

ANSON[®]

HYDRAULICS

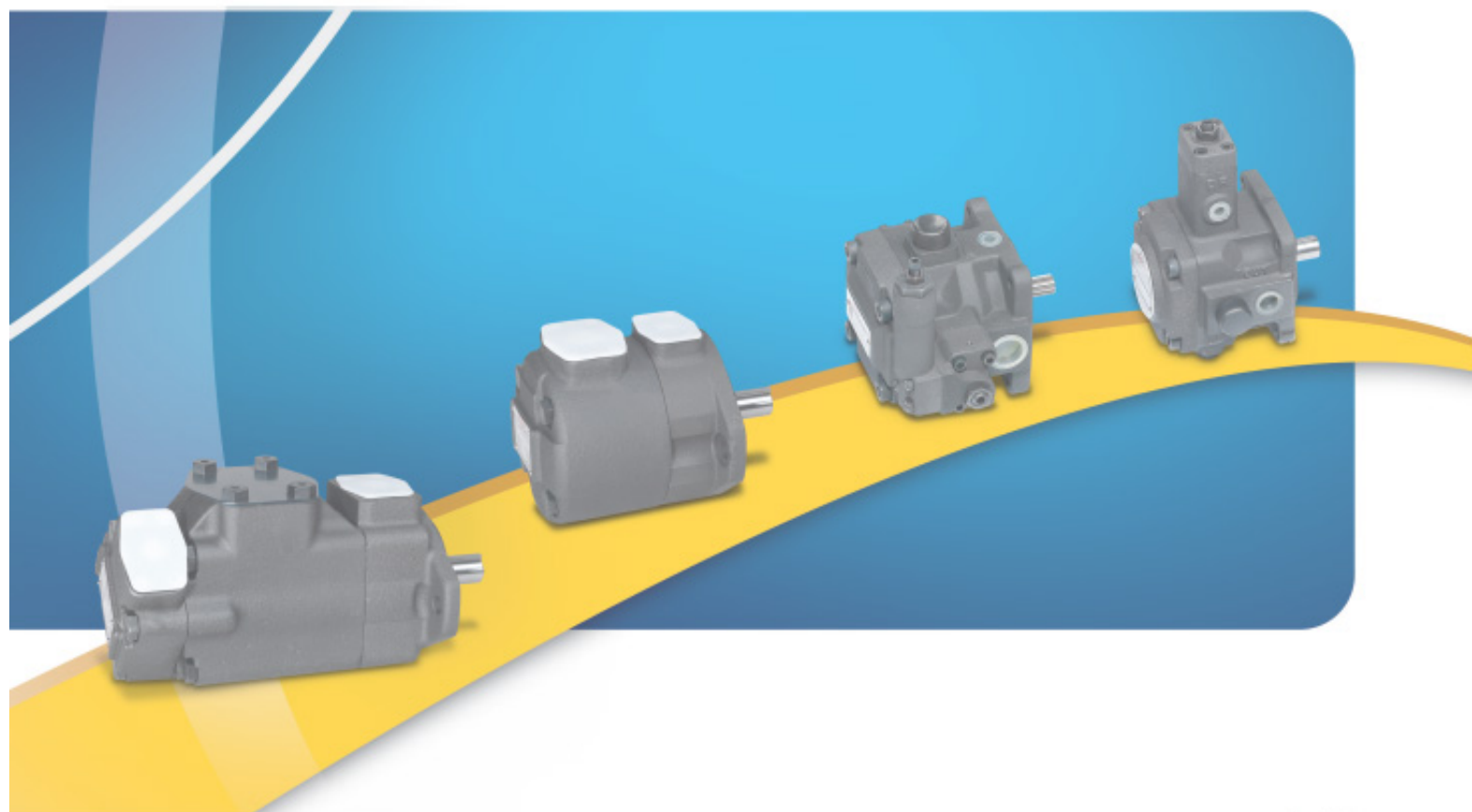


HYDRAULIC VANE PUMPS

ANSON HYDRAULICS INDUSTRIAL CO., LTD.

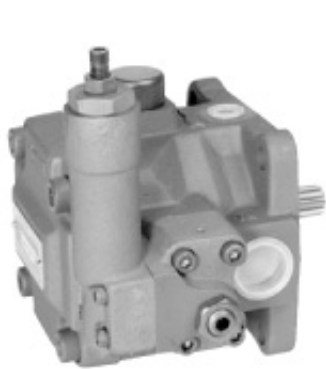
Variable Displacement Vane Pumps

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Hydraulic
**Variable displacement
vane pumps** Series

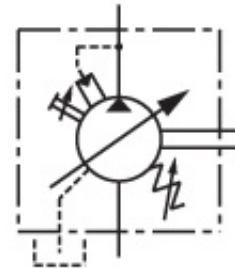




VP5F



PVF



High Efficiency Operation With High Pressure.

Under the conditions of pressure 140 bar ,the VP5 pump is stable and highly efficient. Due to our improvement designs "THREE POINT RING" support systems.

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.

Sharp Characteristics And Quick Response.

Quick response is displayed in both "ON-OFF" control of operation ,due to use special design "BIAS PISTON" stable and accurate operation can be attained in an instant.

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.

Easy Testing And Maintenance.

Pressure adjusting screw,and the volume adjusting screw were located at the same side,and ensure easy testing at a glance.

VP5F Series - Single Pumps Model Code

VP5F	-A		-5		-50	S
Code Frame size	Outlet flow (at 3.5 bar, 1800r/min)		Operating pressure range		Design	Shafts code
	A Outlet flow (Geometric displ.) L/min (cm ³ /rev)	★B Outlet flow (Geometric displ.) L/min (cm ³ /rev)	Code	Pressure range (bar)		
VP5	30 (16)	40 (22)	2	15 - 35	50	Omite: Woodruff key (VP5) Straight key (VP6-7)
VP6	54 (30)	70 (39)	3	20 - 70		
VP7	120 (67)	—	4	50 - 105		
F: Flange mounting	★B code (40 & 70 L/min) maximum pressure 105bar Factory setting Q max.		5	70 - 140		S: Splined Shafts
			Factory setting P min.			

VP5F

Pumps Speed Limits

 Minimum speed : 800 r/min
 Maximum speed : 1800 r/min

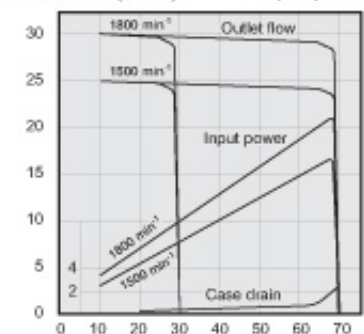
Frame size	Weight
VP5F- ** - 50 *	9.4 kg
VP6F- ** - 50 *	25.5 kg
VP7F- ** - 50 *	47.0 kg

VP5F Series Pumps Curve

Suitable Viscosity : ISO VG32

VP5F-A3-50

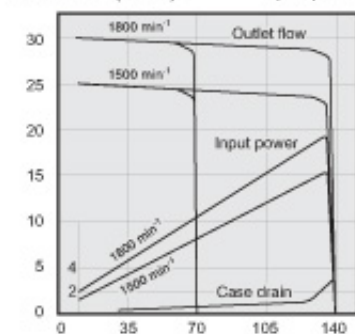
Outlet flow (ℓ/min) Input power (kw)



Case drain Outlet pressure (bar)
(ℓ/min)

VP5F-A5-50

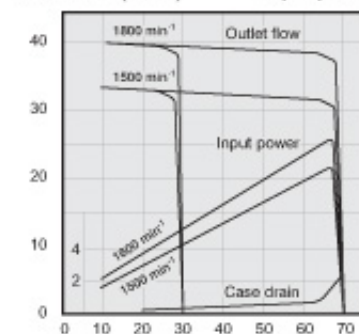
Outlet flow (ℓ/min) Input power (kw)



Case drain Outlet pressure (bar)
(ℓ/min)

VP5F-B3-50

Outlet flow (ℓ/min) Input power (kw)

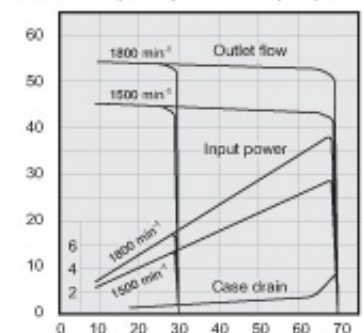


Case drain Outlet pressure (bar)
(ℓ/min)

VP6F Series Pumps Curve

VP6F-A3-50

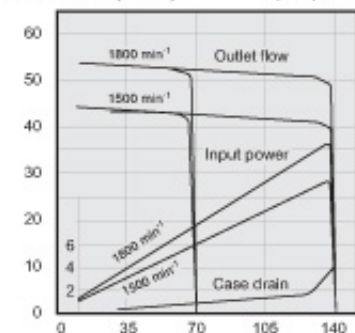
Outlet flow (ℓ/min) Input power (kw)



Case drain Outlet pressure (bar)
(ℓ/min)

VP6F-A5-50

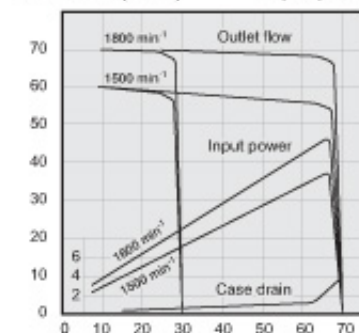
Outlet flow (ℓ/min) Input power (kw)



Case drain Outlet pressure (bar)
(ℓ/min)

VP6F-B3-50

Outlet flow (ℓ/min) Input power (kw)

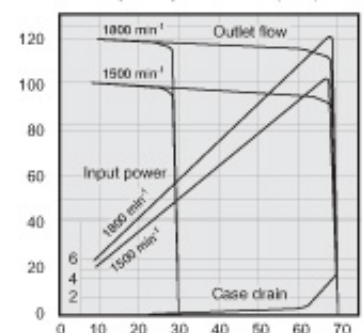


Case drain Outlet pressure (bar)
(ℓ/min)

VP7F Series Pumps Curve

VP7F-A3-50

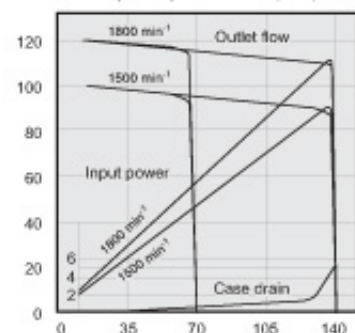
Outlet flow (ℓ/min) Input power (kw)



Case drain Outlet pressure (bar)
(ℓ/min)

VP7F-A5-50

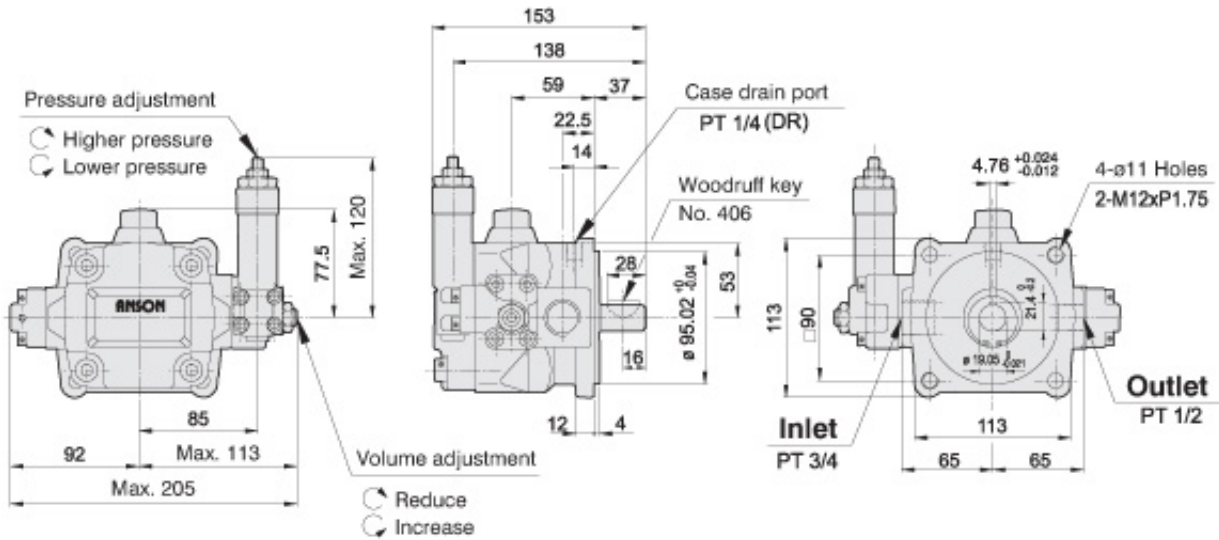
Outlet flow (ℓ/min) Input power (kw)



Case drain Outlet pressure (bar)
(ℓ/min)

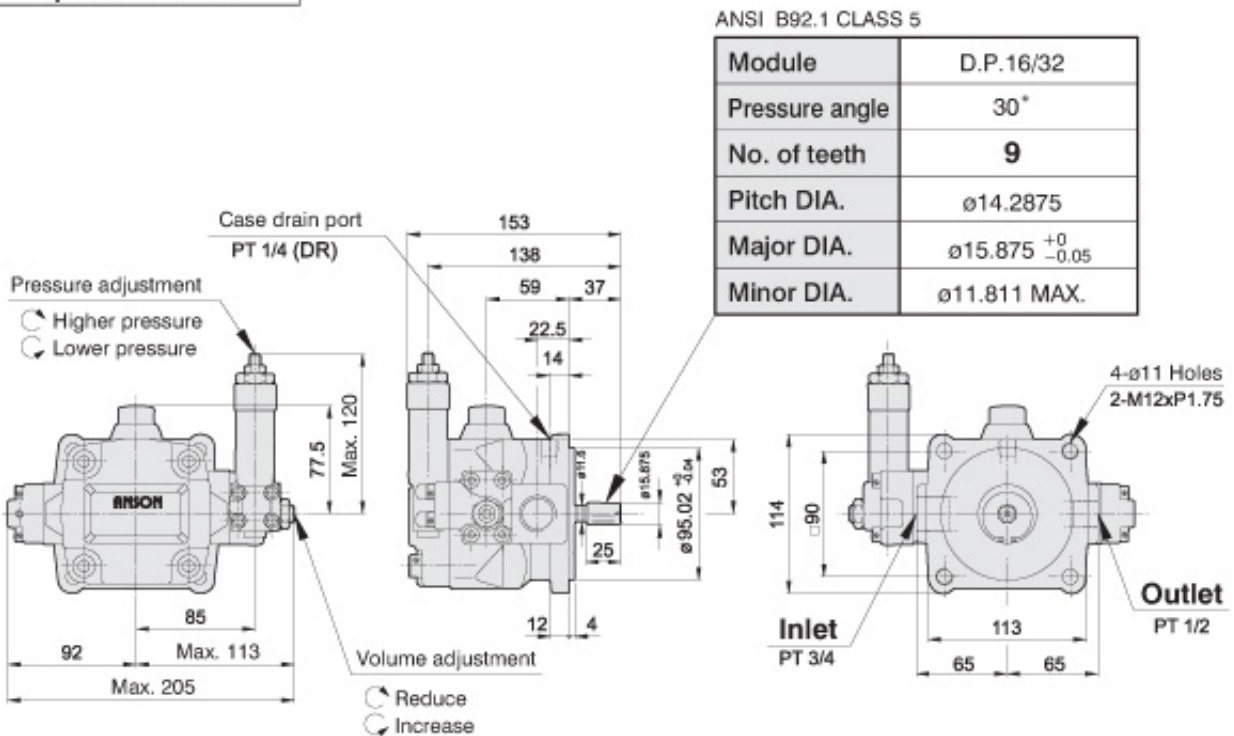
VP5F-A(B) -50

Woodruff key



VP5F-A(B) -50S

Splined Shafts

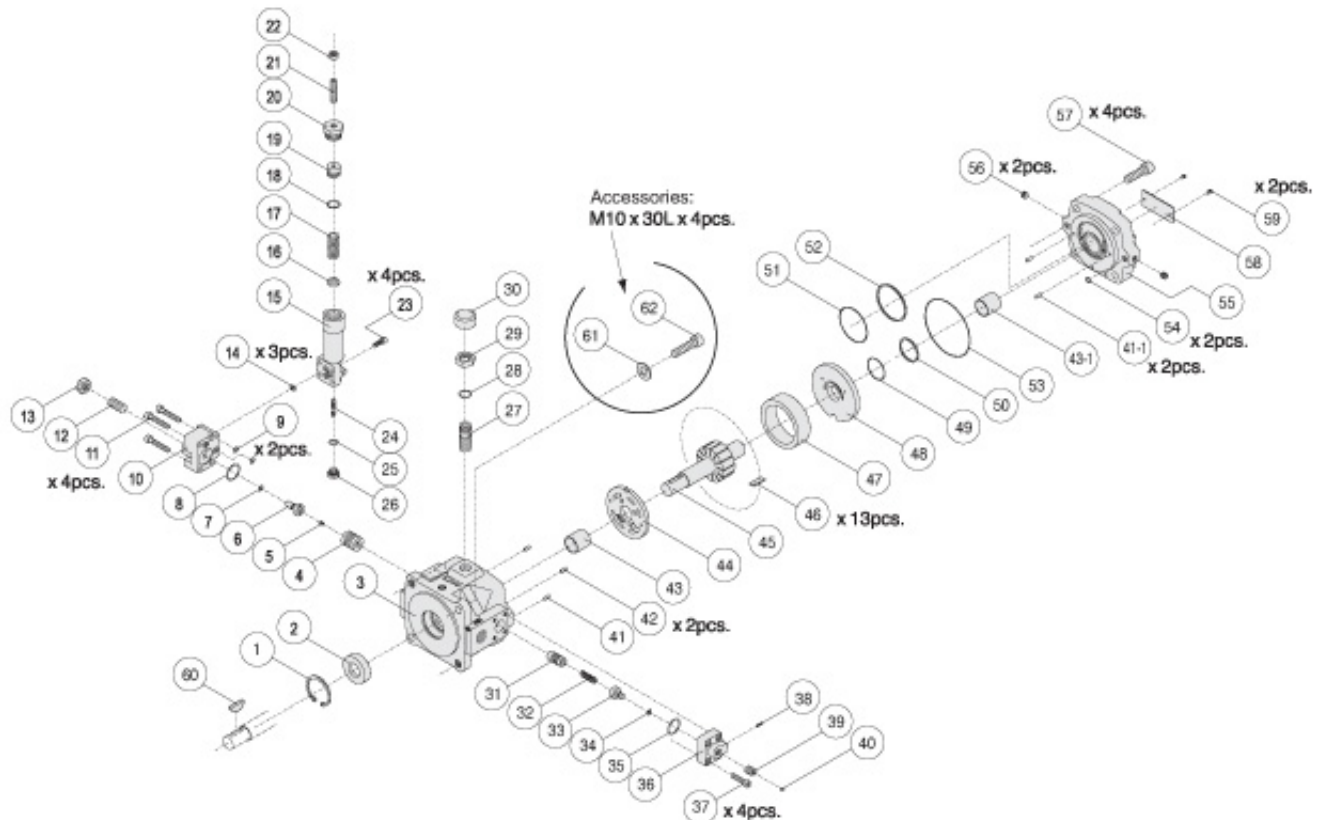


Variable displacement vane pumps VP5F series

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Assembly

VP5F-A(B) ※-50 Woodruff key



VP5F

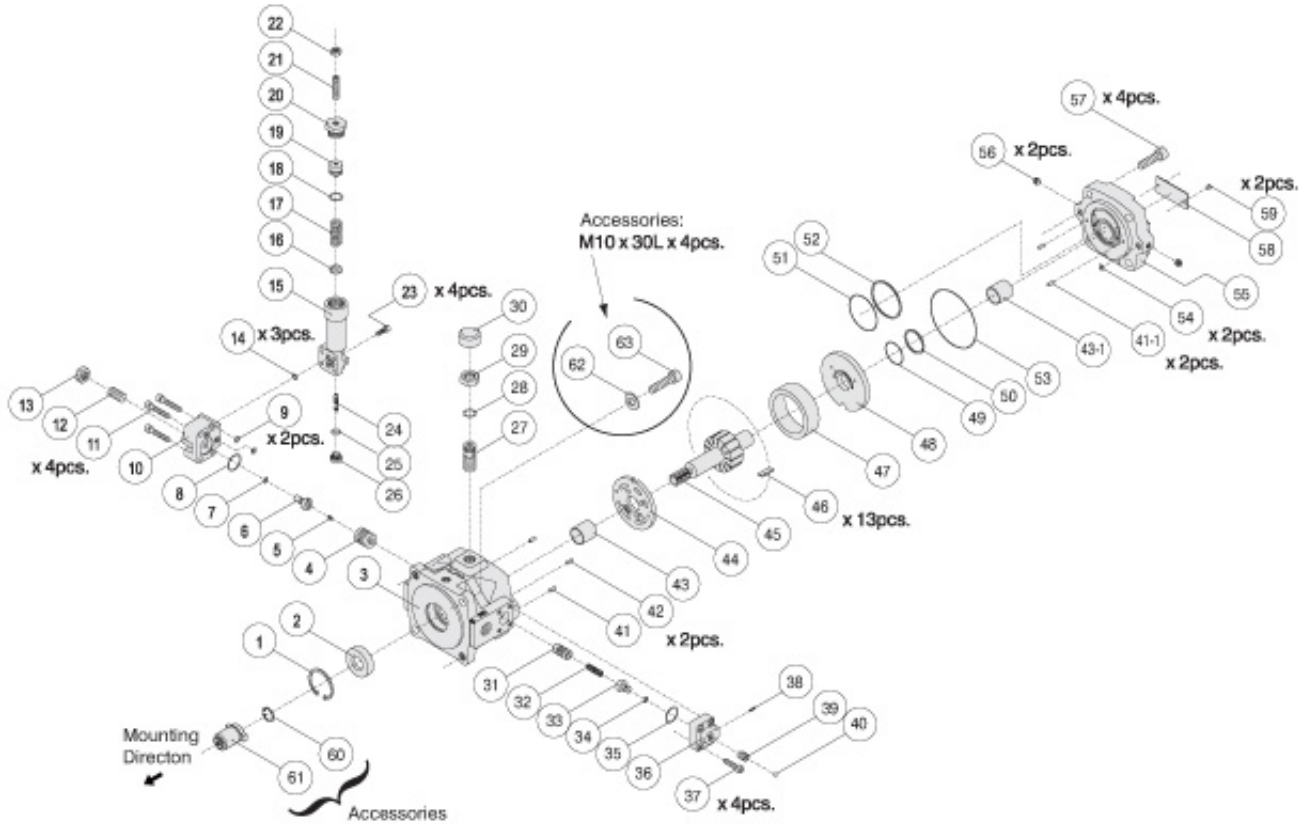
VP5F-A(B) ※-50 Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	23	Skt. HD. Cap Scr.	M5 × P0.8 × 25L	4	43-1	Engine Bush	DIADO(JAPAN)DD2225	1
2	Shaft Seal	TDN1 22 42 11	1	24	Spool		1	44	Port Plate		1
3	Pump Body		1	25	O-Ring	1A-P10	1	45	Rotorshaft		1
4	Piston (A)		1	26	Plug		1	46	Vanes		13
5	Socket Set Screw	M4 × P0.7 × 5L	1	27	Slide Screw		1	47	Cam Ring		1
6	Piston (B)		1	28	O-Ring	1A-P14	1	48	Thrust Plate		1
7	O-Ring	1A-P5	1	29	Hexagon Nut	M16 × P1.0	1	49	O-Ring	AS568-026	1
8	O-Ring	1A-P20	1	30	Cap		1	50	Endless Back-up Ring		1
9	O-Ring	1A-P6	2	31	Piston (A)		1	51	O-Ring	AS568-034	1
10	Cover		1	32	Spring		1	52	Endless Back-up Ring		1
11	Skt. HD. Cap Scr.	M6 × P1.0 × 35L	4	33	Piston (B)		1	53	O-Ring	1A-S85	1
12	Socket Set Screw	M12 × P1.75 × 25L	1	34	O-Ring	1A-P5	1	54	O-Ring	1A-P6	2
13	Hexagon Nut	M12 × P1.75	1	35	O-Ring	1A-P22	1	55	Cover O-Ring		1
14	O-Ring	1A-P6	3	36	Cover		1	56	Plug	1/16"	2
15	Body		1	37	Skt. HD. Cap Scr.	M6 × P1.0 × 25L	4	57	Skt. HD. Cap Scr.	M10 × P1.5 × 35L	4
16	Hold		1	38	Socket Set Screw	M5 × P0.8 × 10L	1	58	Name Plate		1
17	Spring		1	39	Socket Set Screw	M10 × P1.5 × 12L	1	59	Fixing Screw		2
18	O-Ring	1A-P14	1	40	Plug		1	60	Woodruff Key	NO.608	1
19	Spring Retainer		1	41	Spring Pin	φ4 × 10	1	61	Spring Washer	M10	4
20	Screw		1	41-1	Spring Pin	φ4 × 10	2	62	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4
21	Socket Set Screw	M8 × P1.25 × 35L	1	42	Straight Pin	φ4 × 10	2				
22	Hexagon Nut	M8 × P1.25	1	43	Engine Bush	DIADO(JAPAN)DD2225	1				

※ 61~62 are Accessories.

Assembly

VP5F-A(B) ※-50S Splined Shafts



VP5F-A(B) ※-50S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	23	Skt. HD. Cap Scr.	M5 × P0.8 × 25L	4	43-1	Engine Bush	DIADO(JAPAN)DD2225	1
2	Shaft Seal	TDN1 22 42 11	1	24	Spool		1	44	Port Plate		1
3	Pump Body		1	25	O-Ring	1A-P10	1	45	Rotorshaft		1
4	Piston (A)		1	26	Plug		1	46	Vanes		13
5	Socket Set Screw	M4 × P0.7 × 5L	1	27	Slide Screw		1	47	Cam Ring		1
6	Piston (B)		1	28	O-Ring	1A-P14	1	48	Thrust Plate		1
7	O-Ring	1A-P5	1	29	Hexagon Nut	M16 × P1.0	1	49	O-Ring	AS568-026	1
8	O-Ring	1A-P20	1	30	Cap		1	50	Endless Back-up Ring		1
9	O-Ring	1A-P6	2	31	Piston (A)		1	51	O-Ring	AS568-034	1
10	Cover		1	32	Spring		1	52	Endless Back up Ring		1
11	Skt. HD. Cap Scr.	M6 × P1.0 × 35L	4	33	Piston (B)		1	53	O-Ring	1A-S85	1
12	Socket Set Screw	M12 × P1.75 × 25L	1	34	O-Ring	1A-P5	1	54	O-Ring	1A-P6	2
13	Hexagon Nut	M12 × P1.75	1	35	O-Ring	1A-P22	1	55	Cover		1
14	O-Ring	1A-P6	3	36	Cover		1	56	Plug	1/16"	2
15	Body		1	37	Skt. HD. Cap Scr.	M6 × P1.0 × 25L	4	57	Skt. HD. Cap Scr.	M10 × P1.5 × 35L	4
16	Hold		1	38	Socket Set Screw	M5 × P0.8 × 10L	1	58	Name Plate		1
17	Spring		1	39	Socket Set Screw	M10 × P1.5 × 12L	1	59	Fixing Screw		2
18	O-Ring	1A-P14	1	40	Plug		1	60	Coupling		1
19	Spring Retainer		1	41	Spring Pin	ø4 × 10	1	61	Retainer Ring	IRTW 24	1
20	Screw		1	41-1	Spring Pin	ø4 × 10	2	62	Spring Washer	M10	4
21	Socket Set Screw	M8 × P1.25 × 35L	1	42	Straight Pin	ø4 × 10	2	63	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4
22	Hexagon Nut	M8 × P1.25	1	43	Engine Bush	DIADO(JAPAN)DD2225	1				

※ 60~63 are Accessories.

Variable displacement vane pumps VP6F series

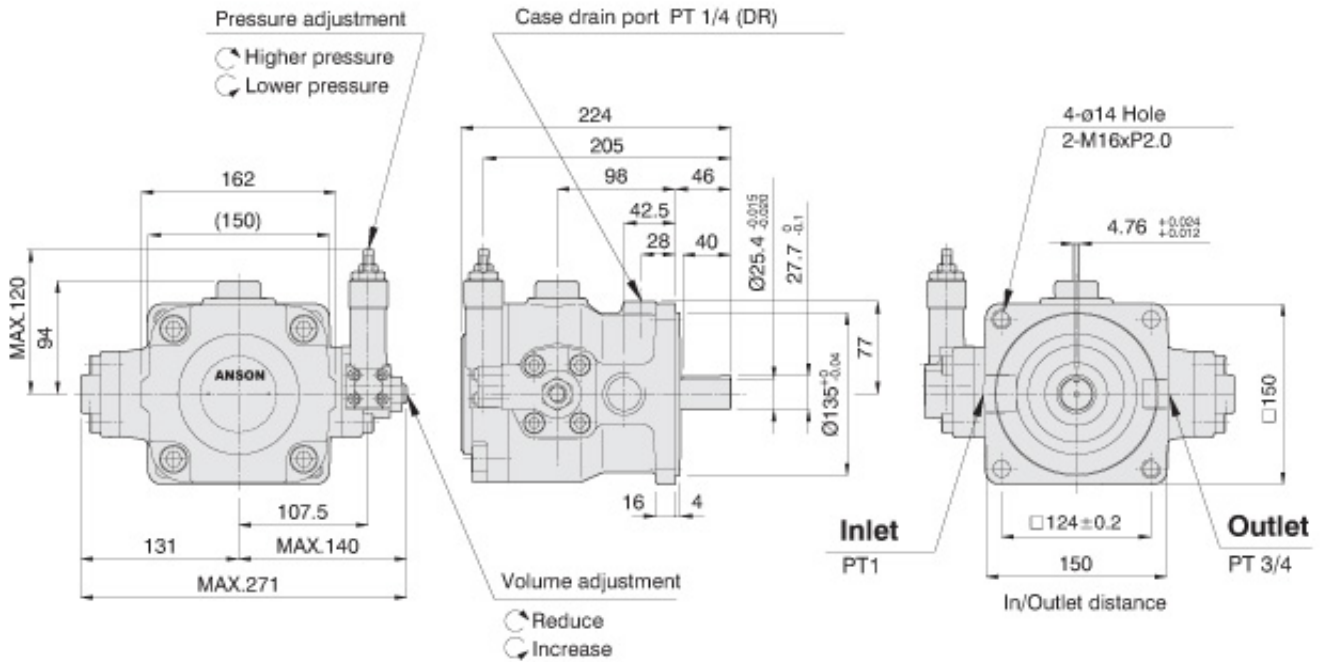
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VP6F

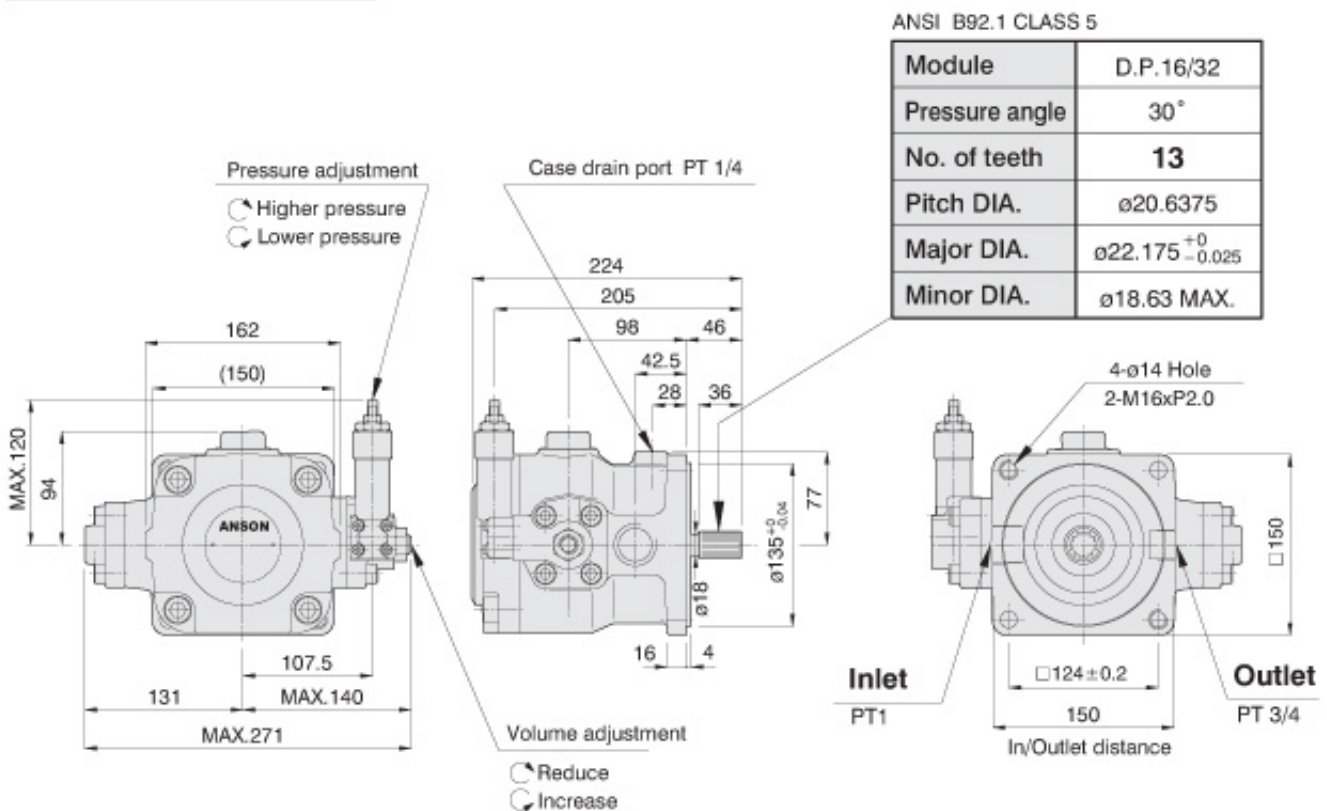
VP6F-A(B) -50

Straight key



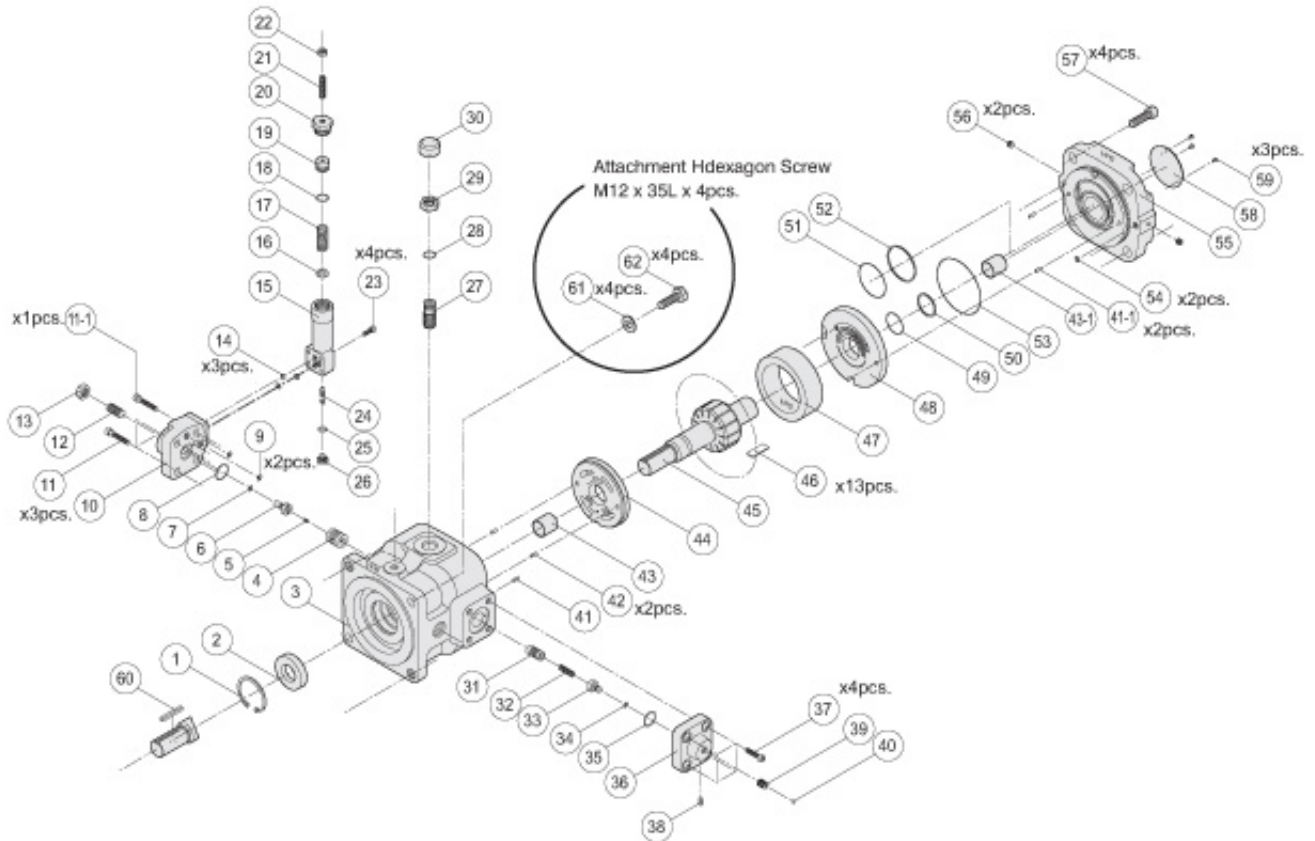
VP6F-A(B) -50S

Splined Shafts



Assembly

VP6F-A(B) ※-50 Straight key



VP6F-A(B) ※-50 Parts List

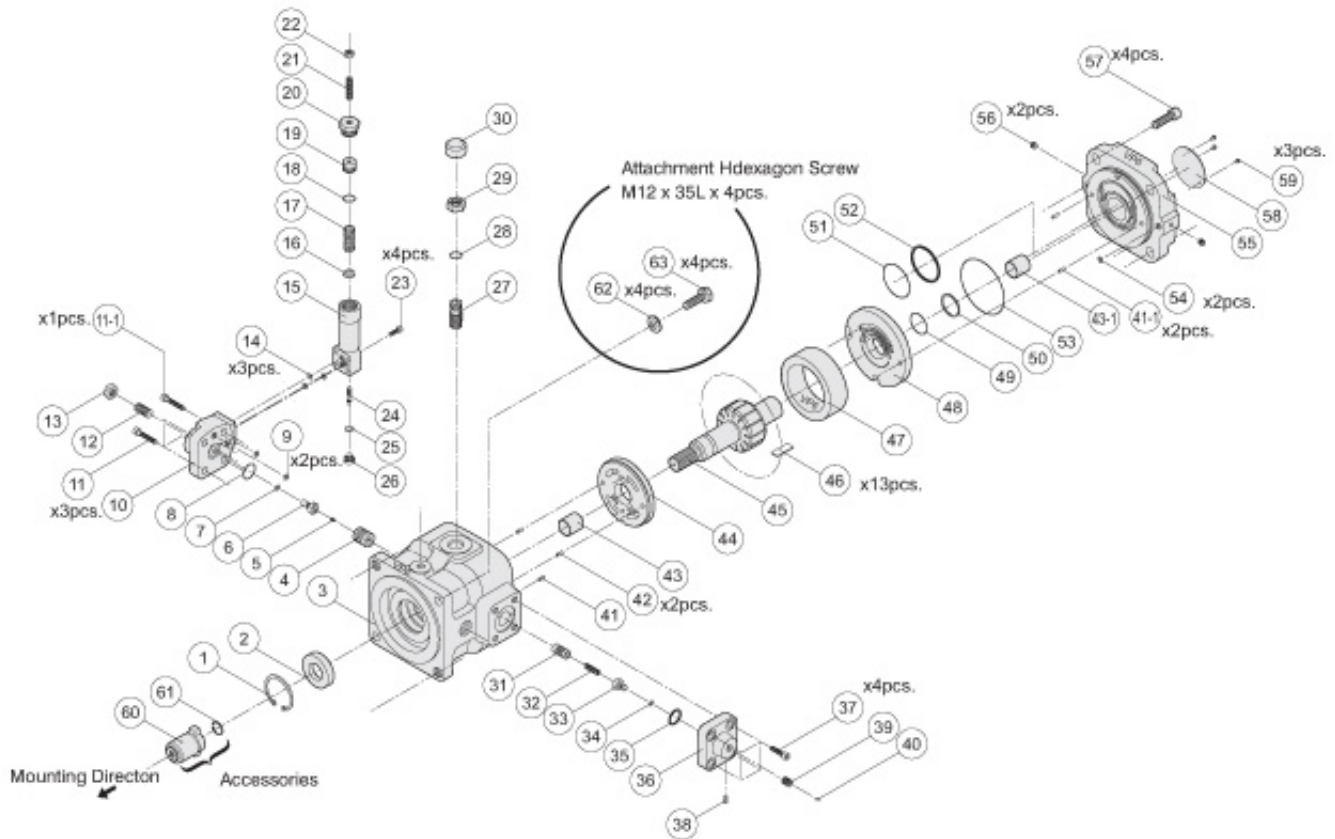
NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R52	1	23	Skt. HD. Cap Scr.	M5 × P0.8 × 25L	4	44	Port Plate		1
2	Shaft Seal	TDN1 32 52 11	1	24	Spool		1	45	Rotorshaft		1
3	Pump Body		1	25	O-Ring	1A-P10	1	46	Vanes		13
4	Piston (A)		1	26	Plug		1	47	Cam Ring		1
5	Socket Set Screw	M4 × P0.7 × 5L	1	27	Slide Screw	M20 × P1.5 × 40L	1	48	Thrust Plate		1
6	Piston (B)		1	28	O-Ring	1A-P18	1	49	O-Ring	AS568-026	1
7	O-Ring	1A-P9	1	29	Hexagon Nut	M20 × P1.5	1	50	Endless Back-up Ring		1
8	O-Ring	1A-G35	1	30	Cap		1	51	O-Ring	AS568-034	1
9	O-Ring	1A-P7	2	31	Piston (A)		1	52	Endless Back-up Ring		1
10	Cover		1	32	Spring		1	53	O-Ring	1A-G115	1
11	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	3	33	Piston (B)		1	54	O-Ring	1A-P7	2
11-1	Skt. HD. Cap Scr.	M10 × P1.5 × 40L	1	34	O-Ring	1A-P9	1	55	Cover		1
12	Socket Set Screw	M16 × P2.0 × 40L	1	35	O-Ring	1A-G35	1	56	Plug	1/16"	2
13	Hexagon Nut	M16 × P2.0	1	36	Cover		1	57	Skt. HD. Cap Scr.	M14 × P2.0 × 40L	4
14	O-Ring	1A-P6	3	37	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4	58	Name Plate		1
15	Body		1	38	Socket Set Screw	M5 × P0.8 × 10L	1	59	Fixing Screw		3
16	Hold		1	39	Socket Set Screw	M10 × P1.5 × 16L	1	60	Straight Key	□4.76 × 40L	1
17	Spring		1	40	Plug		1	61	Spring Washer	M12	4
18	O-Ring	1A-P14	1	41	Spring Pin	ø4 × 12L	1	62	Skt. HD. Cap Scr.	M12 × P1.75 × 35L	4
19	Spring Retainer		1	41-1	Spring Pin	ø4 × 12L	2				
20	Screw		1	42	Straight Pin	ø4 × 12L	2				
21	Socket Set Screw	M8 × P1.25 × 35L	1	43	Engine Bush	DIADO(JAPAN)DD3238	1				
22	Hexagon Nut	M8 × P1.25	1	43-1	Engine Bush	DIADO(JAPAN)DD3238	1				

※ 61~62 are Accessories.

Variable displacement vane pumps VP6F series

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Assembly VP6F-A(B) ※-50S Splined Shafts



VP6F-A(B) ※-50S Parts List

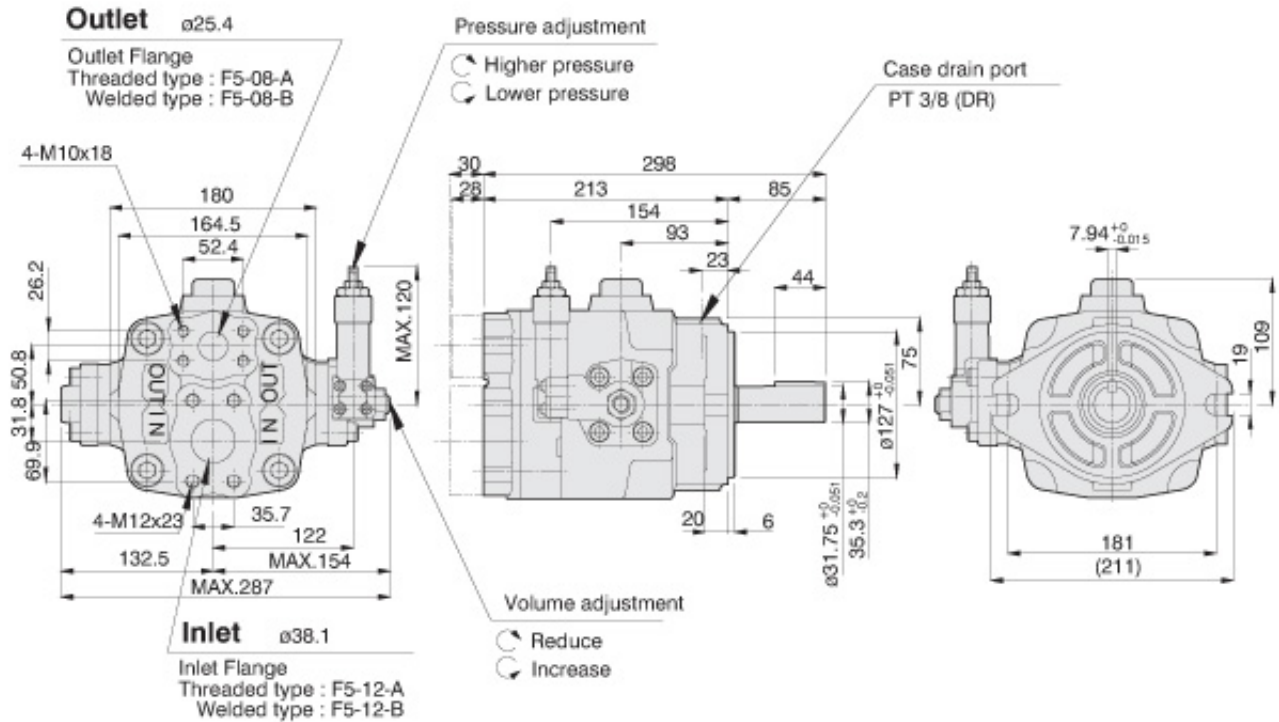
NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R52	1	23	Skt. HD. Cap Scr.	M5 × P0.8 × 25L	4	44	Port Plate		1
2	Shaft Seal	TDN1 32 52 11	1	24	Spool		1	45	Rotorshaft		1
3	Pump Body		1	25	O-Ring	1A-P10	1	46	Vanes		13
4	Piston (A)		1	26	Plug		1	47	Cam Ring		1
5	Socket Set Screw	M4 × P0.7 × 5L	1	27	Slide Screw	M20 × P1.5 × 40L	1	48	Thrust Plate		1
6	Piston (B)		1	28	O-Ring	1A-P18	1	49	O-Ring	AS568-026	1
7	O-Ring	1A-P9	1	29	Hexagon Nut	M20 × P1.5	1	50	Endless Back-up Ring		1
8	O-Ring	1A-G35	1	30	Cap		1	51	O-Ring	AS568-034	1
9	O-Ring	1A-P7	2	31	Piston (A)		1	52	Endless Back-up Ring		1
10	Cover		1	32	Spring		1	53	O-Ring	1A-G115	1
11	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	3	33	Piston (B)		1	54	O-Ring	1A-P7	2
11-1	Skt. HD. Cap Scr.	M10 × P1.5 × 40L	1	34	O-Ring	1A-P9	1	55	Cover		1
12	Socket Set Screw	M16 × P2.0 × 40L	1	35	O-Ring	1A-G35	1	56	Plug	1/16"	2
13	Hexagon Nut	M16 × P2.0	1	36	Cover		1	57	Skt. HD. Cap Scr.	M14 × P2.0 × 40L	4
14	O-Ring	1A-P6	3	37	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4	58	Name Plate		1
15	Body		1	38	Socket Set Screw	M5 × P0.8 × 10L	1	59	Fixing Screw		3
16	Hold		1	39	Socket Set Screw	M10 × P1.5 × 16L	1	60	Coupling		1
17	Spring		1	40	Plug		1	61	Retainer Ring	IRTW 32	1
18	O-Ring	1A-P14	1	41	Spring Pin	ø4 × 12L	1	62	Spring Washer	M12	4
19	Spring Retainer		1	41-1	Spring Pin	ø4 × 12L	2	63	Skt. HD. Cap Scr.	M12 × P1.75 × 35L	4
20	Screw		1	42	Straight Pin	ø4 × 12L	2				
21	Socket Set Screw	M8 × P1.25 × 35L	1	43	Engine Bush	DIADO(JAPAN)DD3236	1				
22	Hexagon Nut	M8 × P1.25	1	43-1	Engine Bush	DIADO(JAPAN)DD3236	1				

※ 60~63 are Accessories.

VP6F

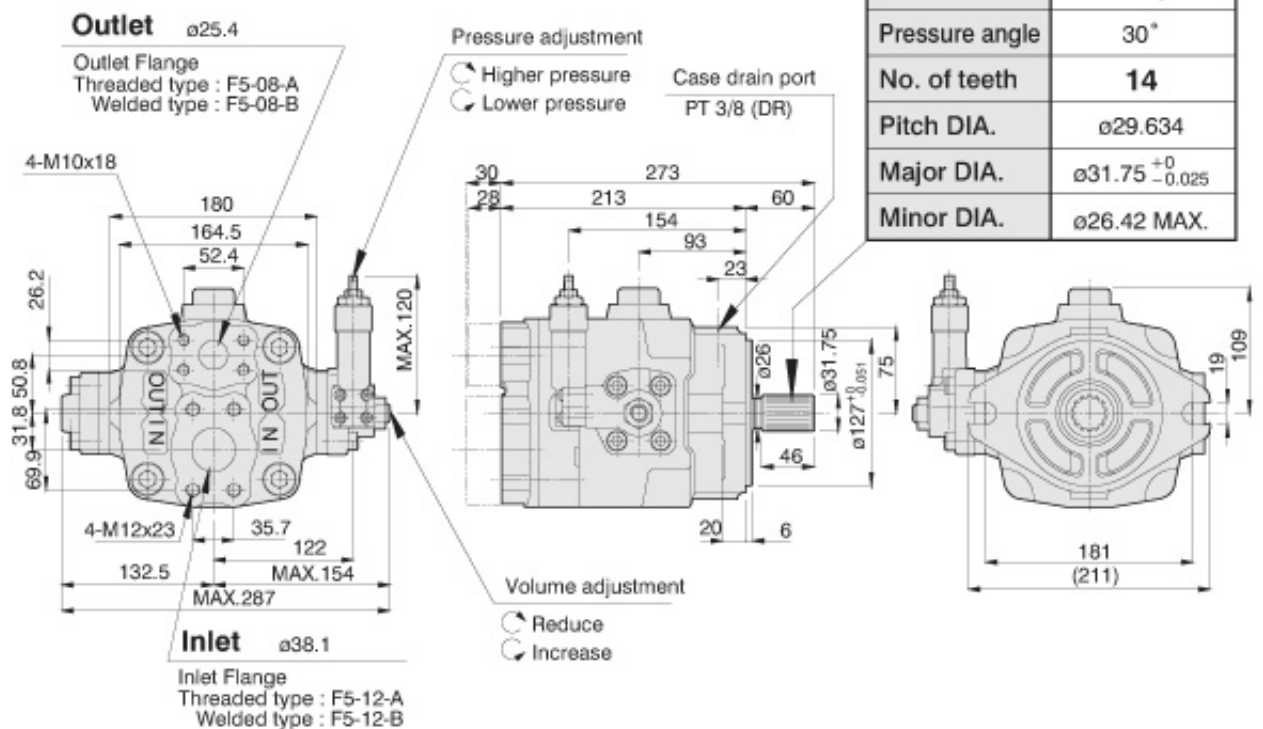
VP7F-A(B) \varnothing -50

Straight key



VP7F-A(B) \varnothing -50S

Splined Shafts

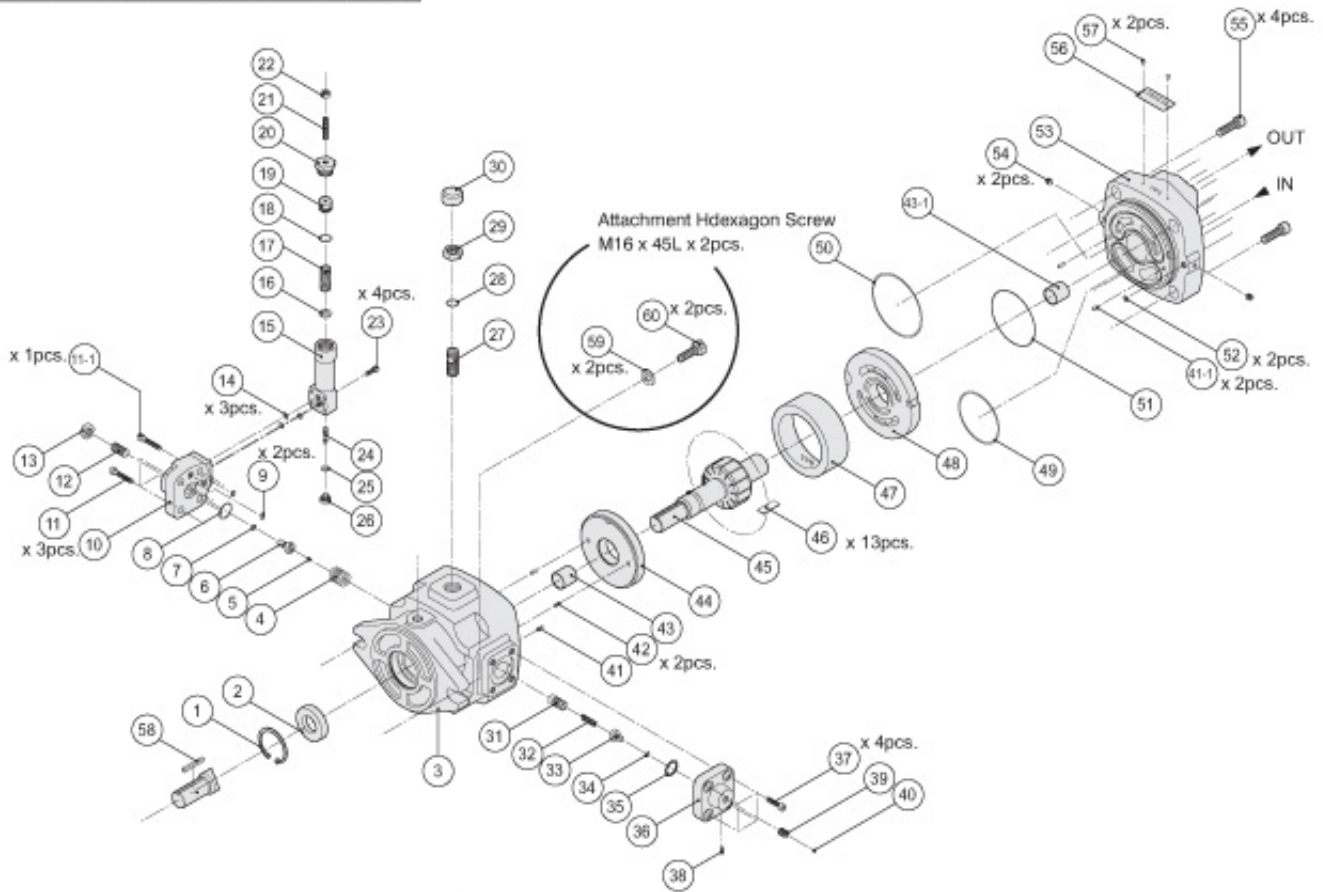


Variable displacement vane pumps VP7F series

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Assembly

VP7F-A(B) ※-50 Straight Key



VP7F-A(B) ※-50 Parts List

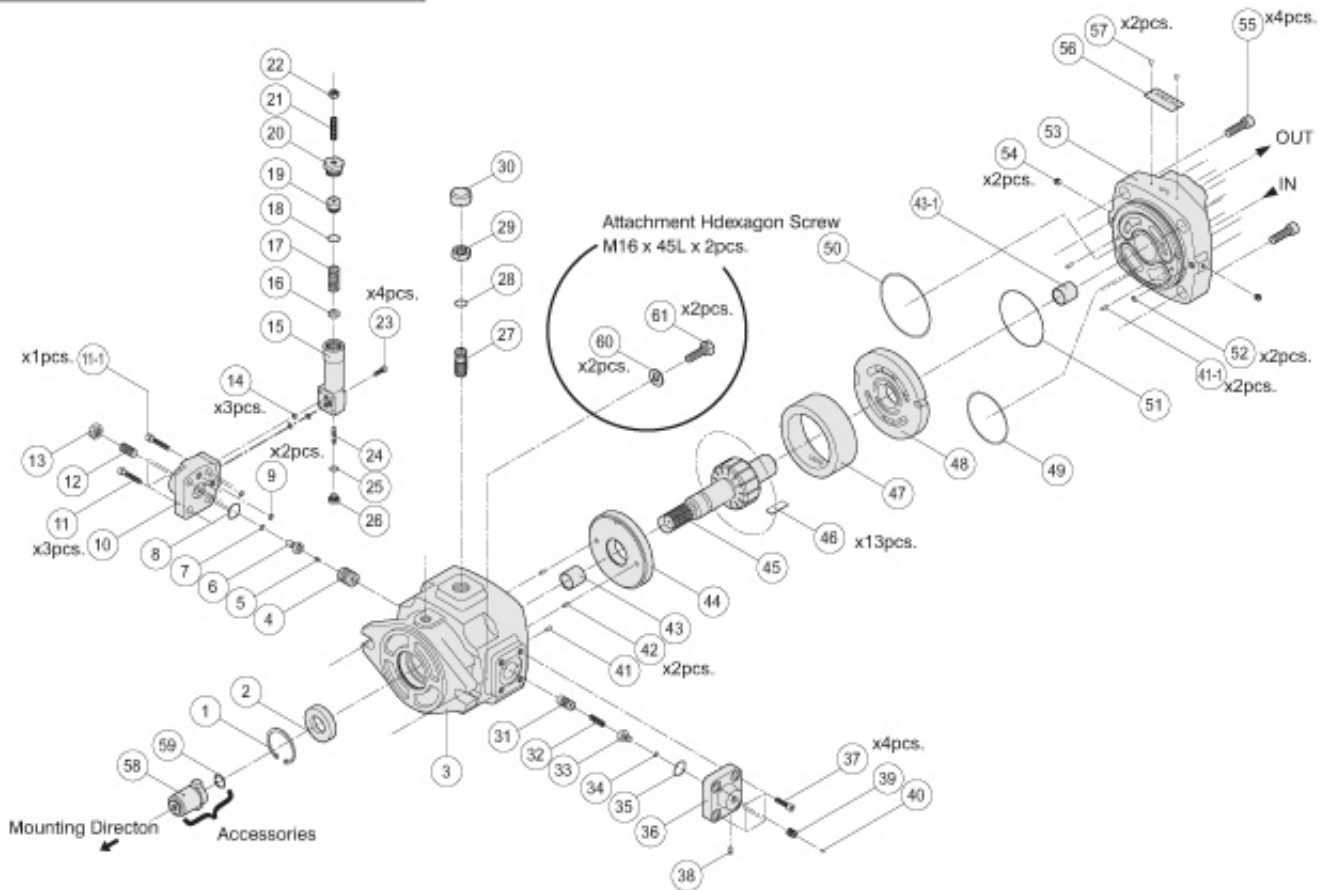
NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R58	1	23	Skt. HD. Cap Scr.	M5 × P0.8 × 25L	4	44	Port Plate		1
2	Shaft Seal	TDN1 38 58 11	1	24	Spool		1	45	Rotorshaft		1
3	Pump Body		1	25	O-Ring	1A-P10	1	46	Vanes		13
4	Piston (A)		1	26	Plug		1	47	Cam Ring		1
5	Socket Set Screw	M4 × P0.7 × 5L	1	27	Slide Screw	M24 × P1.5 × 56L	1	48	Thrust Plate		1
6	Piston (B)		1	28	O-Ring	1A-P22	1	49	O-Ring	AS568-151	1
7	O-Ring	1A-P9	1	29	Hexagon Nut	M24 × P1.5	1	50	O-Ring	AS568-154	1
8	O-Ring	1A-G40	1	30	Cap		1	51	O-Ring	1A-G130	1
9	O-Ring	1A-P7	2	31	Piston (A)		1	52	O-Ring	1A-P7	2
10	Cover		1	32	Spring		1	53	Cover		1
11	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	3	33	Piston (B)		1	54	Plug	1/16"	2
11-1	Skt. HD. Cap Scr.	M10 × P1.5 × 40L	1	34	O-Ring	1A-P9	1	55	Skt. HD. Cap Scr.	M18 × P2.5 × 65L	4
12	Socket Set Screw	M16 × P2.0 × 40L	1	35	O-Ring	1A-G40	1	56	Name Plate		1
13	Hexagon Nut	M16 × P2.0	1	36	Cover		1	57	Fixing Screw		2
14	O-Ring	1A-P6	3	37	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4	58	Straight Key	└ 7.94 × 44L	1
15	Body		1	38	Socket Set Screw	M5 × P0.8 × 10L	1	59	Spring Washer	M16	2
16	Hold		1	39	Socket Set Screw	M10 × P1.5 × 16L	1	60	Skt. HD. Cap Scr.	M16 × P2.0 × 45L	2
17	Spring		1	40	Plug		1				
18	O-Ring	1A-P14	1	41	Spring Pin	ø6 × 12L	1				
19	Spring Retainer		1	41-1	Spring Pin	ø6 × 12L	2				
20	Screw		1	42	Straight Pin	ø6 × 12L	2				
21	Socket Set Screw	M8 × P1.25 × 35L	1	43	Engine Bush	DIADO(JAPAN)DD3840	1				
22	Hexagon Nut	M8 × P1.25	1	43-1	Engine Bush	DIADO(JAPAN)DD3840	1				

※ 59-60 are Accessories.

VP7F

Assembly

VP7F-A(B) ※-50S Splined Shafts



VP7F-A(B) ※-50S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R58	1	23	Skt. HD. Cap Scr.	M5 × P0.8 × 25L	4	44	Port Plate		1
2	Shaft Seal	TDN1 38 58 11	1	24	Spool		1	45	Rotorshaft		1
3	Pump Body		1	25	O-Ring	1A-P10	1	46	Vanes		13
4	Piston (A)		1	26	Plug		1	47	Cam Ring		1
5	Socket Set Screw	M4 × P0.7 × 5L	1	27	Slide Screw	M24 × P1.5 × 56L	1	48	Thrust Plate		1
6	Piston (B)		1	28	O-Ring	1A-P22	1	49	O-Ring	AS568-151	1
7	O-Ring	1A-P9	1	29	Hexagon Nut	M24 × P1.5	1	50	O-Ring	AS568-154	1
8	O-Ring	1A-G40	1	30	Cap		1	51	O-Ring	1A-G130	1
9	O-Ring	1A-P7	2	31	Piston (A)		1	52	O-Ring	1A-P7	2
10	Cover		1	32	Spring		1	53	Cover		1
11	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	3	33	Piston (B)		1	54	Plug	1/16"	2
11-1	Skt. HD. Cap Scr.	M10 × P1.5 × 40L	1	34	O-Ring	1A-P9	1	55	Skt. HD. Cap Scr.	M18 × P2.5 × 65L	4
12	Socket Set Screw	M16 × P2.0 × 40L	1	35	O-Ring	1A-G40	1	56	Name Plate		1
13	Hexagon Nut	M16 × P2.0	1	36	Cover		1	57	Fixing Screw		2
14	O-Ring	1A-P6	3	37	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4	58	Coupling		1
15	Body		1	38	Socket Set Screw	M5 × P0.8 × 10L	1	59	Retainer Ring	IRTW 45	1
16	Hold		1	39	Socket Set Screw	M10 × P1.5 × 16L	1	60	Spring Washer	M16	2
17	Spring		1	40	Plug		1	61	Skt. HD. Cap Scr.	M16 × P2.0 × 45L	2
18	O-Ring	1A-P14	1	41	Spring Pin	ø6 × 12L	1				
19	Spring Retainer		1	41-1	Spring Pin	ø6 × 12L	2				
20	Screw		1	42	Straight Pin	ø6 × 12L	2				
21	Socket Set Screw	M8 × P1.25 × 35L	1	43	Engine Bush	DIADO(JAPAN)DD3840	1				
22	Hexagon Nut	M8 × P1.25	1	43-1	Engine Bush	DIADO(JAPAN)DD3840	1				

※ 58~61 are Accessories.

Variable displacement vane pumps VP55FD series

ANSON

HYDRAULICS

VP **FD Series - Double Pumps Model Code										
VP55FD	-A		5		-A		5		-50	S
Code Frame size	Shaft end pump				Cover end pump				Design	Shafts code
	Outlet flow at (3.5 bar, 1800 r/min)		Opeating pressure range		Outlet flow at (3.5bar, 1800 r/min)		Opeating pressure range			
	A	*B	Code	Pressure range (bar)	A	*B	Code	Pressure range (bar)		
	Outlet (Geometric flow displ.) L/min (cm ³ /rev)	Outlet (Geometric flow displ.) L/min (cm ³ /rev)			Outlet (Geometric flow displ.) L/min (cm ³ /rev)	Outlet (Geometric flow displ.) L/min (cm ³ /rev)				
VP55FD <small>(previously VP5FD)</small>	30 (16)	40 (22)	2	15 - 35	30 (16)	40 (22)	2	15 - 35	50	Omitte: Woodruff key (VP5**) Straight key (VP6**)
VP65FD	54 (30)	70 (39)	3	20 - 70	30 (16)	40 (22)	3	20 - 70		
VP66FD	54 (30)	70 (39)	4	50 - 105	54 (30)	70 (39)	4	50 - 105		
Flange mounting	*B code (40 & 70 L/min) maximum pressure 105bar Factory setting Q max.		5	70 - 140 Factory setting P min.	*B code (40 & 70 L/min) maximum pressure 105bar Factory setting Q max.		5	70 - 140 Factory setting P min.		S: Splined Shafts

VP55FD

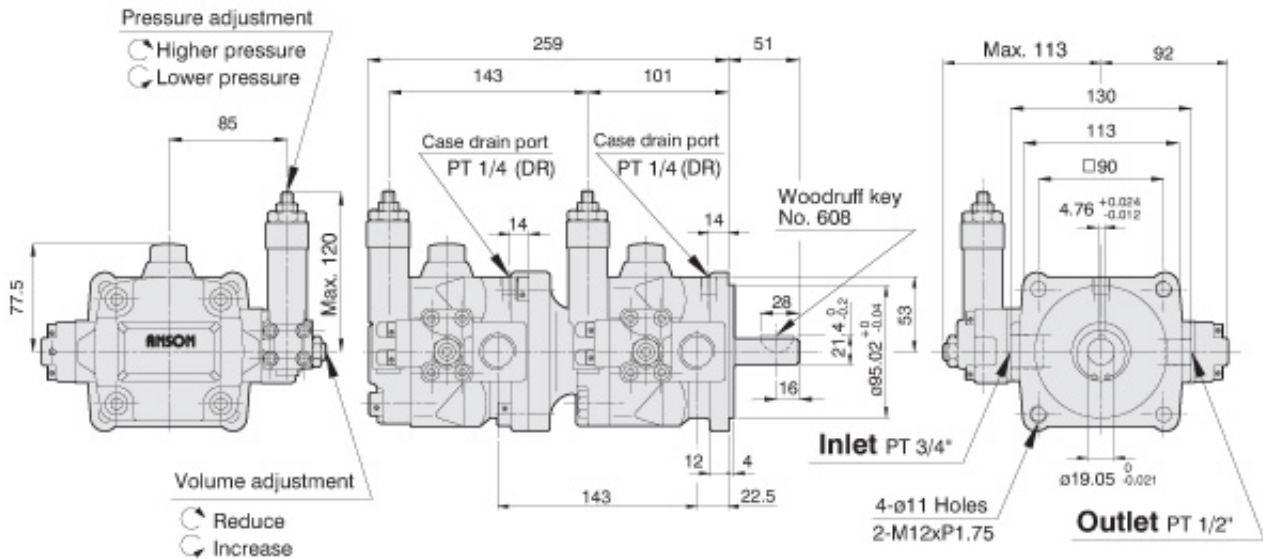
Pumps Speed Limits

Minimum speed : 800 r/min
Maximum speed : 1800 r/min

Frame size	Weight
VP55FD - ** - ** - 50	20 kg
VP65FD - ** - ** - 50	35 kg
VP66FD - ** - ** - 50	50 kg

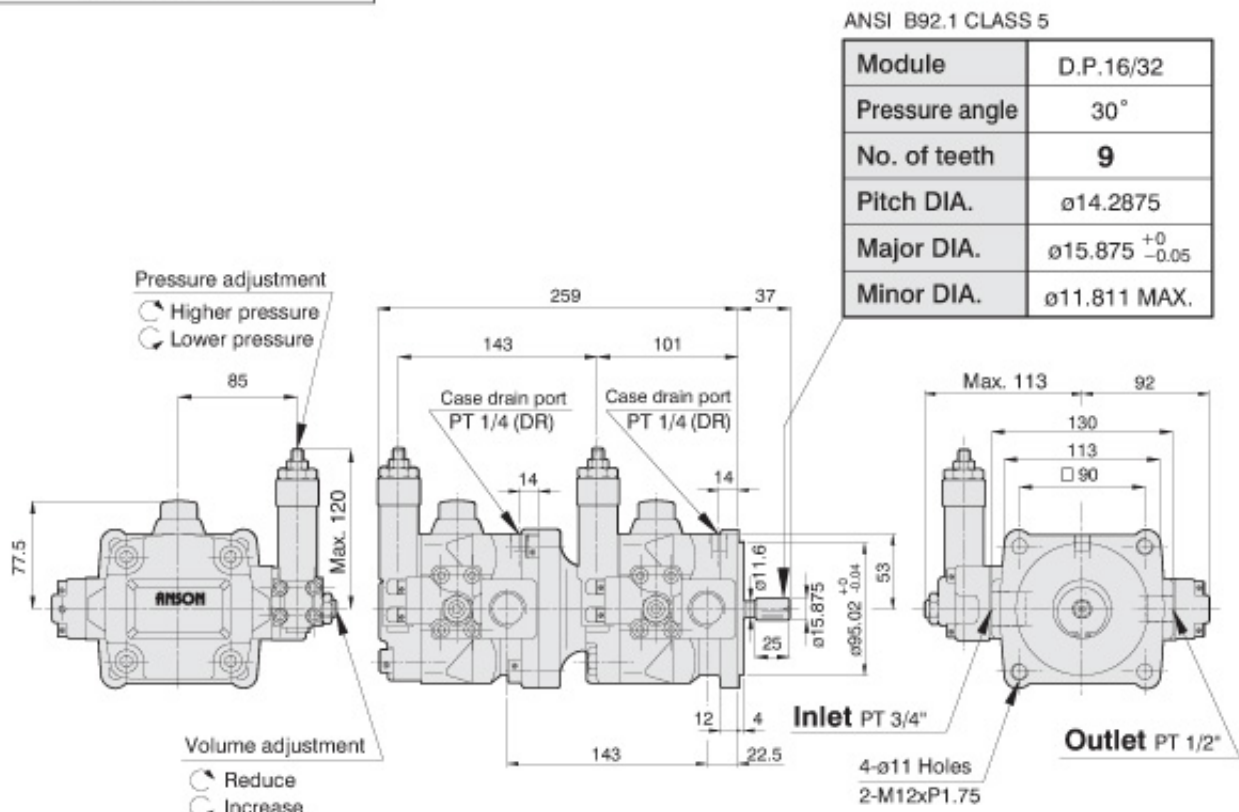
VP55FD-A(B) * -A(B) * -50

Woodruff key



VP55FD-A(B) * -A(B) * -50S

Splined Shafts

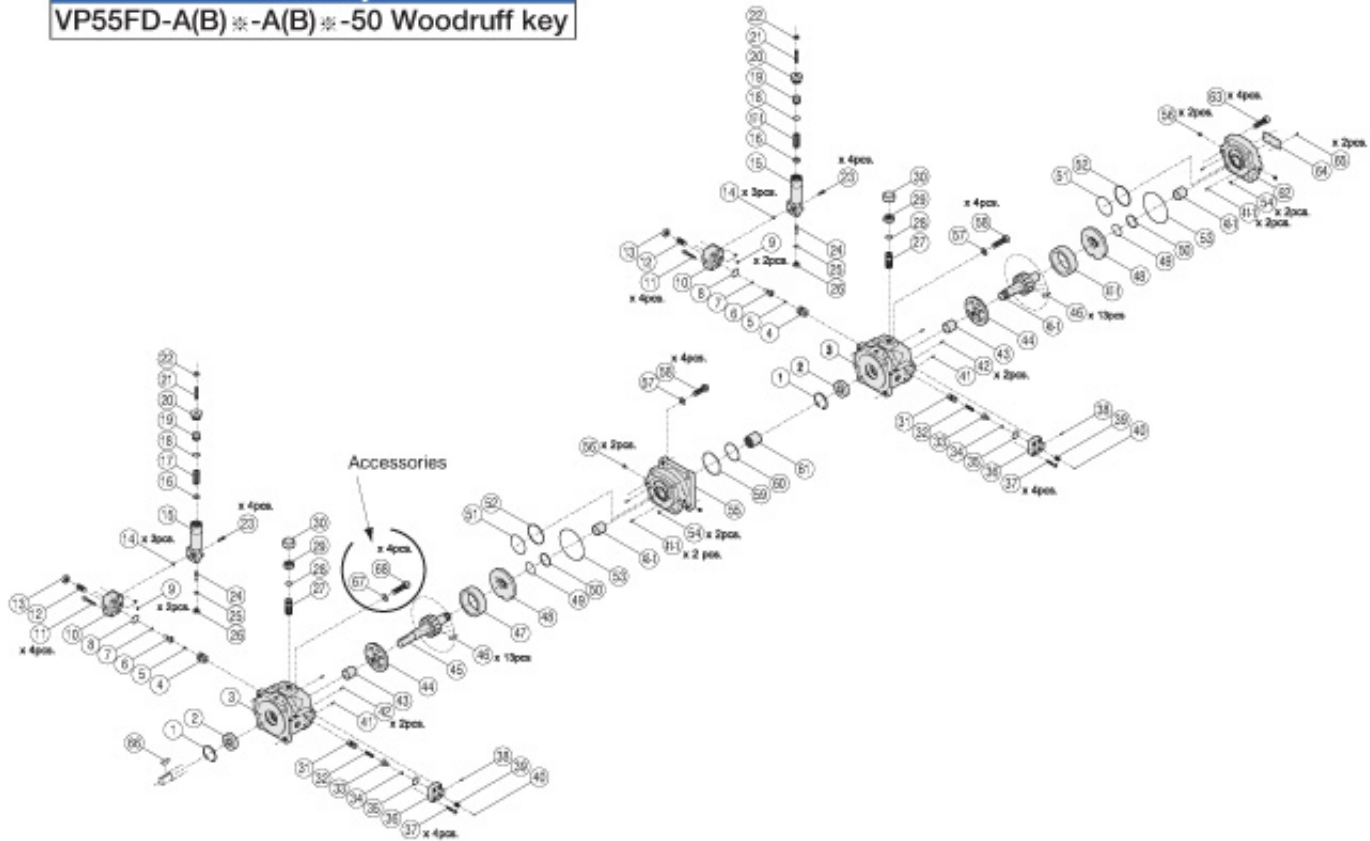


Variable displacement vane pumps VP55FD series

ANSON HYDRAULICS

Assembly

VP55FD-A(B) ※-A(B) ※-50 Woodruff key



VP55FD-A(B) ※-A(B) ※-50 Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1+1	26	Plug		1+1	48	Thrust Plate		1+1
2	Shaft Seal	TDN1 22 42 11	1+1	27	Slide Screw		1+1	49	O-Ring	AS568-026	1+1
3	Pump Body		1+1	28	O-Ring	1A-P14	1+1	50	Endless Back-up Ring		1+1
4	Piston (A)		1+1	29	Hexagon Nut	M16 × P1.0	1+1	51	O-Ring	AS568-034	1+1
5	Socket Set Screw	M4 × P0.7 × 5L	1+1	30	Cap		1+1	52	Endless Back-up Ring		1+1
6	Piston (B)		1+1	31	Piston (A)		1+1	53	O-Ring	1A-SB5	1+1
7	O-Ring	1A-P5	1+1	32	Spring		1+1	54	O-Ring	1A-P6	2+2
8	O-Ring	1A-P20	1+1	33	Piston (B)		1+1	55	Cover		1
9	O-Ring	1A-P6	2+2	34	O-Ring	1A-P5	1+1	56	Plug	1/16"	2+2
10	Cover		1+1	35	O-Ring	1A-P22	1+1	57	Spring Washer	M10	4+4
11	Skt. HD. Cap Scr.	M6 × P1.0 × 35L	4+4	36	Cover		1+1	58	Hexagon Screw	M10 × P1.5 × 35L	4+4
12	Socket Set Screw	M12 × P1.75 × 25L	1+1	37	Skt. HD. Cap Scr.	M6 × P1.0 × 25L	4+4	59	O-Ring	1A-G45	1
13	Hexagon Nut	M12 × P1.75	1+1	38	Socket Set Screw	M5 × P0.8 × 10L	1+1	60	O-Ring	1A-G60	1
14	O-Ring	1A-P6	3+3	39	Socket Set Screw	M10 × P1.5 × 12L	1+1	61	Coupling		1
15	Body		1+1	40	Plug		1+1				
16	Hold		1+1	41	Spring Pin	∅4 × 10	1+1				
17	Spring		1	41-1	Spring Pin	∅4 × 10	2+2	62	Cover		1
17-1	Spring		1	42	Straight Pin	∅4 × 10	2+2	63	Skt. HD. Cap Scr.	M10 × P1.5 × 35L	4
18	O-Ring	1A-P14	1+1	43	Engine Bush	DIADO(JAPAN)DD2225	1+1	64	Name Plate		1
19	Spring Retainer		1+1	43-1	Engine Bush	DIADO(JAPAN)DD2225	1+1	65	Fixing Screw		2
20	Screw		1+1	44	Port Plate		1+1	66	Woodruff Key	NO.608	1
21	Socket Set Screw	M8 × P1.25 × 35L	1+1	45	Rotorshaft (A)		1	67	Spring Washer	M10	4
22	Hexagon Nut	M8 × P1.25	1+1	45-1	Rotorshaft (B)		1	68	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4
23	Skt. HD. Cap Scr.	M5 × P0.8 × 25L	4+4	46	Vanes		13+13				
24	Spool		1+1	47	Cam Ring		1				
25	O-Ring	1A-P10	1+1	47-1	Cam Ring		1				

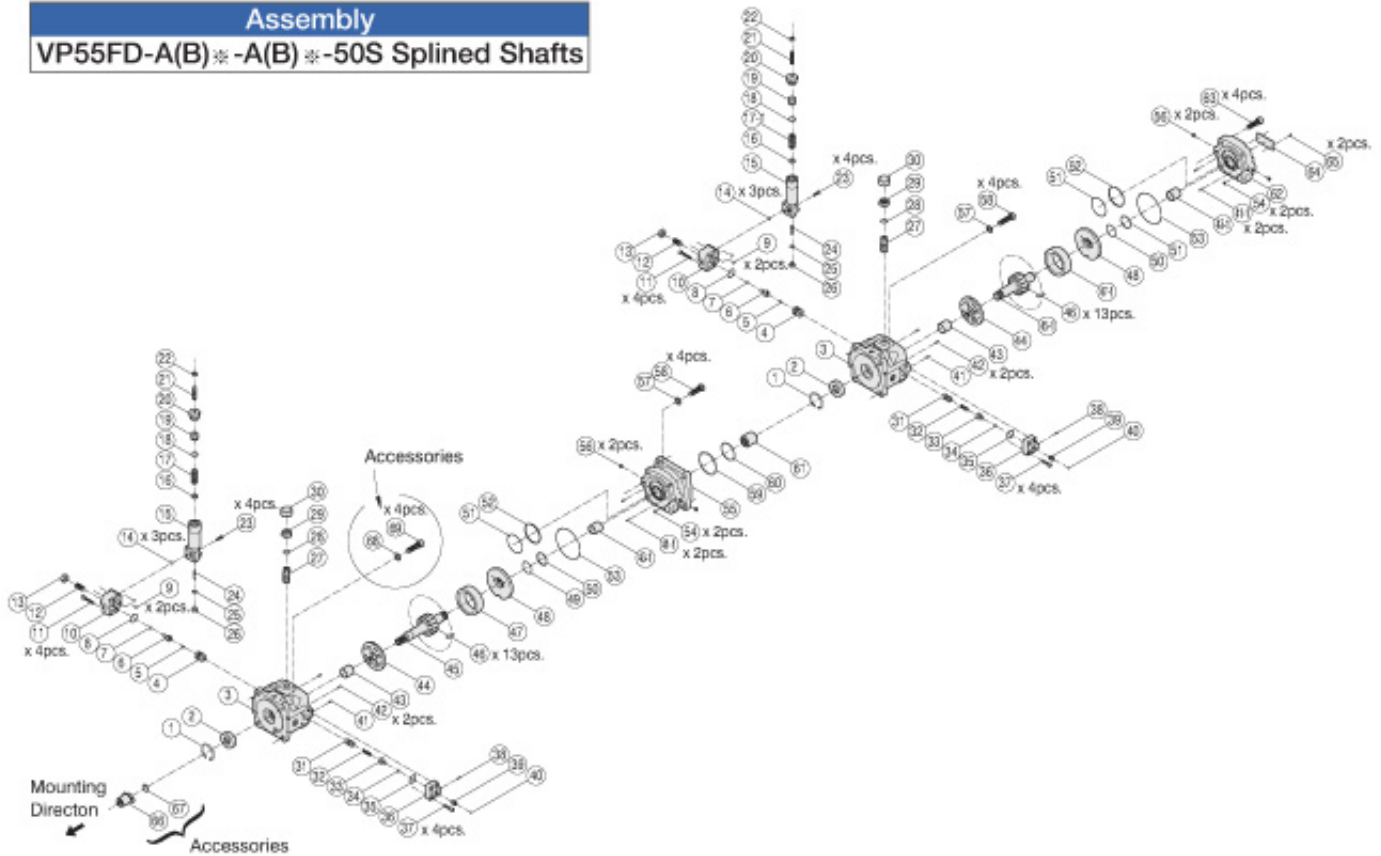
※ Parts numbers 1-58 on the double pump are same as those on previous pump. Quantity are calculated together. (but parts number 17-1, 45-1, and 47-1 are not included.)

※ 67 ~ 68 are Accessories.

VP55FD

Assembly

VP55FD-A(B)※-A(B)※-50S Splined Shafts



VP55FD-A(B)※-A(B)※-50S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1+1	26	Plug		1+1	48	Thrust Plate		1+1
2	Shaft Seal	TDN1 22 42 11	1+1	27	Slide Screw		1+1	49	O-Ring	AS568-026	1+1
3	Pump Body		1+1	28	O-Ring	1A-P14	1+1	50	Endless Back-up Ring		1+1
4	Piston (A)		1+1	29	Hexagon Nut	M16 × P1.0	1+1	51	O-Ring	AS568-034	1+1
5	Socket Set Screw	M4 × P0.7 × 5L	1+1	30	Cap		1+1	52	Endless Back-up Ring		1+1
6	Piston (B)		1+1	31	Piston (A)		1+1	53	O-Ring	1A-S85	1+1
7	O-Ring	1A-P5	1+1	32	Spring		1+1	54	O-Ring	1A-P6	2+2
8	O-Ring	1A-P20	1+1	33	Piston (B)		1+1	55	Cover		1
9	O-Ring	1A-P6	2+2	34	O-Ring	1A-P5	1+1	56	Plug	1/16"	2+2
10	Cover		1+1	35	O-Ring	1A-P22	1+1	57	Spring Washer	M10	4+4
11	Skt. HD. Cap Scr.	M6 × P1.0 × 35L	4+4	36	Cover		1+1	58	Hexagon Screw	M10 × P1.5 × 35L	4+4
12	Socket Set Screw	M12 × P1.75 × 25L	1+1	37	Skt. HD. Cap Scr.	M6 × P1.0 × 25L	4+4	59	O-Ring	1A-G45	1
13	Hexagon Nut	M12 × P1.75	1+1	38	Socket Set Screw	M5 × P0.8 × 10L	1+1	60	O-Ring	1A-G60	1
14	O-Ring	1A-P6	3+3	39	Socket Set Screw	M10 × P1.5 × 12L	1+1	61	Coupling		1
15	Body		1+1	40	Plug		1+1	※ Parts numbers 1-58 on the double pump are same as those on previous pump. Quantity are calculated together (but parts number 17-1, 45-1, and 47-1 are not included)			
16	Hold		1+1	41	Spring Pin	ø4 × 10	1+1				
17	Spring		1	41-1	Spring Pin	ø4 × 10	2+2	63	Skt. HD. Cap Scr.	M10 × P1.5 × 35L	4
17-1	Spring		1	42	Straight Pin	ø4 × 10	2+2	64	Name Plate		1
18	O-Ring	1A-P14	1+1	43	Engine Bush	DIADO(JAPAN)DD2225	1+1	65	Fixing Screw		2
19	Spring Retainer		1+1	43-1	Engine Bush	DIADO(JAPAN)DD2225	1+1	66	Coupling		1
20	Screw		1+1	44	Port Plate		1+1	67	Retainer Ring	IRTW 24	1
21	Socket Set Screw	M8 × P1.25 × 35L	1+1	45	Rotorshaft (A)		1	68	Spring Washer	M10	4
22	Hexagon Nut	M8 × P1.25	1+1	45-1	Rotorshaft (B)		1	69	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4
23	Skt. HD. Cap Scr.	M5 × P0.8 × 25L	4+4	46	Vanes		13+13	※ 66~69 are Accessories.			
24	Spool		1+1	47	Cam Ring		1				
25	O-Ring	1A-P10	1+1	47-1	Cam Ring		1				

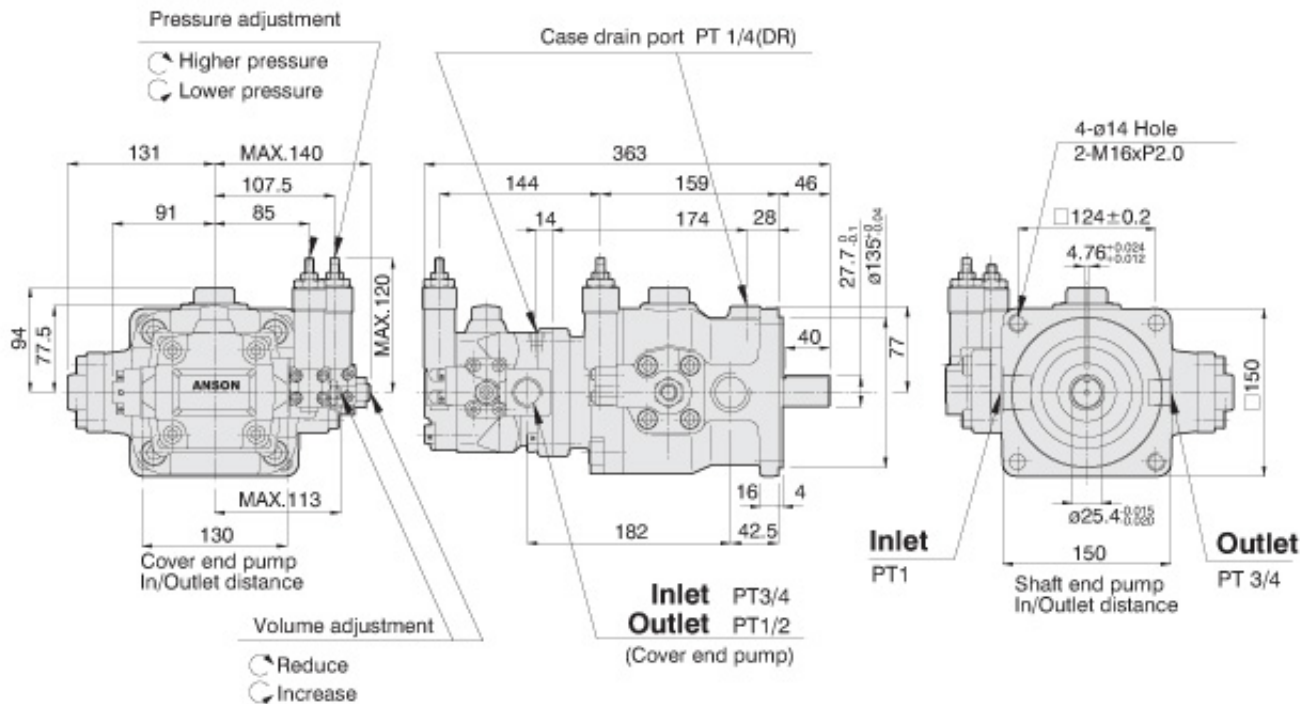
Variable displacement vane pumps VP65FD series

ANSON

HYDRAULICS

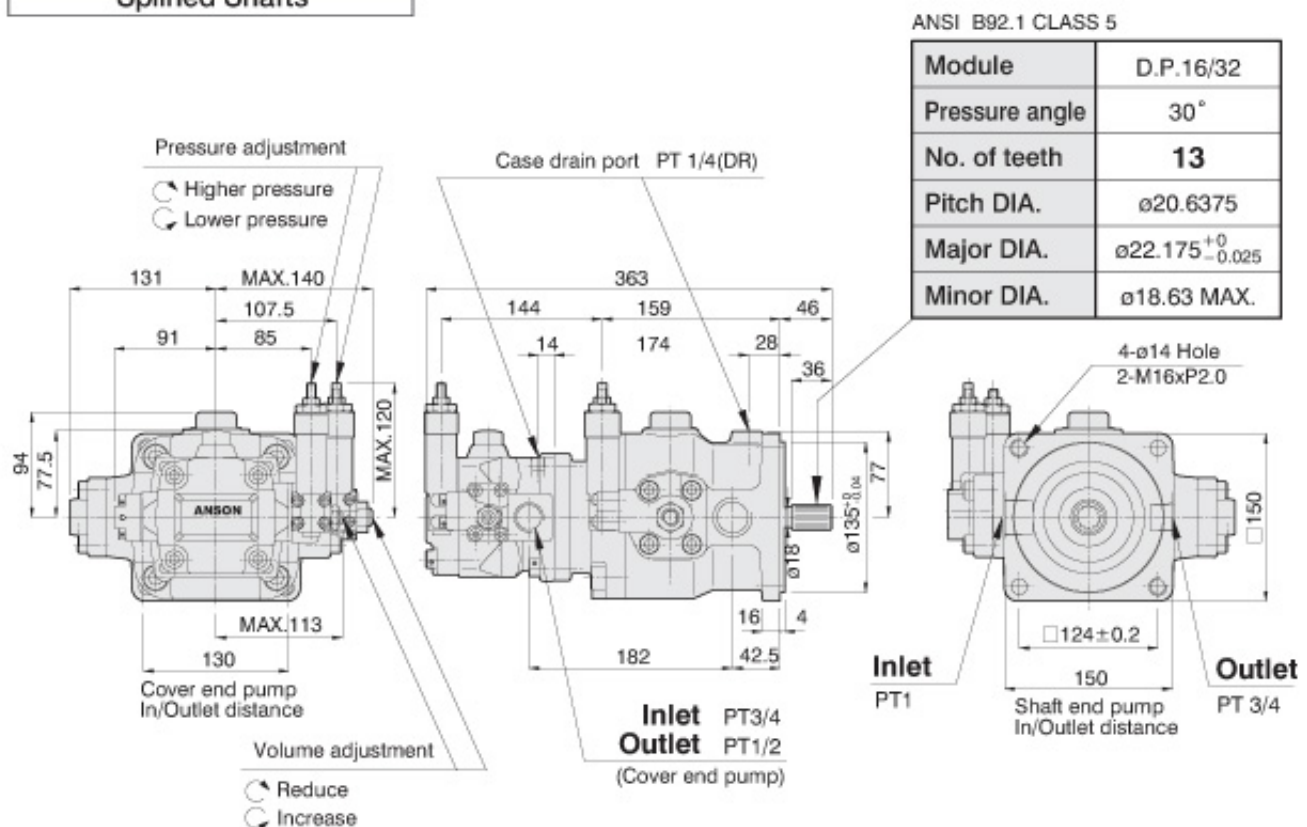
VP65FD-***-50

Straight key



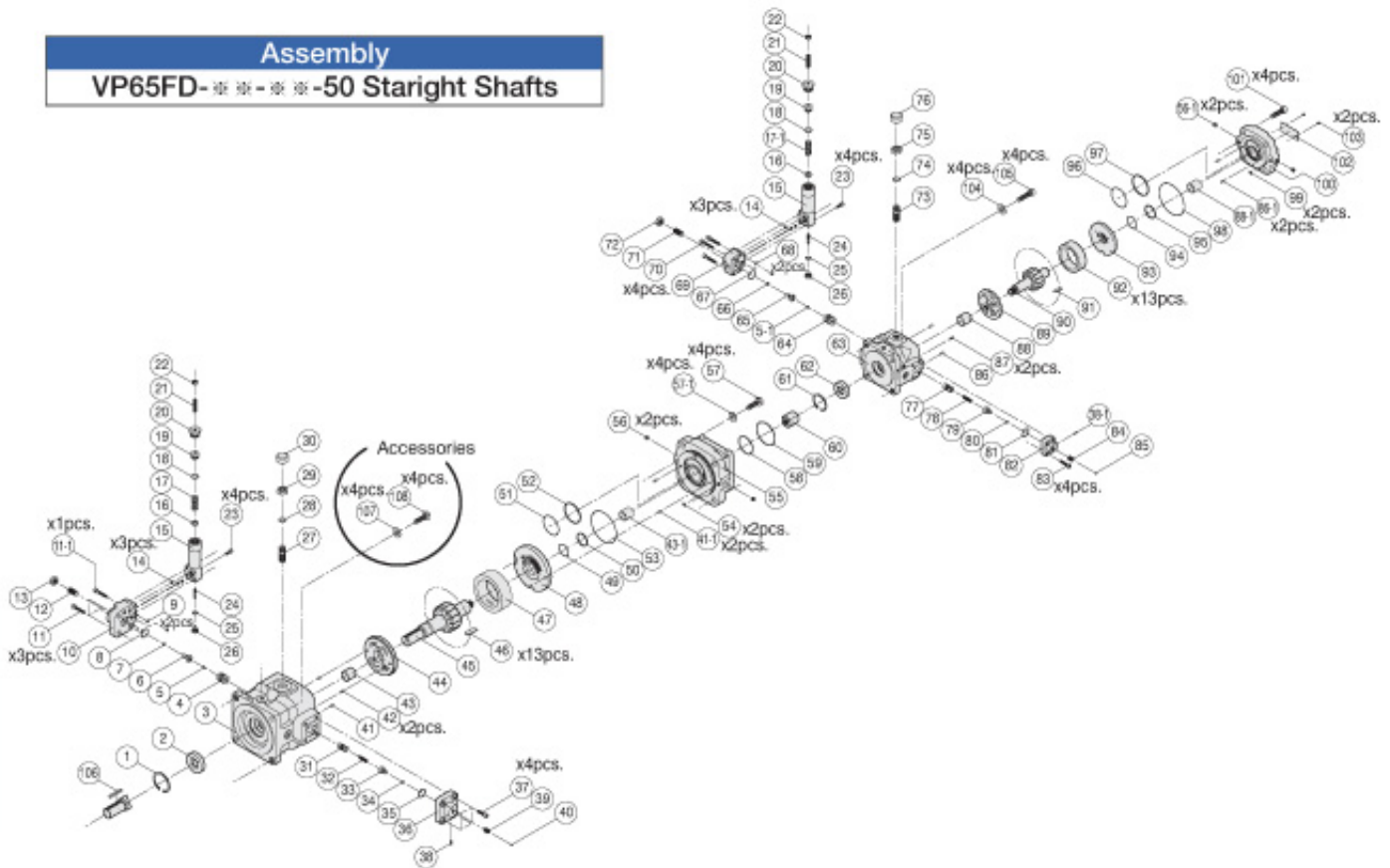
VP65FD-***-50S

Spined Shafts



VP65FD

Assembly VP65FD-**-**-50 Staright Shafts



VP65FD-**-**-50 Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R52	1	27	Slide Screw		1	55	Cover		1	84	Socket Set Screw	M10 x P1.5 x 12L	1
2	Shaft Seal	TDN1 32 52 11	1	28	O-Ring	1A-P18	1	56	Plug	1/16"	2	85	Plug		1
3	Pump Body		1	29	Hexagon Nut	M20 x P1.5	1	56-1	Plug	1/16"	2	86	Spring Pin	ø4 x 10L	1
4	Piston (A)		1	30	Cap		1	57	Hexagon Screw	M14 x P2.0 x 40L	4	86-1	Spring Pin	ø4 x 10L	2
5	Socket Set Screw	M4 x P0.7 x 5L	1	31	Piston (A)		1	57-1	Washer	M14	4	87	Straight Pin	ø4 x 10L	2
5-1	Socket Set Screw	M4 x P0.7 x 5L	1	32	Spring		1	58	O-Ring	1A-G45	1	88	Engine Bush	DAIDO/JAPAN/002225	1
6	Piston (B)		1	33	Piston (B)		1	59	O-Ring	1A-G60	1	88-1	Engine Bush	DAIDO/JAPAN/002225	1
7	O-Ring	1A-P9	1	34	O-Ring	1A-P9	1	60	Shaft Coupling		1	89	Port Plate		1
8	O-Ring	1A-G35	1	35	O-Ring	1A-G35	1	61	Retainer Ring	R42	1	90	Rotorshaft (B)		1
9	O-Ring	1A-P7	2	36	Cover		1	62	Shaft Seal	TDN1 22 42 11	1	91	Vanes		13
10	Cover		1	37	Skt. HD. Cap Scr.	M10 x P1.5 x 30L	4	63	Pump Body		1	92	Cam Ring		1
11	Skt. HD. Cap Scr.	M10 x P1.5 x 30L	3	38	Socket Set Screw	M5 x P0.8 x 10L	1	64	Piston (A)		1	93	Thrust Plate		1
11-1	Skt. HD. Cap Scr.	M10 x P1.5 x 40L	1	38-1	Socket Set Screw	M5 x P0.8 x 10L	1	65	Piston (B)		1	94	O-Ring	AS568-026	1
12	Socket Set Screw	M16 x P2.0 x 40L	1	39	Socket Set Screw	M10 x P1.5 x 16L	1	66	O-Ring	1A-P5	1	95	Endless Back-up Ring		1
13	Hexagon Nut	M16 x P2.0	1	40	Plug		1	67	O-Ring	1A-P20	1	96	O-Ring	AS568-034	1
14	O-Ring	1A-P6	3+3	41	Spring Pin	ø6 x 12L	1	68	O-Ring	1A-P6	2	97	Endless Back-up Ring		1
15	Body		1+1	41-1	Spring Pin	ø6 x 12L	2	69	Cover		1	98	O-Ring	1A-S85	1
16	Hold		1+1	42	Straight Pin	ø6 x 12L	2	70	Skt. HD. Cap Scr.	M6 x P1.0 x 35L	4	99	O-Ring	1A-P6	2
17	Spring		1	43	Engine Bush	DAIDO/JAPAN/002236	1	71	Socket Set Screw	M12 x P1.75 x 25L	1	100	Cover		1
17-1	Spring		1	43-1	Engine Bush	DAIDO/JAPAN/002236	1	72	Hexagon Nut	M12 x P1.75	1	101	Skt. HD. Cap Scr.	M10 x P1.5 x 35L	4
18	O-Ring	1A-P14	1+1	44	Port Plate		1	73	Slide Screw		1	102	Name Plate		1
19	Spring Retainer		1+1	45	Rotorshaft (A)		1	74	O-Ring	1A-P14	1	103	Fixing Screw		2
20	Screw		1+1	46	Vanes		13	75	Hexagon Nut	M16 x P1.0	1	104	Spring Washer	M10	4
21	Socket Set Screw	M8 x P1.25 x 35L	1+1	47	Cam Ring		1	76	Cap		1	105	Skt. HD. Cap Scr.	M10 x P1.5 x 30L	4
22	Hexagon Nut	M8 x P1.25	1+1	48	Thrust Plate		1	77	Piston (A)		1	106	Straight Key	□4.76 x L40	1
23	Skt. HD. Cap Scr.	M6 x P0.8 x 25L	4+4	49	O-Ring	AS568-134	1	78	Spring		1	107	Spring Washer	M12	4
24	Spool		1+1	50	Endless Back-up Ring		1	79	Piston (B)		1	108	Hexagon Screw	M12 x P1.75 x 35L	4
25	O-Ring	1A-P10	1+1	51	O-Ring	AS568-150	1	80	O-Ring	1A-P5	1				
26	Plug		1+1	52	Endless Back-up Ring		1	81	O-Ring	1A-P22	1				
				53	O-Ring	1A-G115	1	82	Cover		1				
				54	O-Ring	1A-P7	2	83	Skt. HD. Cap Scr.	M6 x P1.0 x 25L	4				

※ Parts numbers 14-26 on the double pump are same as those on previous pump. Quantity are calculated together (but parts number 17-1 are not included.)

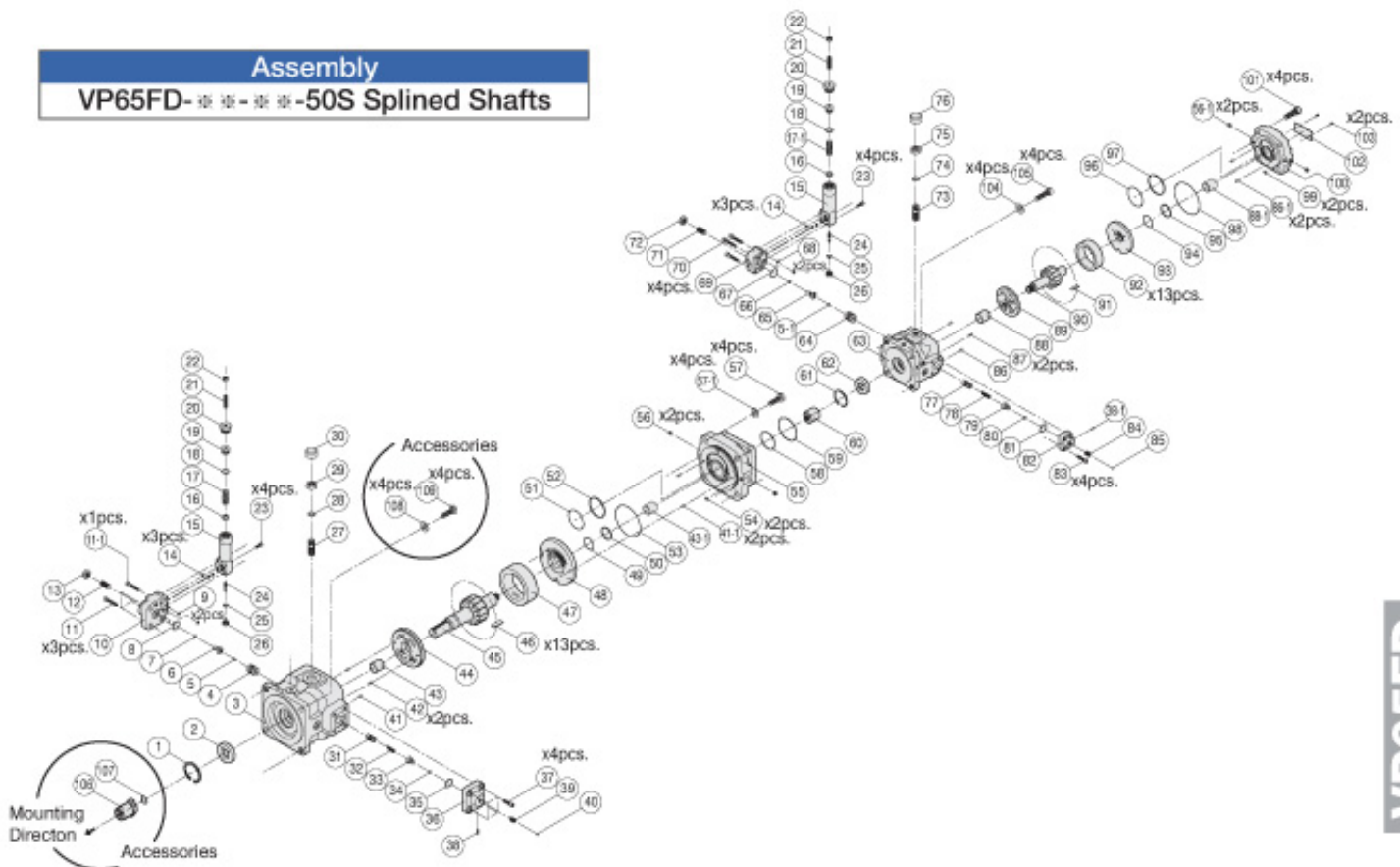
※ See drawing for accessory

Variable displacement vane pumps VP65FD series

ANSON HYDRAULICS

VP65FD

Assembly VP65FD-**-**-50S Splined Shafts



VP65FD-**-**-50S Parts List

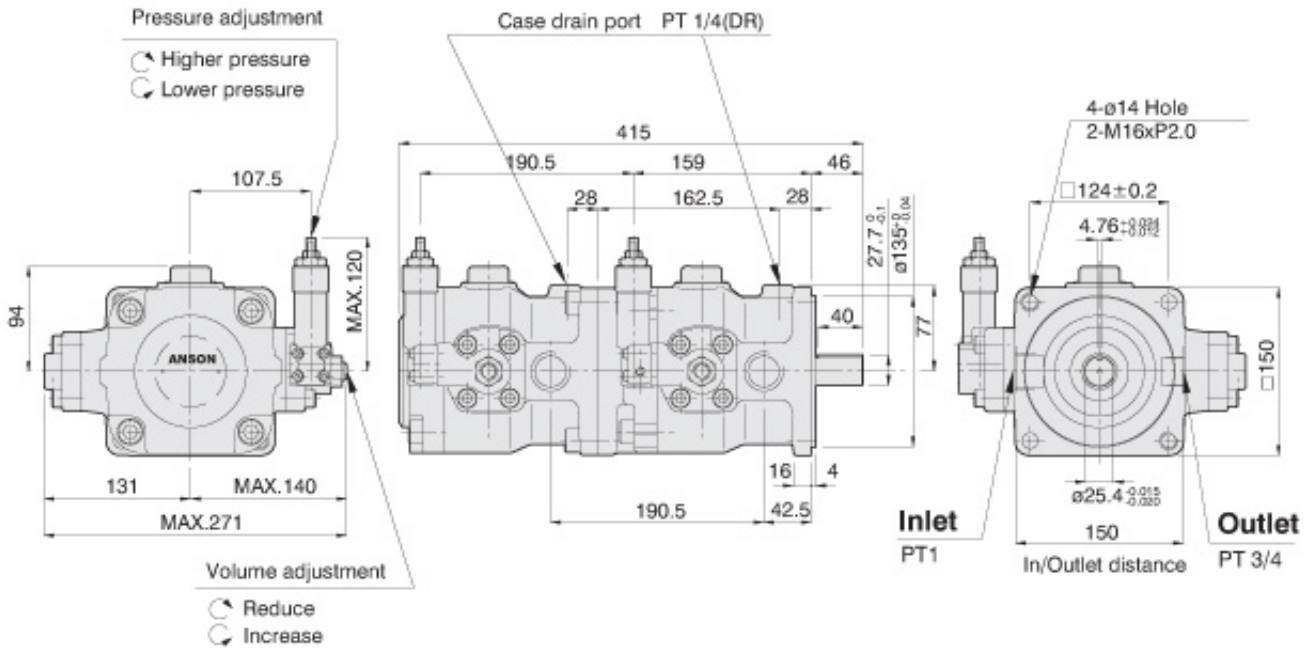
NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R52	1	27	Slide Screw		1	55	Cover		1	84	Socket Set Screw	M10 x P1.5 x 12L	1
2	Shaft Seal	TDN1 32 52 11	1	28	O-Ring	1A-P18	1	56	Plug	1/16"	2	85	Plug		1
3	Pump Body		1	29	Hexagon Nut	M20 x P1.5	1	56-1	Plug	1/16"	2	86	Spring Pin	ø4 x 10L	1
4	Piston (A)		1	30	Cap		1	57	Hexagon Screw	M14 x P2.0 x 40L	4	86-1	Spring Pin	ø4 x 10L	2
5	Socket Set Screw	M4 x P0.7 x 5L	1	31	Piston (A)		1	57-1	Washer	M14	4	87	Straight Pin	ø4 x 10L	2
5-1	Socket Set Screw	M4 x P0.7 x 5L	1	32	Spring		1	58	O-Ring	1A-G45	1	88	Engine Bush	DADO(JAPAN)D03225	1
6	Piston (B)		1	33	Piston (B)		1	59	O-Ring	1A-G60	1	88-1	Engine Bush	DADO(JAPAN)D03225	1
7	O-Ring	1A-P9	1	34	O-Ring	1A-P9	1	60	Shaft Coupling		1	89	Port Plate		1
8	O-Ring	1A-G35	1	35	O-Ring	1A-G35	1	61	Retainer Ring	R42	1	90	Rotorshaft (B)		1
9	O-Ring	1A-P7	2	36	Cover		1	62	Shaft Seal	TDN1 22 42 11	1	91	Vanes		13
10	Cover		1	37	Skt. HD. Cap Scr.	M10 x P1.5 x 30L	4	63	Pump Body		1	92	Cam Ring		1
11	Skt. HD. Cap Scr.	M10 x P1.5 x 30L	3	38	Socket Set Screw	M5 x P0.8 x 10L	1	64	Piston (A)		1	93	Thrust Plate		1
11-1	Skt. HD. Cap Scr.	M10 x P1.5 x 40L	1	38-1	Socket Set Screw	M5 x P0.8 x 10L	1	65	Piston (B)		1	94	O-Ring	AS568-026	1
12	Socket Set Screw	M16 x P2.0 x 40L	1	39	Socket Set Screw	M10 x P1.5 x 16L	1	66	O-Ring	1A-P5	1	95	Endless Back-up Ring		1
13	Hexagon Nut	M16 x P2.0	1	40	Plug		1	67	O-Ring	1A-P20	1	96	O-Ring	AS568-034	1
14	O-Ring	1A-P6	3+3	41	Spring Pin	ø6 x 12L	1	68	O-Ring	1A-P6	2	97	Endless Back-up Ring		1
15	Body		1+1	41-1	Spring Pin	ø6 x 12L	2	69	Cover		1	98	O-Ring	1A-S85	1
16	Hold		1+1	42	Straight Pin	ø6 x 12L	2	70	Skt. HD. Cap Scr.	M6 x P1.0 x 35L	4	99	O-Ring	1A-P6	2
17	Spring		1	43	Engine Bush	DADO(JAPAN)D03236	1	71	Socket Set Screw	M12 x P1.75 x 25L	1	100	Cover		1
17-1	Spring		1	43-1	Engine Bush	DADO(JAPAN)D03236	1	72	Hexagon Nut	M12 x P1.75	1	101	Skt. HD. Cap Scr.	M10 x P1.5 x 35L	4
18	O-Ring	1A-P14	1+1	44	Port Plate		1	73	Slide Screw		1	102	Name Plate		1
19	Spring Retainer		1+1	45	Rotorshaft (A)		1	74	O-Ring	1A-P14	1	103	Fixing Screw		2
20	Screw		1+1	46	Vanes		13	75	Hexagon Nut	M16 x P1.0	1	104	Spring Washer	M10	4
21	Socket Set Screw	M8 x P1.25 x 35L	1+1	47	Cam Ring		1	76	Cap		1	105	Skt. HD. Cap Scr.	M10 x P1.5 x 30L	4
22	Hexagon Nut	M8 x P1.25	1+1	48	Thrust Plate		1	77	Piston (A)		1	106	Coupling		1
23	Skt. HD. Cap Scr.	M5 x P0.8 x 25L	4+4	49	O-Ring	AS568-134	1	78	Spring		1	107	Retainer Ring	IRTW 32	1
24	Spool		1+1	50	Endless Back-up Ring		1	79	Piston (B)		1	108	Spring Washer	M12	4
25	O-Ring	1A-P10	1+1	51	O-Ring	AS568-150	1	80	O-Ring	1A-P5	1	109	Hexagon Screw	M12 x P1.75 x 35L	4
26	Plug		1+1	52	Endless Back-up Ring		1	81	O-Ring	1A-P22	1				
				53	O-Ring	1A-G115	1	82	Cover		1				
				54	O-Ring	1A-P7	2	83	Skt. HD. Cap Scr.	M6 x P1.0 x 25L	4				

※: Parts numbers 14-26 on the double pump are same as those on previous pump. Quantity are calculated together, (but parts number 17-1 are not included.)

※: See drawing for accessory

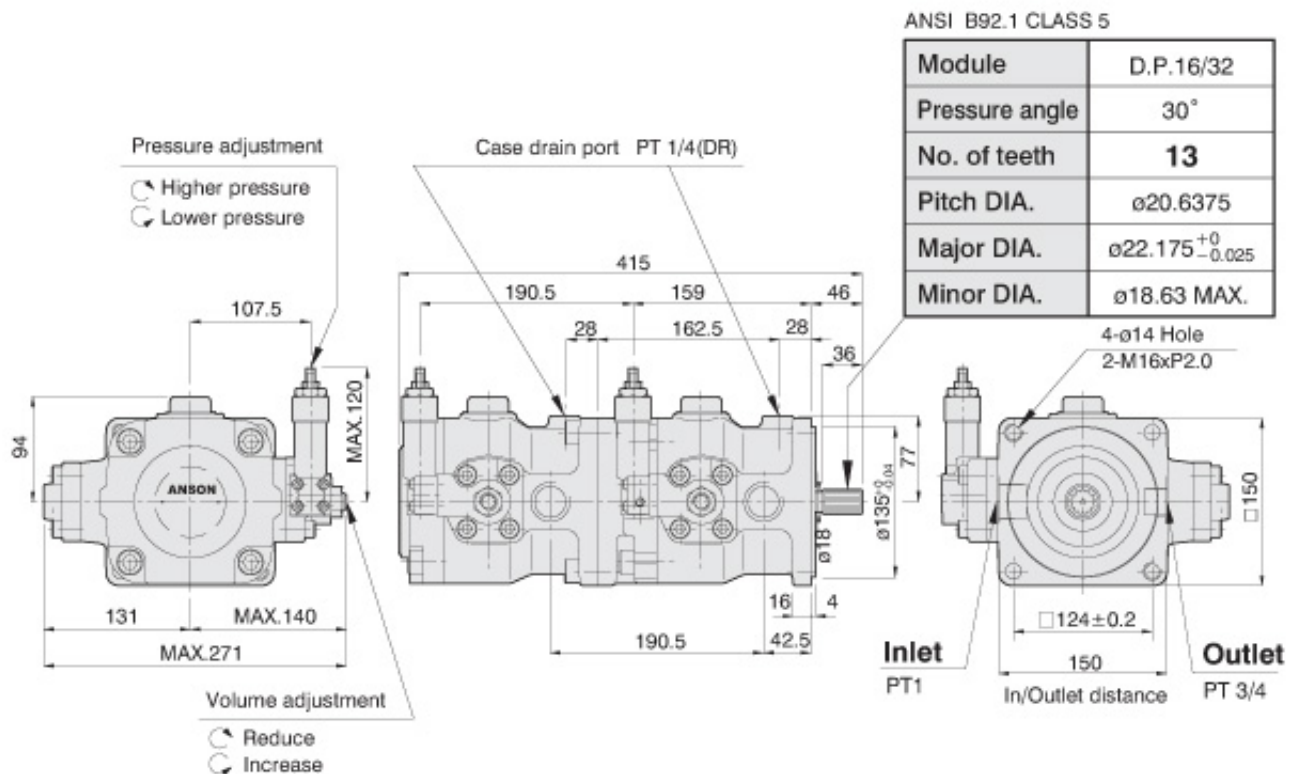
VP66FD-***-**-50

Straight key



VP66FD-***-**-50S

Splined Shafts

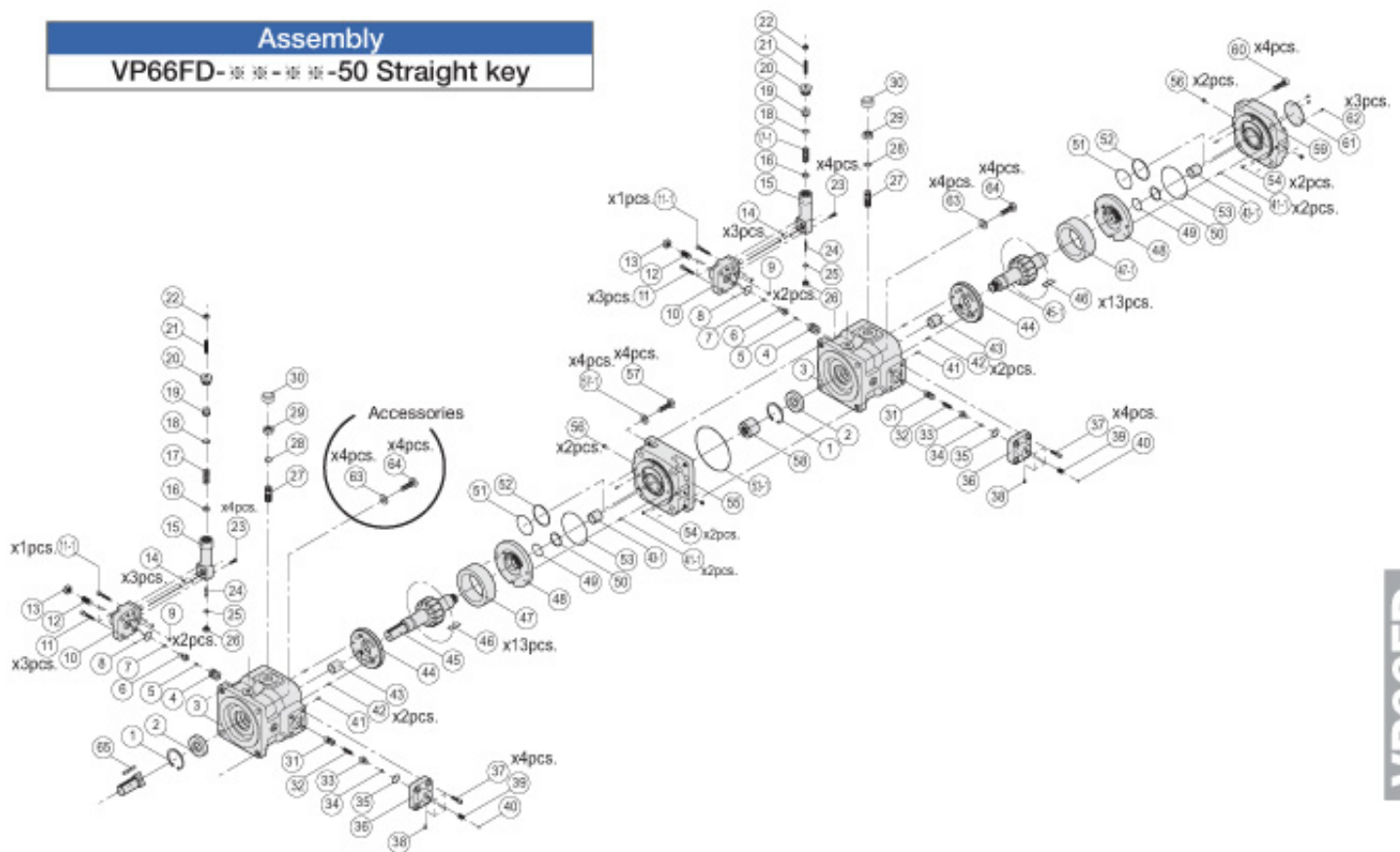


Variable displacement vane pumps VP66FD series

ANSON HYDRAULICS

Assembly

VP66FD-**-**-50 Straight key

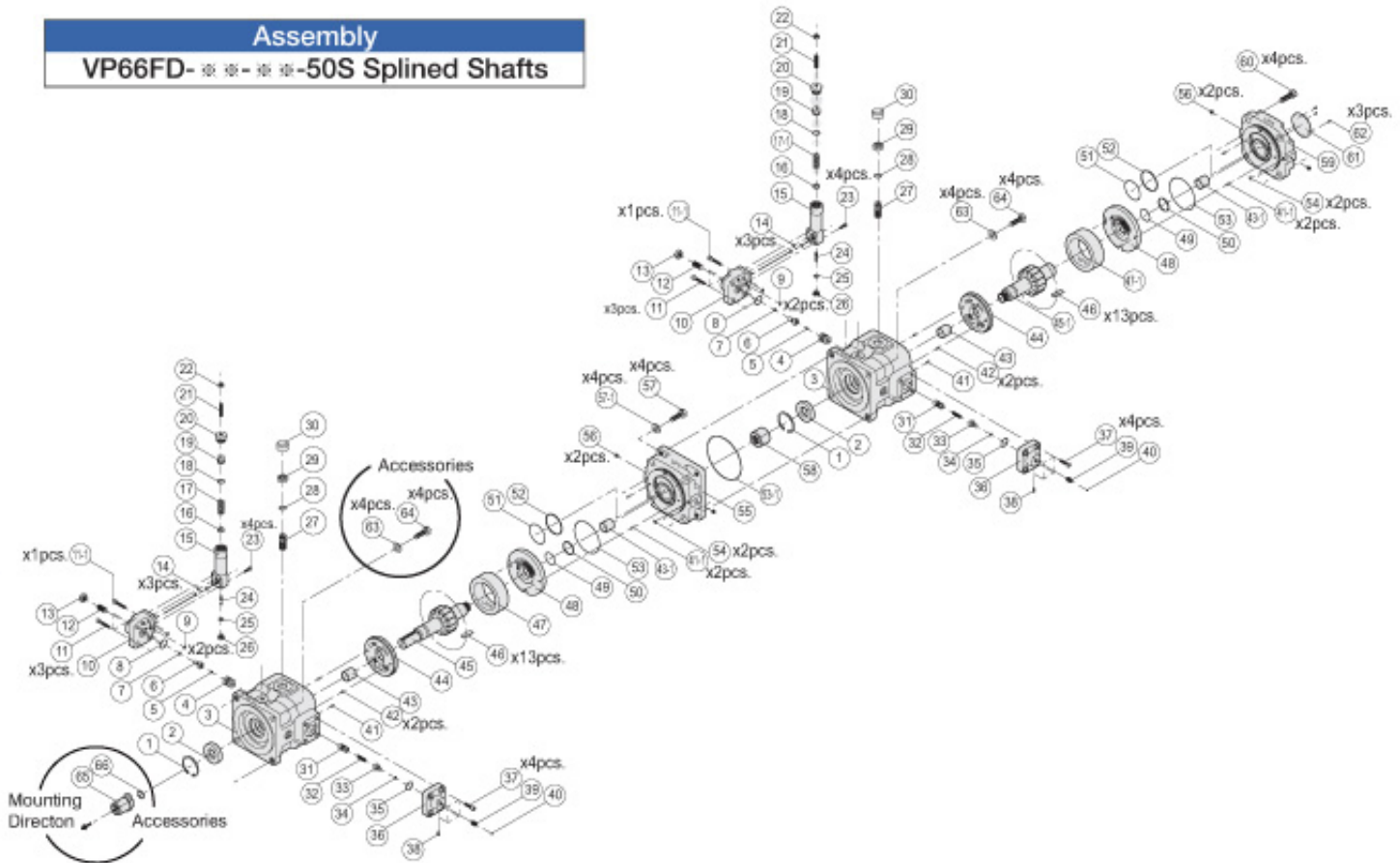


VP66FD-**-**-50 Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R52	1+1	25	O-Ring	1A-P10	1+1	47-1	Cam Ring		1
2	Shaft Seal	TDN1 32 52 11	1+1	26	Plug		1+1	48	Thrust Plate		1+1
3	Pump Body		1+1	27	Slide Screw		1+1	49	O-Ring	AS568-134	1+1
4	Piston (A)		1+1	28	O-Ring	1A-P18	1+1	50	Endless Back-up Ring		1+1
5	Socket Set Screw	M4 × P0.7 × 5L	1+1	29	Hexagon Nut	M20 × P1.5	1+1	51	O-Ring	AS568-150	1+1
6	Piston (B)		1+1	30	Cap		1+1	52	Endless Back-up Ring		1+1
7	O-Ring	1A-P9	1+1	31	Piston (A)		1+1	53	O-Ring	1A-G115	1+1
8	O-Ring	1A-G35	1+1	32	Spring		1+1	53-1	O-Ring	1A-G115	1
9	O-Ring	1A-P7	2+2	33	Piston (B)		1+1	54	O-Ring	1A-P7	2+2
10	Cover		1+1	34	O-Ring	1A-P9	1+1	55	Cover		1
11	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	3+3	35	O-Ring	1A-G35	1+1	56	Plug	1/16"	2+2
11-1	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	1+1	36	Cover		1+1	57	Hexagon Screw	M14 × P2.0 × 40L	4
12	Socket Set Screw	M16 × P2.0 × 40L	1+1	37	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4+4	57-1	Washer	M14	4
13	Hexagon Nut	M16 × P2.0	1+1	38	Socket Set Screw	M5 × P0.8 × 10L	1+1	58	Shaft Coupling		1
14	O-Ring	1A-P6	3+3	39	Socket Set Screw	M10 × P1.5 × 16L	1+1	※ Parts numbers 1-57 on the double pump are same as those on previous pump. Quantity are calculated together (but parts number 17-1, 45-1, and 47-1 are not included.)			
15	Body		1+1	40	Plug		1+1				
16	Hold		1+1	41	Spring Pin	ø6 × 12L	1+1	59	Cover		1
17	Spring		1	41-1	Spring Pin	ø6 × 12L	2+2	60	Skt. HD. Cap Scr.	M14 × P2.0 × 40L	4
17-1	Spring		1	42	Straight Pin	ø6 × 12L	2+2	61	Name Plate		1
18	O-Ring	1A-P14	1+1	43	Engine Bush	DIADO(JAPAN)DD3236	1+1	62	Fixing Screw		3
19	Spring Retainer		1+1	43-1	Engine Bush	DIADO(JAPAN)DD3236	1+1	63	Spring Washer	M12	4+4
20	Screw		1+1	44	Port Plate		1+1	64	Skt. HD. Cap Scr.	M12 × P1.75 × 35L	4+4
21	Socket Set Screw	M8 × P1.25 × 35L	1+1	45	Rotorshaft (A)		1	65	Straight Key	4.76 × L40	1
22	Hexagon Nut	M8 × P1.25	1+1	45-1	Rotorshaft (B)		1	※ See drawing for accessory			
23	Skt. HD. Cap Scr.	M8 × P0.8 × 25L	4+4	46	Vanes		13+13				
24	Spool		1+1	47	Cam Ring		1				

VP66FD

Assembly VP66FD-***-50S Splined Shafts



VP66FD-***-50S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R52	1+1	25	O-Ring	1A-P10	1+1	47-1	Cam Ring		1
2	Shaft Seal	TDN1 32 52 11	1+1	26	Plug			48	Thrust Plate		1+1
3	Pump Body		1+1	27	Slide Screw		1+1	49	O-Ring	AS568-134	1+1
4	Piston (A)		1+1	28	O-Ring	1A-P18	1+1	50	Endless Back-up Ring		1+1
5	Socket Set Screw	M4 xP0.7 x5L	1+1	29	Hexagon Nut	M20 xP1.5	1+1	51	O-Ring	AS568-150	1+1
6	Piston (B)		1+1	30	Cap		1+1	52	Endless Back-up Ring		1+1
7	O-Ring	1A-P9	1+1	31	Piston (A)		1+1	53	O-Ring	1A-G115	1+1
8	O-Ring	1A-G35	1+1	32	Spring		1+1	53-1	O-Ring	1A-G115	1
9	O-Ring	1A-P7	2+2	33	Piston (B)		1+1	54	O-Ring	1A-P7	2+2
10	Cover		1+1	34	O-Ring	1A-P9	1+1	55	Cover		1
11	Skt. HD. Cap Scr.	M10 xP1.5 x30L	3+3	35	O-Ring	1A-G35	1+1	56	Plug	1/16"	2+2
11-1	Skt. HD. Cap Scr.	M10 xP1.5 x30L	1+1	36	Cover		1+1	57	Hexagon Screw	M14 xP2.0 x40L	4
12	Socket Set Screw	M16 xP2.0 x40L	1+1	37	Skt. HD. Cap Scr.	M10 xP1.5 x30L	4+4	57-1	Washer	M14	4
13	Hexagon Nut	M16 xP2.0	1+1	38	Socket Set Screw	M5 xP0.8 x10L	1+1	58	Shaft Coupling		1
14	O-Ring	1A-P6	3+3	39	Socket Set Screw	M10 xP1.5 x16L	1+1				
15	Body		1+1	40	Plug		1+1				
16	Hold		1+1	41	Spring Pin	ø6 x12L	1+1	59	Cover		1
17	Spring		1	41-1	Spring Pin	ø6 x12L	2+2	60	Skt. HD. Cap Scr.	M14 xP2.0 x40L	4
17-1	Spring		1	42	Straight Pin	ø6 x12L	2+2	61	Name Plate		1
18	O-Ring	1A-P14	1+1	43	Engine Bush	DIADO(JAPAN)DD3236	1+1	62	Fixing Screw		3
19	Spring Retainer		1+1	43-1	Engine Bush	DIADO(JAPAN)DD3236	1+1	63	Spring Washer	M12	4+4
20	Screw		1+1	44	Port Plate		1+1	64	Skt. HD. Cap Scr.	M12 xP1.75 x35L	4+4
21	Socket Set Screw	M8 xP1.25 x35L	1+1	45	Rotorshaft (A)		1	65	Coupling		1
22	Hexagon Nut	M8 xP1.25	1+1	45-1	Rotorshaft (B)		1	66	Retainer Ring	IRTW 32	1
23	Skt. HD. Cap Scr.	M8 xP0.8 x25L	4+4	46	Vanes		13+13				
24	Spool		1+1	47	Cam Ring		1				

※ Parts numbers 1-37 on the double pump are same as those on previous pump. Quantity are calculated together. (but parts number 17-1, 45-1, and 47-1 are not included.)

※ See drawing for accessory

PVF Model Code - Single Pumps							
PVF	-12			-70		-10	S
Frame size	Outlet flow at 3.5 bar, 1800 r/min			Operating pressure range		Design	Shafts code
	Code	Outlet flow L/min	(Geometric displ.) (cm ³ /rev)	Code	Pressure range (bar)		
PVF Flange mounting	8	8	(5)	20	8 - 20	10	Omit: Woodruff key S: Splined Shafts
	12	12	(7)	35	15 - 35		
	15	15	(8)	55	30 - 55		
	20	20	(12)	70	50 - 70		
	30	30	(16)	Factory setting P min.			
	40	40	(22)				
	Factory setting Q max.						

PVF

PVF Pumps Speed Limits

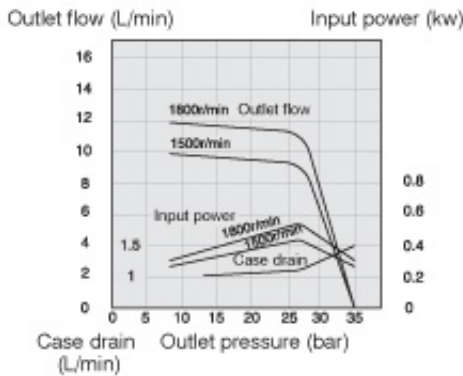
Minimum speed : 800 r/min
 Maximum speed : 1800 r/min

Frame size	Weight
PVF - 8 (12) - *** - 10	5 kg
PVF -15 (20) - *** - 10	6 kg
PVF - 30 - *** - 10	9 kg
PVF - 40 - *** - 10	9 kg

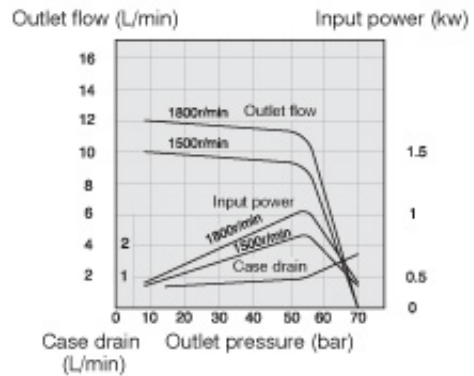
PVF Series Pumps Curve

Suitable Viscosity : ISO VG32

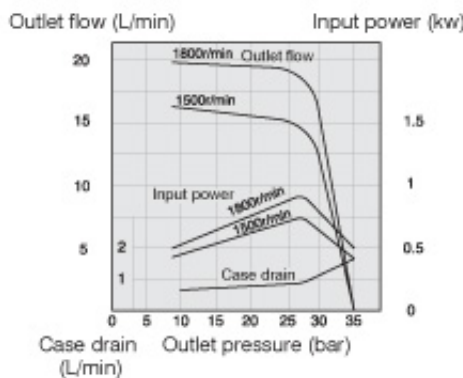
PVF-12-35-10



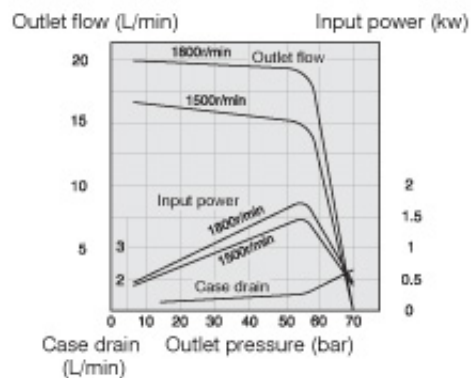
PVF-12-70-10



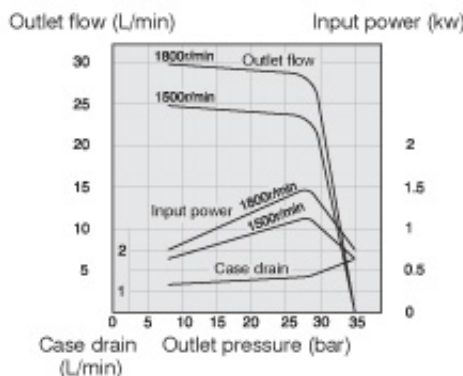
PVF-20-35-10



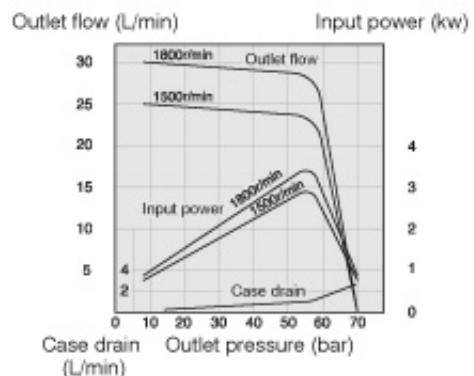
PVF-20-70-10



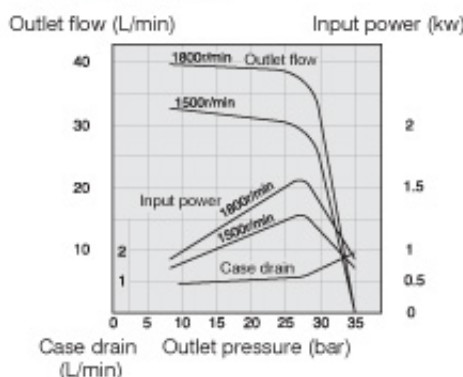
PVF-30-35-10



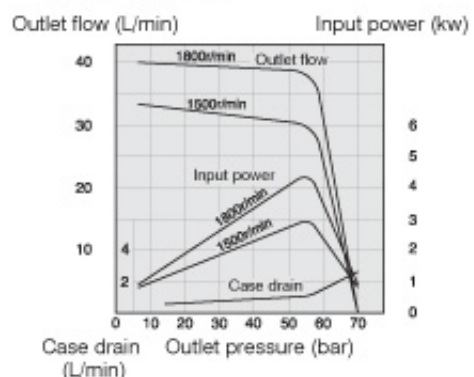
PVF-30-70-10



PVF-40-35-10



PVF-40-70-10

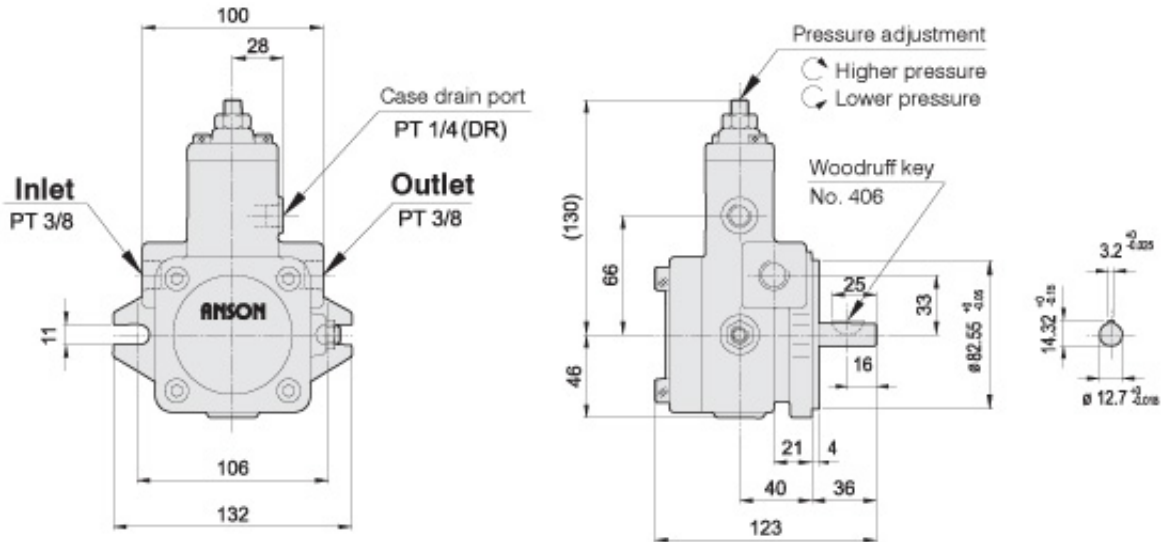


Variable displacement vane pumps PVF series

ANSON HYDRAULICS

PVF-8(12)- $\ast\ast$ -10

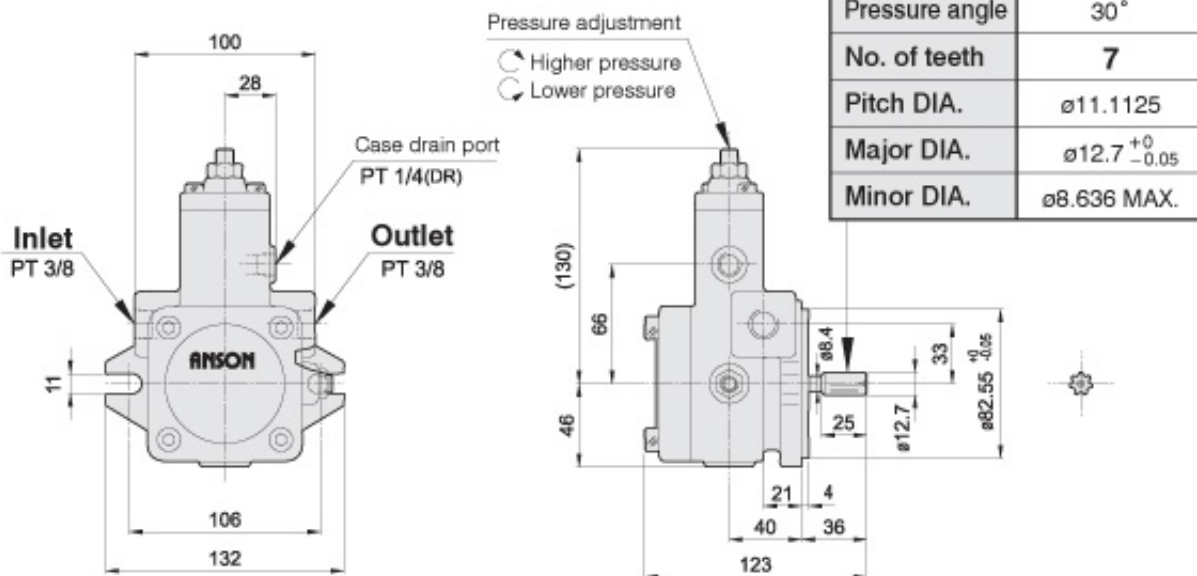
Woodruff key



Note: Above type, without flow adjustment equipment.

PVF-8(12)- $\ast\ast$ -10S

Splined Shafts

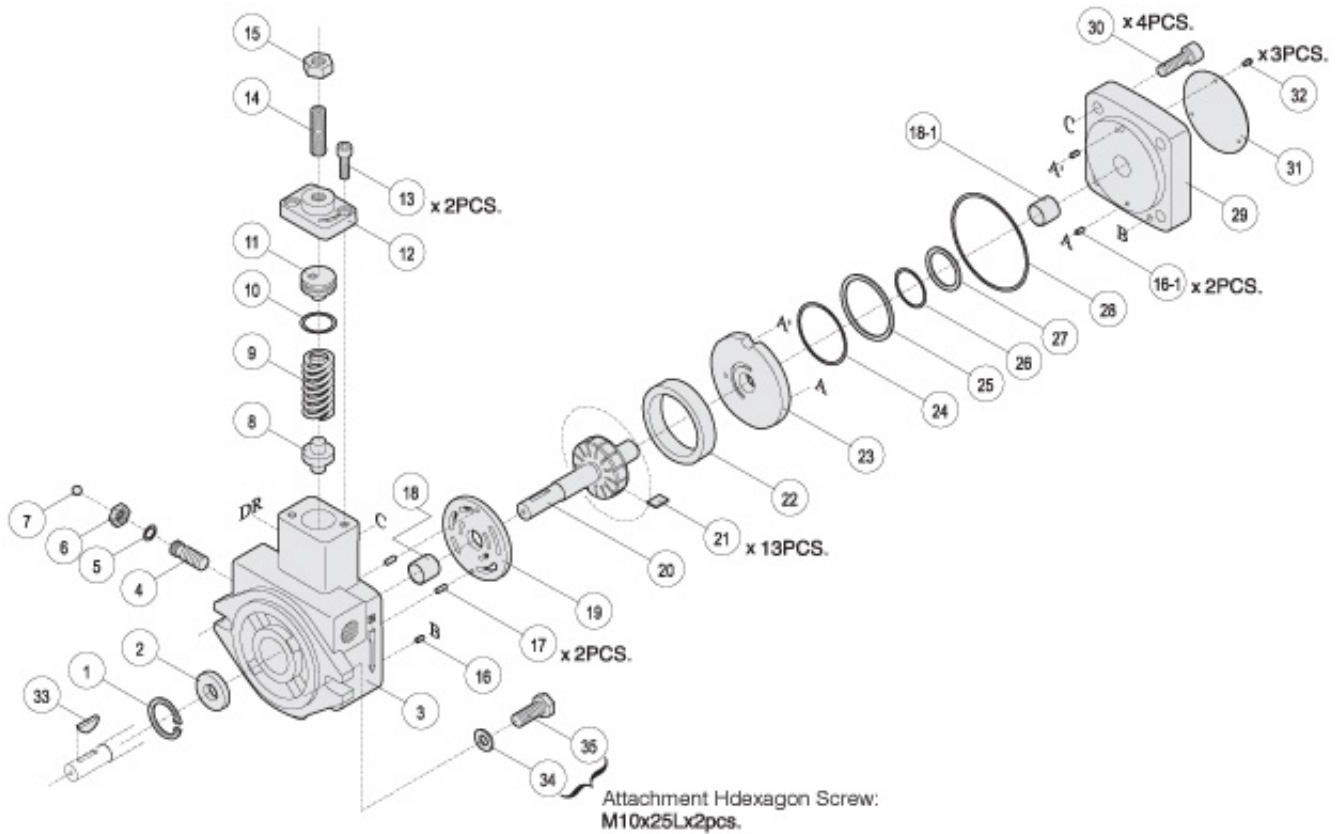


Note: Above type, without flow adjustment equipment.

PVF

Assembly

PVF-8(12)- ϕ 10 Woodruff key



PVF-8(12)- ϕ 10 Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R28	1	19	Port Plate		1
2	Shaft Seal	TC 14 28 7	1	20	Rotorshaft		1
3	Pump Body		1	21	Vanes		13
4	Slide Screw		1	22	Cam Ring		1
5	O-Ring	1A-P8	1	23	Thrust Plate		1
6	Hexagon Nut		1	24	O-Ring	AS568-031	1
7	Plastic Plug		1	25	Endless Back-up Ring		1
8	Piston		1	26	O-Ring	AS568-023	1
9	Spring		1	27	Endless Back-up Ring		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	φ3 × 8	1	34	Washer	M10	2
16-1	Spring Pin	φ3 × 8	2	35	Hexagon Screw	M10 × P1.5 × 25L	2
17	Straight Pin	φ3 × 8	2				
18	Engine Bush	DIADO(JAPAN)DD1415	1				
18-1	Engine Bush	DIADO(JAPAN)DD1415	1				

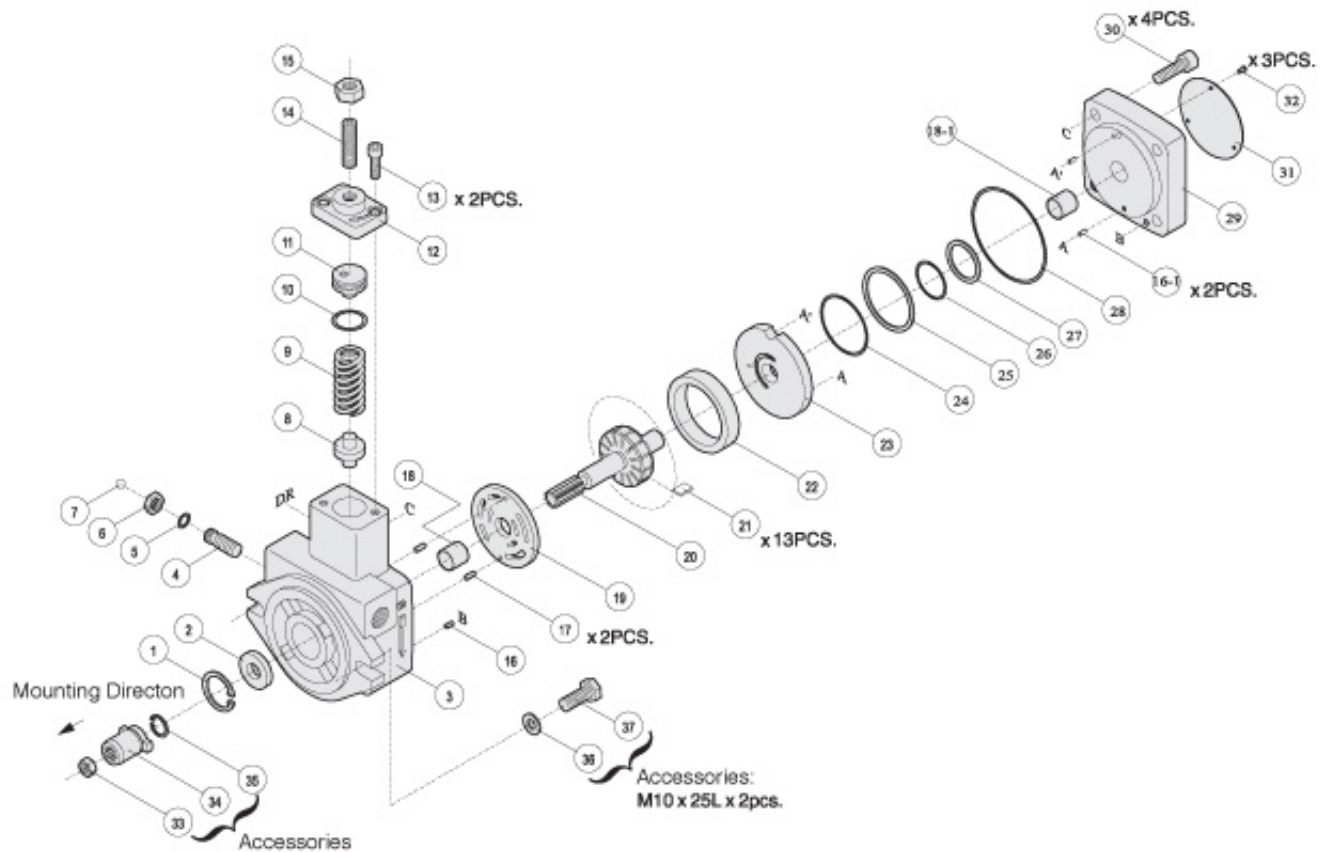
④ 34~35 are Accessories.

Variable displacement vane pumps PVF series

ANSON HYDRAULICS

Assembly

PVF-8(12)-※※-10S Splined Shafts



PVF

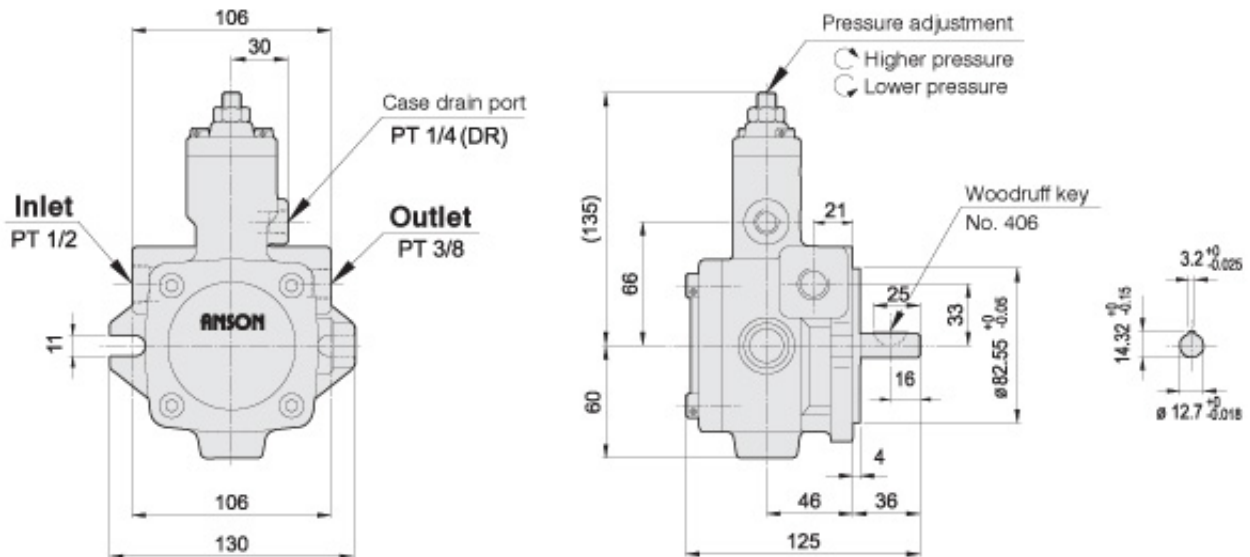
PVF-8(12)-※※-10S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R28	1	19	Port Plate		1
2	Shaft Seal	TC 14 28 7	1	20	Rotorshaft		1
3	Pump Body		1	21	Vanes		13
4	Slide Screw		1	22	Cam Ring		1
5	O-Ring	1A-P8	1	23	Thrust Plate		1
6	Hexagon Nut		1	24	O-Ring	AS568-031	1
7	Plastic Plug		1	25	Endless Back-up Ring		1
8	Piston		1	26	O-Ring	AS568-023	1
9	Spring		1	27	Endless Back-up Ring		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 x P1.25 x 30L	4
13	Skt. HD. Cap Scr.	M6 x P1.0 x 20L	2	31	Name Plate		1
14	Socket Set Screw	M10 x P1.5 x 35L	1	32	Fixing Screw		3
15	Hexagon Nut	M10 x P1.5	1	33	Hexagon Nut	M10 x P1.5	1
16	Spring Pin	φ3 x 8	1	34	Coupling		1
16-1	Spring Pin	φ3 x 8	2	35	Retainer Ring	IRTW20	1
17	Straight Pin	φ3 x 8	2	36	Washer	M10	2
18	Engine Bush	DIADO(JAPAN)DD1415	1	37	Hexagon Screw	M10 x P1.5 x 25L	2
18-1	Engine Bush	DIADO(JAPAN)DD1415	1				

※ 33-37 are Accessories.

PVF-15(20)-***-10

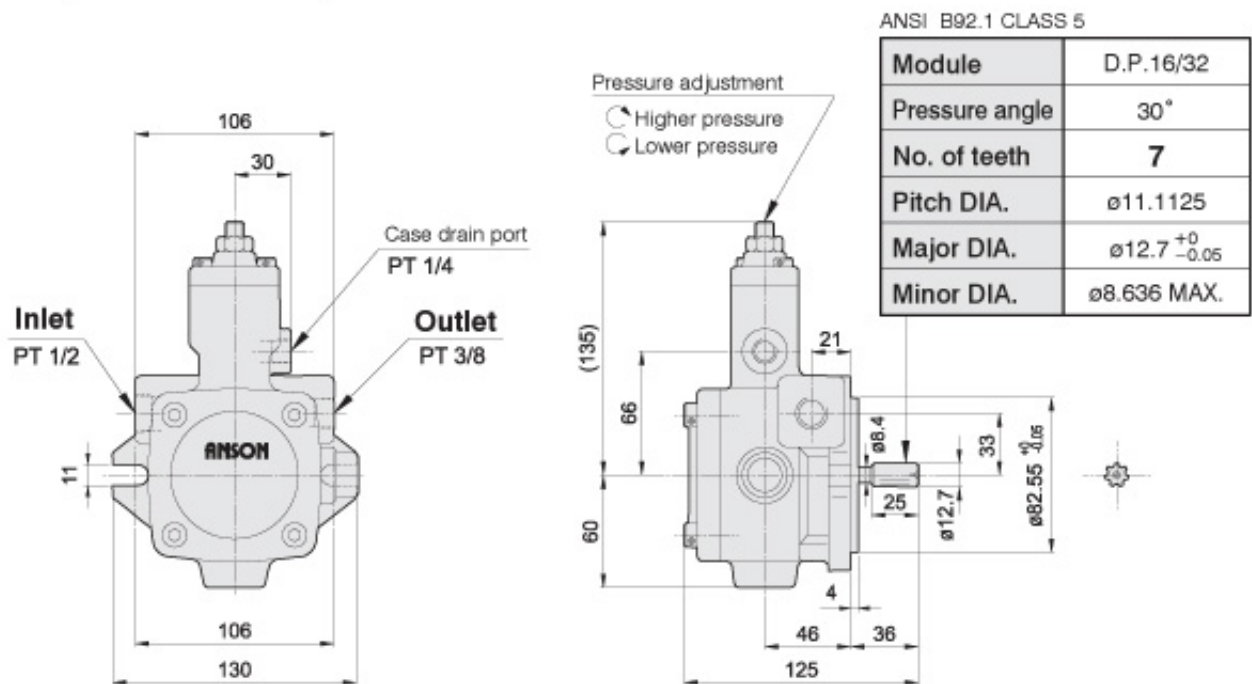
Woodruff key



Note: Above type, without flow adjustment equipment.

PVF-15(20)-***-10S

Splined Shafts



Note: Above type, without flow adjustment equipment.

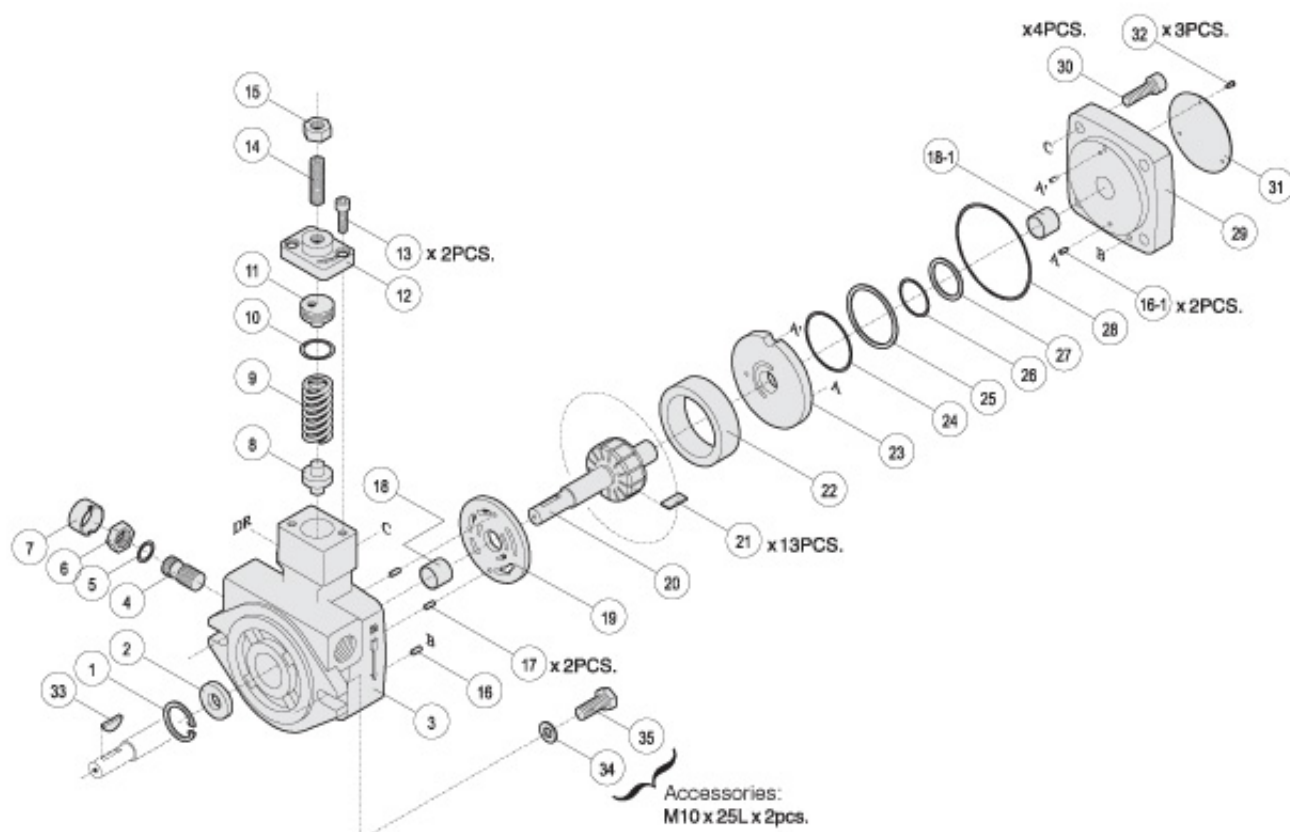
Variable displacement vane pumps PVF series

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HYDRAULICS

Assembly

PVF-15(20)-※※-10 Woodruff key



PVF-15(20)-※※-10 Parts List

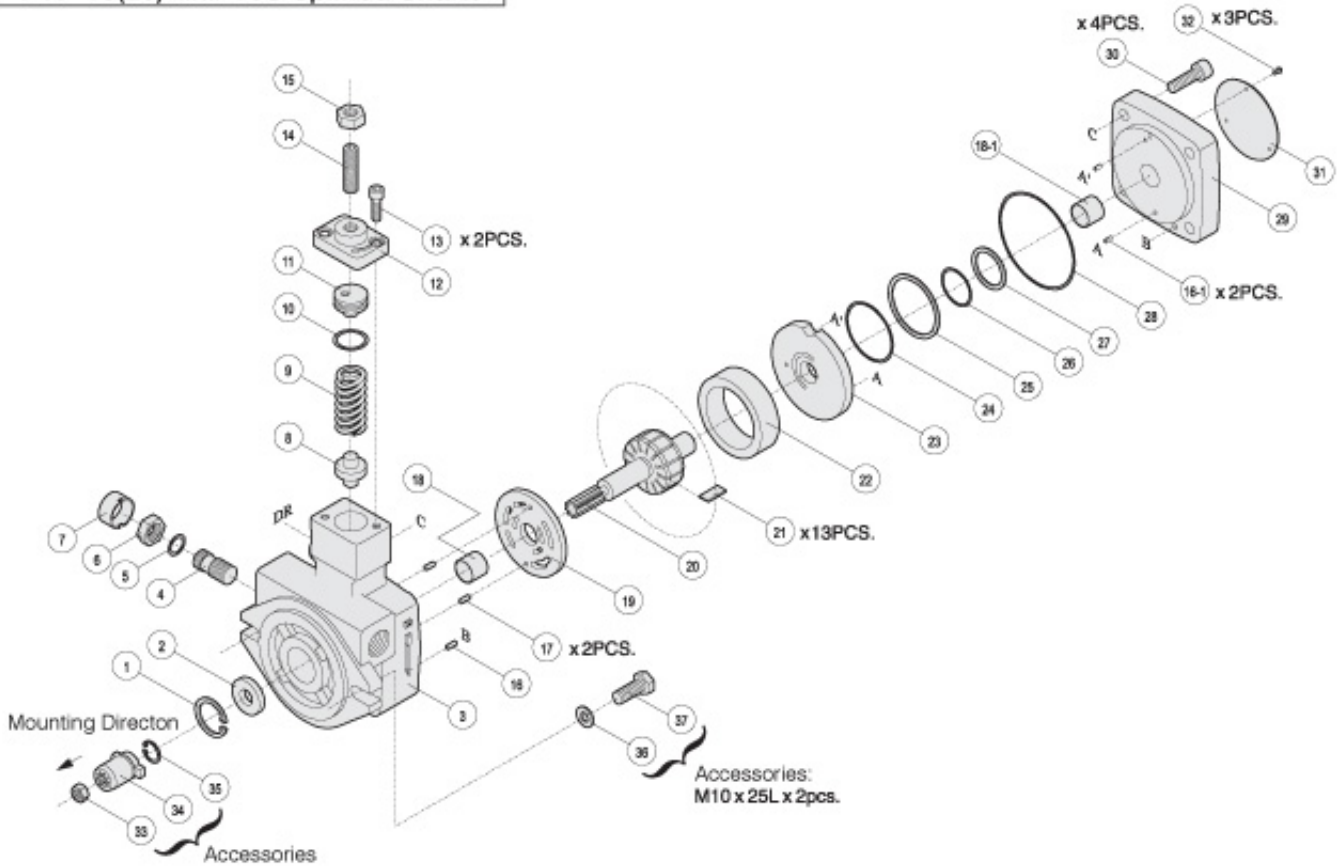
NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R28	1	19	Port Plate		1
2	Shaft Seal	TC 16 28 7	1	20	Rotorshaft		1
3	Pump Body		1	21	Vanes		13
4	Slide Screw		1	22	Cam Ring		1
5	O-Ring	1A-P12	1	23	Thrust Plate		1
6	Hexagon Nut		1	24	O-Ring	AS568-031	1
7	Cap		1	25	Endless Back-up Ring		1
8	Piston		1	26	O-Ring	AS568-023	1
9	Spring		1	27	Endless Back-up Ring		1
10	O-Ring	1A-P20	1	28	O-Ring	1A-S75	1
11	Spring Retainer		1	29	Cover		1
12	Cover		1	30	Skt. HD. Cap Scr.	M8 xP1.25 x30L	4
13	Skt. HD. Cap Scr.	M6 xP1.0 x20L	2	31	Name Plate		1
14	Socket Set Screw	M10 xP1.5 x35L	1	32	Fixing Screw		3
15	Hexagon Nut	M10 xP1.5	1	33	Woodruff Key	NO.406	1
16	Spring Pin	φ3 x8	1	34	Washer	M10	2
16-1	Spring Pin	φ3 x8	2	35	Hexagon Screw	M10 xP1.5 x25L	2
17	Straight Pin	φ3 x8	2				
18	Engine Bush	DIADO(JAPAN)DD1615	1				
18-1	Engine Bush	DIADO(JAPAN)DD1615	1				

※ 34~35 are Accessories.

PVF

Assembly

PVF-15(20)-※※-10S Splined Shafts



PVF-15(20)-※※-10S Parts List

NO.	Description	Specification	Qty	NO.	Description	Specification	Qty
1	Retainer Ring	R28	1	19	Port Plate		1
2	Shaft Seal	TC 16 28 7	1	20	Rotorshaft		1
3	Pump Body		1	21	Vanes		13
4	Slide Screw		1	22	Cam Ring		1
5	O-Ring	1A-P12	1	23	Thrust Plate		1
6	Hexagon Nut		1	24	O-Ring	AS568-031	1
7	Cap		1	25	Endless Back-up Ring		1
8	Piston		1	26	O-Ring	AS568-023	1
9	Spring		1	27	Endless Back-up Ring		1
10	O-Ring	1A-P20	1	28	O-Ring	1A-S75	1
11	Spring Retainer		1	29	Cover		1
12	Cover		1	30	Skt. HD. Cap Scr.	M8 x P1.25 x 30L	4
13	Skt. HD. Cap Scr.	M6 x P1.0 x 20L	2	31	Name Plate		1
14	Socket Set Screw	M10 x P1.5 x 35L	1	32	Fixing Screw		3
15	Hexagon Nut	M10 x P1.5	1	33	Hexagon Nut	M10 x P1.5	1
16	Spring Pin	φ3 x 8	1	34	Coupling		1
16-1	Spring Pin	φ3 x 8	2	35	Retainer Ring	IRTW 20	1
17	Straight Pin	φ3 x 8	2	36	Washer	M10	2
18	Engine Bush	DIADO(JAPAN)DD1615	1	37	Hexagon Screw	M10 x P1.5 x 25L	2
18-1	Engine Bush	DIADO(JAPAN)DD1615	1				

※ 33~37 are Accessories.

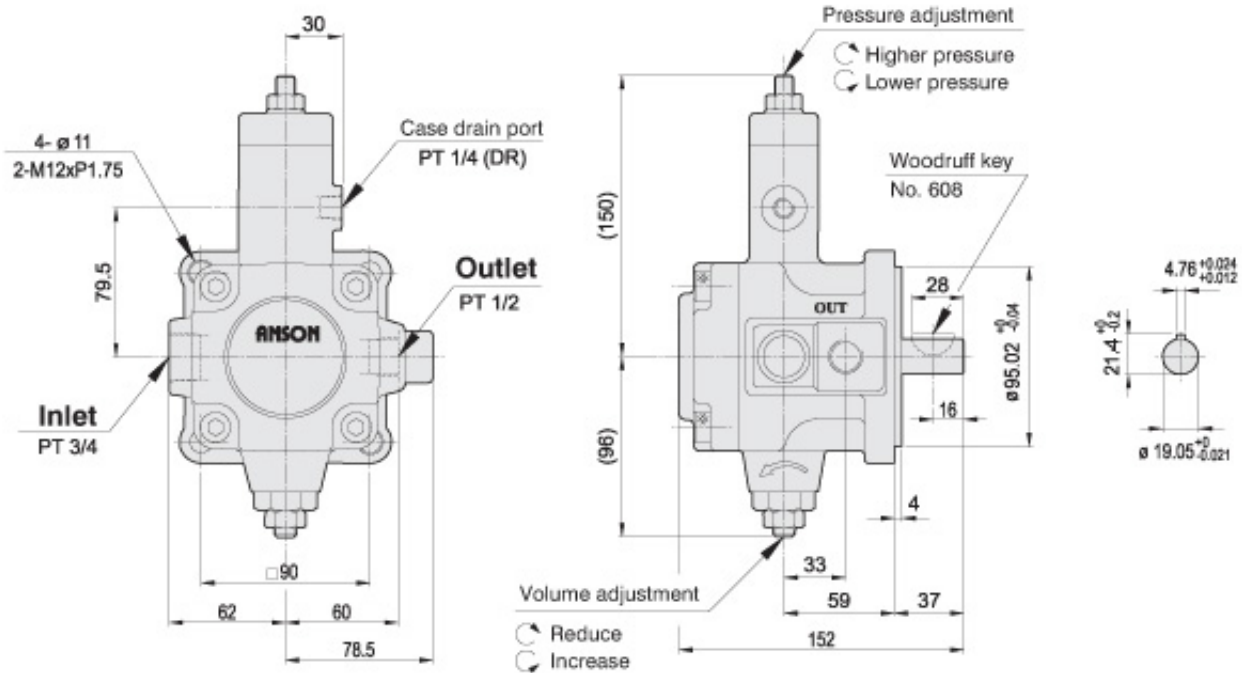
Variable displacement vane pumps PVF series

ANSON

HYDRAULICS

PVF-30(40)- $\ast\ast$ -10

Woodruff key

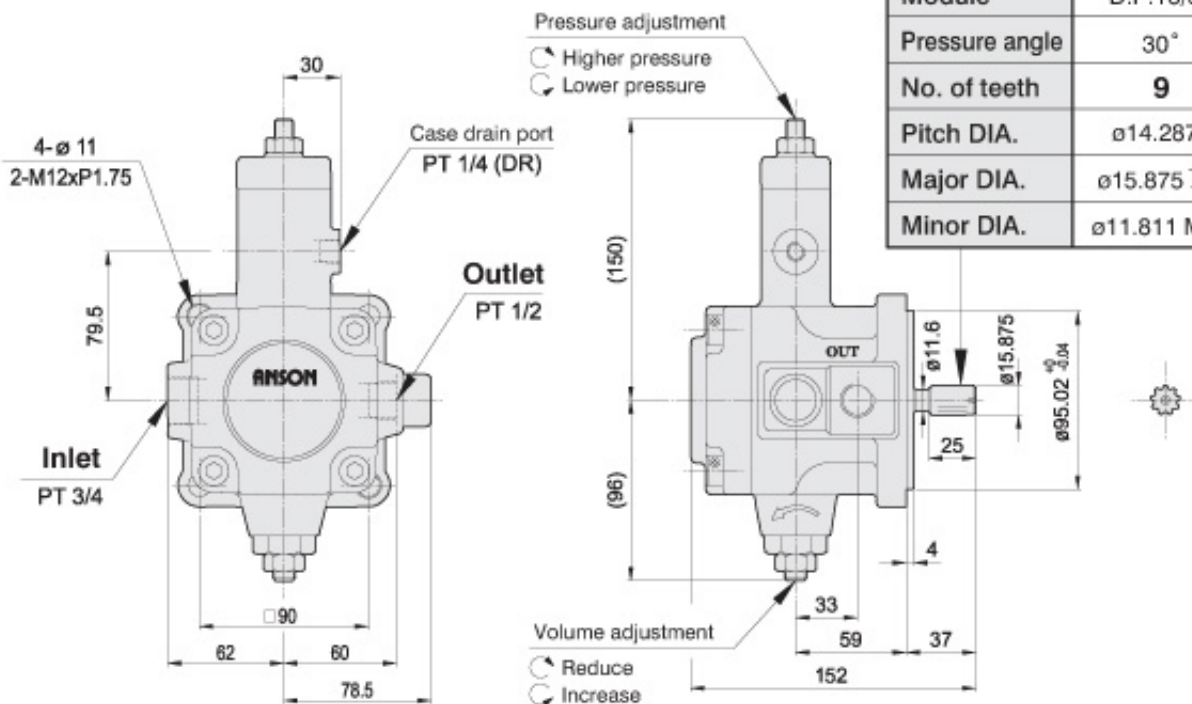


PVF-30(40)- $\ast\ast$ -10S

Splined Shafts

ANSI B92.1 CLASS 5

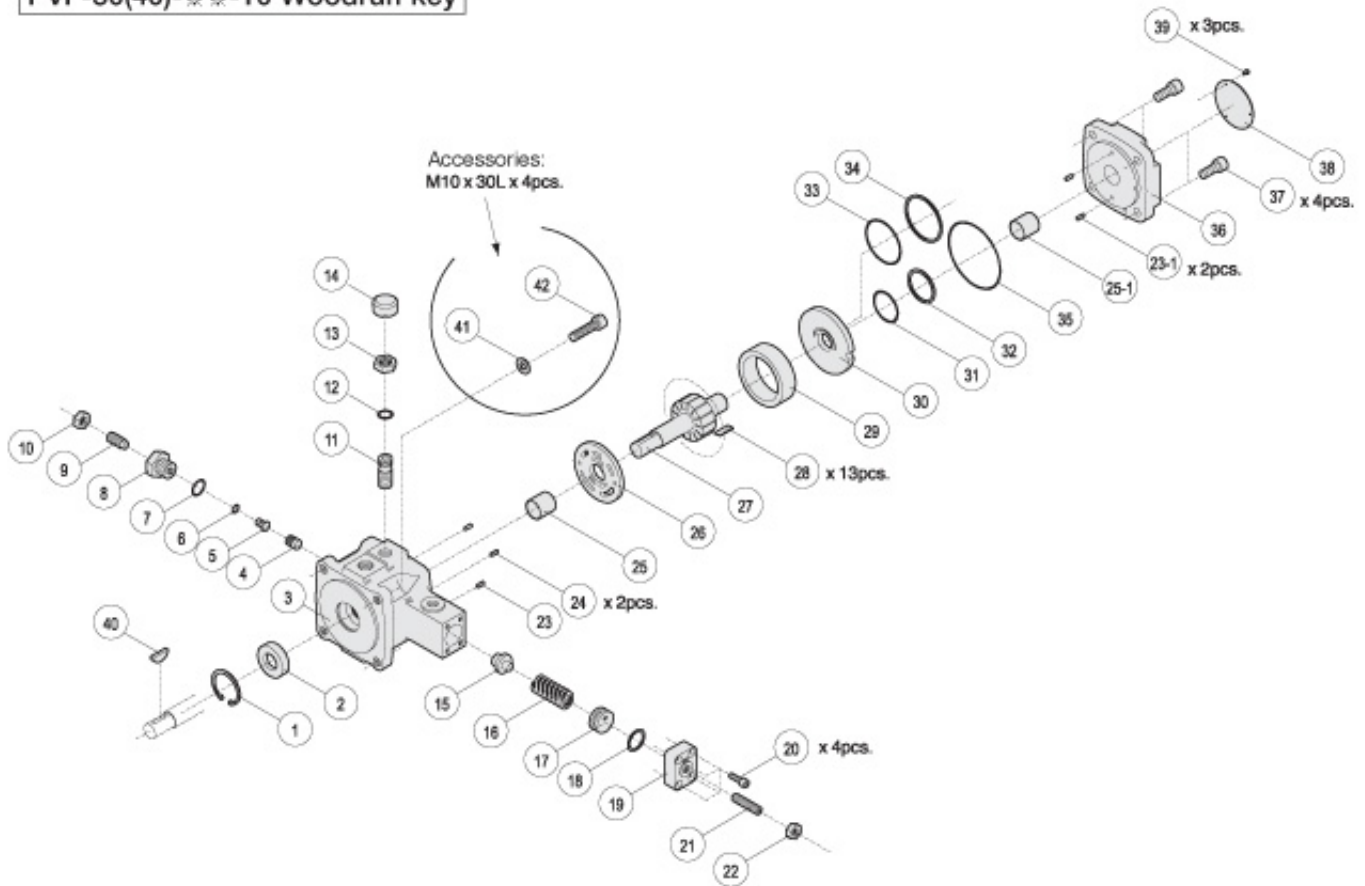
Module	D.P.16/32
Pressure angle	30°
No. of teeth	9
Pitch DIA.	$\varnothing 14.2875$
Major DIA.	$\varnothing 15.875^{+0}_{-0.05}$
Minor DIA.	$\varnothing 11.811 \text{ MAX.}$



PVF

Assembly

PVF-30(40)-※※-10 Woodruff key



PVF-30(40)-※※-10 Parts List

NO.	Description	Specification	Qty	NO.	Description	Specification	Qty
1	Retainer Ring	R42	1	23-1	Spring Pin	ø4 × 10	2
2	Shaft Seal	TC 22 42 11	1	24	Spring Pin	ø4 × 10	2
3	Pump Body		1	25	Engine Bush	DIADO(JAPAN)DD2225	1
4	Piston (B)		1	25-1	Engine Bush	DIADO(JAPAN)DD2225	1
5	Piston (A)		1	26	Port Plate		1
6	O-Ring	1A-P5	1	27	Rotorshaft		1
7	O-Ring	1A-P22	1	28	Vanes		13
8	Thrust Screw		1	29	Cam Ring		1
9	Socket Set Screw	M12 × P1.75 × 25L	1	30	Thrust Plate		1
10	Hexagon Nut	M12 × P1.75	1	31	O-Ring	AS568-030	1
11	Slide Screw		1	32	Endless Back-up Ring		1
12	O-Ring	1A-P14	1	33	O-Ring	AS568-035	1
13	Hexagon Nut	M16 × P1.0	1	34	Endless Back-up Ring		1
14	Cap		1	35	O-Ring	1A-S85	1
15	Piston		1	36	Cover		1
16	Spring		1	37	Skt. HD. Cap Scr.	M10 × P1.5 × 25L	4
17	Spring Retainer		1	38	Name Plate		1
18	O-Ring	1A-P22A	1	39	Fixing Screw		3
19	Cover		1	40	Woodruff Key	NO.608	1
20	Skt. HD. Cap Scr.	M6 × P1.0 × 20L	4	41	Spring Washer	M10	4
21	Socket Set Screw	M10 × P1.5 × 35L	1	42	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4
22	Hexagon Nut	M10 × P1.5	1				
23	Spring Pin	ø4 × 10	1				

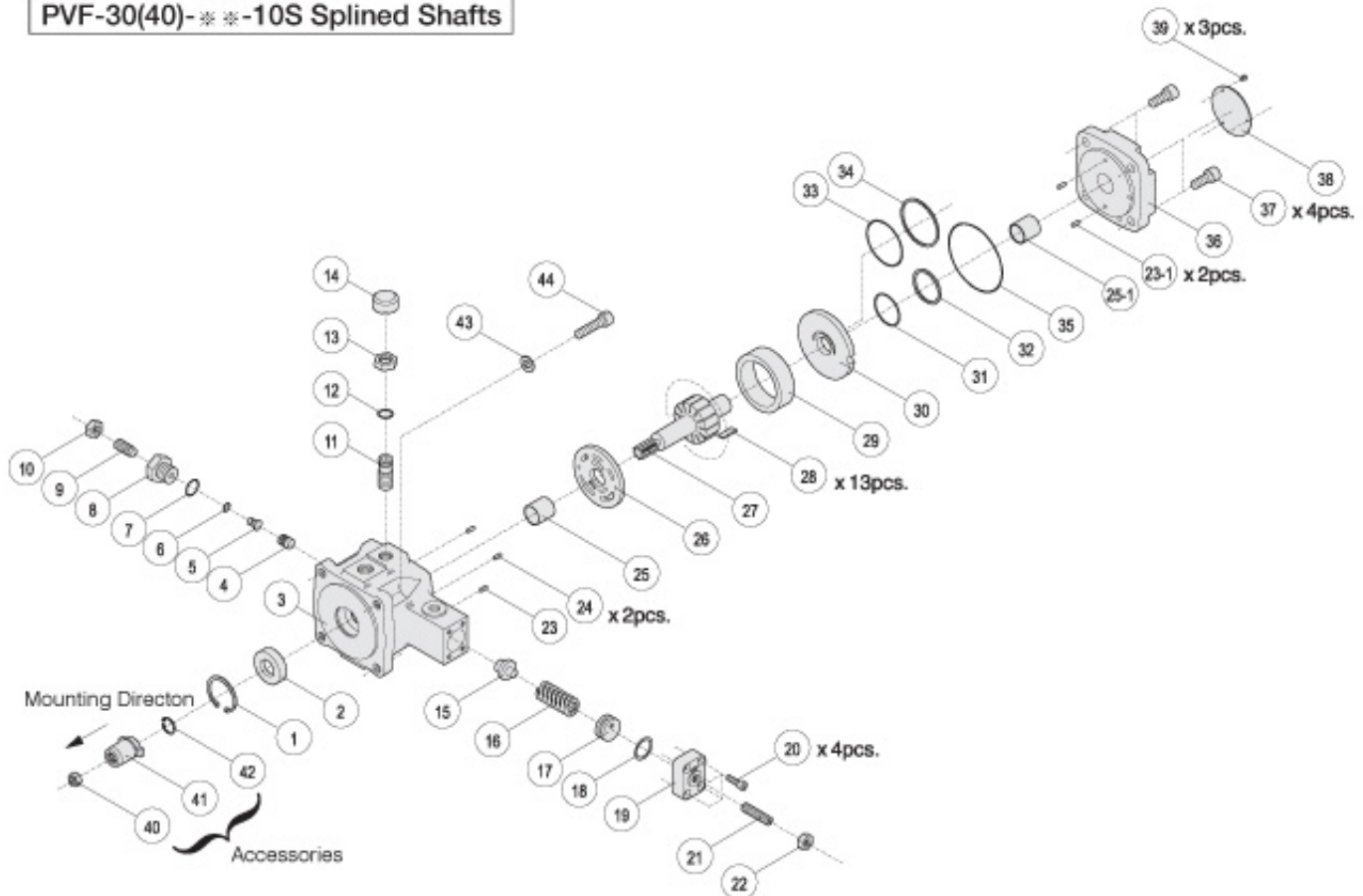
※ 41~42 are Accessories.

Variable displacement vane pumps PVF series

ANSON HYDRAULICS

Assembly

PVF-30(40)-※※-10S Splined Shafts



PVF-30(40)-※※-10S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	24	Spring Pin	ø4 ×10	2
2	Shaft Seal	TC 22 42 11	1	25	Engine Bush	DIADO(JAPAN)DD2225	1
3	Pump Body		1	25-1	Engine Bush	DIADO(JAPAN)DD2225	1
4	Piston (B)		1	26	Port Plate		1
5	Piston (A)		1	27	Rotorshaft		1
6	O-Ring	1A-P5	1	28	Vanes		13
7	O-Ring	1A-P22	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	AS568-030	1
10	Hexagon Nut	M12 ×P1.75	1	32	Endless Back-up Ring		1
11	Slide Screw		1	33	O-Ring	AS568-035	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	Hexagon Nut	M10 ×P1.5	1
19	Cover		1	41	Coupling		1
20	Skt. HD. Cap Scr.	M6 ×P1.0 ×20L	4	42	Retainer Ring	IRTW 24	1
21	Socket Set Screw	M10 ×P1.5 ×35L	1	43	Spring Washer	M10	4
22	Hexagon Nut	M10 ×P1.5	1	44	Skt. HD. Cap Scr.	M10 ×P1.5 ×30L	4
23	Spring Pin	ø4 ×10	1				
23-1	Spring Pin	ø4 ×10	2				

※ 40~44 are Accessories.

PVF

PVDF Series - Double Pumps Model Code

PVDF2	-D		70		-D		70		-15	S				
Frame size	Shaft end pump				Cover end pump				Design	Shafts code				
	Outlet flow at 3.5bar,1800r/min			Operating pressure range		Outlet flow at 3.5bar,1800r/min					Operating pressure range			
	Code	Outlet flow L/min	(Geometric displ.) cm ³ /rev	Code	Pressure range	Code	Outlet flow L/min	(Geometric displ.) cm ³ /rev			Code	Pressure range		
PVDF2	A	8	(5)	20	8 - 20	A	8	(5)	20	8 - 20	15	Omite: Woodruff key S: Splined Shafts		
	B	12	(7)			B	12	(7)						
	C	15	(8)	35	15 - 35	C	15	(8)	35	15 - 35				
	D	20	(12)			D	20	(12)						
PVDF Flange mounting	3	30	(16)	70	50 - 70	3	30	(16)	70	50 - 70				
	4	40	(22)			4	40	(22)						
	Factory setting Q max.			Factory setting P min.		Factory setting Q max.			Factory setting P min.					

PVDF Pumps Speed Limits

Minimum speed : 800 r/min
Maximum speed : 1800 r/min

Frame size	Weight
PVDF2 - *** - *** - 15	10 kg
PVDF - *** - *** - 15	17 kg

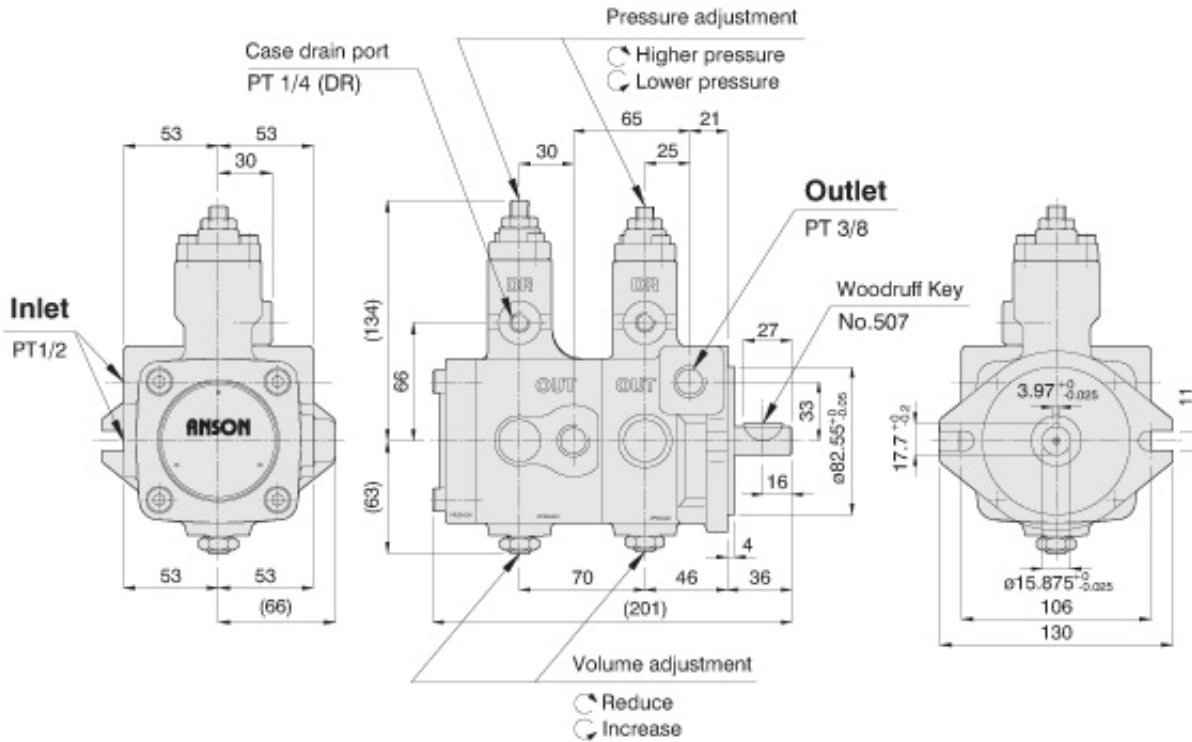
Variable displacement vane pumps PVDF series

ANSON

HYDRAULICS

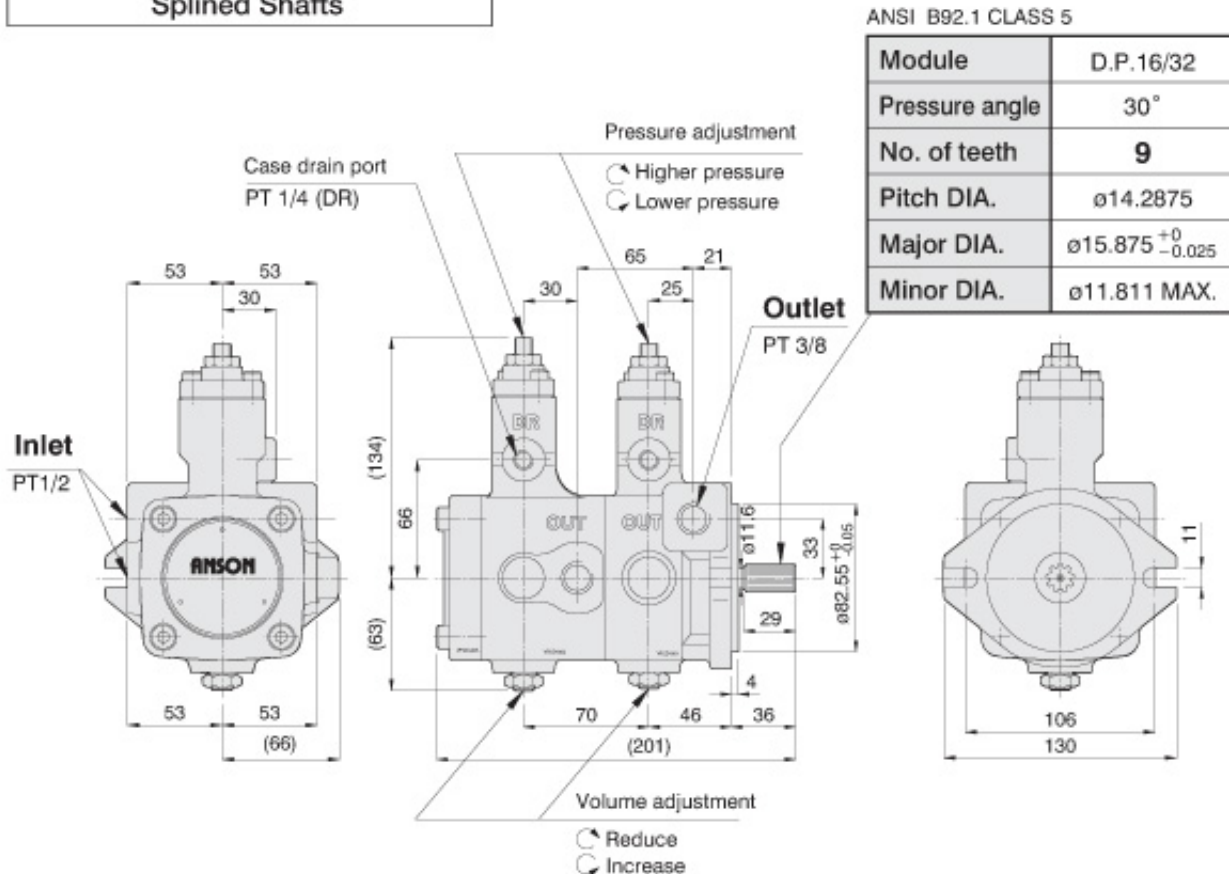
PVDF2-***-***-15

Woodruff key



PVDF2-***-***-15S

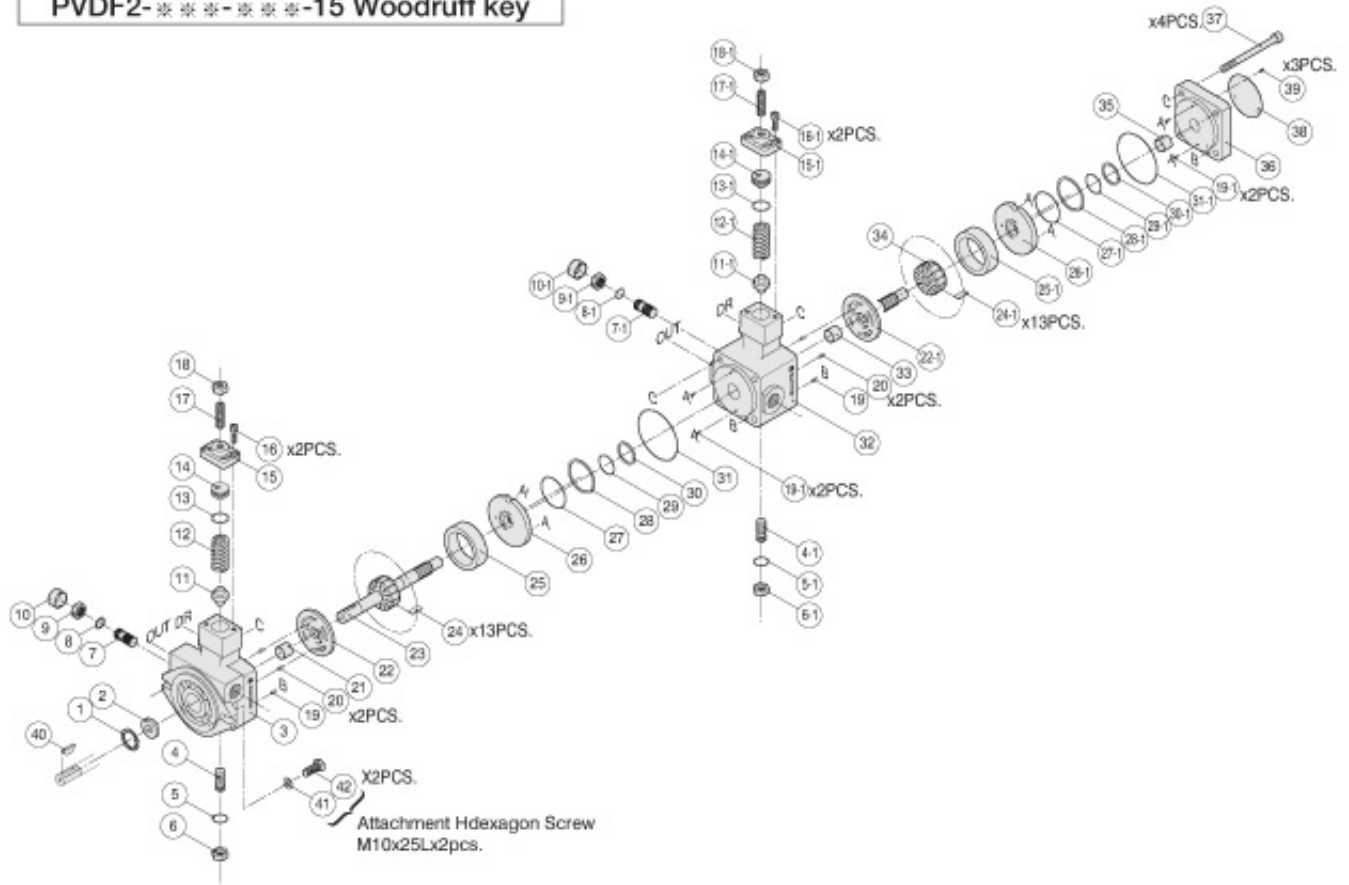
Splined Shafts



PVDF

Assembly

PVDF2-***-15 Woodruff key



PVDF2-***-15 Parts List

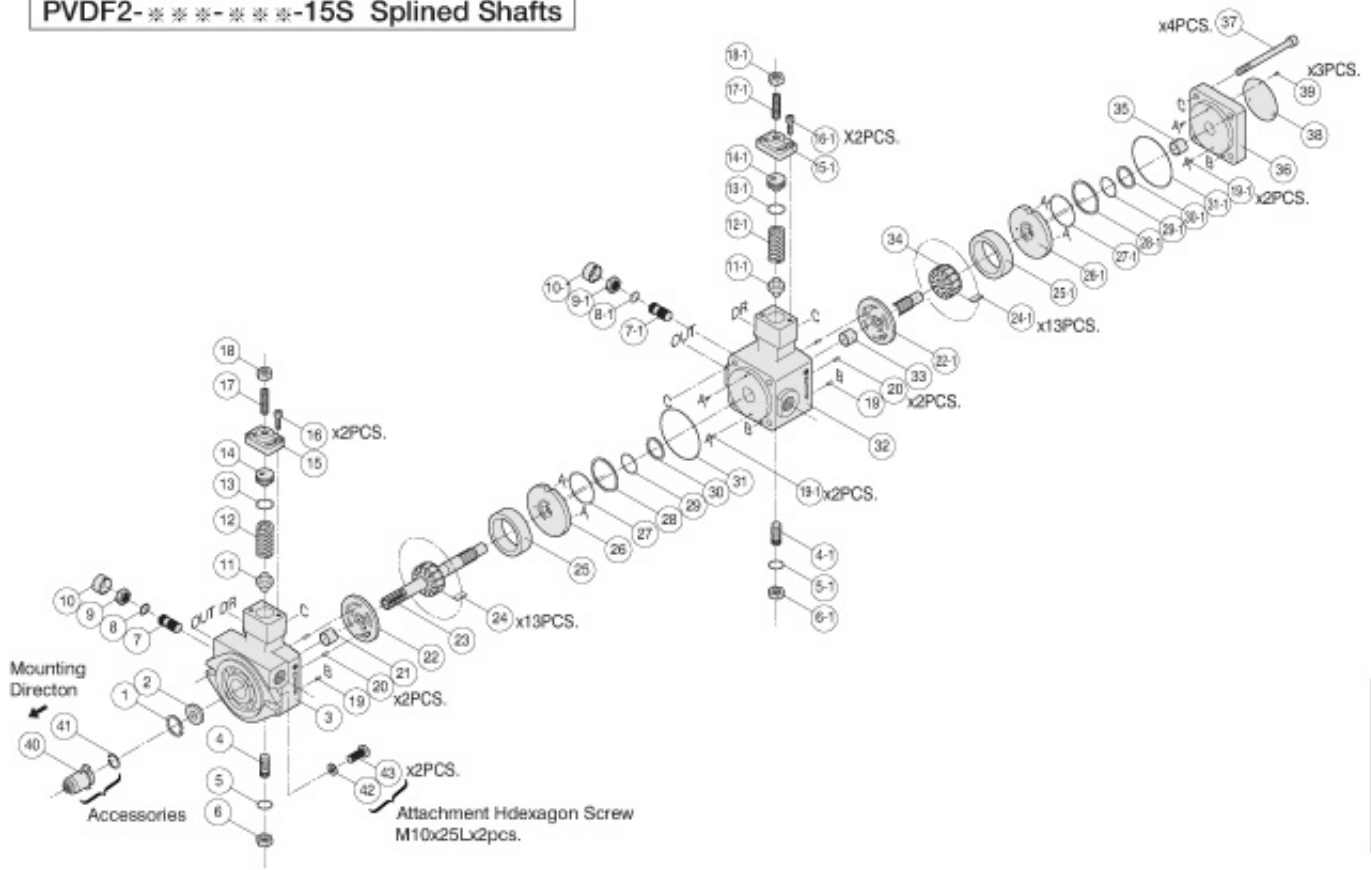
NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R28	1	17	Socket Set Screw	M10 xP1.5 x35L	1+1	32	Pump Body		1
2	Shaft Seal	TC 16 28 7	1	18	Hexagon Nut	M10 xP1.5	1+1	※: Parts numbers 4-1~20 are same as 4~20. Quantity are calculated together. (spring 12-1 is not included.)			
3	Pump Body		1	19	Spring Pin	φ3 x8L	1+1				
4	Slide Screw	M12 xP1.0 x30L	1+1	19-1	Spring Pin	φ3 x8L	2+2	33	Engine Bush	DIADO(JAPAN)DD1715	1
5	O-Ring	1A-P10	1+1	20	Straight Pin	φ3 x8L	2+2	34	Rotor		1
6	Hexagon Nut	M12 xP1.0	1+1	21	Engine Bush	DIADO(JAPAN)DD1615	1	※: Parts numbers 22-1~19-1 are same as 22~19-1. Quantity are calculated together. (camring 25-1 is not included.)			
7	Slide Screw		1+1	22	Port Plate		1+1				
8	O-Ring	1A-P12	1+1	23	Rotorshaft		1	35	Engine Bush	DIADO(JAPAN)DD1415	1
9	Hexagon Nut	M14 xP1.0	1+1	24	Vanes		13+13	36	Cover		4
10	Cap		1+1	25	Cam Ring		1	37	Skt. HD. Cap Scr.	M8 xP1.25 x100L	1
11	Piston		1+1	25-1	Cam Ring		1	38	Name Plate		3
12	Spring		1	26	Thrust Plate		1+1	39	Fixing Screw		1
12-1	Spring		1	27	O-Ring	AS568-031	1+1	40	Woodruff Key	NO.507	1
13	O-Ring	1A-P20	1+1	28	Endless Back-up Ring		1+1	41	Washer	M10	2
14	Spring Retainer		1+1	29	O-Ring	AS568-023	1+1	42	Hexagon Screw	M10 xP1.5 x25L	2
15	Cover		1+1	30	Endless Back-up Ring		1+1	※: 41~42 are Accessories.			
16	Skt. HD. Cap Scr.	M6 xP1.0 x20L	2+2	31	O-Ring	1A-S75	1+1				

Variable displacement vane pumps PVDF series

ANSON HYDRAULICS

Assembly

PVDF2-***-***-15S Splined Shafts



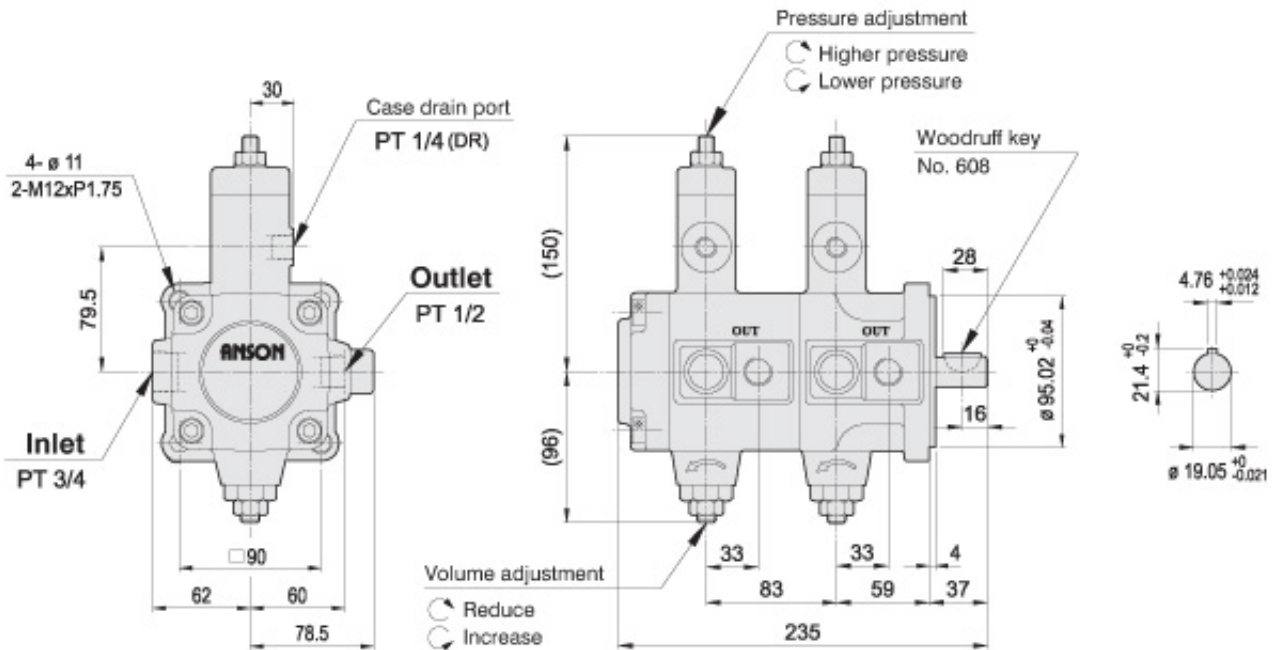
PVDF2-***-***-15S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R28	1	17	Socket Set Screw	M10 × P1.5 × 35L	1+1	32	Pump Body		1
2	Shaft Seal	TC 16 28 7	1	18	Hexagon Nut	M10 × P1.5	1+1	※ Parts numbers 4-1~20 are same as 4~20. Quantity are calculated together. (spring 12-1 is not included.)			
3	Pump Body		1	19	Spring Pin	ø3 × 8L	1+1				
4	Slide Screw	M12 × P1.0 × 30L	1+1	19-1	Spring Pin	ø3 × 8L	2+2	33	Engine Bush	DIADO(JAPAN)DD1715	1
5	O-Ring	1A-P10	1+1	20	Straight Pin	ø3 × 8L	2+2	34	Rotor		1
6	Hexagon Nut	M12 × P1.0	1+1	21	Engine Bush	DIADO(JAPAN)DD1615	1	※ Parts numbers 22-1~19-1 are same as 22~19-1. Quantity are calculated together. (camring 25-1 is not included.)			
7	Slide Screw		1+1	22	Port Plate		1+1				
8	O-Ring	1A-P12	1+1	23	Rotorshaft		1	35	Engine Bush	DIADO(JAPAN)DD1415	1
9	Hexagon Nut	M14 × P1.0	1+1	24	Vanes		13+13	36	Cover		4
10	Cap		1+1	25	Cam Ring		1	37	Skt. HD. Cap Scr.	M8 × P1.25 × 100L	1
11	Piston		1+1	25-1	Cam Ring		1	38	Name Plate		3
12	Spring		1	26	Thrust Plate		1+1	39	Fixing Screw		1
12-1	Spring		1	27	O-Ring	AS568-031	1+1	40	Coupling		1
13	O-Ring	1A-P20	1+1	28	Endless Back-up Ring		1+1	41	Retainer Ring	IRTW 24	1
14	Spring Retainer		1+1	29	O-Ring	AS568-023	1+1	42	Washer	M10	2
15	Cover		1+1	30	Endless Back-up Ring		1+1	43	Hexagon Screw	M10 × P1.5 × 25L	2
16	Skt. HD. Cap Scr.	M6 × P1.0 × 20L	2+2	31	O-Ring	1A-S75	1+1	※ 40~43 are Accessories.			

PVDF

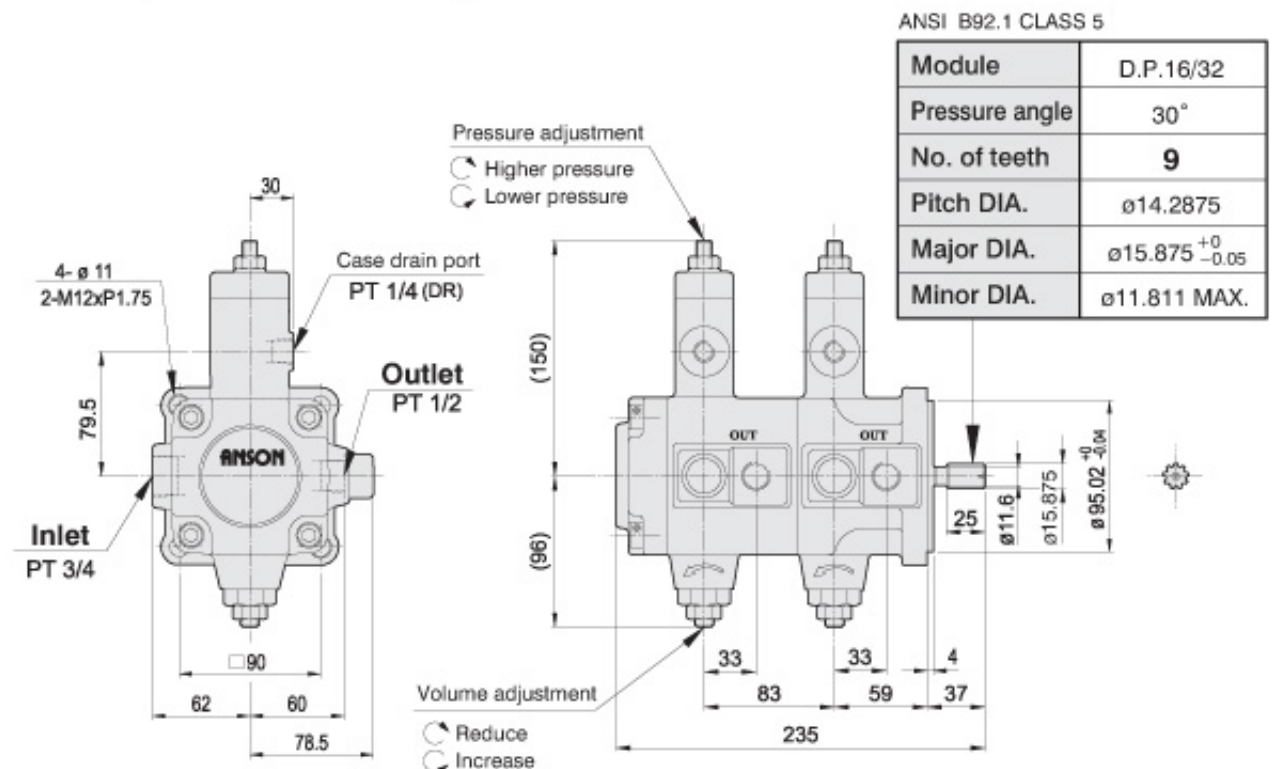
PVDF-3(4) ***-3(4) ***-15

Woodruff key



PVDF-3(4) ***-3(4) ***-15S

Splined Shafts

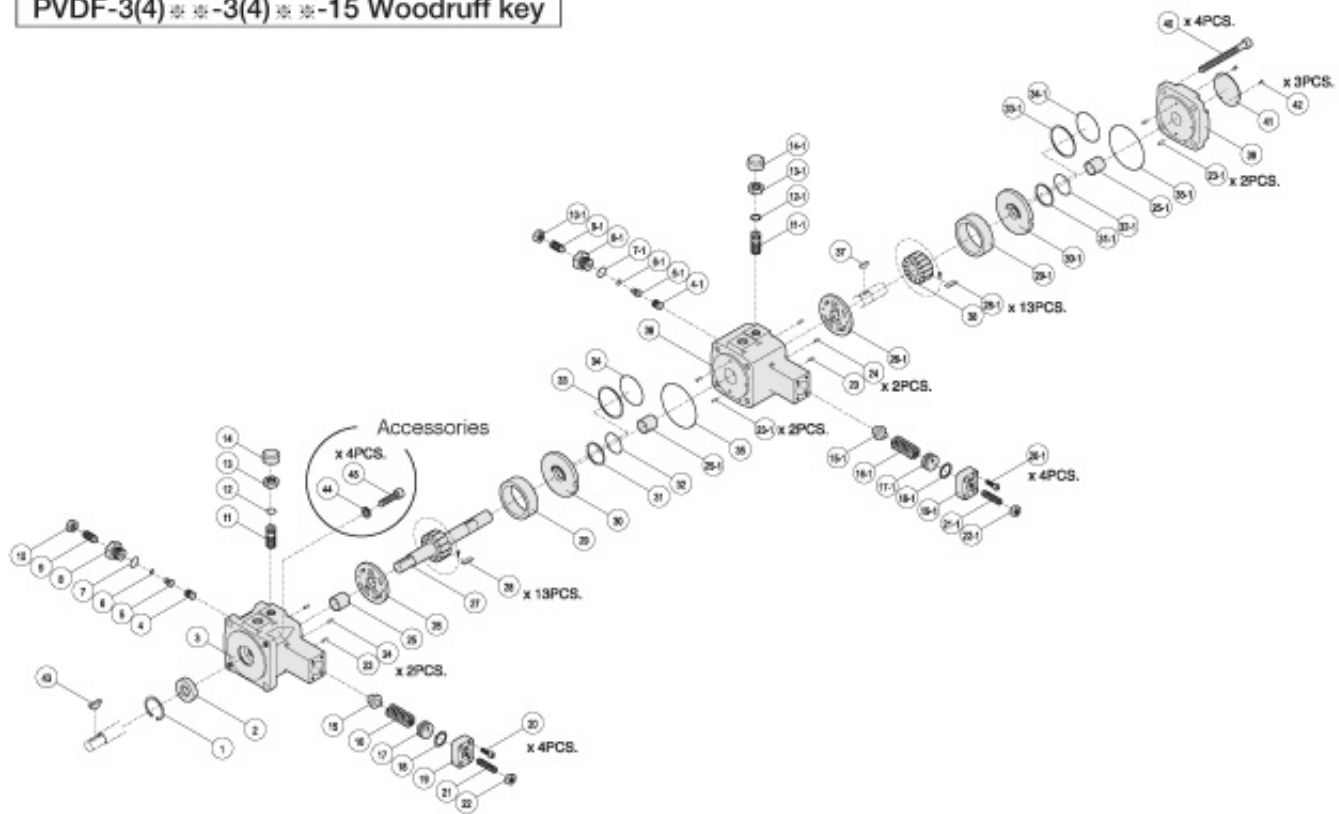


Variable displacement vane pumps PVDF series

ANSON HYDRAULICS

Assembly

PVDF-3(4) ※ ※ -3(4) ※ ※ -15 Woodruff key



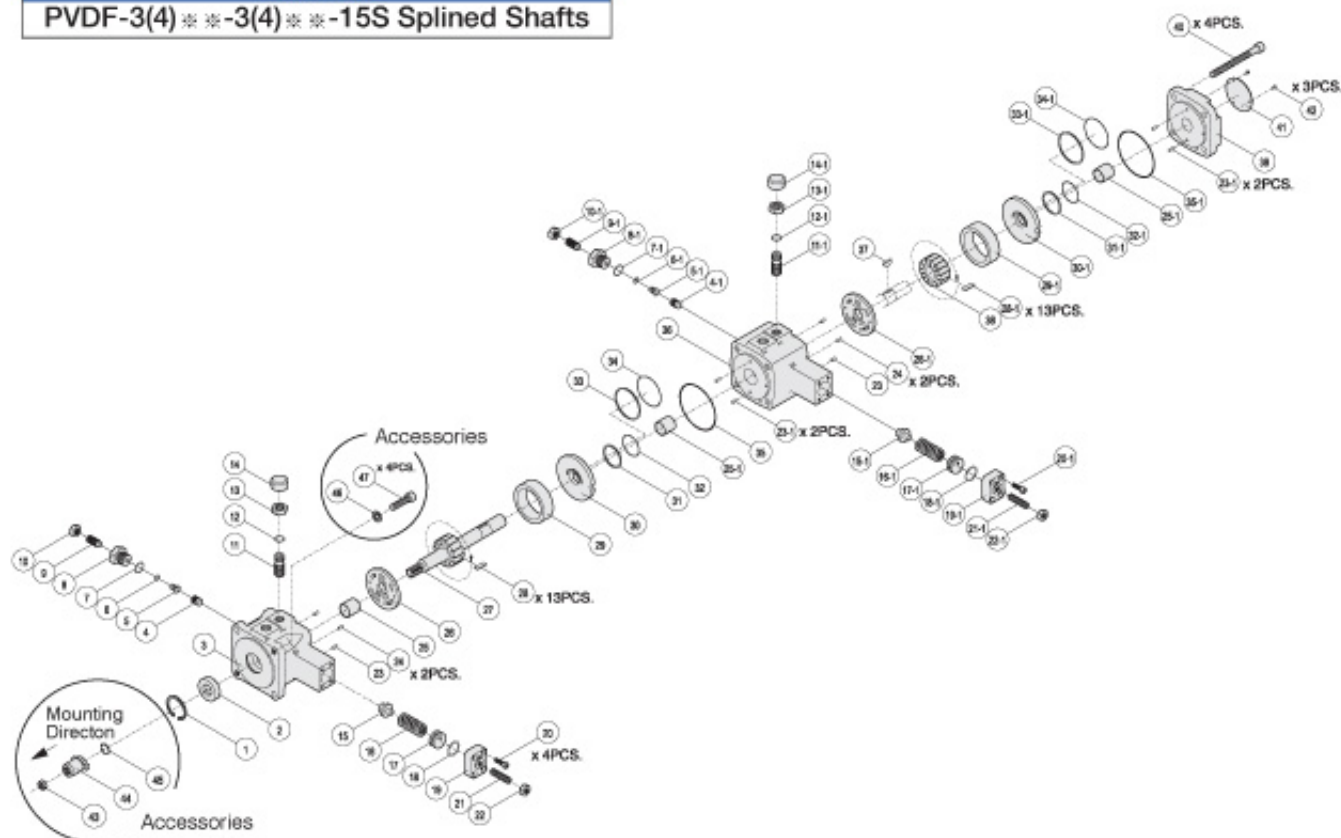
PVDF-3(4) ※ ※ -3(4) ※ ※ -15 Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	18	O-Ring	1A-P22A	1+1	33	O-Ring	AS568-035	1+1
2	Shaft Seal	TC 22 42 11	1	19	Cover		1+1	34	Endless Back-up Ring		1+1
3	Pump Body		1	20	Skt. HD. Cap Scr.	M6 × P1.0 × 20L	4+4	35	O-Ring	1A-S85	1+1
4	Piston (B)		1+1	21	Socket Set Screw	M10 × P1.5 × 35L	1+1	36	Body		1
5	Piston (A)		1+1	22	Hexagon Nut	M10 × P1.5	1+1	※ Parts numbers 4-1 ~ 25-1 are same as 4 ~ 26. Quantity are calculated together.(spring 16-1 is not included)			
6	O-Ring	1A-P5	1+1	23	Spring Pin	ø4 × 10	1+1	37	Woodruff Key	NO.406	1
7	O-Ring	1A-P22	1+1	23-1	Spring Pin	ø4 × 10	2+2	38	Rotor		1
8	Thrust Screw		1+1	24	Straight Pin	ø4 × 10	2+2	※ Parts numbers 28-1 ~ 23-1 are same as 28 ~ 23-1. Quantity are calculated together.(camring 29-1 is not included)			
9	Socket Set Screw	M12 × P1.75 × 25L	1+1	25	Engine Bush	DIADO(JAPAN)DD2225	1	39	Cover		1
10	Hexagon Nut	M12 × P1.75	1+1	25-1	Engine Bush	DIADO(JAPAN)DD2225	1+1	40	Skt. HD. Cap Scr.	M10 × P1.5 × 110L	4
11	Slide Screw		1+1	26	Port Plate		1+1	41	Name Plate		1
12	O-Ring	1A-P14	1+1	27	Rotorshaft		1	42	Fixing Screw		3
13	Hexagon Nut	M16 × P1.0	1+1	28	Vanes		13+13	43	Woodruff Key	NO.608	1
14	Cap		1+1	29	Cam Ring		1	44	Spring Washer	M10	4
15	Piston		1+1	29-1	Cam Ring		1	45	Skt. HD. Cap Scr.	M10 × P1.5 × 25L	4
16	Spring		1	30	Thrust Plate		1+1				
16-1	Spring		1	31	O-Ring	AS568-030	1+1				
17	Spring Retainer		1+1	32	Endless Back-up Ring		1+1	※ 44~45 are Accessories.			

PVDF

Assembly

PVDF-3(4) ※ ※-3(4) ※ ※-15S Splined Shafts



PVDF-3(4) ※ ※-3(4) ※ ※-15S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	18	O-Ring	1A-P22A	1+1	33	O-Ring	AS568-035	1+1
2	Shaft Seal	TC 22 42 11	1	19	Cover		1+1	34	Endless Back-up Ring		1+1
3	Pump Body		1	20	Skt. HD. Cap Scr.	M6 × P1.0 × 20L	4+4	35	O-Ring	1A-S85	1+1
4	Piston (B)		1+1	21	Socket Set Screw	M10 × P1.5 × 35L	1+1	36	Body		1
5	Piston (A)		1+1	22	Hexagon Nut	M10 × P1.5	1+1	※ Parts numbers 4-1—25-1 are same as 4—26. Quantity are calculated together.(spring 16-1 is not included.)			
6	O-Ring	1A-P5	1+1	23	Spring Pin	ø4 × 10	1+1	37	Woodruff Key	NO.406	1
7	O-Ring	1A-P22	1+1	23-1	Spring Pin	ø4 × 10	2+2	38	Rotor		1
8	Thrust Screw		1+1	24	Straight Pin	ø4 × 10	2+2	※ Parts numbers 28-1—23-1 are same as 28—23-1. Quantity are calculated together.(camring 29-1 is not included.)			
9	Socket Set Screw	M12 × P1.75 × 25L	1+1	25	Engine Bush	DIADO(JAPAN)DD2225	1	39	Cover		1
10	Hexagon Nut	M12 × P1.75	1+1	25-1	Engine Bush	DIADO(JAPAN)DD2225	1+1	40	Skt. HD. Cap Scr.	M10 × P1.5 × 110L	4
11	Slide Screw		1+1	26	Port Plate		1+1	41	Name Plate		1
12	O-Ring	1A-P14	1+1	27	Rotorshaft		1	42	Fixing Screw		3
13	Hexagon Nut	M16 × P1.0	1+1	28	Vanes		13+13	43	Hexagon Nut	M10 × P1.5	1
14	Cap		1+1	29	Cam Ring		1	44	Coupling		1
15	Piston		1+1	29-1	Cam Ring		1	45	Retainer Ring	IRTW 24	1
16	Spring		1	30	Thrust Plate		1+1	46	Spring Washer	M10	4
16-1	Spring		1	31	O-Ring	AS568-030	1+1	47	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4
17	Spring Retainer		1+1	32	Endless Back-up Ring		1+1	※ 43—47 are Accessories.			

VD/SVD Model Code - Single Pumps						
VD	12		-B	-12	S	
Frame size	Outlet flow at 3.5 bar, 1800 r/min		Operating pressure range		Design	Shafts code
	Code	Geometric displ. (Outlet flow) cm ³ /rev (L/min)	Code	Pressure range (bar)		
VD	08	8 (15)	A	8 - 20	12	Omit: Woodruff key S: Splined Shafts
	12	12 (20)	B	15 - 35		
	16	16 (30)	C	30 - 55		
SVD	08	8 (15)	D	50 - 70		
	12	12 (20)	Factory setting P min.			
	Factory setting Q max.					

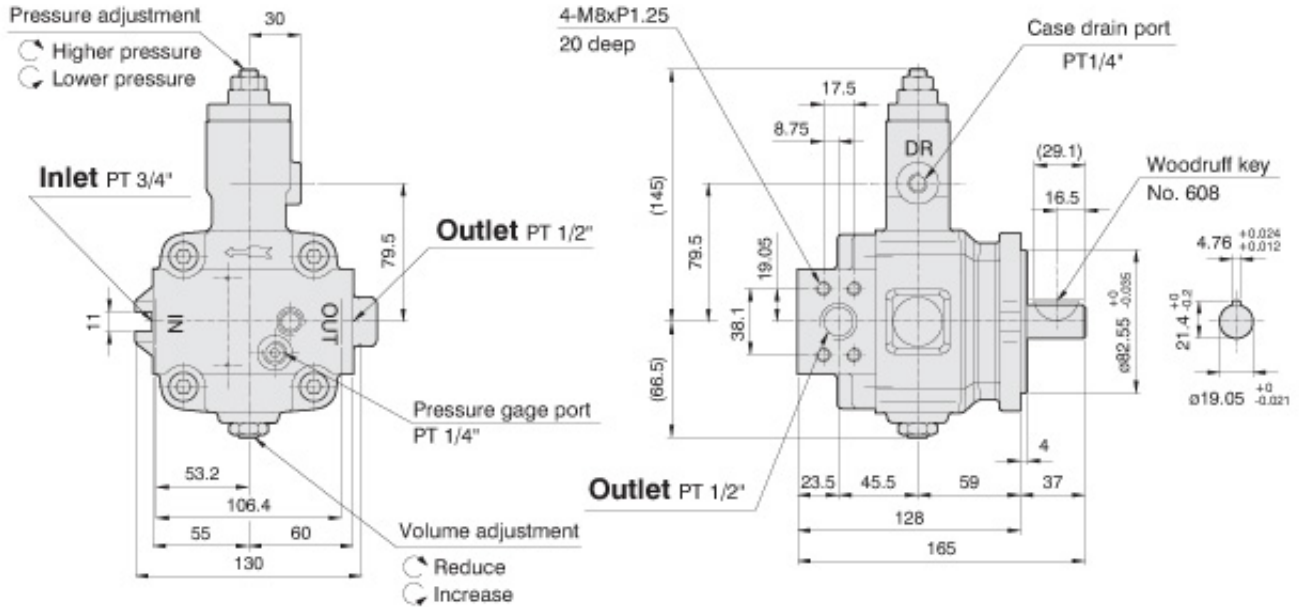
VD/SVD Pumps Speed Limits

Minimum speed : 800 r/min
 Maximum speed : 1800 r/min

Frame size	Weight
VD * - * - 12	8.6 kg
SVD * - * - 12	7.0 kg

VD ***-12

Woodruff key

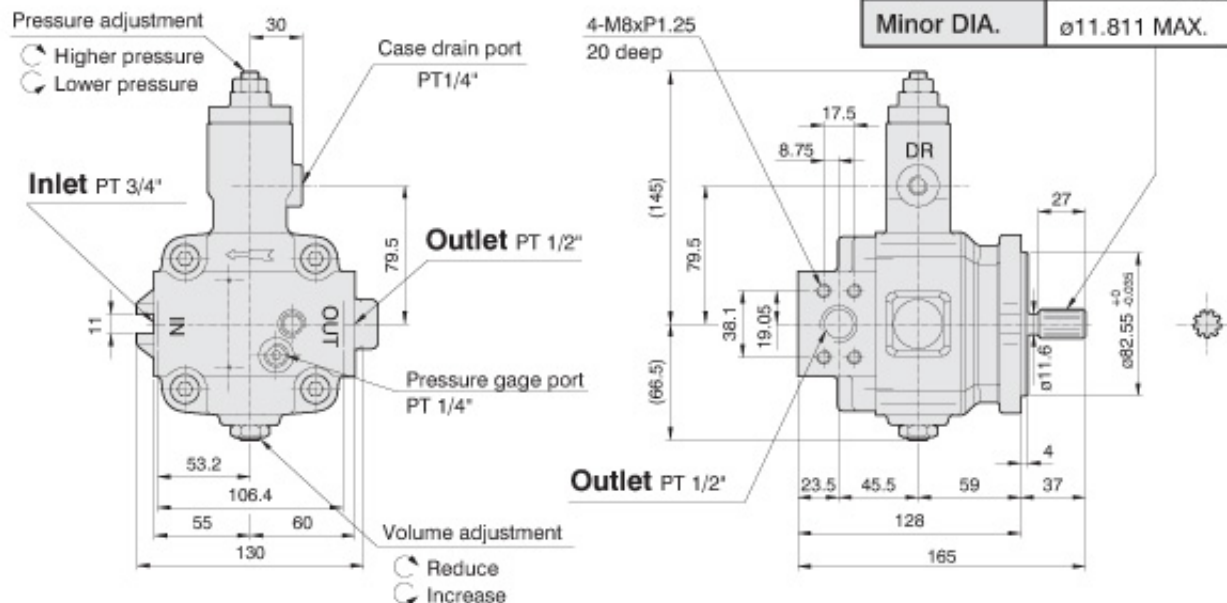


VD ***-12S

Splined Shafts

ANSI B92.1 CLASS 5

Module	D.P.16/32
Pressure angle	30°
No. of teeth	9
Pitch DIA.	ø14.2875
Major DIA.	ø15.875 ⁺⁰ / _{-0.05}
Minor DIA.	ø11.811 MAX.

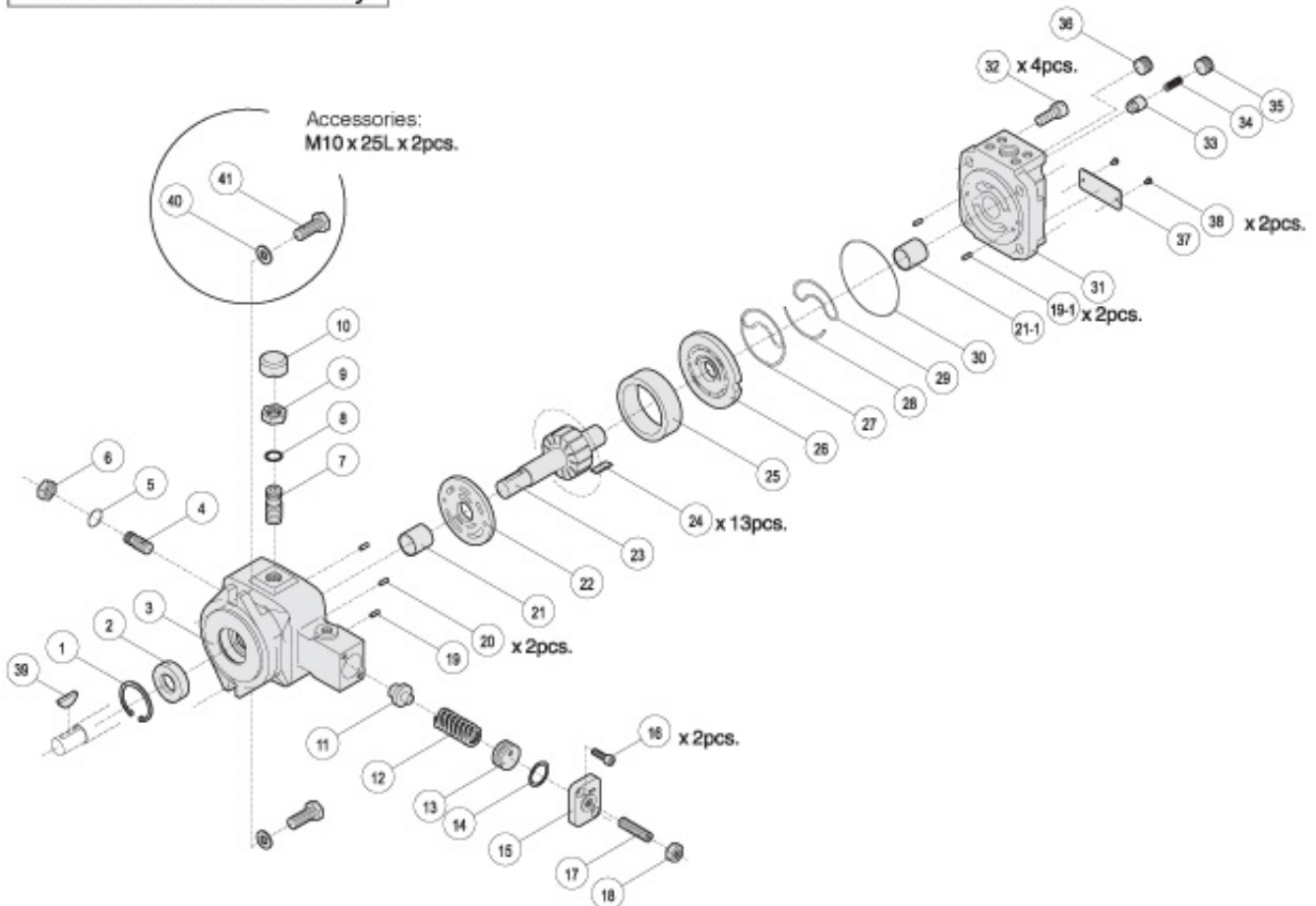


Variable displacement vane pumps VD series

ANSON HYDRAULICS

Assembly

VD *-*-12 Woodruff key



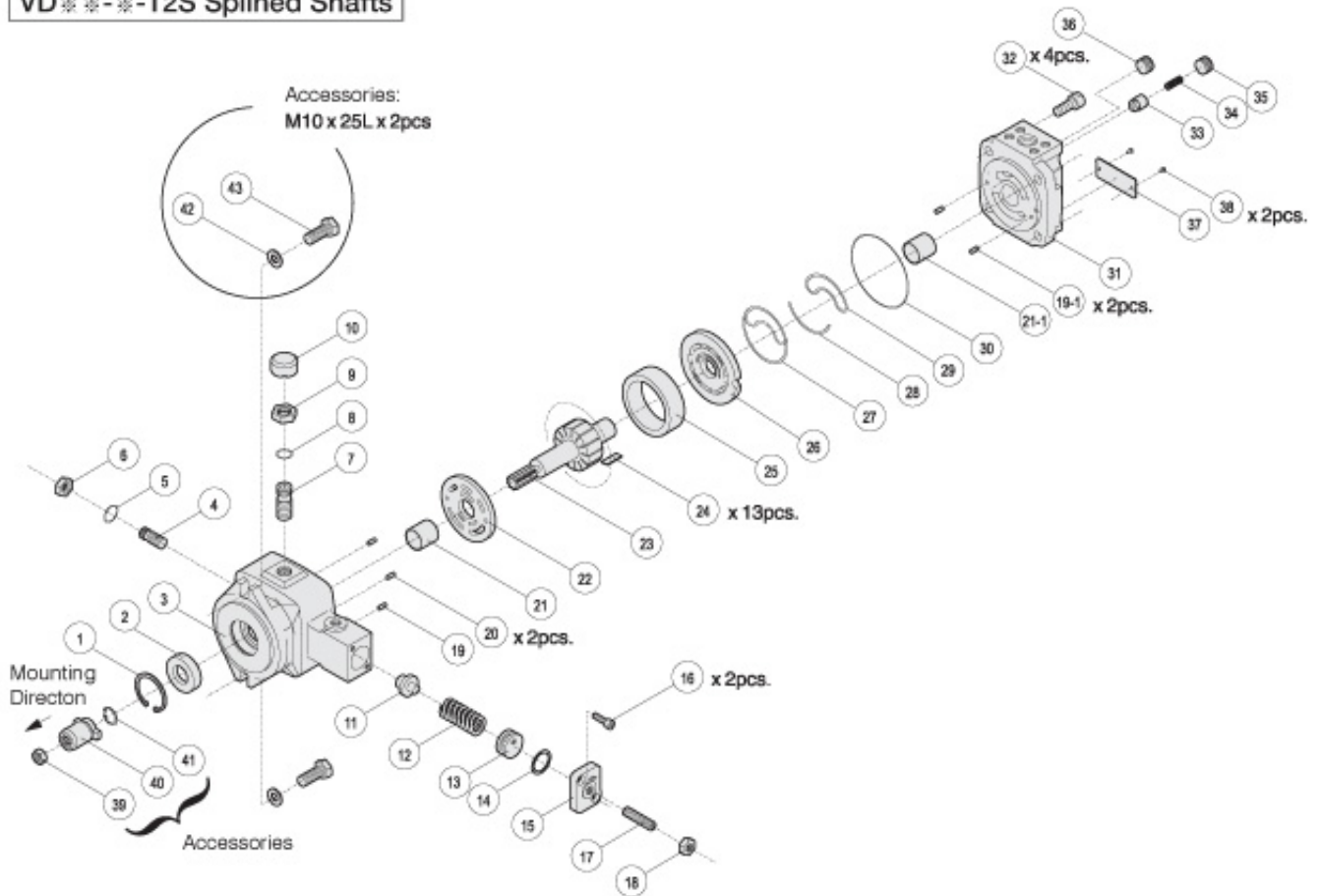
VD *-*-12 Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	16	Skt. HD. Cap Scr.	M6 x P1.0 x 20L	2	29	Endless Back-up Ring		1
2	Shaft Seal	TC 22 42 11	1	17	Socket Set Screw	M10 x P1.5 x 35L	1	30	O-Ring	1A-S85	1
3	Pump Body		1	18	Hexagon Nut	M10 x P1.5	1	31	Cover		1
4	Slide Screw	M12 x P1.0 x 30L	1	19	Spring Pin	ø4 x 10	1	32	Skt. HD. Cap Scr.	M10 x P1.5 x 25L	4
5	O-Ring	1A-P10	1	19-1	Spring Pin	ø4 x 10	2	33	Piston		1
6	Hexagon Nut	M12 x P1.0	1	20	Straight Pin	ø4 x 10	2	34	Spring		1
7	Slide Screw	M16 x P1.0 x 32L	1	21	Engine Bush	DIADO(JAPAN)DD2225	1	35	Plug	PT 3/8"	1
8	O-Ring	1A-P14	1	21-1	Engine Bush	DIADO(JAPAN)DD2225	1	36	Plug	PT 1/4"	1
9	Hexagon Nut	M16 x P1.0	1	22	Port Plate		1	37	Name Plate		1
10	Cap		1	23	Rotorshaft		1	38	Fixing Screw		2
11	Piston		1	24	Vanes		13	39	Woodruff Key	NO.608	1
12	Spring		1	25	Cam Ring		1	40	Washer	M10	2
13	Spring Retainer		1	26	Thrust Plate		1	41	Hexagon Screw	M10 x P1.5 x 25L	2
14	O-Ring	1A-P22A	1	27	O-Ring	AS568-034	1	※ 40~41 are Accessories.			
15	Cover		1	28	O-Ring	AS568-017	1				

VD

Assembly

VD**-**-12S Splined Shafts



VD**-**-12S Parts List

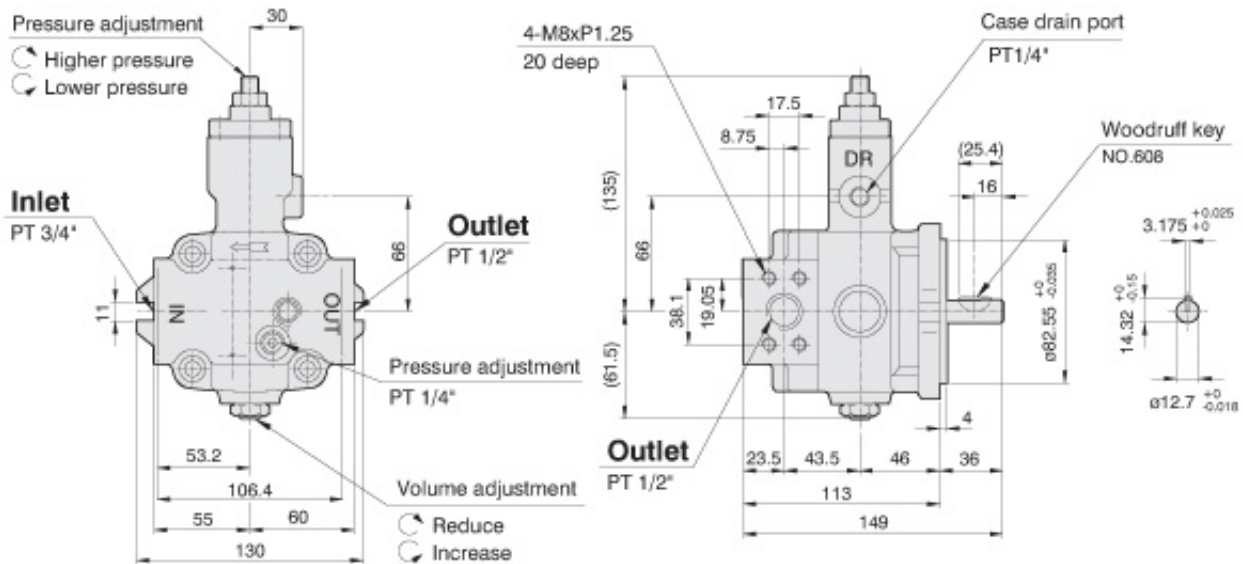
NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	17	Socket Set Screw	M10 × P1.5 × 35L	1	31	Cover		1
2	Shaft Seal	TC 22 42 11	1	18	Hexagon Nut	M10 × P1.5	1	32	Skt. HD. Cap Scr.	M10 × P1.5 × 25L	4
3	Pump Body		1	19	Spring Pin	ø4 × 10	1	33	Piston		1
4	Slide Screw	M12 × P1.0 × 30L	1	19-1	Spring Pin	ø4 × 10	2	34	Spring		1
5	O-Ring	1A-P10	1	20	Straight Pin	ø4 × 10	2	35	Plug	PT 3/8"	1
6	Hexagon Nut	M12 × P1.0	1	21	Engine Bush	DIADO(JAPAN)DD2225	1	36	Plug	PT 1/4"	1
7	Slide Screw	M16 × P1.0 × 32L	1	21-1	Engine Bush	DIADO(JAPAN)DD2225	1	37	Name Plate		1
8	O-Ring	1A-P14	1	22	Port Plate		1	38	Fixing Screw		2
9	Hexagon Nut	M16 × P1.0	1	23	Rotorshaft		1	39	Hexagon Nut	M10 × P1.5	1
10	Cap		1	24	Vanes		13	40	Coupling		1
11	Piston		1	25	Cam Ring		1	41	Retainer Ring	IRTW24	1
12	Spring		1	26	Thrust Plate		1	42	Washer	M10	2
13	Spring Retainer		1	27	O-Ring	1B-AS568-034	1	43	Hexagon Screw	M10 × P1.5 × 25L	2
14	O-Ring	1A-P22A	1	28	O-Ring	1B-AS568-017	1	※ 39--43 are Accessories.			
15	Cover		1	29	Endless Back-up Ring		1				
16	Skt. HD. Cap Scr.	M6 × P1.0 × 20L	2	30	O-Ring	1A-S85	1				

Variable displacement vane pumps SVD series

ANSON HYDRAULICS

SVD ***-12

Woodruff key

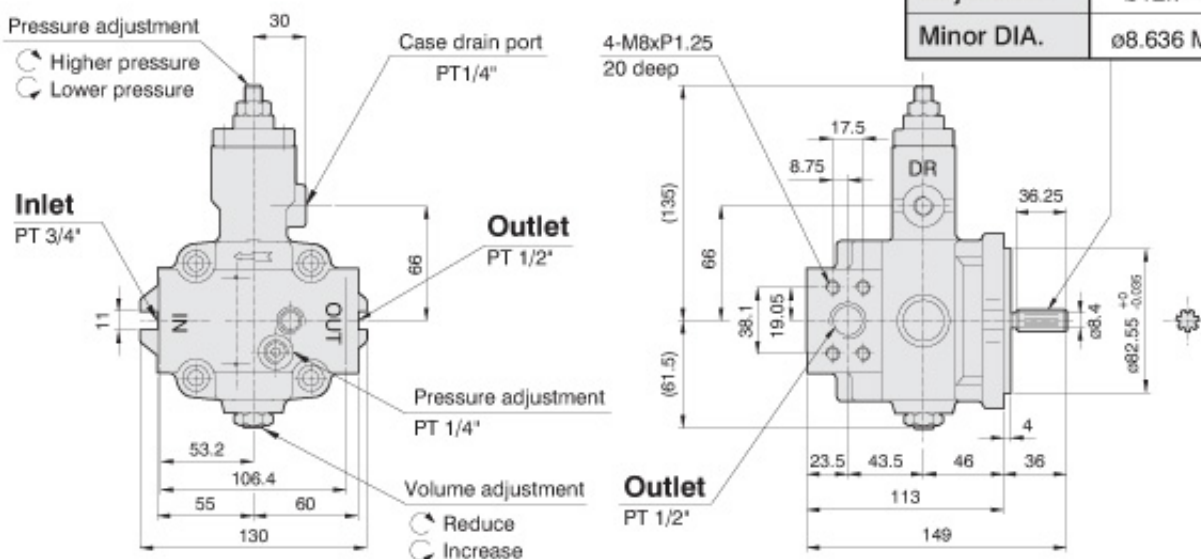


SVD ***-12S

Splined Shafts

ANSI B92.1 CLASS 5

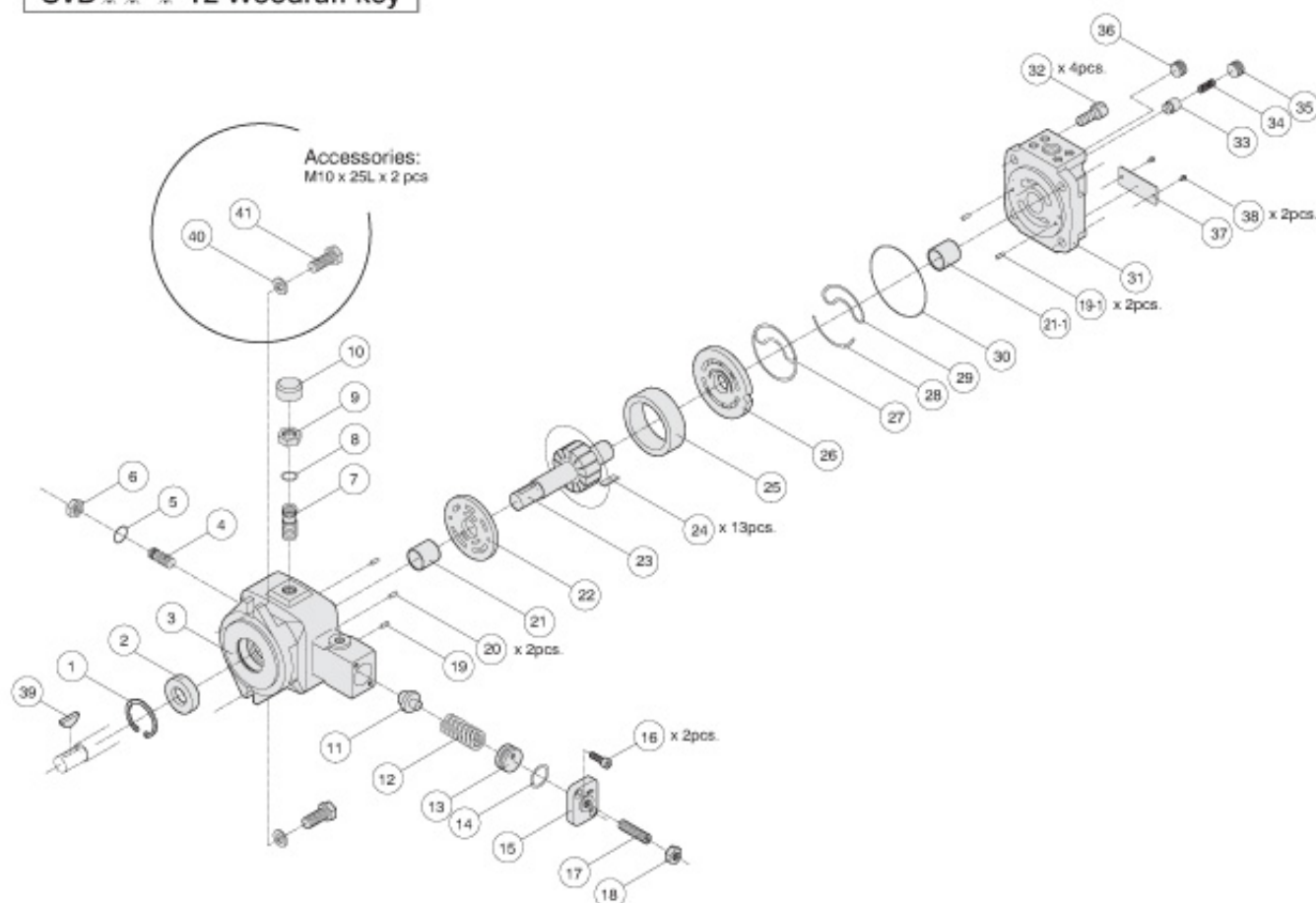
Module	D.P.16/32
Pressure angle	30°
No. of teeth	7
Pitch DIA.	ø11.1125
Major DIA.	ø12.7 ⁺⁰ / _{-0.043}
Minor DIA.	ø8.636 MAX.



SVD

Assembly

SVD ※※※-12 Woodruff key



SVD ※※※-12 Parts List

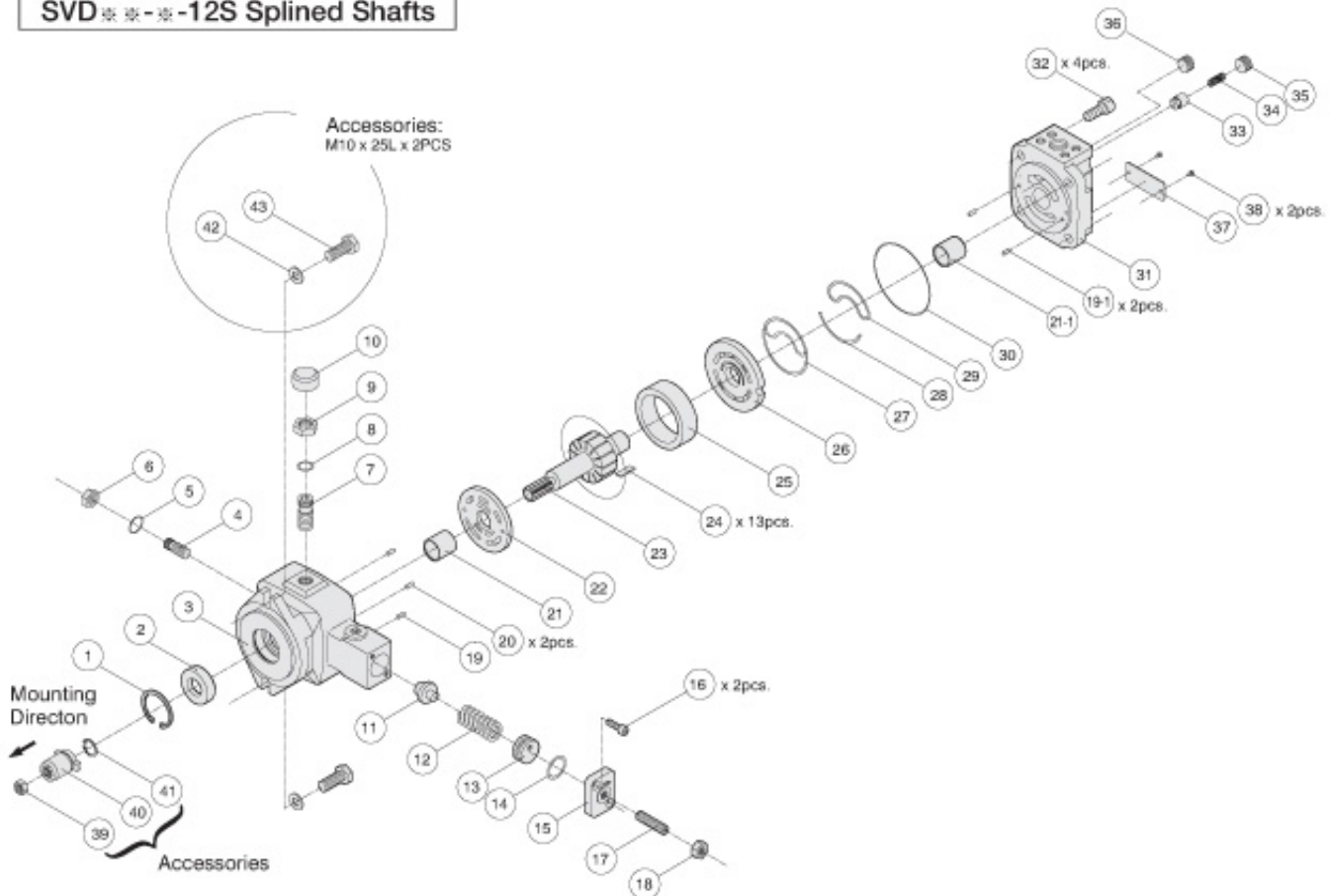
NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R28	1	16	Skt. HD. Cap Scr.	M6 × P1.0 × 20L	2	29	Endless Back-up Ring		1
2	Shaft Seal	TC 16 28 7	1	17	Socket Set Screw	M10 × P1.5 × 35L	1	30	O-Ring	1B-S75	1
3	Pump Body		1	18	Hexagon Nut	M10 × P1.5	1	31	Cover		1
4	Slide Screw	M12 × P1.0 × 30L	1	19	Spring Pin	φ3 × 8	1	32	Skt. HD. Cap Scr.	M8 × P1.25 × 30L	4
5	O-Ring	1A-P10	1	19-1	Spring Pin	φ3 × 8	2	33	Piston		1
6	Hexagon Nut	M12 × P1.0	1	20	Straight Pin	φ3 × 8	2	34	Spring		1
7	Slide Screw	M14 × P1.0 × 30L	1	21	Engine Bush	DIADO(JAPAN)DD1615	1	35	Plug	PT 3/8"	1
8	O-Ring	1A-P12	1	21-1	Engine Bush	DIADO(JAPAN)DD1615	1	36	Plug	PT 1/4"	1
9	Hexagon Nut	M14 × P1.0	1	22	Port Plate		1	37	Name Plate		1
10	Cap		1	23	Rotorshaft		1	38	Fixing Screw		2
11	Piston		1	24	Vanes		13	39	Woodruff Key	NO.406	1
12	Spring		1	25	Cam Ring		1	40	Washer	M10	2
13	Spring Retainer		1	26	Thrust Plate		1	41	Hexagon Screw	M10 × P1.5 × 25L	2
14	O-Ring	1A-P20	1	27	O-Ring	1B-AS568-031	1	※ 40~41 are Accessories.			
15	Cover		1	28	O-Ring	1B-AS568-017	1				

Variable displacement vane pumps SVD series

ANSON HYDRAULICS

Assembly

SVD ***-12S Splined Shafts



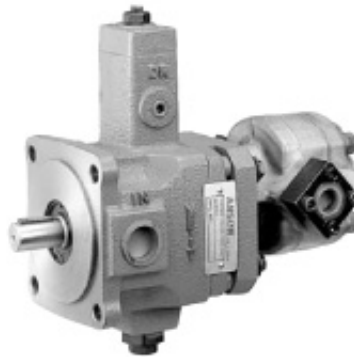
SVD ***-12S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R28	1	17	Socket Set Screw	M10 × P1.5 × 35L	1	31	Cover		1
2	Shaft Seal	TC 16 28 7	1	18	Hexagon Nut	M10 × P1.5	1	32	Skt. HD. Cap Scr.	M6 × P1.25 × 30L	4
3	Pump Body		1	19	Spring Pin	ø3 × 8	1	33	Piston		1
4	Slide Screw	M12 × P1.0 × 30L	1	19-1	Spring Pin	ø3 × 8	2	34	Spring		1
5	O-Ring	1A-P10	1	20	Straight Pin	ø3 × 8	2	35	Plug	PT 3/8"	1
6	Hexagon Nut	M12 × P1.0	1	21	Engine Bush	DIADO(JAPAN)DD1615	1	36	Plug	PT 1/4"	1
7	Slide Screw	M14 × P1.0 × 30L	1	21-1	Engine Bush	DIADO(JAPAN)DD1615	1	37	Name Plate		1
8	O-Ring	1A-P12	1	22	Port Plate		1	38	Fixing Screw		2
9	Hexagon Nut	M14 × P1.0	1	23	Rotorshaft		1	39	Hexagon Nut	M10 × P1.5	1
10	Cap		1	24	Vanes		13	40	Coupling		1
11	Piston		1	25	Cam Ring		1	41	Retainer Ring	IR20/24	1
12	Spring		1	26	Thrust Plate		1	42	Washer	M10	2
13	Spring Retainer		1	27	O-Ring	1B-AS568-031	1	43	Hexagon Screw	M10 × P1.5 × 25L	2
14	O-Ring	1A-P20	1	28	O-Ring	1B-AS568-017	1	※ 39~43 are Accessories.			
15	Cover		1	29	Endless Back-up Ring		1				
16	Skt. HD. Cap Scr.	M6 × P1.0 × 20L	2	30	O-Ring	1B-S75	1				

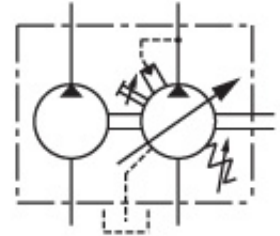
SVD



TPF-VL *** -G00



TPF-VL *** -GH*



TPF Model Code - Double Pumps

TPF	-VL30		2		-GH5			-10	S	
Frame size	Shaft end pump Variable volume pressure compensated vane pump				Cover end pump Fixed displacement gear pump				Design	Shafts code
	Outlet flow (3.5 bar, 1800 r/min)		Operating pressure range (bar)		Displacement (L/min)		Operating pressure (bar)			
	Code	Outlet (Geometric flow displ.) L/min (cm ³ /rev)	Code	Pressure range	Code	Outlet flow	Pressure	Peak		
TPF Flange mountin	VL30	30 (16)	1	15 - 35	GH1	1.09	210	250	10	Omite: Woodruff key S: Splined Shafts
	VL40	40 (22)	2	30 - 70	GH2	2.07				
	Factory setting Q max.		Factory setting P min.		GH3	3.08				
					GH4	4.06				
					GH5	6.16				
					GH6	7.67				
					GH7	9.24				
					GH8	10.77				
					GH9	12.00				
	G00		G00 Type , is variable vane pump only , no including the gear pump.							

TPF Pumps Speed Limits

Minimum speed : 800 r/min
Maximum speed : 1800 r/min

Frame size	Weight
TPF-VL *** -G00-10	10 kg
TPF-VL *** -GH *-10	11.7 kg

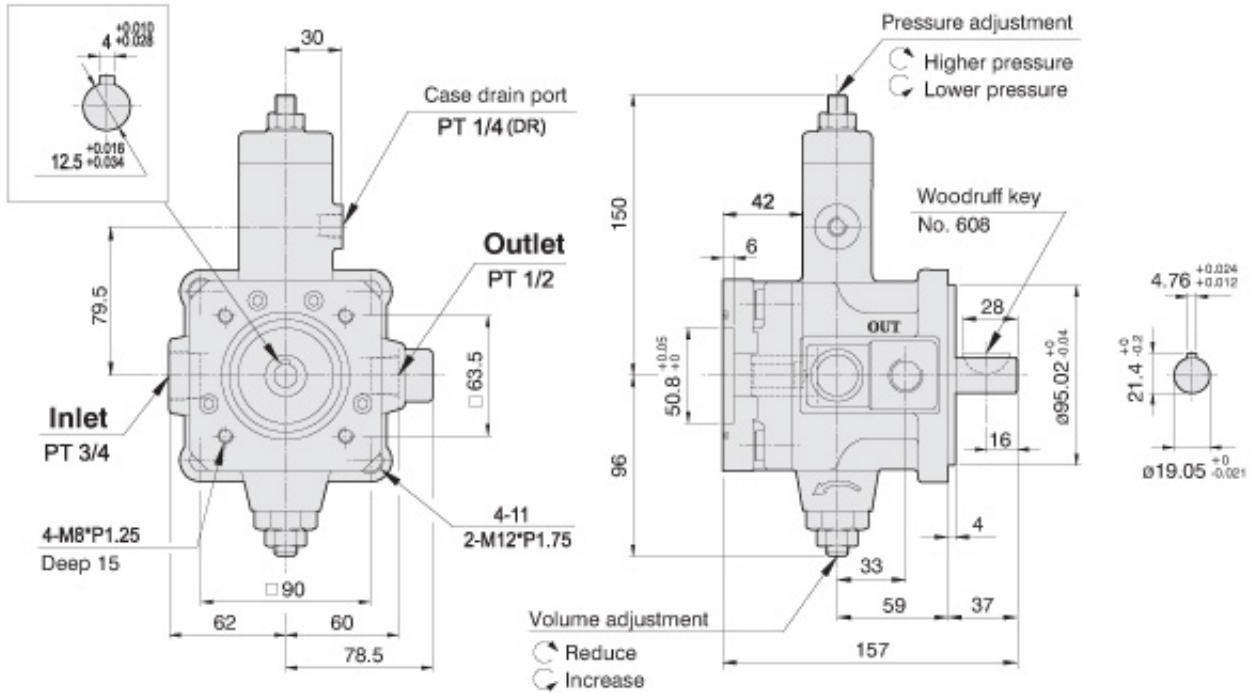
Variable displacement vane pumps

TPF series

ANSON
HYDRAULICS

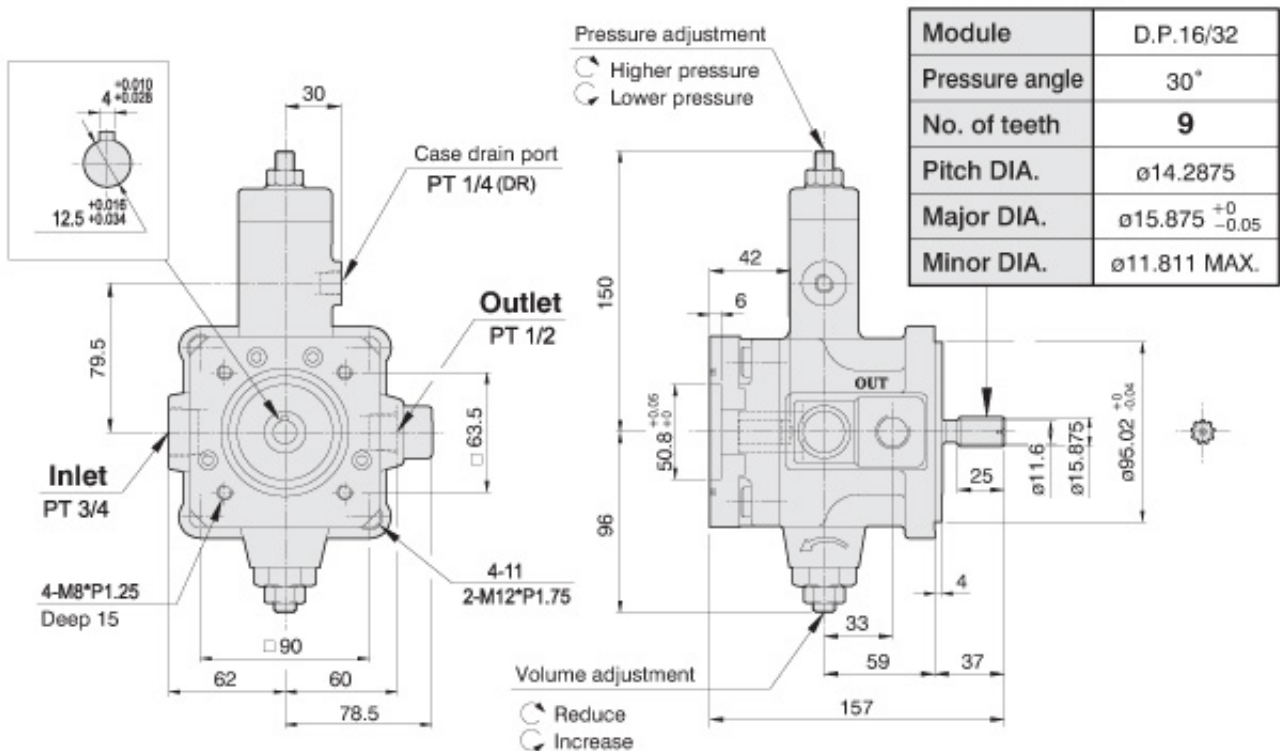
TPF-VL30(40) -G00-10

Woodruff key



TPF-VL30(40) -G00-10S

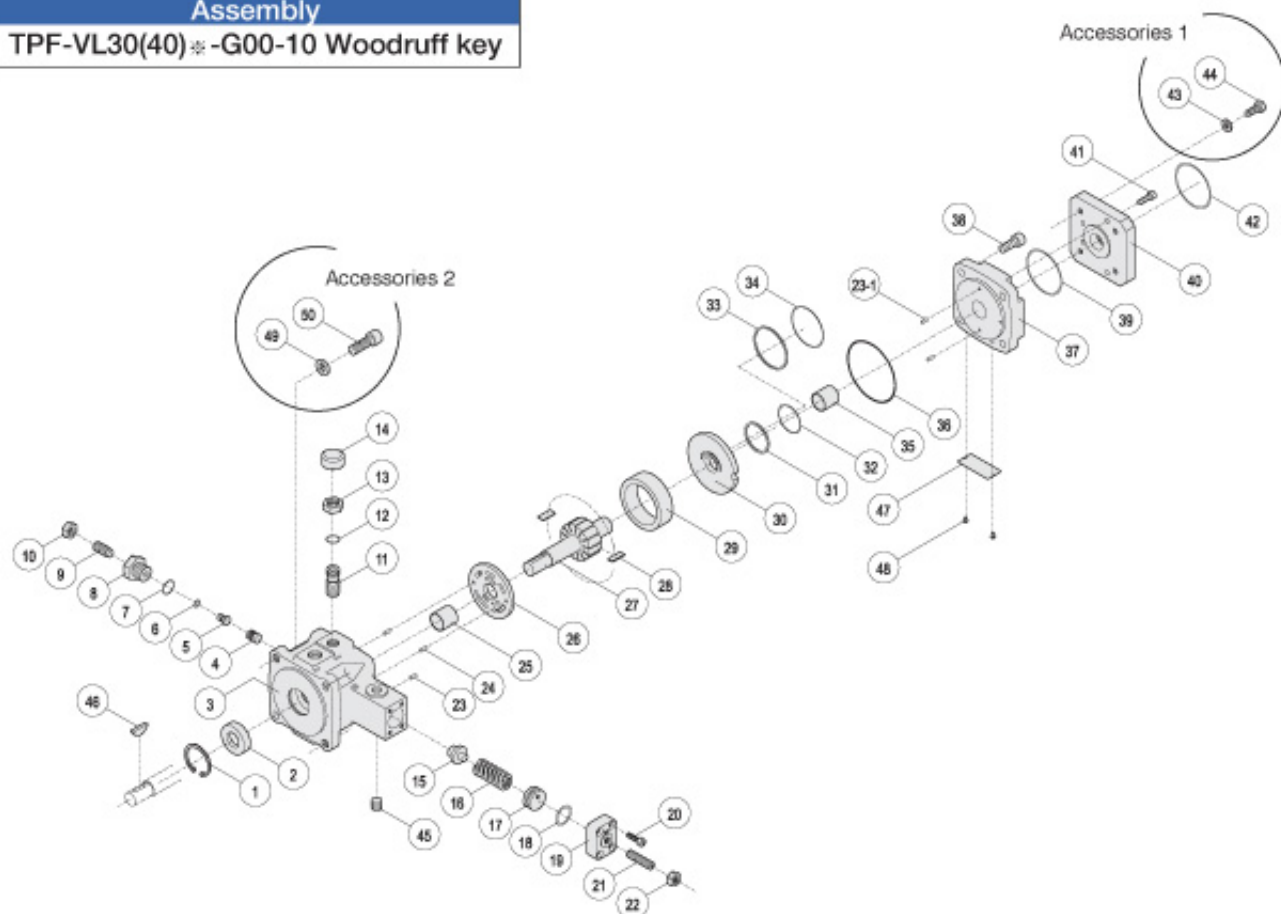
Splined Shafts



TPF

Assembly

TPF-VL30(40)※-G00-10 Woodruff key



TPF-VL30(40)※-G00-10 Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	19	Cover		1	36	O-Ring	1A-S85	1
2	Shaft Seal	TC 22 42 11	1	20	Skt. HD. Cap Scr.	M6 ×P1.0 ×20L	4	37	Cover		1
3	Pump Body		1	21	Socket Set Screw	M10 ×P1.5 ×35L	1	38	Skt. HD. Cap Scr.	M10 ×P1.5 ×25L	4
4	Piston (B)		1	22	Hexagon Nut	M10 ×P1.5	1	39	O-Ring	1B-G60	1
5	Piston (A)		1	23	Spring Pin	ø4 × 10	1	40	Connection Flange		1
6	O-Ring	1A-P5	1	23-1	Spring Pin	ø4 × 10	2	41	Skt. HD. Cap Scr.	M6 ×P1.0 ×16L	1
7	O-Ring	1A-P22	1	24	Straight Pin	ø4 × 10	2	42	O-Ring	1B-G60	1
8	Thrust Screw		1	25	Engine Bush	DIADO(JAPAN)002225	1	43	Washer	M8	4
9	Socket Set Screw	M12 ×P1.75 ×25L	1	26	Port Plate		1	44	Skt. HD. Cap Scr.	M8 ×P1.25 ×20L	4
10	Hexagon Nut	M12 ×P1.75	1	27	Rotorshaft		1	45	Plug	PT 1/4"	1
11	Slide Screw		1	28	Vanes		13	46	Woodruff Key	NO.608	1
12	O-Ring	1A-P14	1	29	Cam Ring		1	47	Name Plate		1
13	Hexagon Nut	M16 ×P1.0	1	30	Thrust Plate		1	48	Fixing Screw		2
14	Cap		1	31	O-Ring	AS568-030	1	49	Spring Washer	M10	4
15	Piston		1	32	Endless Back-up Ring		1	50	Skt. HD. Cap Scr.	M10 ×P1.5 ×30L	4
16	Spring		1	33	O-Ring	AS568-035	1				
17	Spring Retainer		1	34	Endless Back-up Ring		1				
18	O-Ring	1A-P22A	2	35	Engine Bush	DIADO(JAPAN)002220	1				

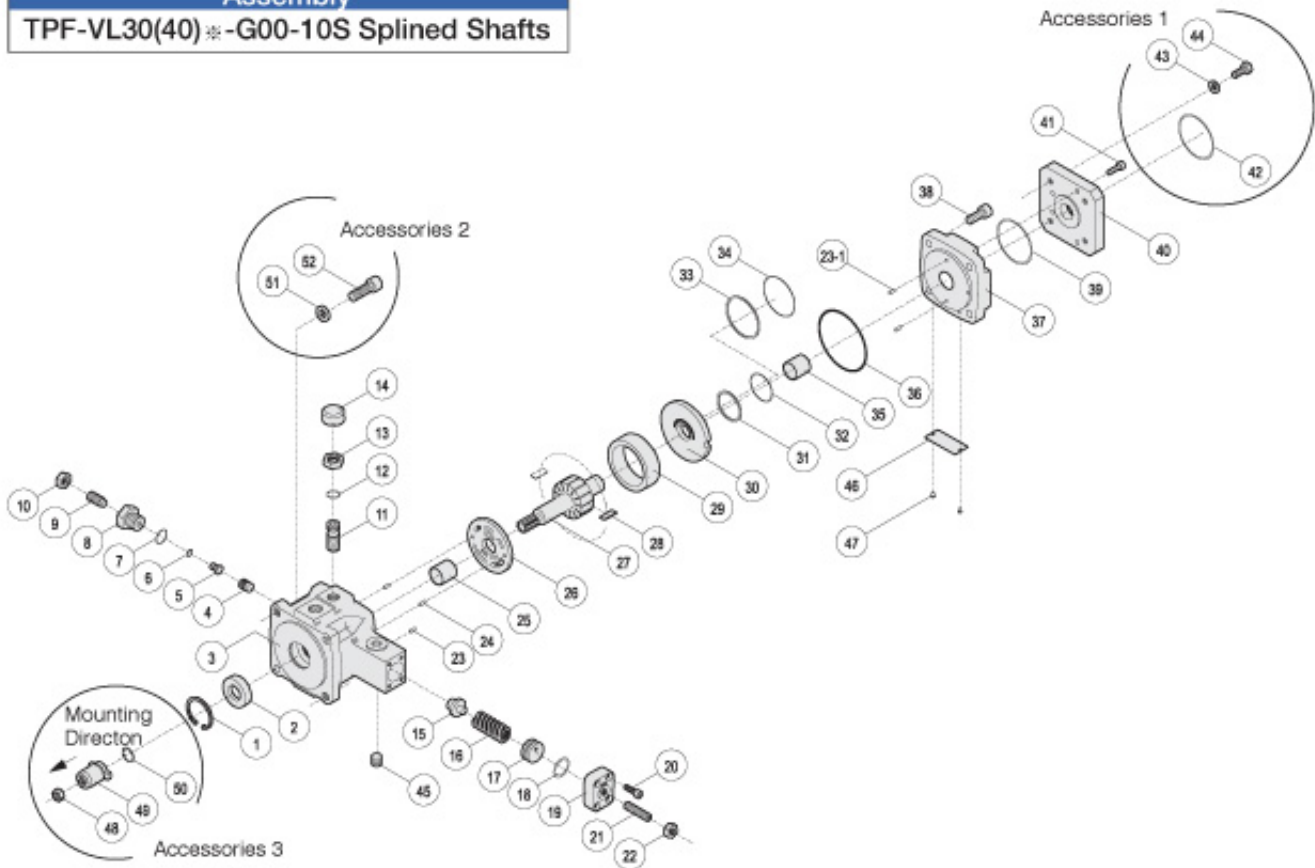
※: 49--50 are Accessories.

Variable displacement vane pumps TPF series

ANSON HYDRAULICS

Assembly

TPF-VL30(40)※-G00-10S Splined Shafts



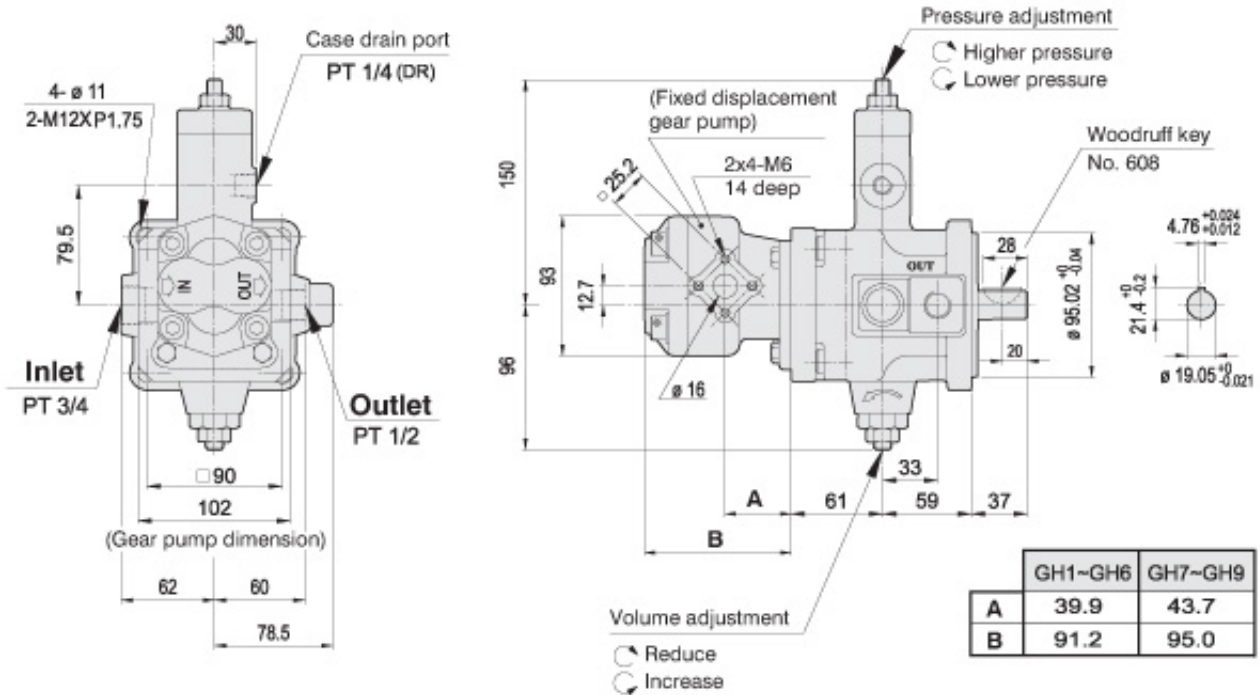
TPF-VL30(40)※-G00-10S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	19	Cover		1	36	O-Ring	1A-S85	1
2	Shaft Seal	TC 22 42 11	1	20	Skt. HD. Cap Scr.	M6 ×P1.0 ×20L	4	37	Cover		1
3	Pump Body		1	21	Socket Set Screw	M10 ×P1.5 ×35L	1	38	Skt. HD. Cap Scr.	M10 ×P1.5 ×25L	4
4	Piston (B)		1	22	Hexagon Nut	M10 ×P1.5	1	39	O-Ring	1B-G60	1
5	Piston (A)		1	23	Spring Pin	ø4 ×10	1	40	Connection Flange		1
6	O-Ring	1A-P5	1	23-1	Spring Pin	ø4 ×10	2	41	Skt. HD. Cap Scr.	M6 ×P1.0 ×16L	1
7	O-Ring	1A-P22	1	24	Straight Pin	ø4 ×10	2	42	O-Ring	1B-G60	1
8	Thrust Screw		1	25	Engine Bush	DIADO,(JAPAN)DD2225	1	43	Washer	M8	4
9	Socket Set Screw	M12 ×P1.75 ×25L	1	26	Port Plate		1	44	Skt. HD. Cap Scr.	M8 ×P1.25 ×20L	4
10	Hexagon Nut	M12 ×P1.75	1	27	Rotorshaft		1	45	Plug	PT 1/4"	1
11	Slide Screw		1	28	Vanes		13	46	Name Plate		1
12	O-Ring	1A-P14	1	29	Cam Ring		1	47	Fixing Screw		2
13	Hexagon Nut	M16 ×P1.0	1	30	Thrust Plate		1	48	Hexagon Nut	M10 ×P1.5	1
14	Cap		1	31	O-Ring	AS568-030	1	49	Coupling		1
15	Piston		1	32	Endless Back-up Ring		1	50	Retainer Ring	IRTW 24	1
16	Spring		1	33	O-Ring	AS568-035	1	51	Spring Washer	M10	4
17	Spring Retainer		1	34	Endless Back-up Ring		1	52	Skt. HD. Cap Scr.	M10 ×P1.5 ×30L	4
18	O-Ring	1A-P22A	2	35	Engine Bush	DIADO,(JAPAN)DD2220	1				

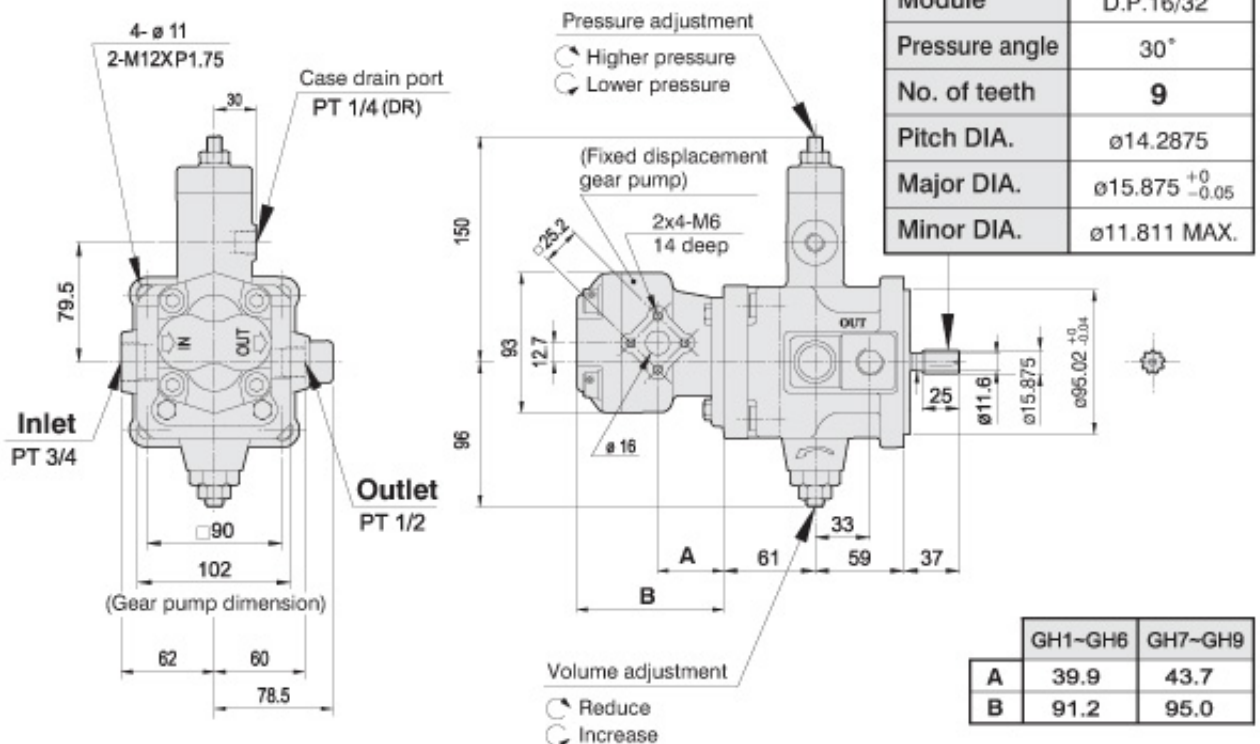
※: 48 ~52 are Accessories.

TPF

TPF-VL30(40) * -GH * -10
Woodruff key



TPF-VL30(40) * -GH * -10S
Splined Shafts

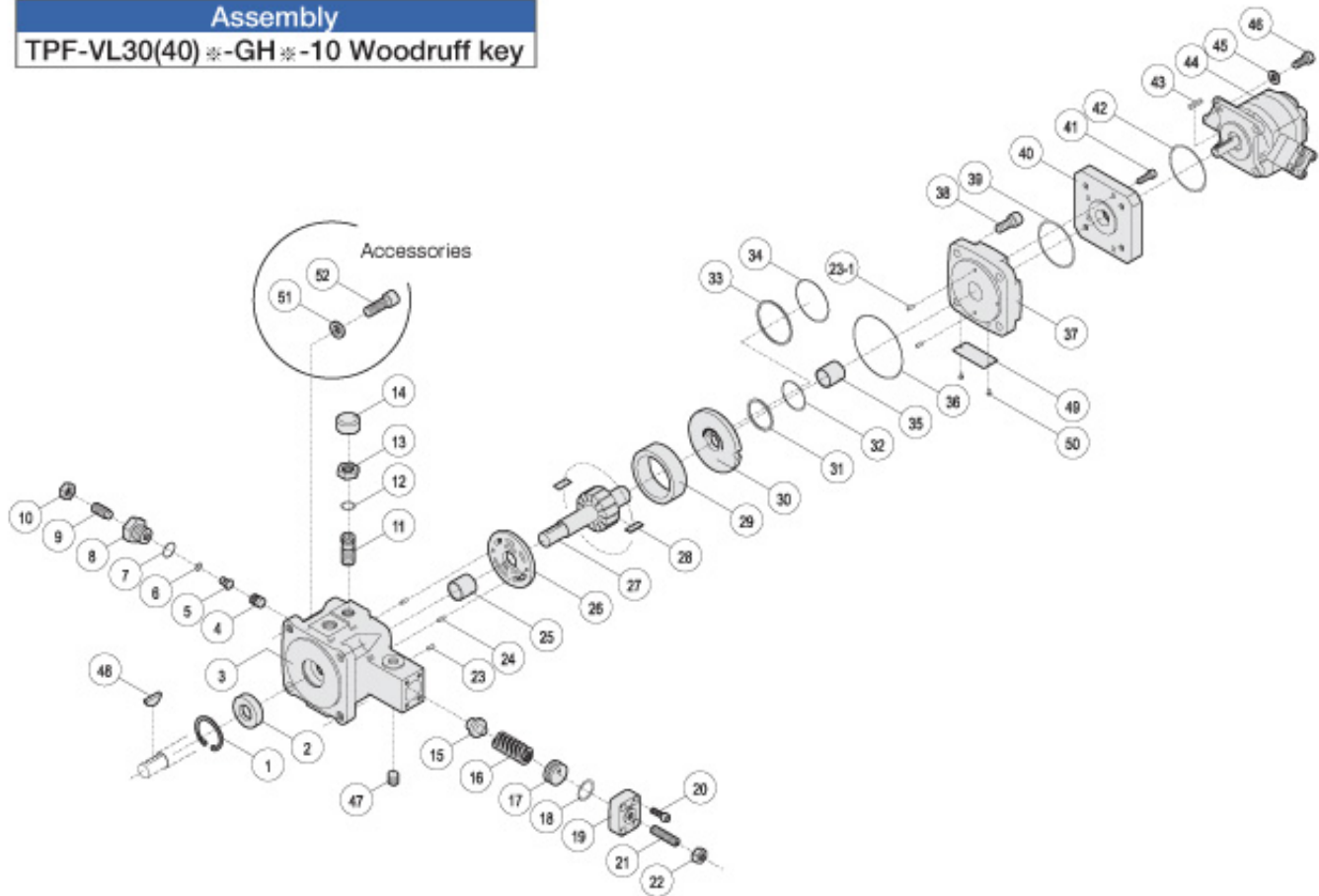


Variable displacement vane pumps TPF series

ANSON HYDRAULICS

Assembly

TPF-VL30(40) ※-GH ※-10 Woodruff key



TPF-VL30(40) ※-GH ※-10 Parts List

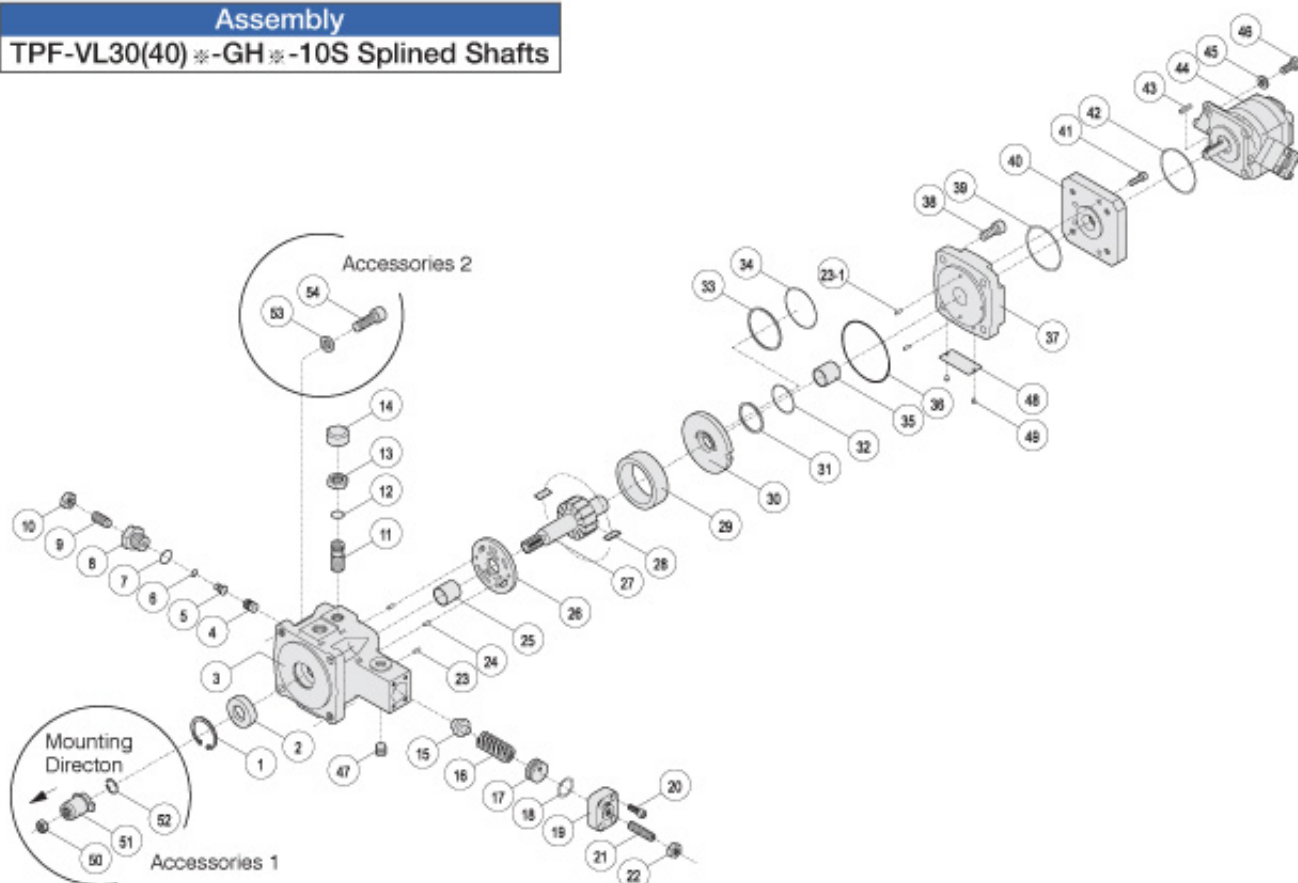
NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	20	Skt. HD. Cap Scr.	M6 × P1.0 × 20L	4	38	Skt. HD. Cap Scr.	M10 × P1.5 × 25L	4
2	Shaft Seal	TC 22 42 11	1	21	Socket Set Screw	M10 × P1.5 × 35L	1	39	O-Ring	1B-G60	1
3	Pump Body		1	22	Hexagon Nut	M10 × P1.5	1	40	Connection Flange	CR / PA	1
4	Piston (B)		1	23	Spring Pin	ø4 × 10	1	41	Skt. HD. Cap Scr.	M6 × P1.0 × 16L	1
5	Piston (A)		1	23-1	Spring Pin	ø4 × 10	2	42	O-Ring	1B-G60	1
6	O-Ring	1A-P5	1	24	Straight Pin	ø4 × 10	2	43	Key		1
7	O-Ring	1A-P22	1	25	Engine Bush	DIADO(JAPAN)DD2225	1	44	Fixed Displacement Gear Pump		1
8	Thrust Screw		1	26	Port Plate		1	45	Washer	M8	4
9	Socket Set Screw	M12 × P1.75 × 25L	1	27	Rotorshaft	TPF-Standard Key	1	46	Hexagon Screw	M8 × P1.25 × 20L	4
10	Hexagon Nut	M12 × P1.75	1	28	Vanes		13	47	Plug	PT 1/4"	1
11	Slide Screw		1	29	Cam Ring		1	48	Woodruff Key	NO.608	1
12	O-Ring	1A-P14	1	30	Thrust Plate		1	49	Name Plate		1
13	Hexagon Nut	M16 × P1.0	1	31	O-Ring	AS568-030	1	50	Fixing Screw		2
14	Cap		1	32	Endless Back-up Ring		1	51	Spring Washer	M10	4
15	Piston		1	33	O-Ring	AS568-035	1	52	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4
16	Spring		1	34	Endless Back-up Ring		1				
17	Spring Retainer		1	35	Engine Bush	DIADO(JAPAN)DD2220	1				
18	O-Ring	1A-P22A	1	36	O-Ring	1A-S85	1				
19	Cover		1	37	Cover		1				

※: 51~52 are Accessories.

TPF

Assembly

TPF-VL30(40)※-GH※-10S Splined Shafts



TPF-VL30(40)※-GH※-10S Parts List

NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty	NO.	Description	Specification	Q'ty
1	Retainer Ring	R42	1	20	Skt. HD. Cap Scr.	M6 × P1.0 × 20L	4	38	Skt. HD. Cap Scr.	M10 × P1.5 × 25L	4
2	Shaft Seal	TC 22 42 11	1	21	Socket Set Screw	M10 × P1.5 × 35L	1	39	O-Ring	1B-G60	1
3	Pump Body		1	22	Hexagon Nut	M10 × P1.5	1	40	Connection Flange	CR / PA	1
4	Piston (B)		1	23	Spring Pin	ø4 × 10	1	41	Skt. HD. Cap Scr.	M6 × P1.0 × 16L	1
5	Piston (A)		1	23-1	Spring Pin	ø4 × 10	2	42	O-Ring	1B-G60	1
6	O-Ring	1A-P5	1	24	Straight Pin	ø4 × 10	2	43	Key		1
7	O-Ring	1A-P22	1	25	Engine Bush	DIADO(JAPAN)DD2225	1	44	Fixed Displacement Gear Pump		1
8	Thrust Screw		1	26	Port Plate		1	45	Washer	M8	4
9	Socket Set Screw	M12 × P1.75 × 25L	1	27	Rotorshaft	TPF-Standard Key	1	46	Hexagon Screw	M8 × P1.25 × 20L	4
10	Hexagon Nut	M12 × P1.75	1	28	Vanes		13	47	Plug	PT 1/4"	1
11	Slide Screw		1	29	Cam Ring		1	48	Name Plate		1
12	O-Ring	1A-P14	1	30	Thrust Plate		1	49	Fixing Screw		2
13	Hexagon Nut	M16 × P1.0	1	31	O-Ring	AS568-030	1	50	Hexagon Nut	M10 × P1.5	1
14	Cap		1	32	Endless Back-up Ring		1	51	Coupling		1
15	Piston		1	33	O-Ring	AS568-035	1	52	Retainer Ring	IRTW 24	1
16	Spring		1	34	Endless Back-up Ring		1	53	Spring Washer	M10	4
17	Spring Retainer		1	35	Engine Bush	DIADO(JAPAN)DD2220	1	54	Skt. HD. Cap Scr.	M10 × P1.5 × 30L	4
18	O-Ring	1A-P22A	1	36	O-Ring	1A-S85	1				
19	Cover		1	37	Cover		1				

※ 50~54 are Accessories.

PERFORMANCE DATA

ROTARY DIRECTION.

FLUIDS PERMISSIBLE.

When working pressure lower than 70 kg/cm², hydraulic oil with a viscosity ranging from 30-50 cSt. (ISO VG32) at 40°C is recommended.
When working pressure higher than 71 kg/cm², hydraulic oil with a viscosity ranging from 50-70 cSt (ISO VG68) at 40°C is recommended.

DRAIN PORT PIPING.

Drain connection must be piped directly to tank and below the oil level with a back pressure not exceed 0.3 kg/cm².

OIL TEMPERATURE RANGE.

Oil temperature range should be between 15°C-60°C for continuous operation and should be higher than 7°C at starting.

ALIGNMENT AND INSTALLATION OF PUMP.

The shaft alignment for pump and electric motor shall be limited to 0.05 mm TIR, and 1 degree angular error.

INLET PORT PRESSURE.

Inlet port pressure should be -0.3 kg/cm² to +0.3 kg/cm².

FLOW ADJUSTMENT.

The flow will be reduced when the flow adjusting screw is turned clockwise and increased when anti-clockwise.

PRESSURE ADJUSTMENT.

The pressure will be increased when the pressure adjusting screw is turned clockwise and reduced when anti-clockwise.

P-Q CHARACTERISTICS (EX-WORK SET)

Flow setting: The max. flow as catalogue shown.
Pressure setting: The min. operating pressure range.

SLIDE SCREW.

The slide screw has been properly set at factory. (See P.75~76 schematic cross-section-27 for details.) Don't adjust it.

CAUTIONS FOR STARTING.

Start up the pump under No-Load condition and repeat to start and stop the motor several times to extract the air from inside of the pump and piping. Then keep a 10 minutes continuous running for a better de-airing.

PEAK-PRESSURE.

The peak pressure is 140 kg/cm² for code *2 & *3, and 210 kg/cm² for A4 & A5.