21-1	Engine Bush	DIADO(JAPAN)DD2225	1				

※39-40 are Accessories.

[ASSEMBLY & PARTS LIST]

VD***-10S
SPLINED SHAFTS



F

PARTS LIST

NO.	DESCRIPTION	SPECIFICATION	QTY	NO.	DESCRIPTION	SPECIFICATION	QTY
1	Retainer Ring	R42	1	22	Port Plate		1
2	Shaft Seal	TCV-224211	1	23	Rotorshaft		1
3	Pump Body		1	24	Vaness		13
4	Retainer Ring	M12×P1.0×30L	1	25	Cam Ring		1
5	O-Ring	1A-P10	1	26	Thrust Plate		1
6	Hexagon Nut	M12×P1.0	1	27	O-Ring	AS568-034	1
7	Slide Screw	M16×P1.0×32L	1	28	Endless Back-up Ring		1
8	O-Ring	1A-P14	1	29	O-Ring	1A-S85	1
9	Hexagon Nut	M16×P1.0	1	30	Cover		1
10	Cap		1	31	Skt. HD. Cap Scr	M10×P1.5×25L	4
11	Piston		1	32	Piston		1
12	Spring		1	33	Spring		1
13	Spring Retainer		1	34	Plug	PT 3/8"	1
14	O-Ring	1A-P22A	1	35	Plug	PT 1/4"	1
15	Cover		1	36	Name Plate		1
16	Skt. HD. Cap Scr	M6×P1.0×20L	2	37	Fixing Screw		2
17	Socket Set Screw	M10×P1.5×35L	1	38	Hexagon Nut	M10×P1.5	1
18	Hexagon Nut	M10 P1.5	1	39	Coupling		1
19	Spring Pin	ø4×10	1	40	Retainer Ring	IRTW24	1
19-1	Spring Pin	ø4×10	2	41	Washer	M10	2
20	Straight Pin	ø4×10	2	42	Hexagon Screw	M10×P1.5×25L	2
21	Engine Bush	DIADO(JAPAN)DD2225	1				
21-1	Engine Bush	DIADO(JAPAN)DD2225	1				

※38-42 are Accessories.