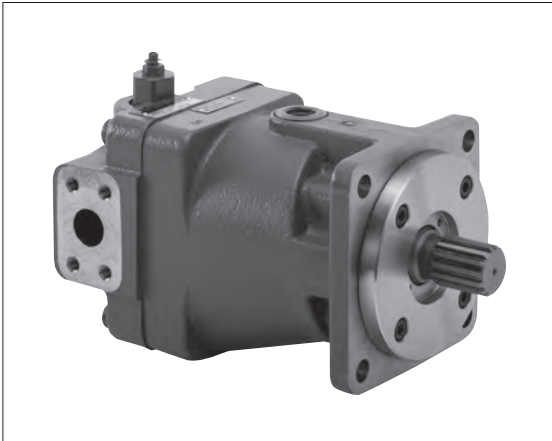


Low noise fixed displacement piston pumps PH**F series



The **PH**F** Series is a fixed displacement version of the PH variable displacement piston pumps designed for Direct Drive Systems, with more lighter weight and more compact size.

- Compared with the PH series, this series of pumps is designed to have about 40% less weight.
- They also incorporate relief valves to achieve a safety design that protects the hydraulic circuit from overloads.

Model Code

PH80F-ZRC-08

1 2 3 4 5

- | | |
|--|--|
| <p>1 Series, displacement
Low noise fixed displacement piston pumps
Refer to specifications.</p> <p>2 Shaft end configuration
Z: SAE spline shaft
Y: SAE key shaft</p> <p>3 Rotation (viewed from shaft end)
R: right rotation</p> | <p>4 Safety valve function
Omit: not provided
C: provided</p> <p>5 Built-in orifice
Omit: no orifice provided
08: 0.8 mm diameter orifice provided</p> |
|--|--|

Specifications

Model Code	Displacement cm ³ /rev	Working Pressure MPa	Speed mim ⁻¹	Weight kg
PH40F	40	Rated 21	2300	22
PH56F	56		2300	22
PH80F	80	Intermittent 22.5	2000	38
PH100F	100		2000	40
PH130F	130		1800	65
PH170F	170		1800	67

- "Intermittent" refers to intermittent pressure which operable time is limited to 10% of operating cycle (max. 6 seconds).
- Consult Tokyo Keiki for specifications of pumps using water glycol fluids.
- The safety valve of this pump is designed to protect the hydraulic circuit from overloads.
Do not use it as the relief valve of the circuit.

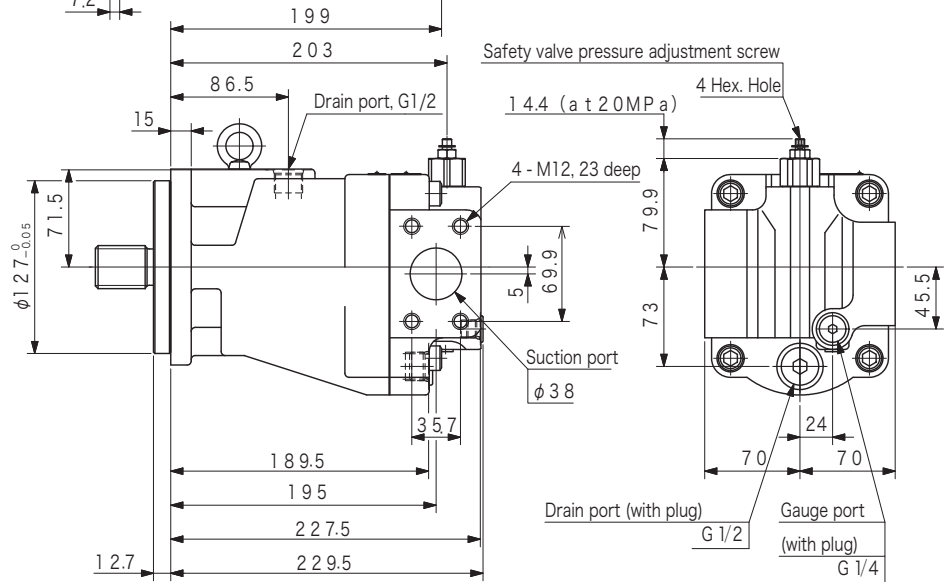
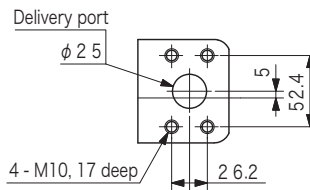
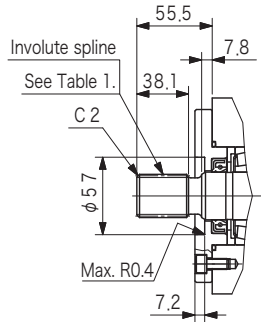
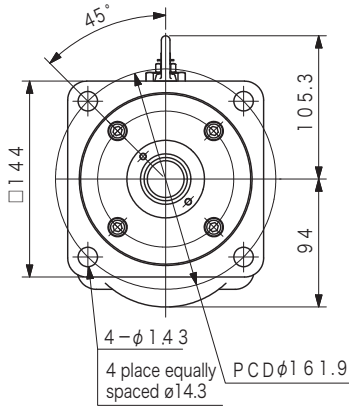
Dimensions

PH40F PH56F

Shaft end

Table 1

Involute spline specifications	
Flat-bottomed tooth surface alignment	
No. of teeth	14
D.P.	12/24
Pressure angle	30°
Major diameter	$\phi 31.22 \begin{smallmatrix} 0 \\ -0.13 \end{smallmatrix}$
Minor diameter	$\phi 26.99 \begin{smallmatrix} 0 \\ -0.33 \end{smallmatrix}$

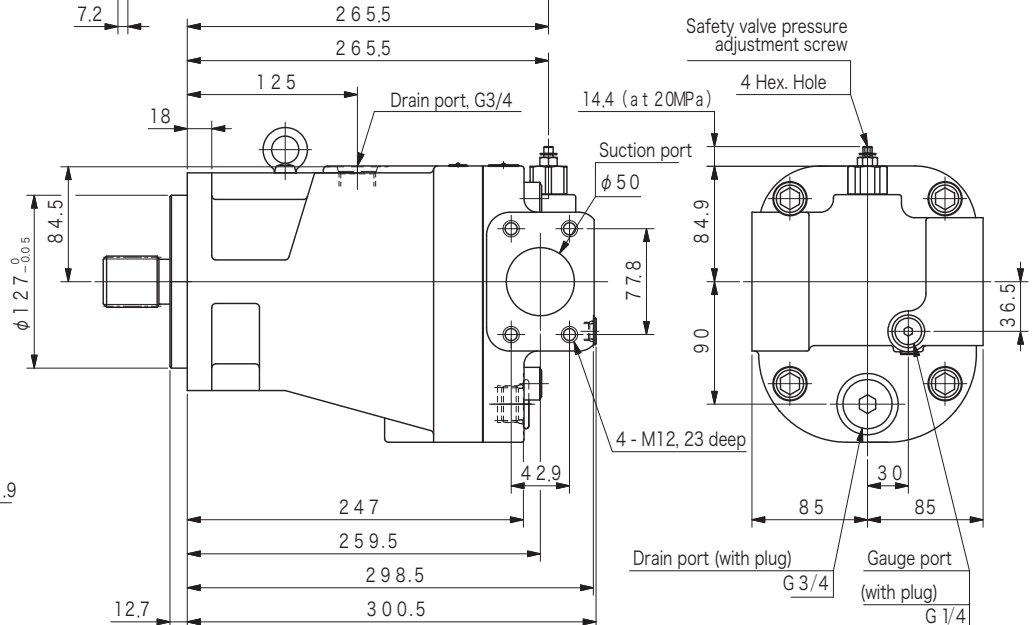
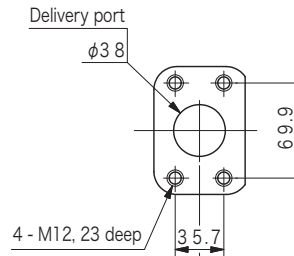
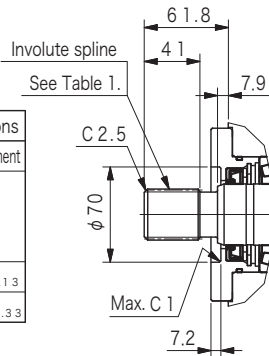
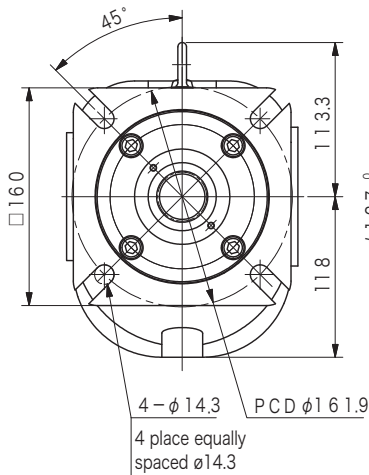


PH80F

Shaft end

Table 1

Involute spline specifications	
Flat-bottomed tooth surface alignment	
No. of teeth	17
D.P.	12/24
Pressure angle	30°
Major diameter	$\phi 37.57 \begin{smallmatrix} 0 \\ -0.13 \end{smallmatrix}$
Minor diameter	$\phi 33.34 \begin{smallmatrix} 0 \\ -0.33 \end{smallmatrix}$

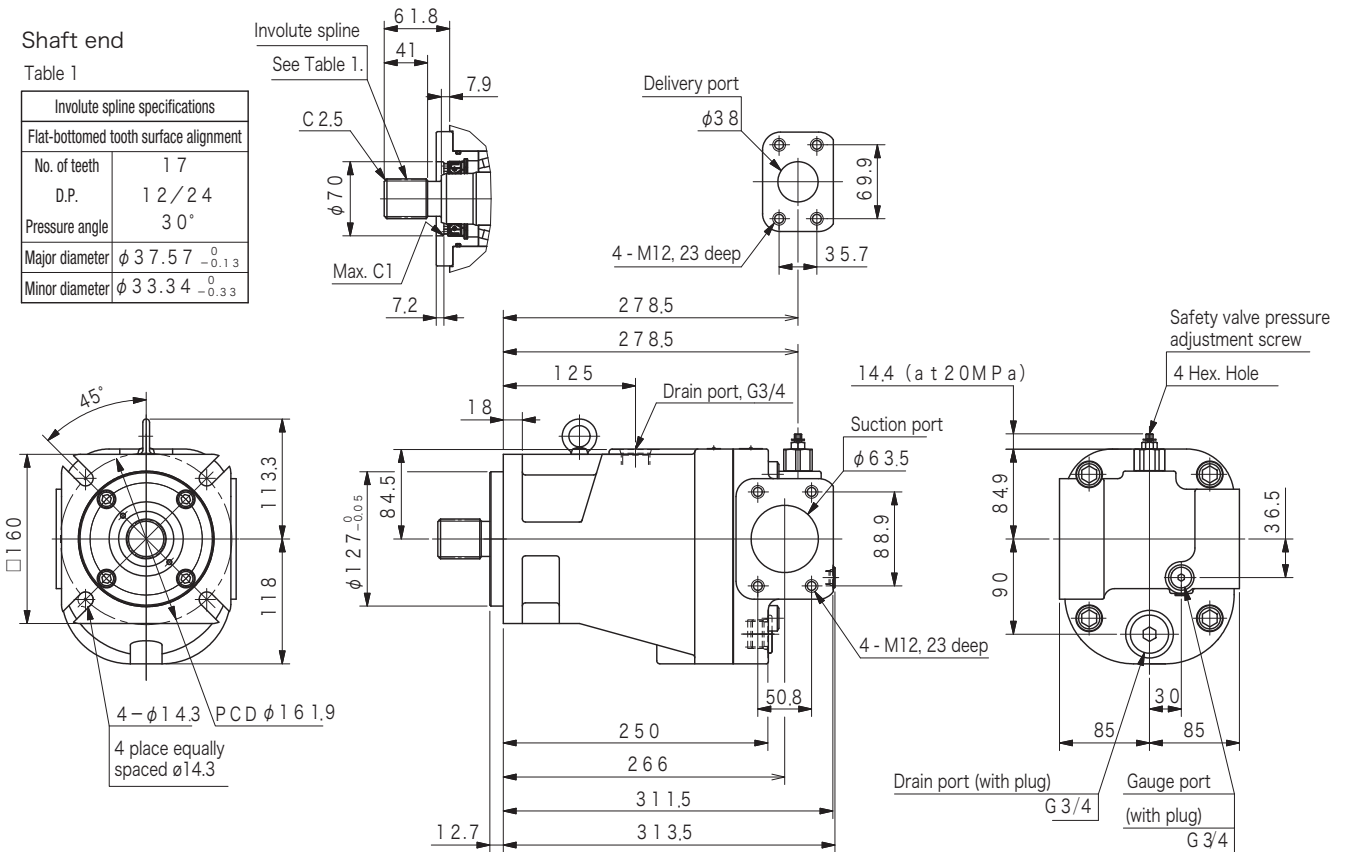


PH100F

Shaft end

Table 1

Involute spline specifications	
Flat-bottomed tooth surface alignment	
No. of teeth	17
D.P.	12/24
Pressure angle	30°
Major diameter	$\phi 37.57 \begin{smallmatrix} 0 \\ -0.13 \end{smallmatrix}$
Minor diameter	$\phi 33.34 \begin{smallmatrix} 0 \\ -0.33 \end{smallmatrix}$

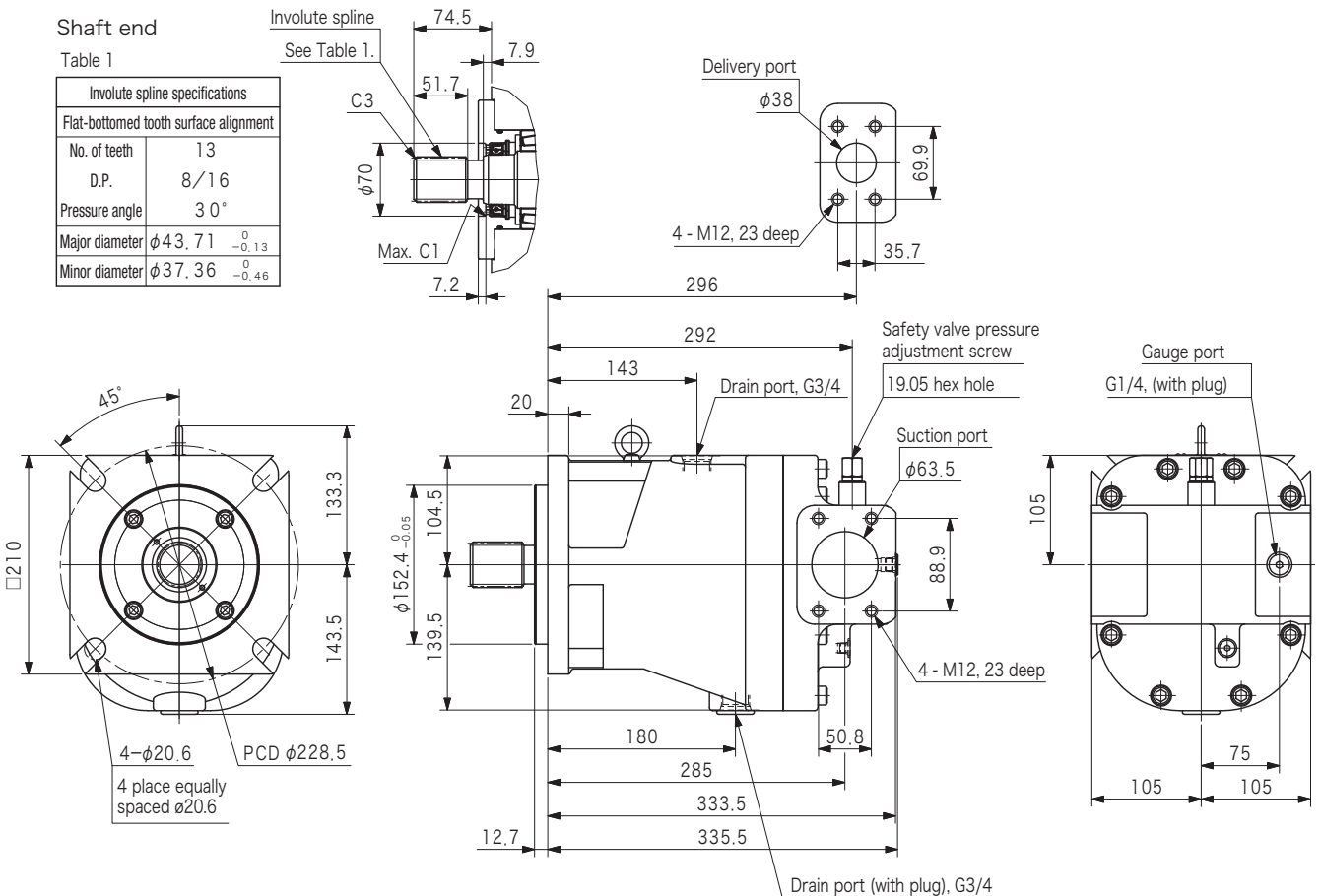


PH130F
PH170F

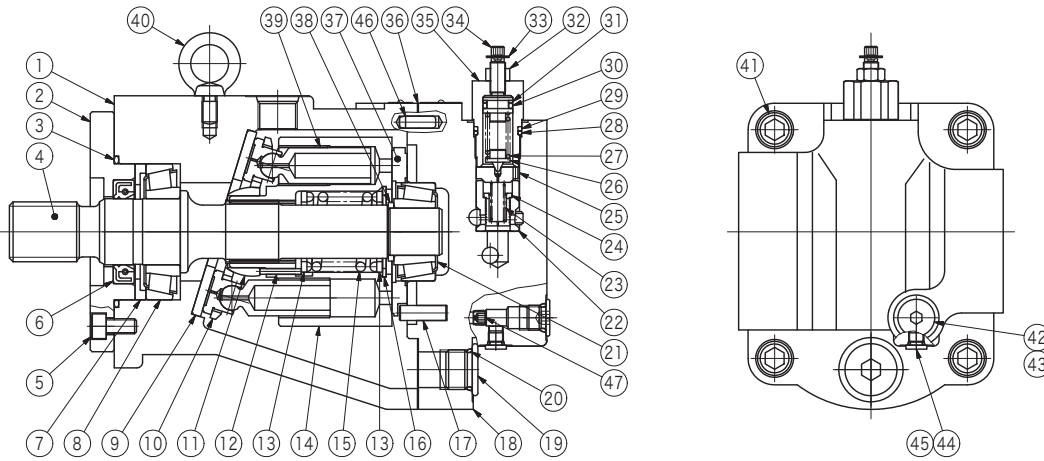
Shaft end

Table 1

Involute spline specifications	
Flat-bottomed tooth surface alignment	
No. of teeth	13
D.P.	8/16
Pressure angle	30°
Major diameter	$\phi 43.71 \begin{smallmatrix} 0 \\ -0.13 \end{smallmatrix}$
Minor diameter	$\phi 37.36 \begin{smallmatrix} 0 \\ -0.46 \end{smallmatrix}$



Construction



PH40/56F

No.	Name	Part No.	Standard	Quantity
3	O-ring	008005119	JIS B 2401 1B-P7	1
6	Shaft seal	40012883	-	1
20	O-ring	008001719	JIS B 2401 1B-P18	1
28	O-ring	007911717	AS568-117 (NBR, Hs70)	1
29	Backup ring	40025061	MS28774-117	1
30	O-ring	007911117	AS568-111 (NBR, Hs70)	1
31	Backup ring	40025057	MS28774-111	1
36	Gasket	40033997	-	1
43	O-ring	008001019	JIS B 2401 1B-P11	1
45	O-ring	007990219	AS568-902 (NBR, Hs90)	1

PH80F

No.	Name	Part No.	Standard	Quantity
3	O-ring	008051219	JIS B 2401 1B-G80	1
6	Shaft seal	VA19648	-	1
20	O-ring	008002219	JIS B 2401 1B-P22.4	1
28	O-ring	007911717	AS568-117 (NBR, Hs70)	1
29	Backup ring	40025061	MS28774-117	1
30	O-ring	007911117	AS568-111 (NBR, Hs70)	1
31	Backup ring	40025057	MS28774-111	1
36	Gasket	40034348	-	1
43	O-ring	008001019	JIS B 2401 1B-P11	1
45	O-ring	007990219	AS568-902 (NBR, Hs90)	1

PH100F

No.	Name	Part No.	Standard	Quantity
3	O-ring	008051219	JIS B 2401 1B-G80	1
6	Shaft seal	40011048	-	1
20	O-ring	008002219	JIS B 2401 1B-P22.4	1
28	O-ring	007911717	AS568-117 (NBR, Hs70)	1
29	Backup ring	40025061	MS28774-117	1
30	O-ring	007911117	AS568-111 (NBR, Hs70)	1
31	Backup ring	40025057	MS28774-111	1
36	Gasket	40034348	-	1
43	O-ring	008001019	JIS B 2401 1B-P11	1
45	O-ring	007990219	AS568-902 (NBR, Hs90)	1

PH130/170F

No.	Name	Part No.	Standard	Quantity
3	O-ring	008051419	JIS B 2401 1B-G90	1
6	Shaft seal	40011048	-	1
20	O-ring	008002219	JIS B 2401 1B-P22.4	1
36	Gasket	40034456	-	1
43	O-ring	008001019	JIS B 2401 1B-P11	1
45	O-ring	007990219	AS568-902 (NBR, Hs90)	1

Rotating group kit/Seal kit

Model Code	PH46/56F	PH80F	PH100F	PH130F	PH170F
Rotating group kit no.	40078940	40048885	40038843	40058177	40068811
R rotation No. 37 w/wafer plate	40032370	40026924	40032326	40032265	40034363
Seal kit part no.	40088654	40088655	40088656	40088983	40088984

Notes on Operation

- See piston pump Notes on Operation (page A0-3, A0-4)

Piping Flanges

- Flanges must be ordered separately. See table below for required parts.

Piping Flanges (conforming to SAE J 518c Standard Pressure)

Pump Model	Type	Suction Port		Delivery Port	
		Size	Flange Model	Size	Flange Model
PH40F PH56F	Threaded	1-1/2	FL1-12-12P-10-JA-S4-M	1	FL1-8-08P-10-JA-S4-M
	Welded		FL1-12-12W-10-JA-M		FL1-8-08W-10-JA-M
PH80F	Threaded	2	FL1-16-16P-10-JA-S4-M	1-1/2	FL1-12-12P-10-JA-S4-M
	Welded		FL1-16-16W-10-JA-M		FL1-12-12W-10-JA-M
PH100F PH130F PH170F	Threaded	2-1/2	FL1-20-20P-10-JA-S4-M	1-1/2	FL1-12-12P-10-JA-S4-M
	Welded		FL1-20-20W-10-JA-M		FL1-12-12W-10-JA-M