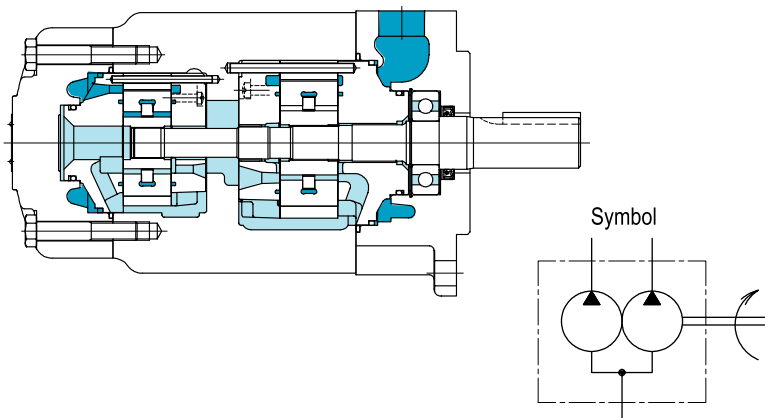


Low noise double fixed displacement vane pumps SQP/SQPS series

B
18

VANE PUMPS



Model Code

(F3) - SQP (S) 32 - 35 - 17 - 86 CD (2) - (LH) - 18

1 2 3 4 5 6 7 8 9 10

- 1 Fluid
Omit for mineral oil
F3: phosphate ester
F11: water glycol
- 2 Low noise fixed displ. double vane pump
SQP(S)21 Series
SQP(S)31,32 Series
SQP(S)41,42,43 Series
- 3 Shaft end pump displacement

Series	Displacement
SQP (S) 2*	10, 12, 14, 15, 17, 19, 21
SQP (S) 3*	17, 21, 25, 30, 32, 35, 38
SQP (S) 4*	30, 35, 38, 42, 50, 60

- 4 Cover end pump displacement

Series	Displacement
SQP (S) *1	2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 14
SQP (S) *2	10, 12, 14, 15, 17, 19, 21
SQP (S) *3	17, 21, 25, 30, 32, 35, 38

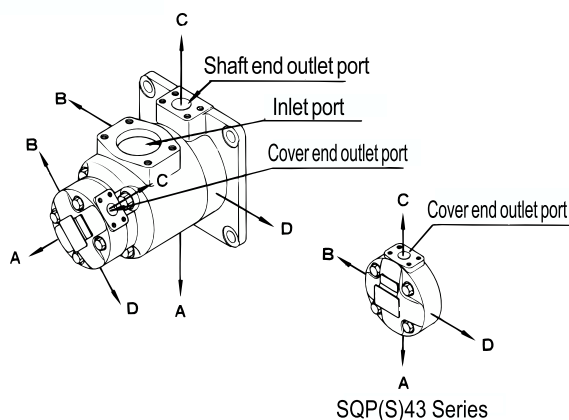
- 5 Shaft
86: parallel sq. key
- 6 Shaft end pump (viewed from cover end)
A: opposite inlet
B: 90' CCW from inlet
C: inline with inlet
D: 90' CW from inlet
- 7 Cover end pump (viewed from cover end)
A: 135' CCW from inlet
B: 45' CCW from inlet
C: 45' CW from inlet
D: 135' CW from inlet
Note: SQP(S) Series indicated in ()
- 8 Pump mounting
Omit for flange mounting
2* : foot mounting

Shaft end outlet position foot mounting surface (see schematics below)

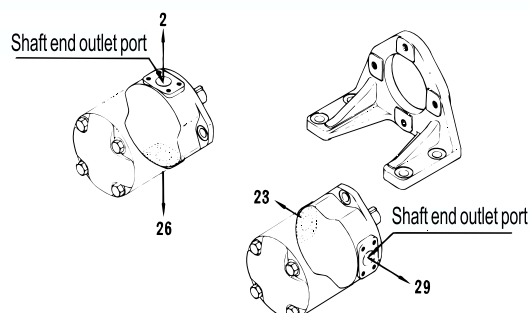
Foot Mount Code	Shaft End Outlet Position to Foot Mount Surface Viewed from Shaft End
2	up (12 o'clock)
23	right (3 o'clock)
26	down (6 o'clock)
29	left (9 o'clock)

- 9 Rotation (viewed from shaft end)
Omit for CW
LH: CCW
- 10 Design no

• Outlet port position



• Foot Mounting Position



Specifications

Model	Shaft End Pump			Cover End Pump			Max. Speed min ⁻¹	Minimum Speed min ⁻¹
	Displacement	Delivery at 1000 min ⁻¹ 0.7Mpa L/min	Max. Working Press. MPa	Displacement	Delivery at 1000 min ⁻¹ 0.7Mpa L/min	Max. Working Press. MPa		
SQP (S) 21	10	32. 5	17. 5 * (14)	2	7. 5	14 * (14)	1800 ▲ (1200) * (1200)	600
	12	38. 3		3	10. 2			
	14	43. 3						
	15	46. 7						
	17	52. 5						
	19	59. 2						
	21	65. 0						
SQP (S) 31	17	53. 3	17. 5 * (14)	6	19. 2	17. 5 * (14)		
	21	66. 7		7	22. 9			
	25	79. 2		8	26. 2			
	30	95. 0						
	32	100. 0						
	35	109. 0						
	38	118. 0						
SQP (S) 41	30	96. 0	17. 5 * (14)	11	35. 0	16 * (14)		
	35	109. 0		12	37. 9			
	38	128. 0		14 * (14)				
	42	134. 0						
	50	156. 0						
	60	189. 0						
SQP (S) 32	17	53. 3	17. 5 * (14)	10	32. 5	17. 5 * (14)	1800 ▲ (1200) * (1200)	600
	21	66. 7		12	38. 3			
	25	79. 2						
	30	95. 0						
	32	100. 0						
	35	109. 0						
	38	118. 0						
SQP (S) 42	30	96. 0	17. 5 * (14)	17	52. 5			
	35	109. 0		19	59. 2			
	38	128. 0		21 65. 0				
	42	134. 0						
	50	156. 0						
	60	189. 0						
SQP (S) 43	30	96. 0	17. 5 * (14)	17	53. 3	17. 5 * (14)		
	35	109. 0		21	66. 7			
	38	128. 0		25	79. 2			
	42	134. 0		30	95. 0			
	50	156. 0		32	100. 0			
	60	189. 0		35	109. 0			
				38	118. 0			

*F3-SQP(S)max. working pressure and sped with phosphate ester fluid

▲F11-SQP(S)max. speed with water-glycol fluid

Weight

Unit : kg

Model	SQP		SQPS	
	Flange Mount	Foot Mount	Flange Mount	Foot Mount
SQP (S) 21	31.5	41.0	41.0	50.5
SQP (S) 31	46.0	55.5	56.0	65.5
SQP (S) 32	48.0	57.5	62.0	71.5
SQP (S) 41	74.0	99.0	83.0	108.0
SQP (S) 42	80.0	105.0	88.0	113.0
SQP (S) 43	88.5	113.0	89.0	123.0

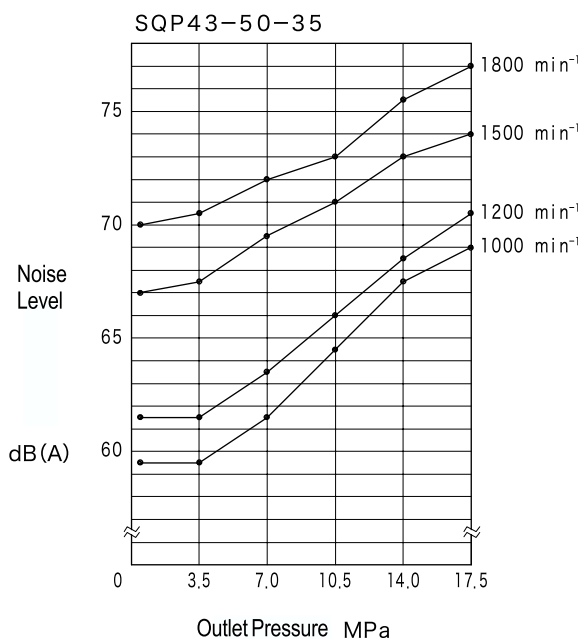
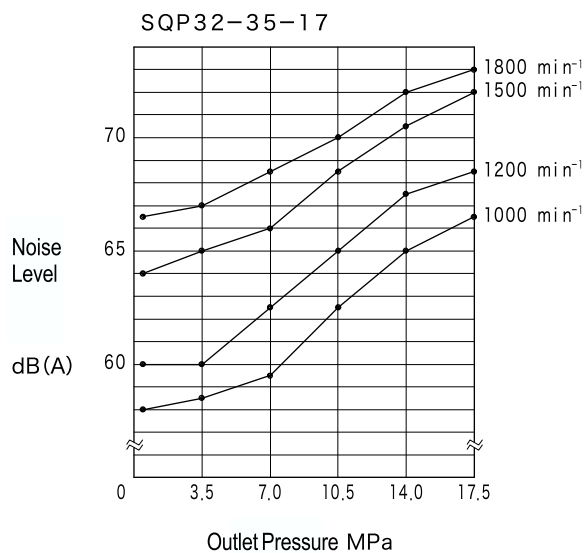
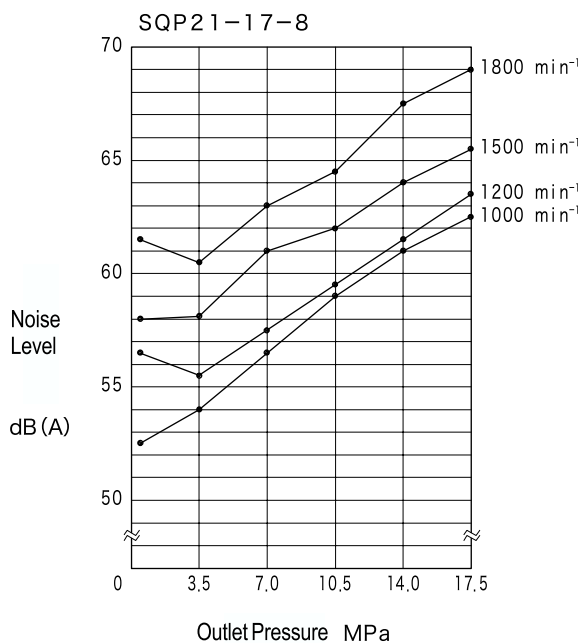
Delivery, Shaft Input Power

Model	Delivery, Shaft Input Power	
	Shaft End Pump	Cover End Pump
SQP (S) 21	Same as SQP (S) 2 Series	Same as SQP (S) 1 Series
SQP (S) 31	Same as SQP (S) 3 Series	
SQP (S) 41	Same as SQP (S) 4 Series	
SQP (S) 32	Same as SQP (S) 3 Series	Same as SQP (S) 2 Series
SQP (S) 42	Same as SQP (S) 4 Series	
SQP (S) 43	Same as SQP (S) 4 Series	Same as SQP (S) 3 Series

※SQP (S) 1~4 delivery, shaft input - see page B10, 11.

Noise Characteristics

Measurement conditions: ISO VG32 oil at 50 degrees C, inlet pressure 0 MPa, and measured 1m from rear of pump cover



Shaft Input (Shaft Torque) Limitation

Shaft torque limitations of double pumps are shown in the table. Please insure that the torque limits shown in the table are not exceeded when the total load of the two pumps are at maximum. Please calculate shaft torque from the operating speed and shaft input.

N: operating speed (min^{-1})

L: shaft input sum (kW)

Shaft torque: $T = (60 \times 1000 / 2\pi N) \times L = (9554 / N) \times L \text{ (N}\cdot\text{m)}$

(Example) SQP43-60-38, operating speed 1800 min^{-1} , first pump 14MPa, second pump 17.5MPa under max. load,

First pump shaft input: from table on page B11, SQP4-60 shaft input is 84.8kW

Second pump shaft input: from table on B11, SQP3-38 shaft input is 66.7kW

Shaft input sum: $L = 84.6 + 66.7 = 151.5 \text{ (kW)}$

Shaft input sum substituted for torque in the table, shaft input torque: $T = 9554 \times 151.5 / 1800 = 804.1 \text{ (N}\cdot\text{m)}$

Thus, the shaft torque of the SQP43 should be below the limitation of 820 N·m.

Please confirm shaft torque using this procedure.

Model	Shaft Torque Limitation N · m
SQP (S) 21	360
SQP (S) 31	610
SQP (S) 32	610
SQP (S) 41	820
SQP (S) 42	820
SQP (S) 43	820

Piping Flange (Conforming to SAE J518c at Standard Pressure)

- Pump flange not included.
- Flanges (incl. hex socket bolts, spring washers, and O-rings) should be ordered separately from the table below.
- See page Q12 for details such as external dimensions, etc.

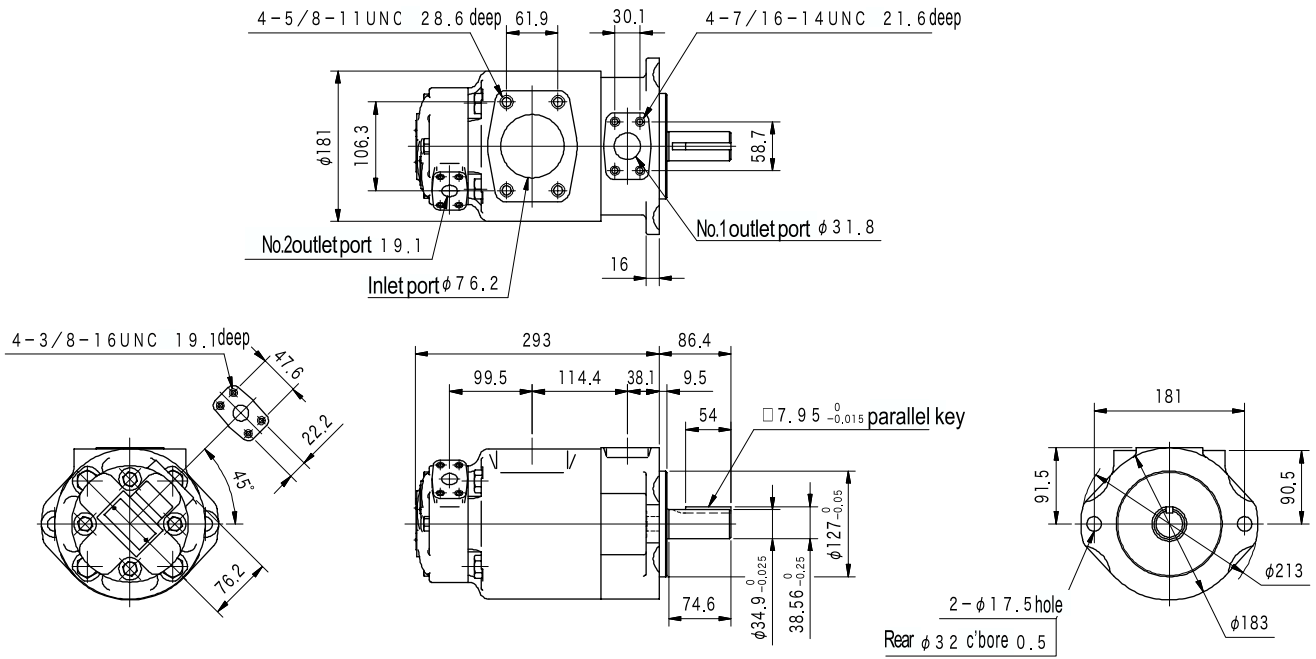
Model	Type	Flange Model					
		Inlet Port		No. 1 Outlet Port (Shaft End)		No. 2 Outlet Port (Shaft End)	
		Code		Code		Code	
SQP (S) 21	Threaded	2-1/2	FL1-20-20P-10-JA-S4-J	1	FL1-8-08P-10-JA-S4-J	3/4	FL1-6-06P-10-JA-S4-J
	Welded		FL1-20-20W-10-JA		FL1-8-08W-10-JA		FL1-6-06W-10-JA
SQP (S) 31	Threaded	3	FL1-24-24P-10-JA-S4-J	1-1/4	FL1-10-10P-10-JA-S4-J	3/4	FL1-6-06P-10-JA-S4-J
	Welded		FL1-24-24W-10-JA		FL1-10-10W-10-JA		FL1-6-06W-10-JA
SQP (S) 32	Threaded	3	FL1-24-24P-10-JA-S4-J	1-1/4	FL1-10-10P-10-JA-S4-J	1	FL1-8-08P-10-JA-S4-J
	Welded		FL1-24-24W-10-JA		FL1-10-10W-10-JA		FL1-8-08W-10-JA
SQP (S) 41	Threaded	3-1/2	FL1-28-28P-10-JA-S4-J	1-1/2	FL1-12-12P-10-JA-S4-J	3/4	FL1-6-06P-10-JA-S4-J
	Welded		FL1-28-28W-10-JA		FL1-12-12W-10-JA		FL1-6-06W-10-JA
SQP (S) 42	Threaded	3-1/2	FL1-28-28P-10-JA-S4-J	1-1/2	FL1-12-12P-10-JA-S4-J	1	FL1-8-08P-10-JA-S4-J
	Welded		FL1-28-28W-10-JA		FL1-12-12W-10-JA		FL1-8-08W-10-JA
SQP (S) 43	Threaded	4	FL1-32-32P-10-JA-S4-J	1-1/2	FL1-12-12P-10-JA-S4-J	1-1/4	FL1-10-10P-10-JA-S4-J
	Welded		FL1-32-32W-10-JA		FL1-12-12W-10-JA		FL1-10-10W-10-JA

S Q P 2 1 (Flange Mount)

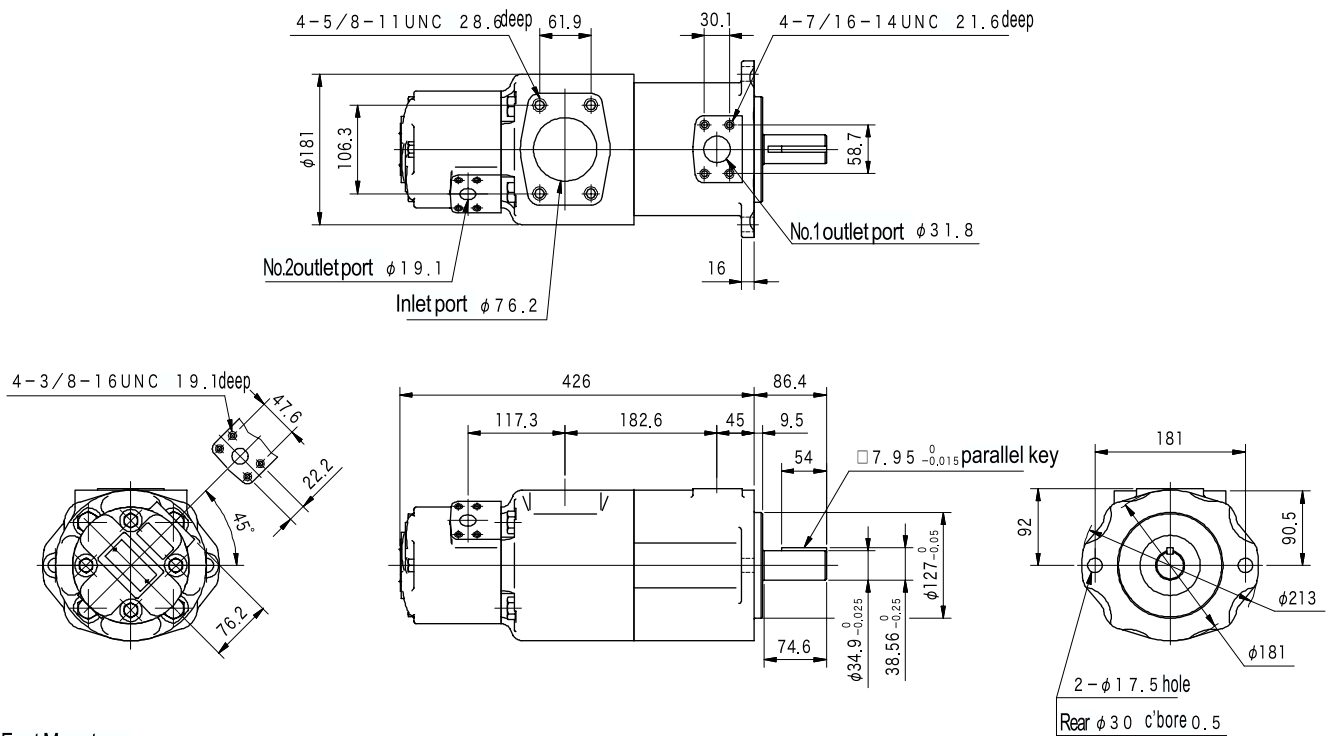
[illegible][illegible]

Dimensions

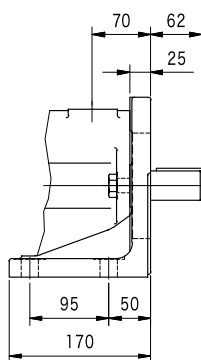
S Q P 3 1 (Flange Mount)



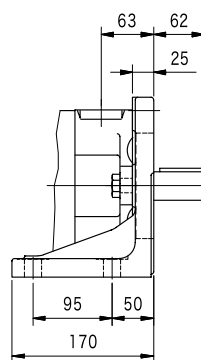
S Q P S 3 1 (Flange Mount)



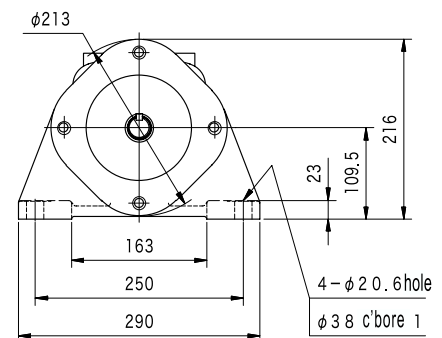
Foot Mount



SQPS31

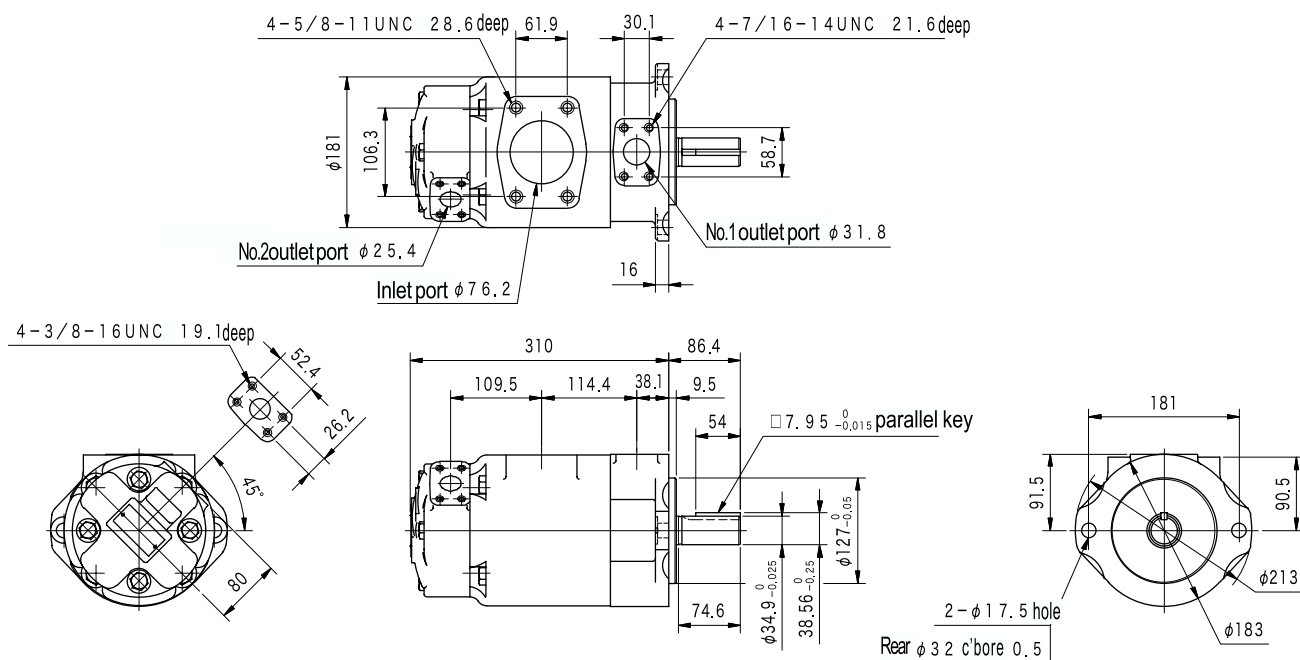


SQP31

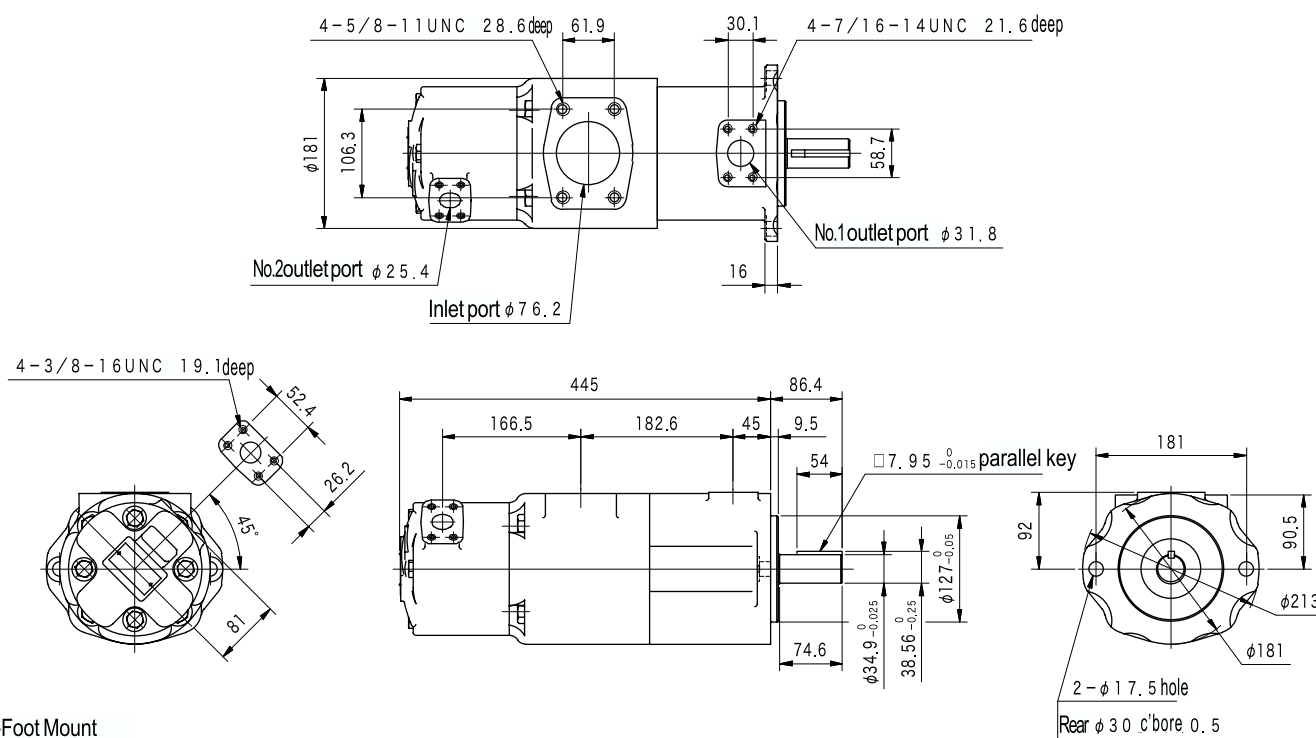


Dimensions

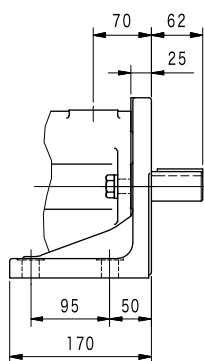
S Q P 3 2 (Flange Mount)



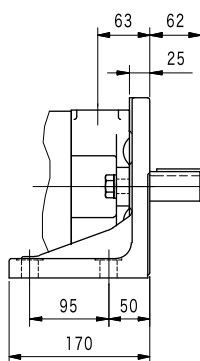
S Q P S 3 2 (Flange Mount)



Foot Mount



SQPS32



SQP32

