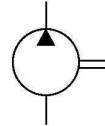
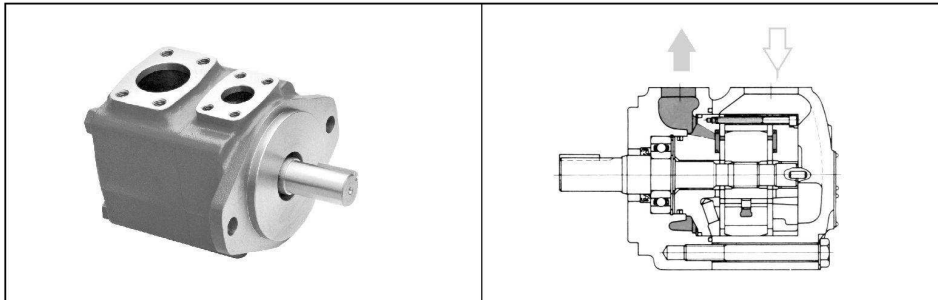


## VQ Series Vane Pumps

—High Performance Intravane Pumps For Mobile Applications

### ■ VQ Series Single Pumps



#### Model Code

(F3-)	25VQ	21	A	(F)	-1	A	30	L
Prefix	Series	▲ Code	Port Connections	Mounting	Shafts	Outlet Position	Design	Rotation
Omit-Using antiwear oil water glycol fluid  F3-Phosphate ester fluid	20VQ	2,3,4,5,6,7,8,9,10,11,12,14	A-SAE 4-bolt flange	Omit-Flange mounting	1-Str.key 151-Spline	(Viewed from cover end of pump)	30	(View from shaft end of pump) L-Left hand for counterclock-wise Omit-Right hand for clock wise
	25VQ	10,12,14,15,17,19,21		F-Foot mounting	1-Str.key	A-Opposite inlet port B-90° CCW from inlet C-Inline with inlet D-90° CW from inlet	20	
	35VQ	21,25,30,32,35,38			86-HD str.key			
	45VQ	42,45,50,57,60,66,75			11-Spline			

▲ Rated capacity (US gpm) at 1200 r/min and 0.7 MPa (100psi).

#### Specification

Model	Code	Displ mL/r	Max.Speed r/min	Max. Pressure MPa	Typical del. L/min ▲ max.speed & pressure	Typical Input kw ▲ max.speed & pressure	Weight
20VQ	2	7	2700	21	16.4	7.2	11.8
	3	11.7	2700	21	24.4	10.8	
	4	15	2700	21	32.7	14.4	
	5	18	2700	21	42.3	17.9	
	6	19	2700	21	50.6	21.5	
	7	22	2700	21	58.8	23.7	
	8	27	2700	21	56.4	25.1	
	9	30	2700	21	73.4	26.0	
	10	31.5	2700	21	81.7	26.8	
	11	36	2700	21	88.5	27.7	
	12	40	2700	16	96.5	28.4	
	14	45	2700	14	115.4	29.1	
	10	32.5	2700	21	81.4	35.2	14.5
	12	38.3	2700	21	88.5	41.0	
25VQ	14	43.3	2700	21	103.8	46.6	
	15	47.3	2500	21	109.4	48.1	
	17	52.5	2500	21	119.2	21.8	
	19	60	2500	21	133.5	55.2	
	21	65.0	2500	21	146.2	61.9	
	21	64.0	2500	21	145.5	63.7	
35VQ	25	79.2	2500	21	173.1	75.3	22.7
	30	95.0	2500	21	211.5	87.7	
	32	101	2500	21	220.2	92.2	
	35	109	2400	21	230.8	98.5	
	38	118	2400	21	250	104.4	
	42	134	2400	17.5	255.8	91.4	
45VQ	45	147	2200	17.5	271.2	99.8	34.1
	50	156	2200	17.5	303.8	105.2	
	57	180	2200	17.5	343.7	120.2	
	60	189	2200	17.5	369.2	126.8	
	66	208	2200	17.5	408.7	142.4	
	75	237	2200	14	460	120.2	

Performance constants:SAE 10W fluid ▲82℃(180°F), and pump inlet ▲0 PSIG(14.7PSIA)

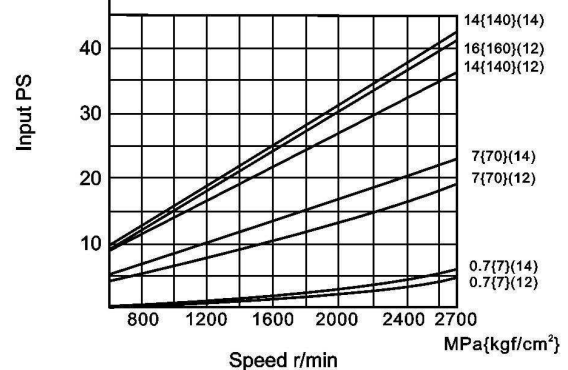
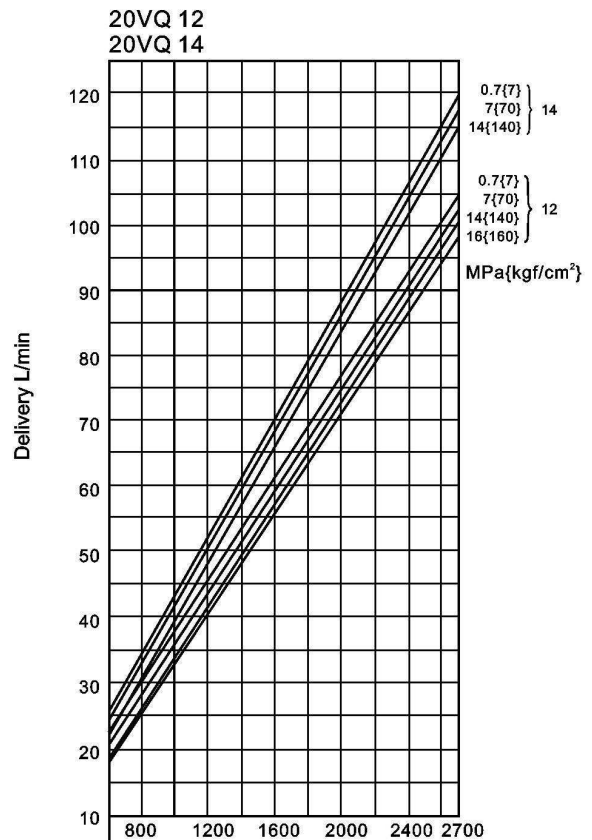
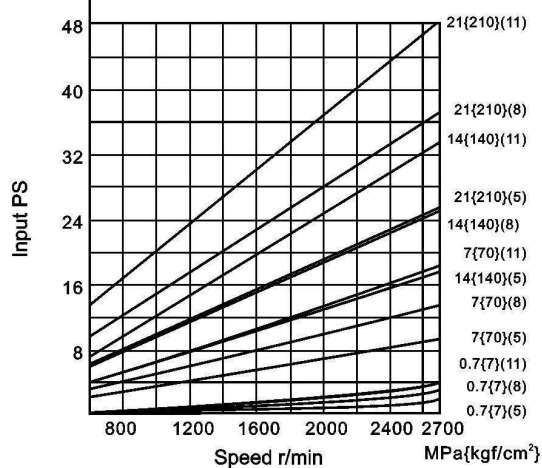
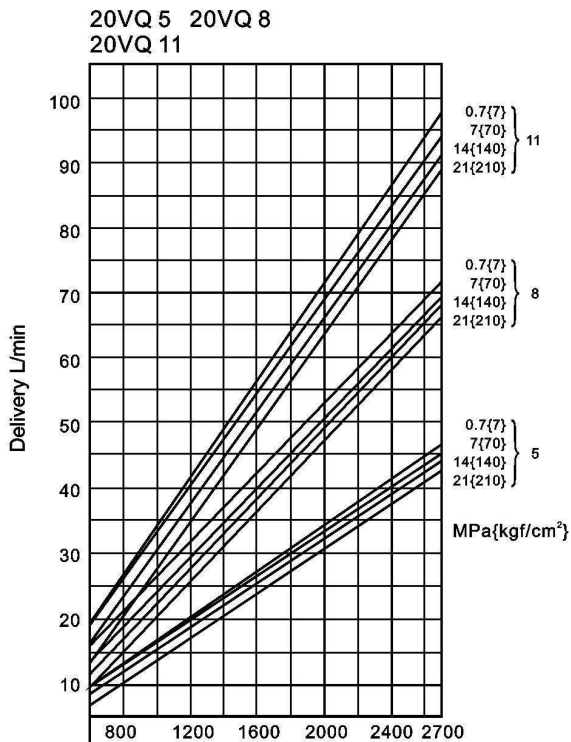
Note:Outlet pressure must always be higher than inlet pressure.

## VQ Series Vane Pumps

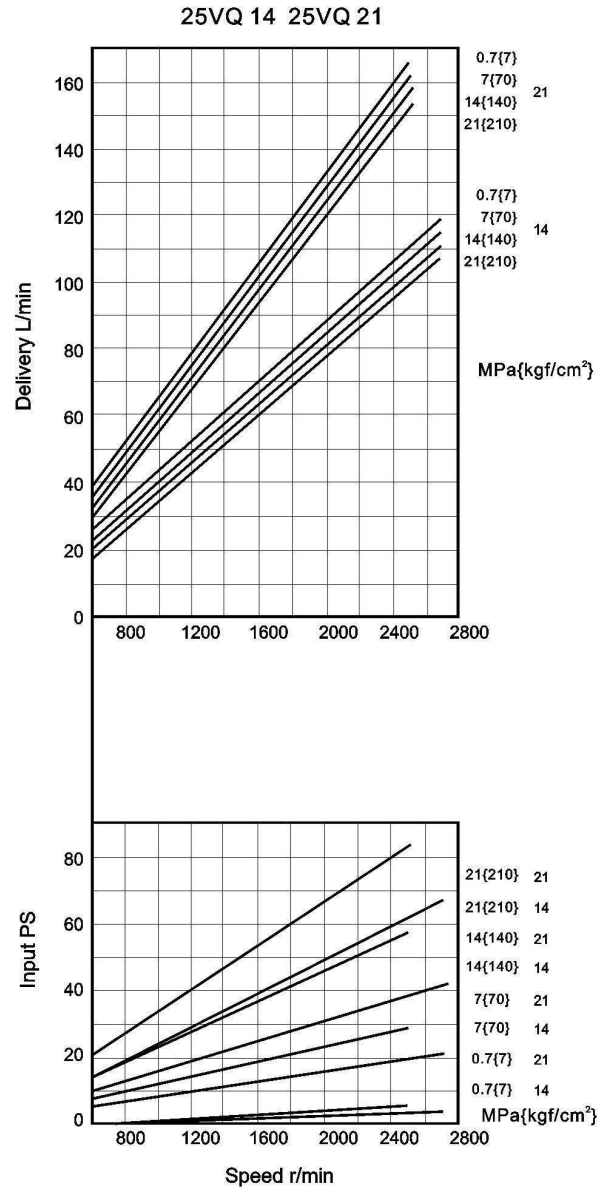
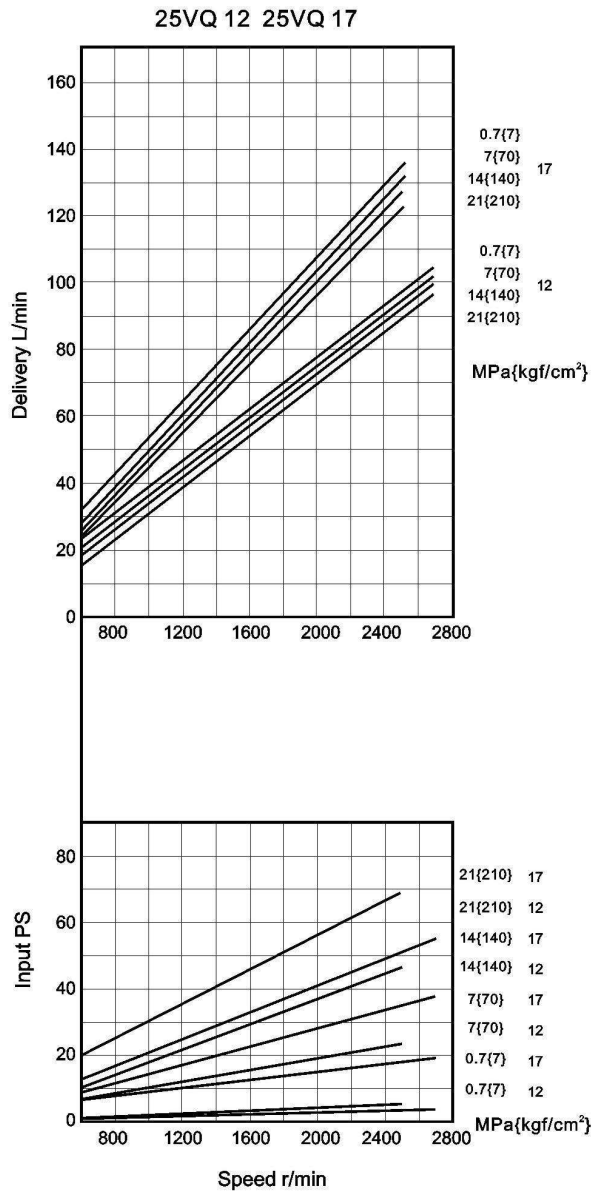
## Performance Characteristics

Typical flows at 50°C, 10W oil at 26cSt, 0MPa inlet at specified speeds.

### 20VQ Series flow, input power type

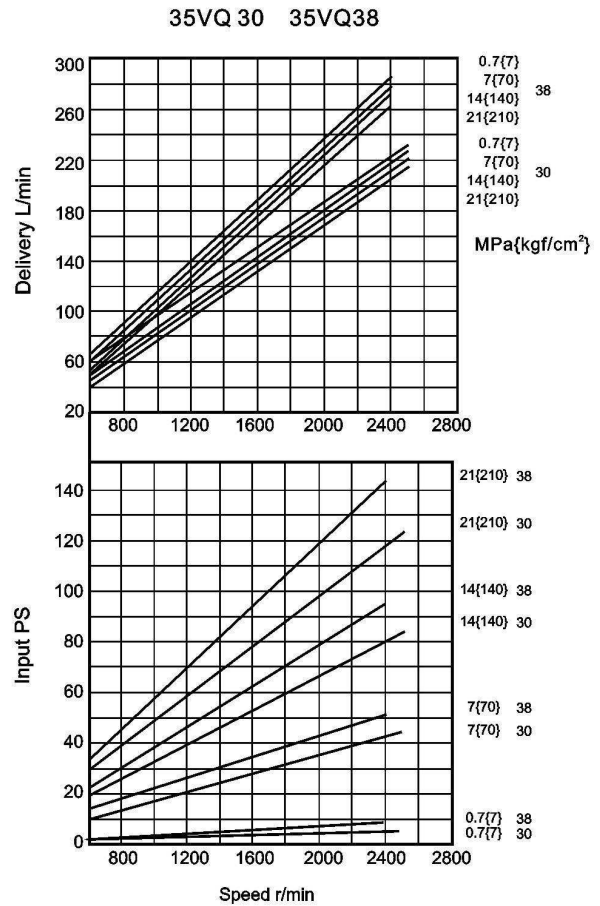
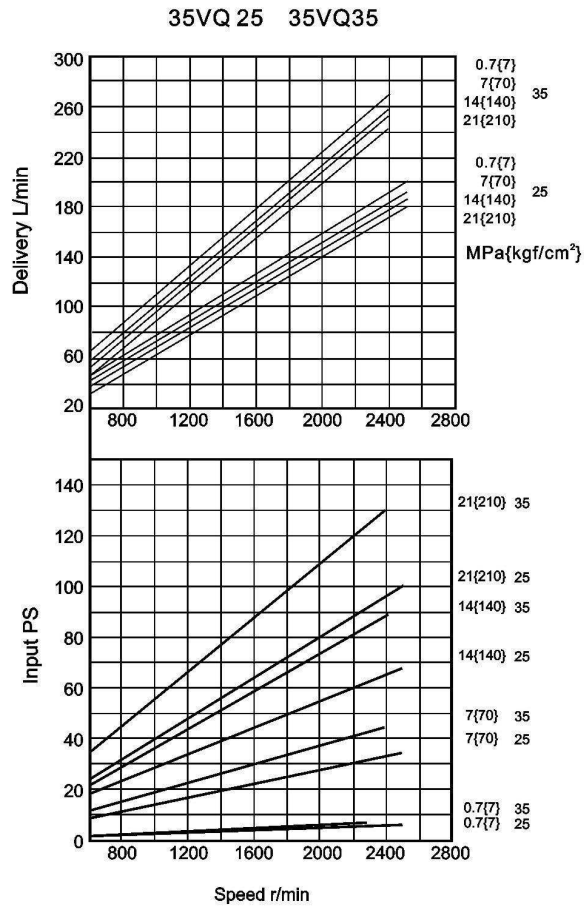


## 25VQ Series flow,input power type



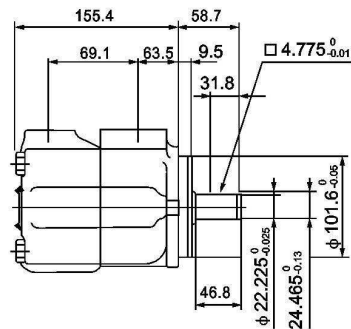
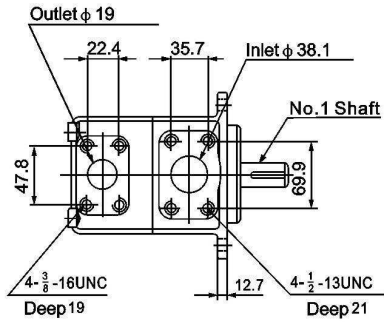


## 35VQ series flow input power type

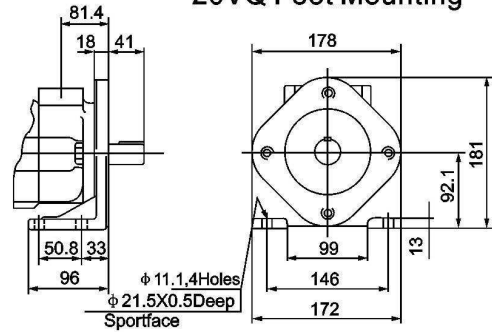


## Installation dimensions

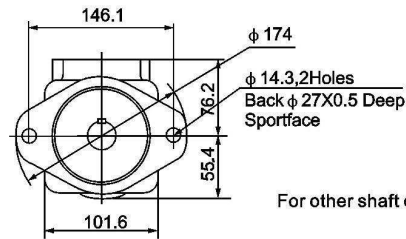
### 20VQ Flange Mounting



### 20VQ Foot Mounting

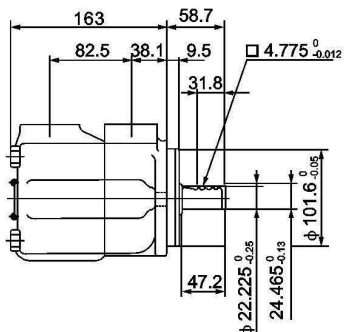
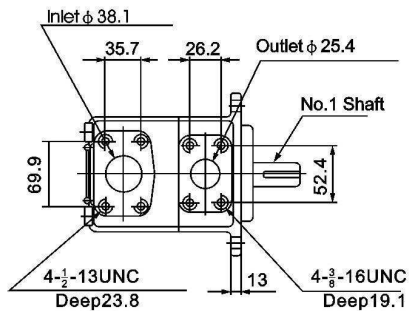


For other dimensions, refer to "Flange Mounting" type.

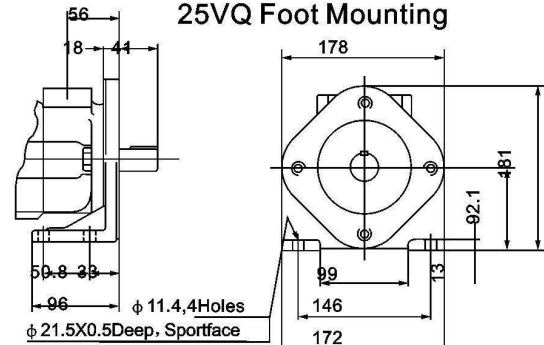


For other shaft dimensions, refer to page 54

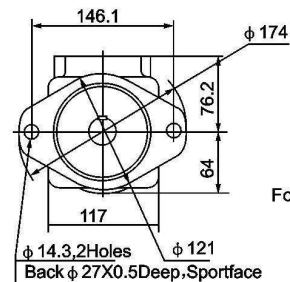
### 25VQ Flange Mounting



### 25VQ Foot Mounting



For other dimensions, refer to "Flange Mounting" type.

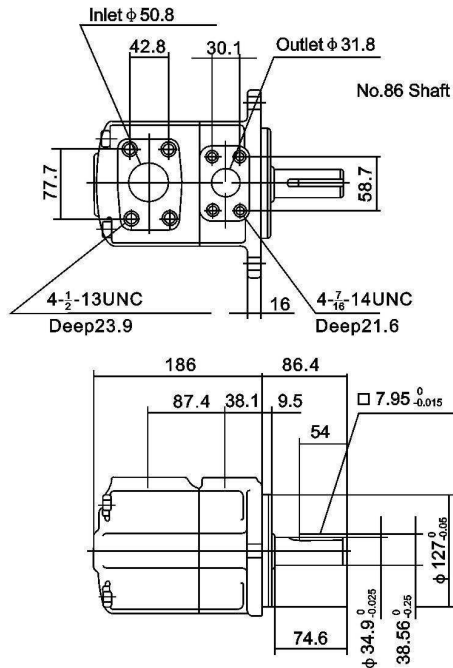


For other shaft dimensions, refer to page 54

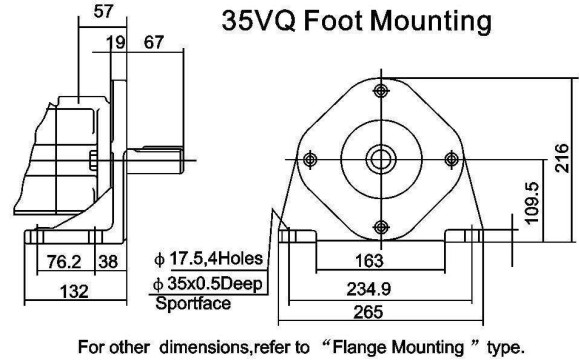


## Installation dimensions

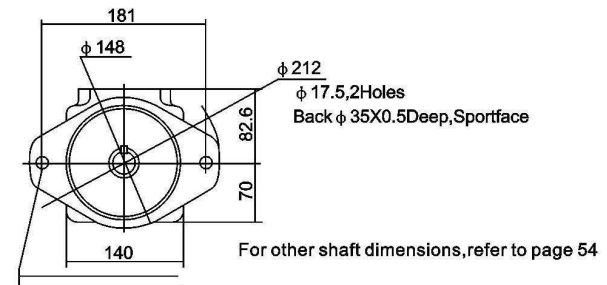
### 35VQ Flange Mounting



### 35VQ Foot Mounting

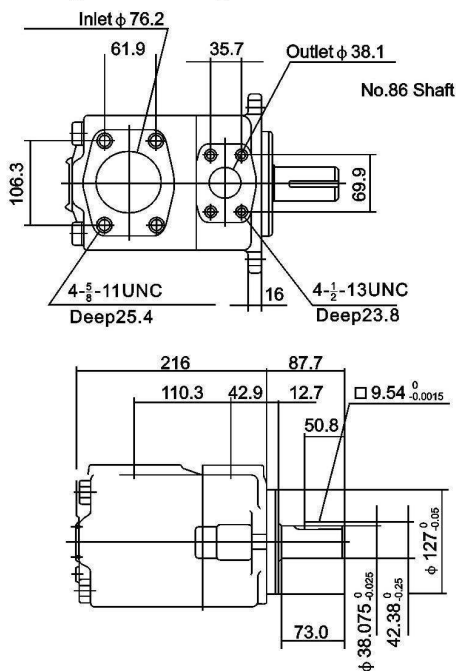


For other dimensions, refer to "Flange Mounting" type.

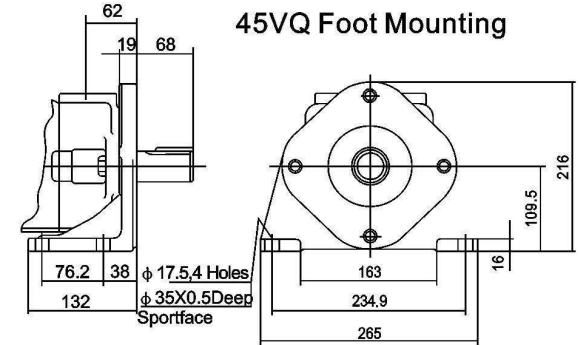


For other shaft dimensions, refer to page 54

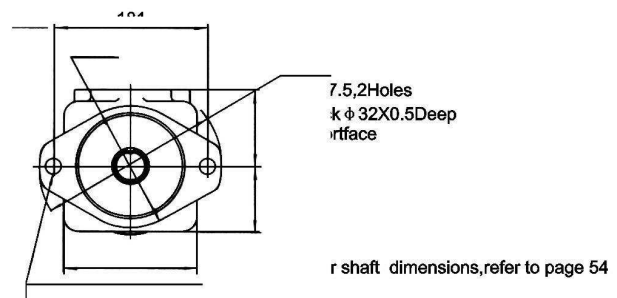
### 45VQ Flange Mounting



### 45VQ Foot Mounting



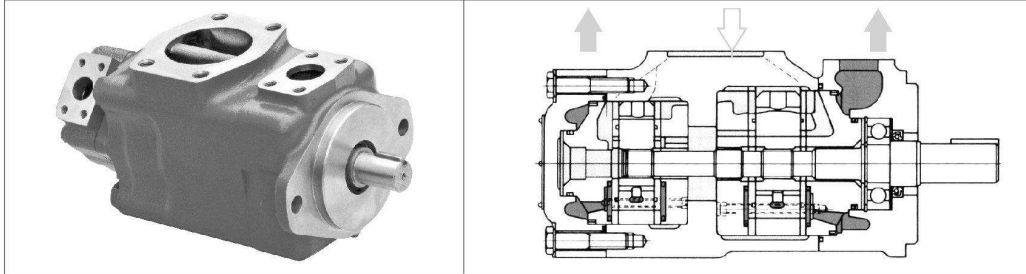
For other dimensions, refer to "Flange Mounting" type.



For other shaft dimensions, refer to page 54

# E.P.R. HYDRAULIC DIVISION: HIGH-TECH PUMPS

## ■ VQSeries Double Pumps



### Model Code

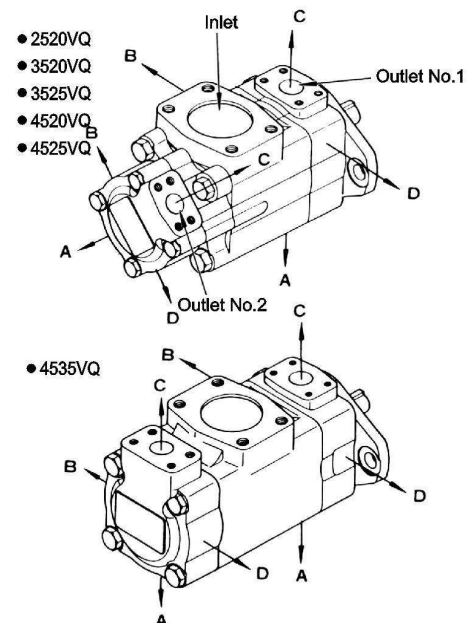
(F3-)	****VQ	**	A	**	(F)	..*	*	20	*
Prefix	Series	▲ Code Shaft End Pump	Port Connections	▲ Code Cover End Pump	Mounting	Shaft	Port Connections	Design	Rotation
Omit-Using antiwear oil water glycol fluid	2520VQ	10,12,14,15,17, 19,21	A-SAE  4-bolt flange	2,3,4,5,6,7,8,9, 10,11,12,14	Omit-Flang mounting  F-Foot mounting	1-Str.key  86-HD Str.key  11-Spline	See below	20	(Viewed from shaft end pump)  Omit- Right hand for clockwise L-Left hand for counterclockwise
	3525VQ	21,25,30,32,35, 38		10,12,14,15,17, 19,21					
	4525VQ	42,45,50,57,60, 66,75		10,12,14,15,17, 19,21					
	3520VQ	21,25,30,32,35,38		2,3,4,5,6,7,8,9, 10,11,12,14					
F3-Phosphate ester fluid	4520VQ	42,45,50,57,60, 66,75		2,3,4,5,6,7,8,9, 10,11,12,14					
	4535VQ	42,45,50,57,60, 66,75		21,25,30,32,35, 38					

▲ Rate capacity(USgpm) at 1200rpm,0.69MPa(100 psi).

Note:For options other than listed in the model code ,i,e,shaft,ports,displacements and mounting,contact us.

### Port Orientation Table (Viewed from cover pump)

Port Orientation		All series except 4535VQ	Series 4535VQ
With No.1 outlet Opposite inlet:	AA	No.2outlet 135° CCW from inlet	No.2outlet opposite inlet
	AB	No.2outlet 45° CCW from inlet	No.2outlet 90° CCW from inlet
	AC	No.2outlet 45° CW from inlet	No.2outlet inline with inlet
	AD	No.2outlet 135° CW from inlet	No.2outlet 90° CW from inlet
With No.1 outlet 90° CCW from Inlet:	BA	No.2outlet 135° CCW from inlet	No.2outlet opposite inlet
	BB	No.2outlet 45° CCW from inlet	No.2outlet 90° CCW from inlet
	BC	No.2outlet 45° CW from inlet	No.2outlet inline with inlet
	BD	No.2outlet 135° CW from inlet	No.2outlet 90° CW from inlet
With No.1 outlet inline with inlet	CA	No.2outlet 135° CCW from inlet	No.2outlet opposite inlet
	CB	No.2outlet 45° CCW from inlet	No.2outlet 90° CCW from inlet
	CC	No.2outlet 45° CW from inlet	No.2outlet inline inlet
	CD	No.2outlet 135° CW from inlet	No.2outlet 90° CW from inlet
With No.1 outlet 90° CW inlet:	DA	No.2outlet 135° CCW from inlet	No.2outlet opposite inlet
	DB	No.2outlet 45° CCW from inlet	No.2outlet 90° CCW from inlet
	DC	No.2outlet 45° CW from inlet	No.2outlet inline with inlet
	DD	No.2outlet 135° CW from inlet	No.2outlet 90° CW from inlet

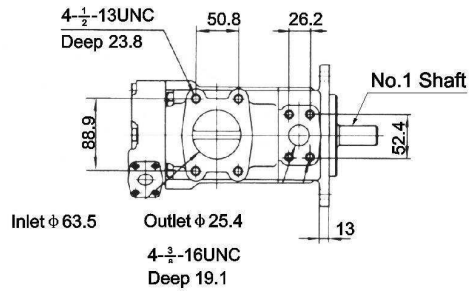


## VQ Series Vane Pumps



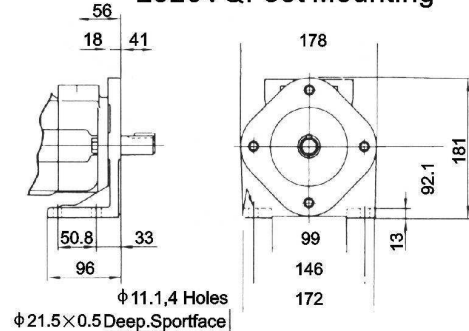
## Installation dimensions

### 2520VQ Flange Mounting

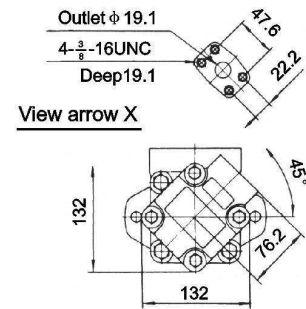
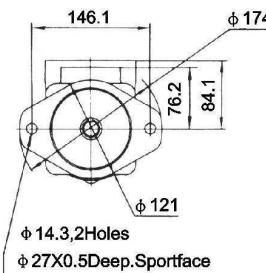


For other shaft dimensions, refer to page 54

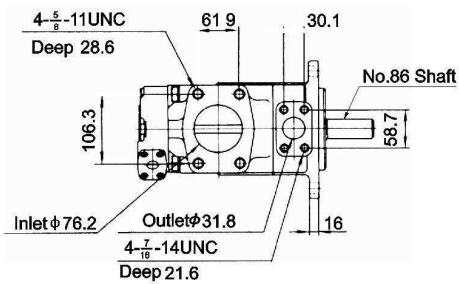
### 2520VQ Foot Mounting



For other dimensions, refer to "Flange Mounting" type.

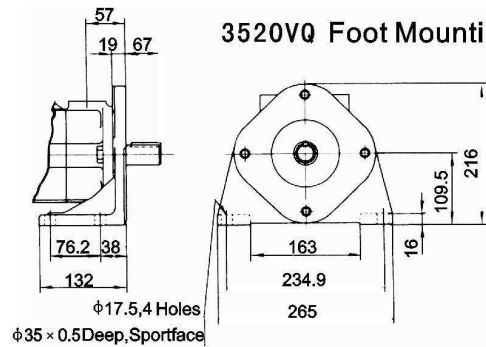


### 3520VQ Flange Mounting

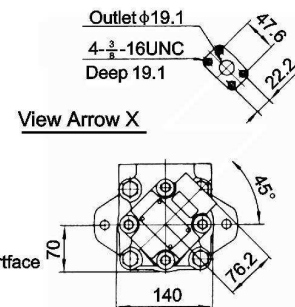
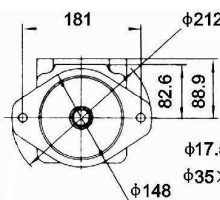


For other shaft dimensions, refer to page 54

### 3520VQ Foot Mounting

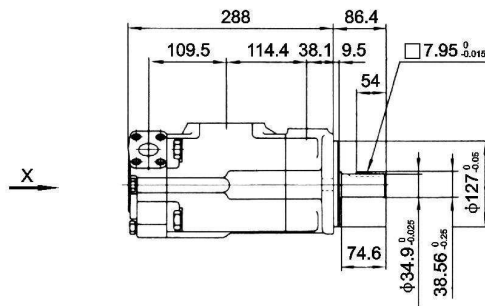
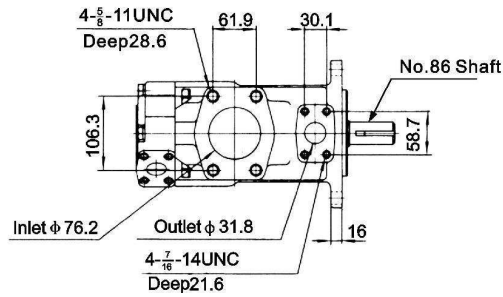


For other dimensions, refer to "Flange Mounting" type.

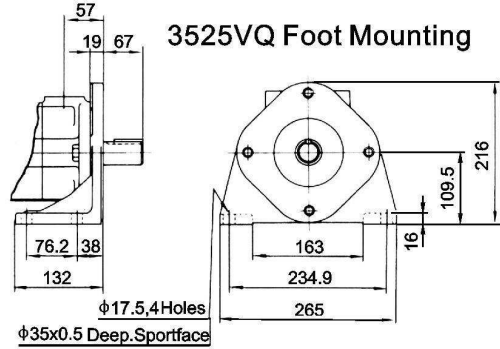


## Installation dimensions

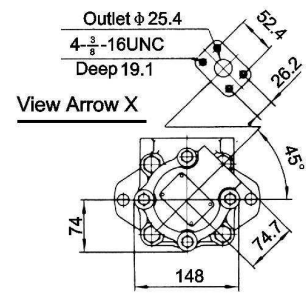
### 3525VQ Flange Mounting



### 3525VQ Foot Mounting

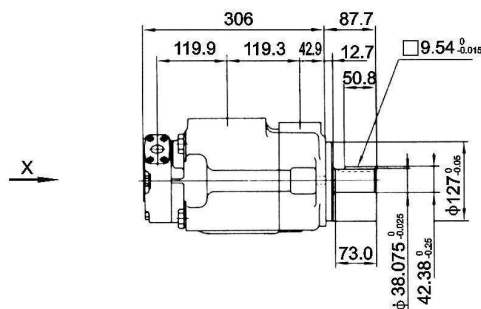
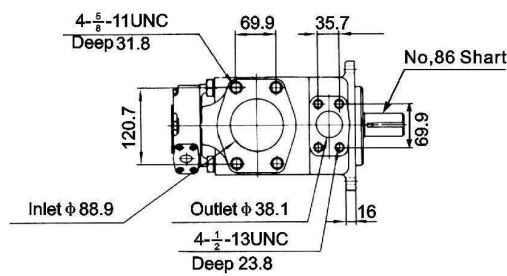


For other dimensions, refer to "Flange Mounting" type.



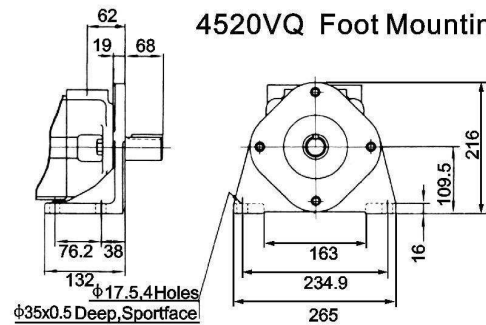
For other shaft dimensions, refer to page 54

### 4520VQ Flange Mounting

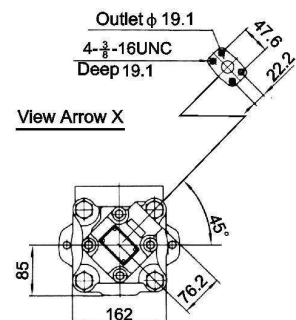


For other shaft dimensions, refer to page 54

### 4520VQ Foot Mounting

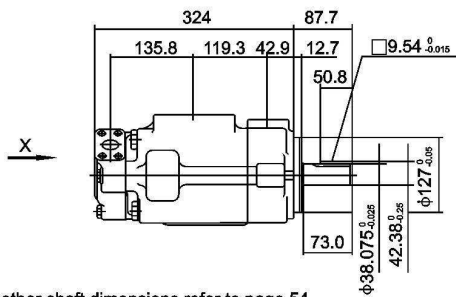
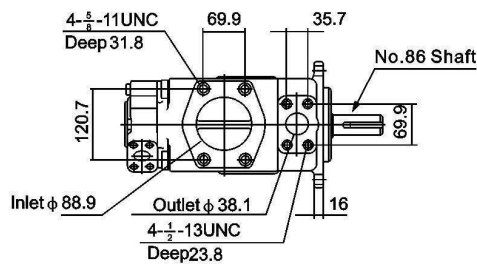


For other dimensions, refer to "Flange Mounting" type.



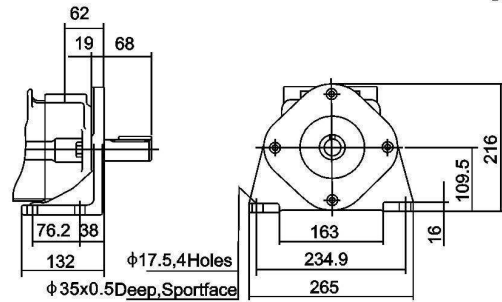
## Installation Dimensions

### 4525VQ Flange Mounting

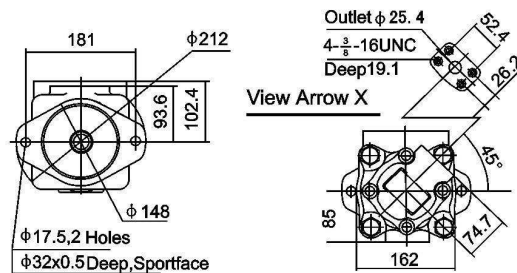


For other shaft dimensions, refer to page 54

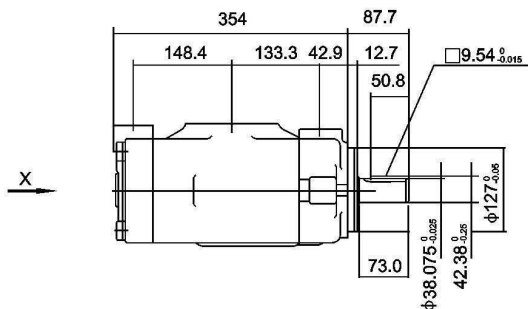
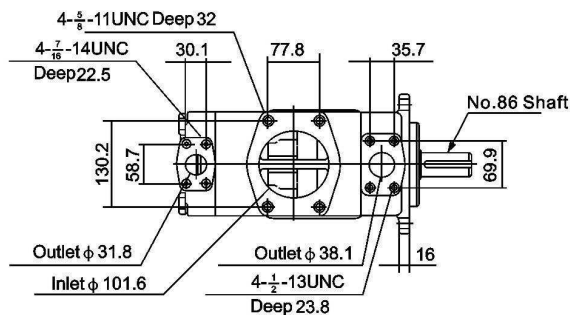
### 4525VQ Foot Mounting



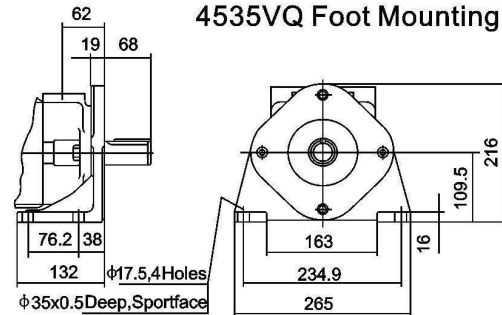
For other dimensions, refer to "Flange Mounting" type.



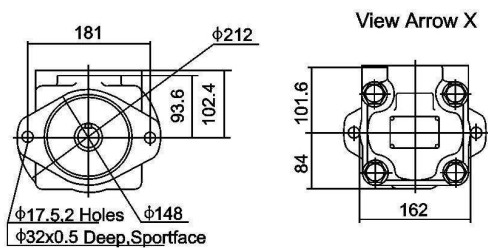
### 4535VQ Flange Mounting



### 4535VQ Foot Mounting



For other dimensions, refer to "Flange Mounting" type.



For other shaft dimensions, refer to page 54