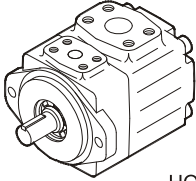
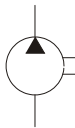
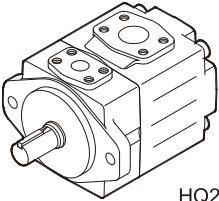
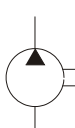
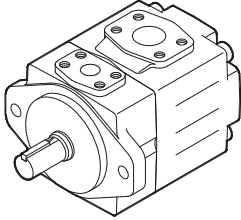
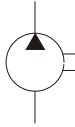
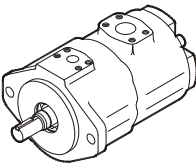
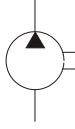
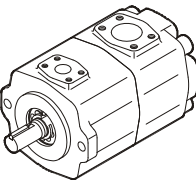
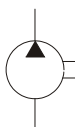
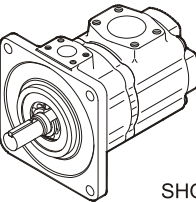
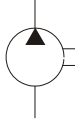




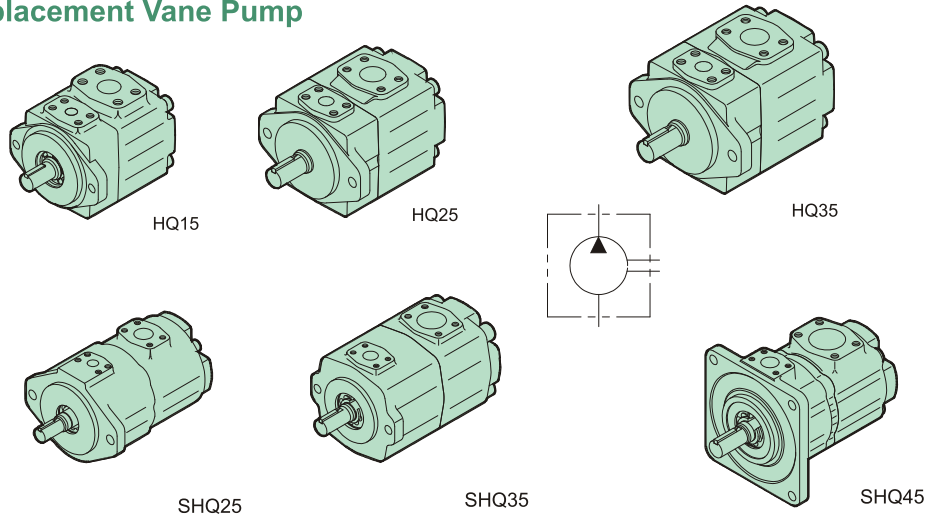
# FIXED VANE PUMPS

**B**

SINGLE VANE PUMPS		Graphic Symbol	Q max. cm <sup>3</sup> /rev (U.S.GPM)	P max. bar(PSI)	Max. r.p.m	Ref. Page
 HQ15	HQ15-11		11.2(.68)	250(3600)	1800	131
	HQ15-14		14.3(.87)			
	HQ15-17		17.1(1.04)			
	HQ15-19		19.2(1.17)			
	HQ15-23		23.3(1.42)			
	HQ15-26		26.1(1.60)			
 HQ25	HQ25-26		26.2(1.61)	250(3600)	1800	131
	HQ25-32		32.1(1.97)			
	HQ25-38		38.2(2.34)			
	HQ25-43		43.2(2.64)			
	HQ25-52		52.3(3.19)	210(3000)		
	HQ25-60		60.2(3.67)			
	HQ25-65		65.3(3.99)			
 HQ35	HQ25-75		75(4.58)	175(2500)	1500	132
	HQ35-60		60.3(3.68)	210(3000)	1800	
	HQ35-66		66.4(4.05)			
	HQ35-76		76.3(4.66)			
	HQ35-82		82.2(5.02)			
	HQ35-88		88.3(5.39)			
	HQ35-94		94.5(5.77)			
	HQ35-108		108.2(6.60)			
	HQ36-116		116.1(7.09)			
	HQ35-125		124.6(7.60)	1500		
LOW NOISE TYPE SINGLE VANE PUMPS		Graphic Symbol	Q max. cm <sup>3</sup> /rev (U.S.GPM)	P max. bar(PSI)	Max. r.p.m	Ref. Page
 SHQ25	SHQ25-18		18.1(1.10)	250(3600)	1800	133
	SHQ25-22		22.1(1.35)			
	SHQ25-26		26.2(1.61)			
	SHQ25-32		32.1(1.97)			
	SHQ25-38		38.2(2.34)			
	SHQ25-43		43.2(2.64)			
	SHQ25-52		52.3(3.19)	210(3000)		
	SHQ25-60		60.2(3.67)			
	SHQ25-65		65.3(3.99)			
 SHQ35	SHQ25-75		75(4.58)	175(2500)	1500	133
	SHQ35-60		60.3(3.68)	210(3000)	1800	
	SHQ35-66		66.4(4.05)			
	SHQ35-76		76.3(4.66)			
	SHQ35-82		82.2(5.02)			
	SHQ35-88		88.3(5.39)			
	SHQ35-94		94.5(5.77)			
	SHQ35-108		108.2(6.60)			
	SHQ36-116		116.1(7.09)			
	SHQ35-125		124.6(7.60)	1500		
 SHQ45	SHQ45-136		136(8.30)	175(2500)	1800	134
	SHQ45-153		153(9.34)			
	SHQ45-184		184(11.23)			
	SHQ45-200		201(12.26)			
	SHQ45-237		237(14.46)	160(2300)	1500	

**B**

**(S)HQ Series  
Fixed Displacement Vane Pump**



**(S)HQ Ordering Code - Single Pump**

HQ	15	L	R	B	A	-30
Series No.	Normal Displacement c.c/rev	Type of Mounting	Shaft Rotation	Discharge Port Position	Suction Port Position	Design
15,25 35,45	<p><b>HQ15:</b> 8, 11, 14, 17, 19, 23, 26, 31</p> <p><b>(S)HQ25:</b> 18, 22, 26, 32, 38, 43, 47, 52, 60, 65, 75</p> <p><b>(S)HQ35:</b> 60, 66, 76, 82, 88, 94, 108,116,125</p> <p><b>(S)HQ45:</b> 136,156,189 216,237</p>	<p><b>L: Foot Mounting</b></p> <p><b>F: Flange Mounting</b></p>	<p><b>Viewed from Shaft End</b></p> <p><b>R: Clockwise</b></p> <p><b>L: Counter-Clockwise</b></p>	<p><b>Viewed from Shaft End</b></p> <p><b>A: Upward (normal)</b></p> <p><b>B: Downward</b></p> <p><b>R: On Right Hand</b></p> <p><b>L: On Left Hand</b></p>	<p><b>Viewed from Shaft End</b></p> <p><b>A: Upward (normal)</b></p> <p><b>B: Downward</b></p> <p><b>R: On Right Hand</b></p> <p><b>L: On Left Hand</b></p>	30

- Max Pressure: 245bar
- HQ: Fixed Displacement Vane Pump
- SHQ: Low Noise Type Fixed Displacement Vane Pump



## (S)HQ15,25,35,45 Single Pumps - Performance Characteristics

**B**

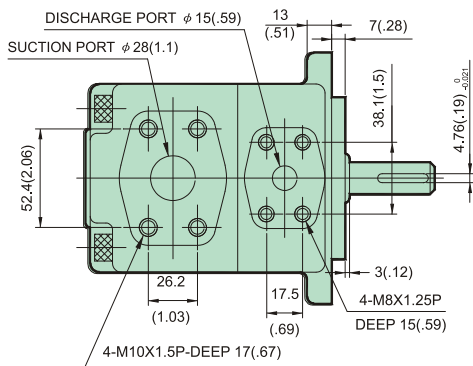
FLOW MODEL		Delivery Flow (lpm) at no-load pressure				Running Speed (rpm)		Max Pressure bar	Weight (kg)	
		Running Speed (rpm)				Max	Min		Foot Type	Flange Type
		1000	1200	1500	1800					
HQ15	HQ15-06	6.2	7.4	9.3	11.2	1800	1200	210	12.5	10.5
	HQ15-08	8.1	9.7	12.1	14.6	1800	950	210	12.5	10.5
	HQ15-11	11.2	13.4	16.8	20.1	1800	950	245	12.5	10.5
	HQ15-14	14.3	17.1	21.5	25.7	1800	950	245	12.5	10.5
	HQ15-17	17.1	20.5	25.6	30.7	1800	950	245	12.5	10.5
	HQ15-19	19.2	23.0	28.8	34.5	1800	950	245	12.5	10.5
	HQ15-23	23.3	27.9	34.9	41.9	1800	950	245	12.5	10.5
	HQ15-26	26.1	31.3	39.1	46.9	1800	950	245	12.5	10.5
	HQ15-31	31.1	37.3	46.6	-	1500	950	245	12.5	10.5
(S)HQ25	(S)HQ25-18	18.1	21.7	27.2	32.6	1800	950	245	19	14
	(S)HQ25-22	22.1	26.5	33.2	39.8	1800	950	245	19	14
	(S)HQ25-26	26.2	31.4	39.3	47.1	1800	950	245	19	14
	(S)HQ25-32	32.1	38.5	48.1	57.7	1800	950	245	19	14
	(S)HQ25-38	38.2	45.8	57.3	68.7	1800	950	245	19	14
	(S)HQ25-43	43.2	51.8	64.8	77.7	1800	950	245	19	14
	(S)HQ25-47	47.1	56.5	77.0	85.0	1800	950	245	19	14
	(S)HQ25-52	52.3	62.7	78.4	94.1	1800	950	245	19	14
	(S)HQ25-60	60.2	72.7	90.3	108.3	1800	950	210	19	14
	(S)HQ25-65	65.3	78.3	97.9	117.5	1800	950	210	19	14
(S)HQ25-75	75.0	90.0	112.5	-	1500	950	175	19	14	
(S)HQ35	(S)HQ35-60	60.3	72.3	90.4	108.5	1800	900	210	42	34
	(S)HQ35-66	66.4	79.6	99.6	119.5	1800	900	210	42	34
	(S)HQ35-76	76.3	91.5	114.4	137.3	1800	900	210	42	34
	(S)HQ35-82	82.2	98.6	123.3	147.9	1800	900	210	42	34
	(S)HQ35-88	88.3	105.9	132.4	158.9	1800	900	210	42	34
	(S)HQ35-94	94.5	113.4	141.7	170.1	1800	900	210	42	34
	(S)HQ35-108	108.2	129.8	162.3	194.4	1800	900	210	42	34
	(S)HQ35-116	116.1	139.3	174.1	208.9	1800	900	175	42	34
	(S)HQ35-125	124.6	149.5	186.9	-	1500	900	175	42	34
(S)HQ45	(S)HQ45-136	136.8	164.0	204.0	246.0	1800	600	175	50	42
	(S)HQ45-156	156.2	188.0	234.0	280.0	1800	600	175	50	42
	(S)HQ45-189	189.5	227.0	284.0	340.0	1800	600	175	50	42
	(S)HQ45-216	216.0	260.0	324.0	-	1500	600	175	50	42
	(S)HQ45-237	237.0	285.0	355.0	-	1500	600	175	50	42

## DIMENSIONS

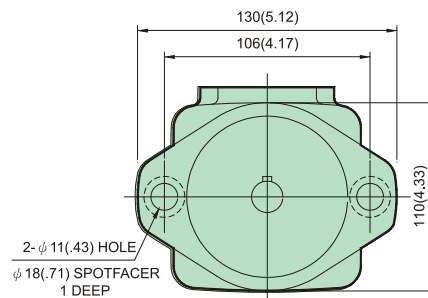
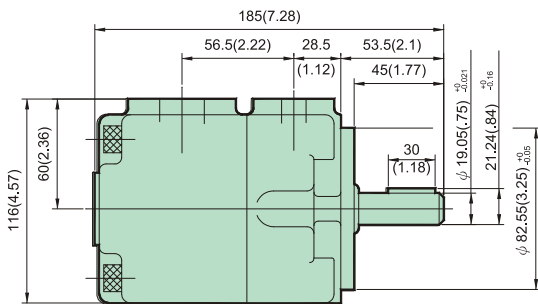
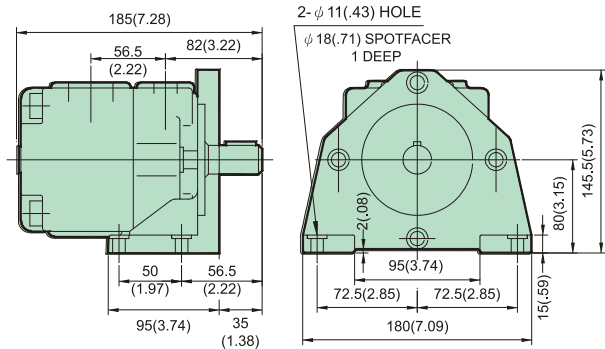
## MILLIMETERS(INCHES)

B

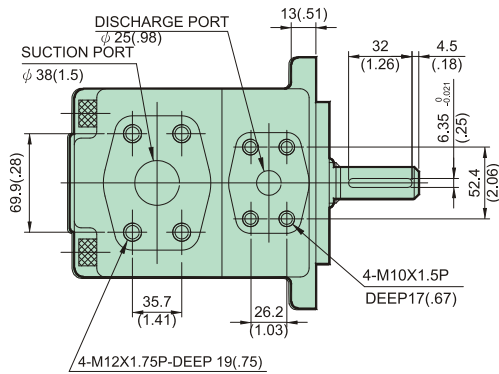
### HQ15 Flange Mounting



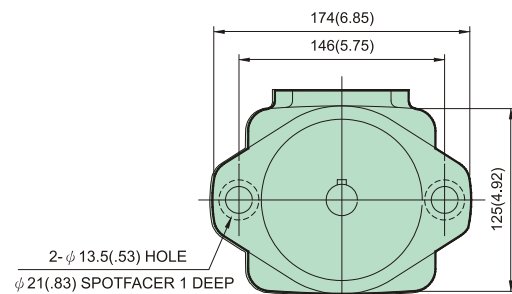
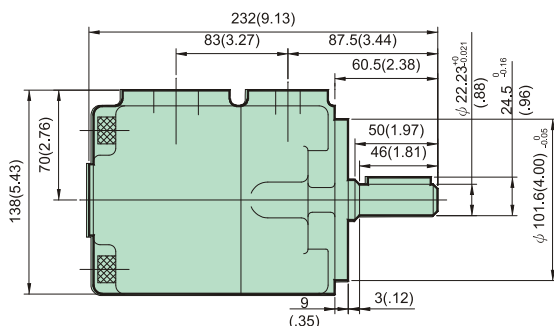
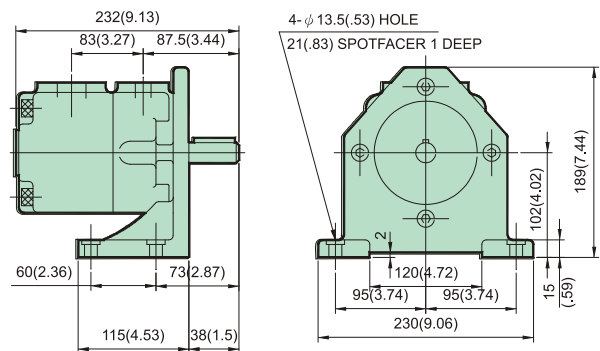
### HQ15 Foot Mounting



### HQ25 Flange Mounting



### HQ25 Foot Mounting



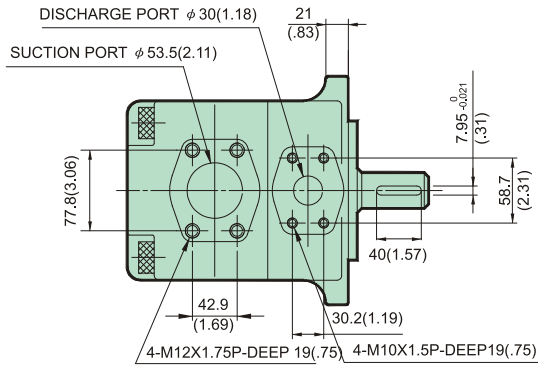


## DIMENSIONS

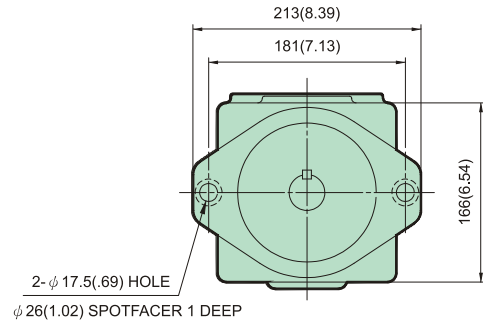
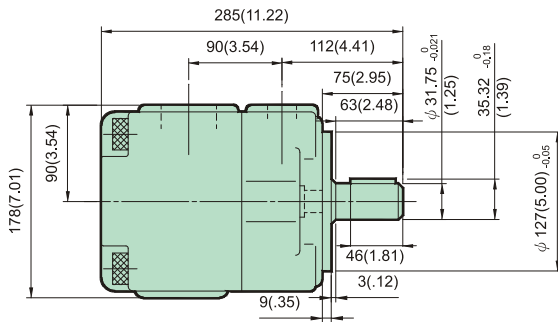
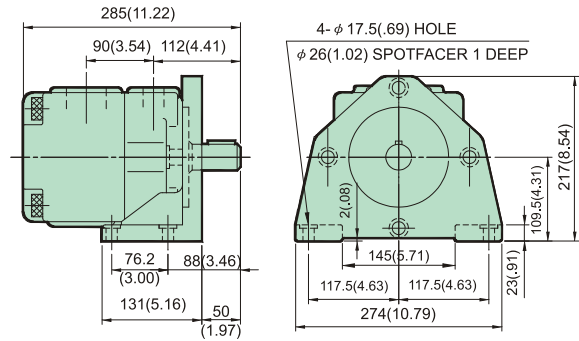
## MILLIMETERS(INCHES)

# B

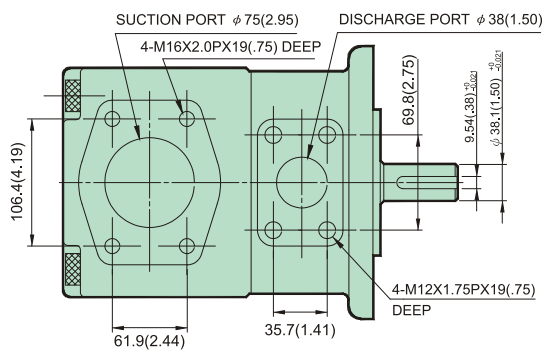
### HQ35 Flange Mounting



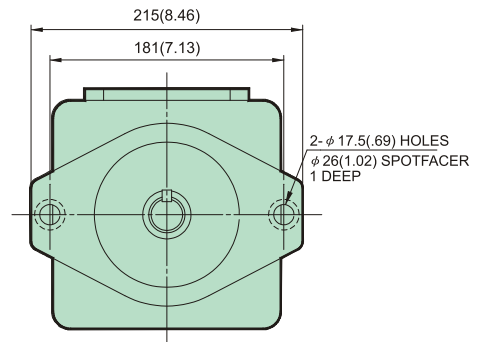
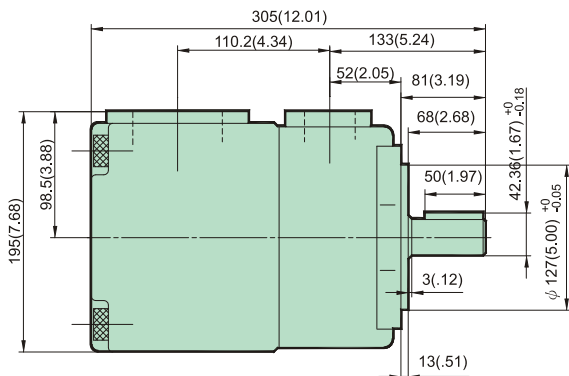
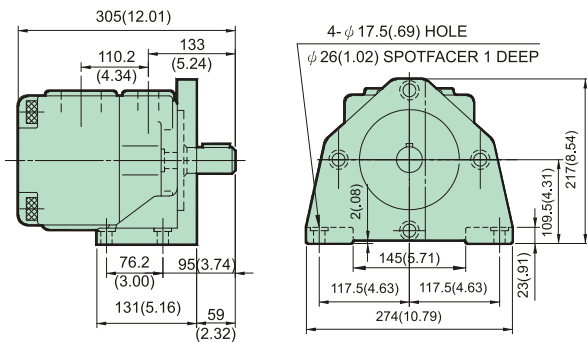
### HQ35 Foot Mounting



### HQ45 Flange Mounting



### HQ45 Foot Mounting

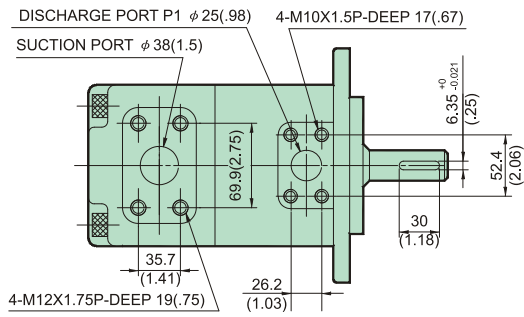


## DIMENSIONS

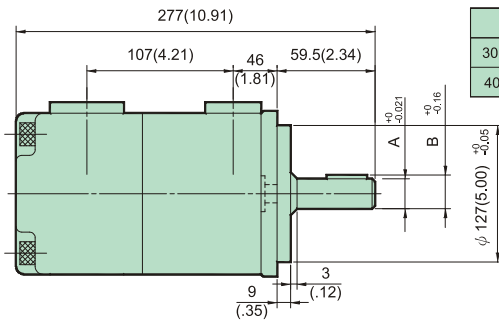
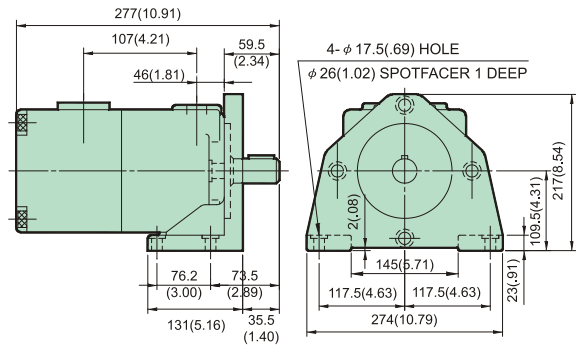
## MILLIMETERS(INCHES)

**B**

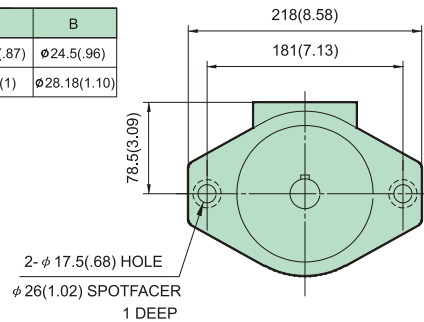
### SHQ25 Flange Mounting



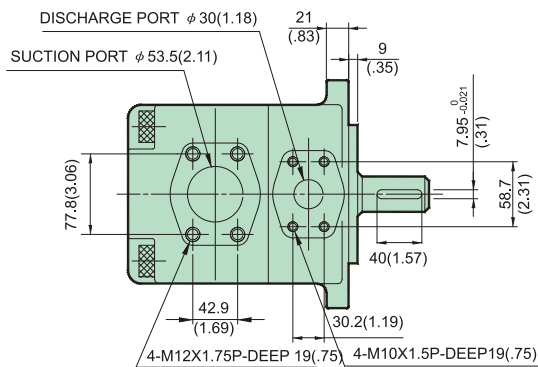
### SHQ25 Foot Mounting



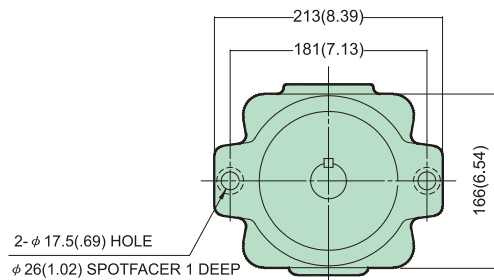
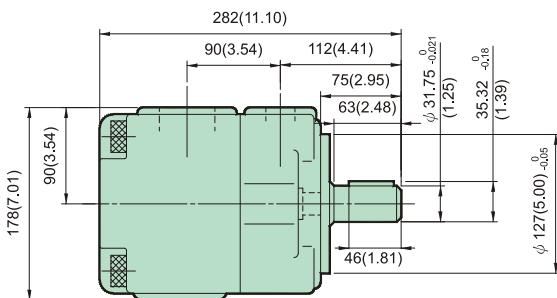
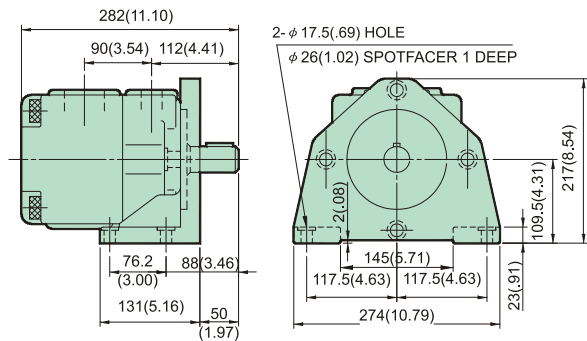
	A	B
30: Shaft	$\phi 22.23(.87)$	$\phi 24.5(.96)$
40: Shaft	$\phi 25.4(1)$	$\phi 28.18(1.10)$



### SHQ35 Flange Mounting



### SHQ35 Foot Mounting

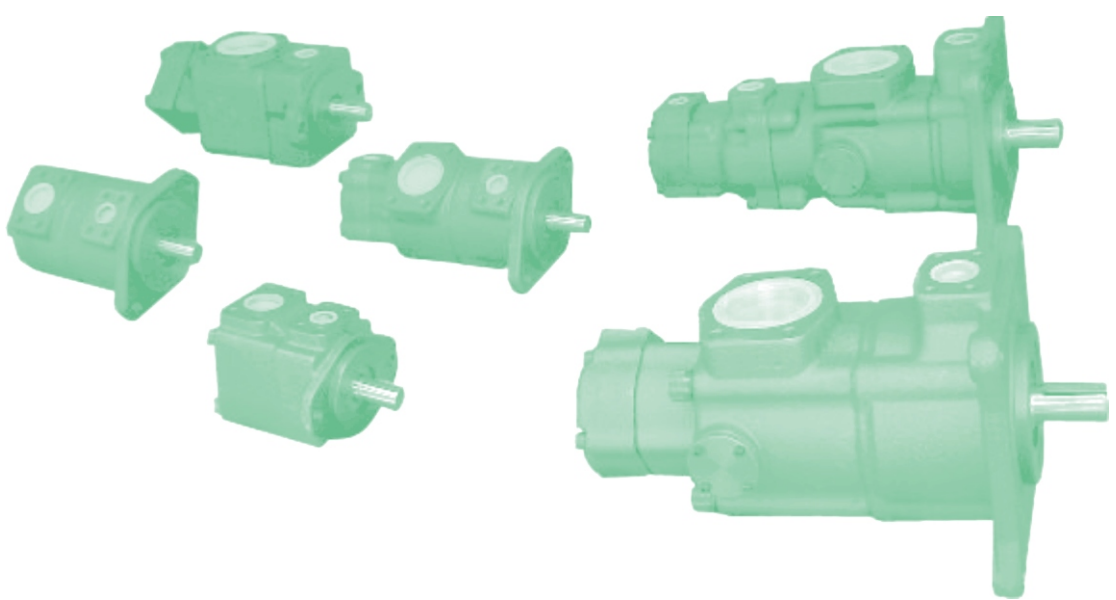
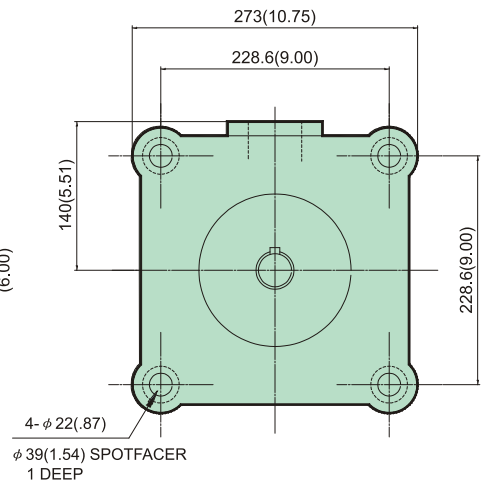
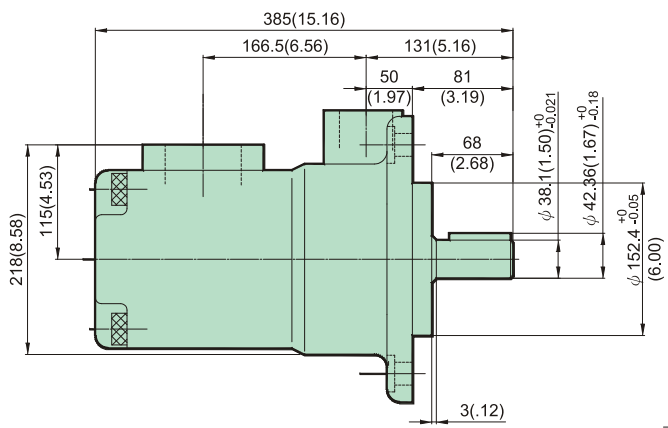
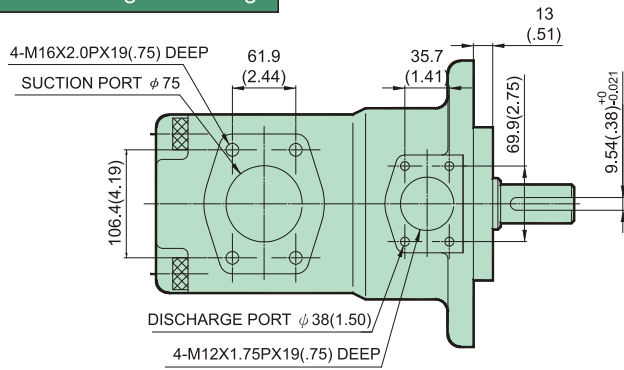




## DIMENSIONS

MILLIMETERS(INCHES)

### SHQ45 Flange Mounting



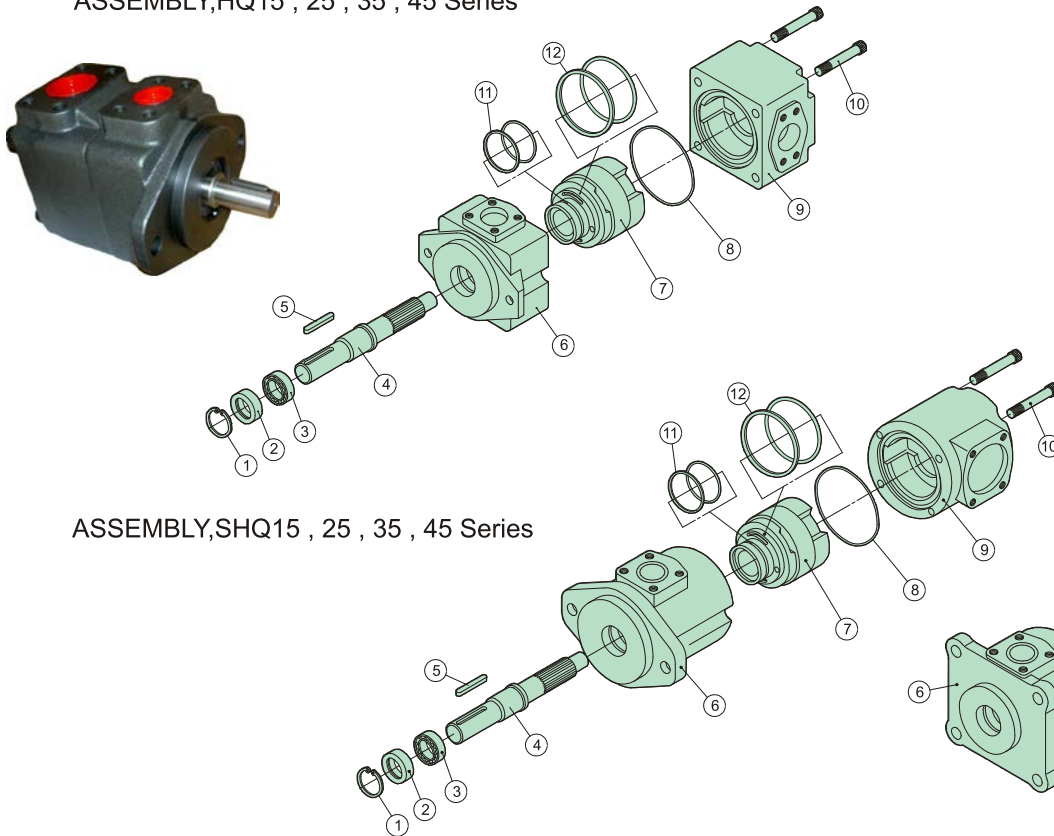
# B



## Assembly and Parts List

**B**

ASSEMBLY, HQ15 , 25 , 35 , 45 Series



ASSEMBLY, SHQ15 , 25 , 35 , 45 Series

### PARTS LIST

Item	Name	HQ15	HQ25(SHQ25)	HQ35(SHQ35)	HQ45(SHQ45)
1	Retainer Ring	R47	R52	R72	R85
2	Seal	22x47x8	30x52x11	35x72x12	50x85x10
3	Bearing	6204 zz	6205 zz	6207 zz	6209 zz
4	Shaft	19.05	22.24	31.75	38.10
5	Key	4.76 <sup>2</sup> x 25	6.35 <sup>2</sup> x 30	7.94 <sup>2</sup> x 40	9.54 <sup>2</sup> x 50
6	Housing	K1A-**	K2A-**	K3A-**	K4A-**
7	Cartridge Kit	C1A-**	C2A-**	C3A-**	C4A-**
8	O-Ring	G85	G100	G135	G140
9	Cover	L1A	L2A	L3A	L4A
10	Cap-Screw	M10x1.5x85	(HQ25)M12x1.75x140 (SHQ25)M12x1.75x120	M16x2.0x140	(HQ45)M16x2.0x160 (SHQ45)M20x2.5x160
11	O-ring & Endless Back-Up Ring	P36	P46	65.5x3.5	G80
12	O-ring & Endless Back-Up Ring	71.5x3.5	90.2x3.5	G115	G130

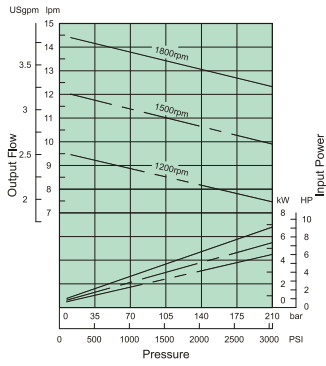




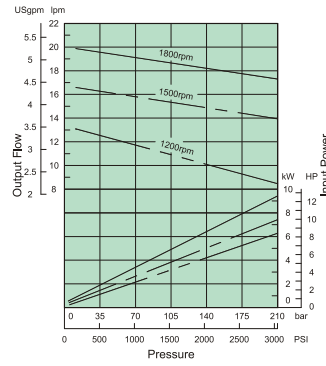
## (S)HQ15 TYPICAL PERFORMANCE CHARACTERISTICS

- PRESSURE-FLOW; INPUT POWER
- CONDITIONS:  
Hydraulic Fluid: ISO VG46  
Temperature: 40 °C (104 °F)

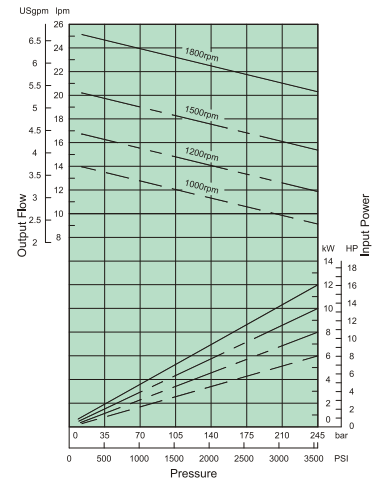
### (S)HQ15-8



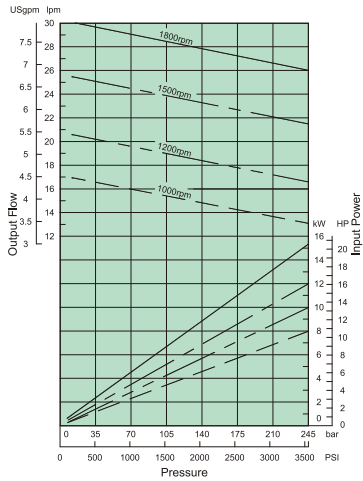
### (S)HQ15-11



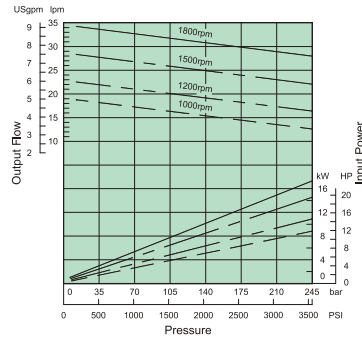
### (S)HQ15-14



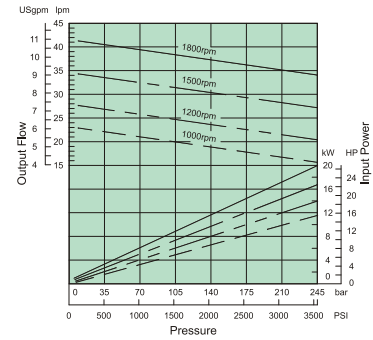
### (S)HQ15-17



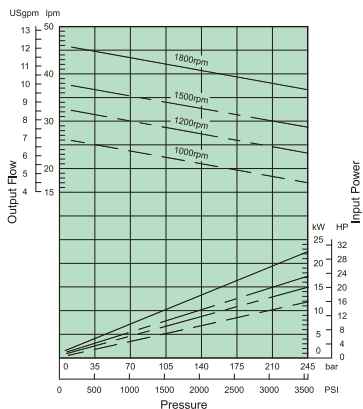
### (S)HQ15-19



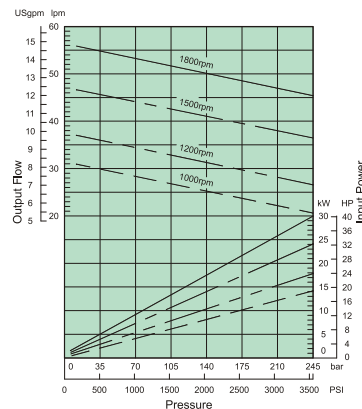
### (S)HQ15-23



### (S)HQ15-26



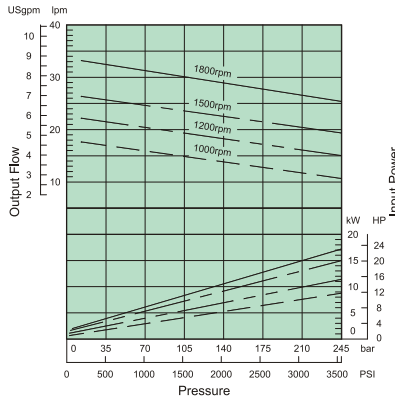
### (S)HQ15-31



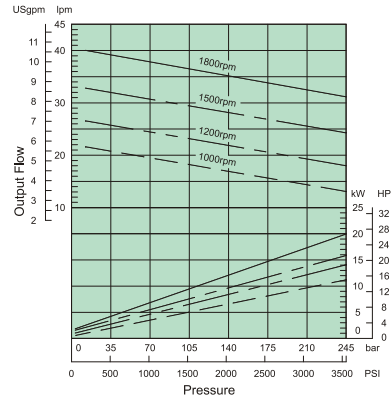
### (S)HQ25 TYPICAL PERFORMANCE CHARACTERISTICS

- PRESSURE-FLOW/INPUT POWER
- CONDITIONS:  
Hydraulic Fluid: ISO VG46  
Temperature: 40°C (104°F)

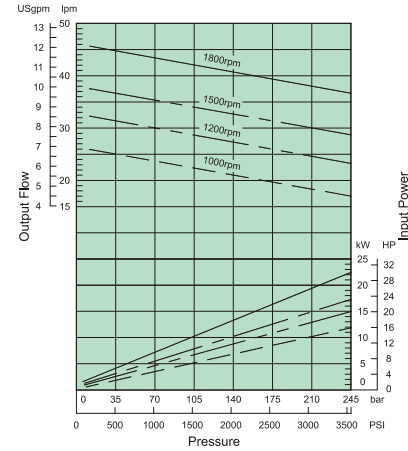
(S)HQ25-18



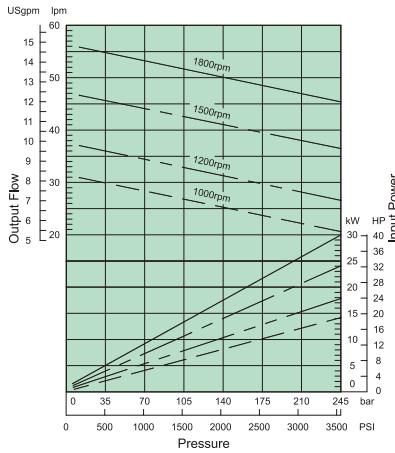
(S)HQ25-22



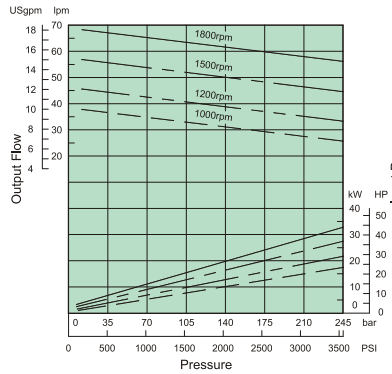
(S)HQ25-26



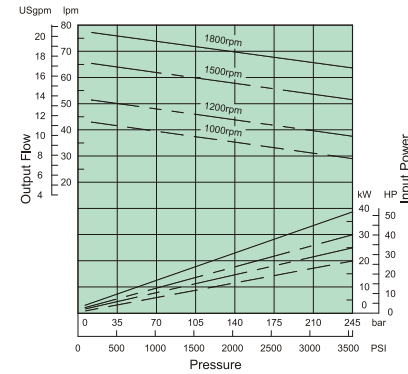
(S)HQ25-32



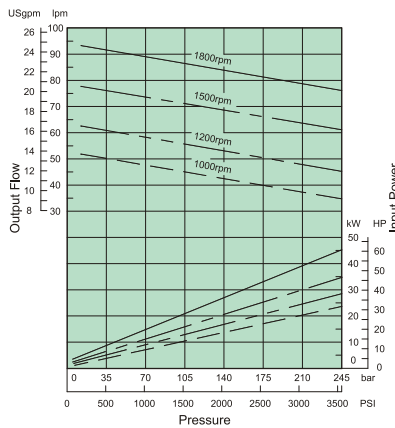
(S)HQ25-38



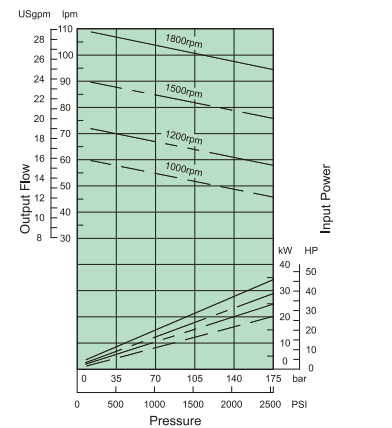
(S)HQ25-43



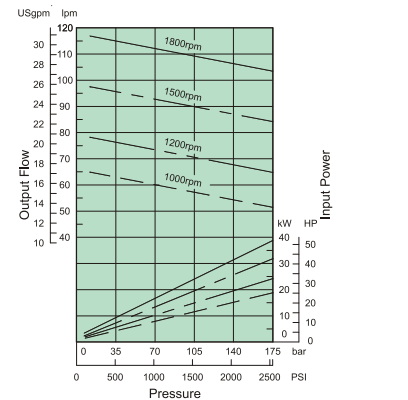
(S)HQ25-52



(S)HQ25-60



(S)HQ25-65

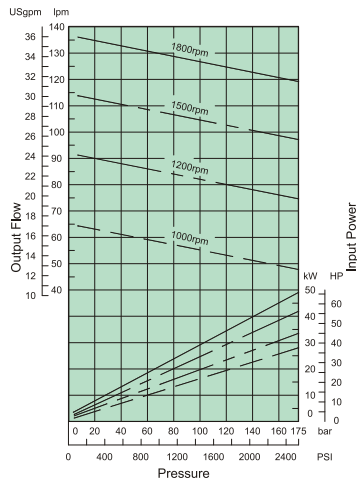




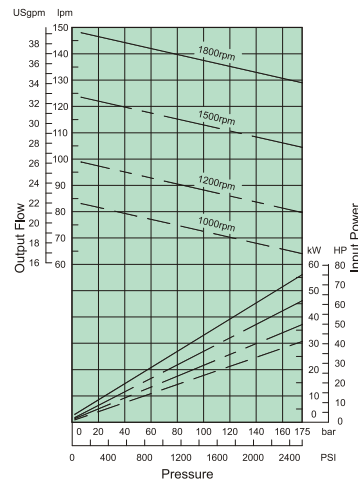
## (S)HQ35 TYPICAL PERFORMANCE CHARACTERISTICS

■ PRESSURE-FLOW; INPUT POWER  
 ■ CONDITIONS:  
 Hydraulic Fluid: ISO VG46  
 Temperature: 40°C (104°F)

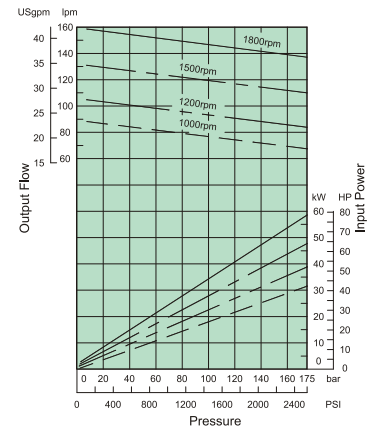
(S)HQ35-76



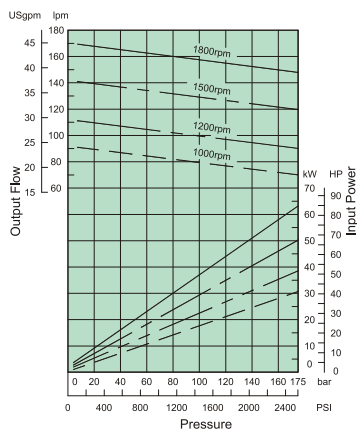
(S)HQ35-82



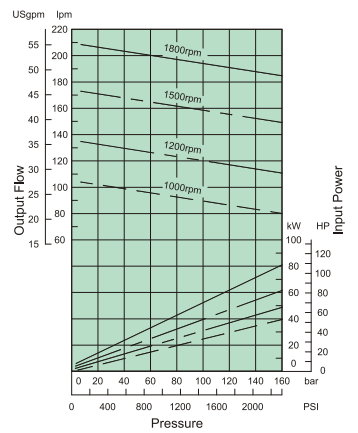
(S)HQ35-88



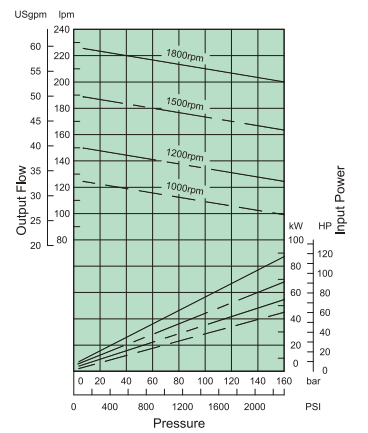
(S)HQ35-94



(S)HQ35-116

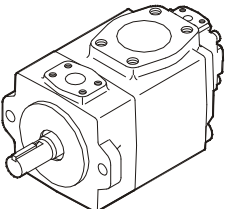
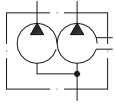
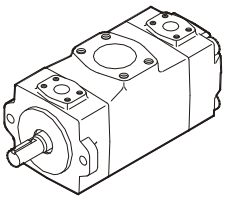
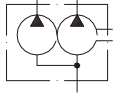
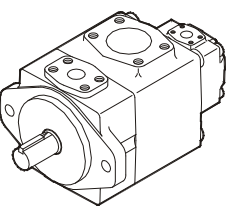
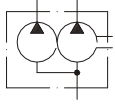
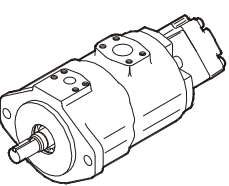
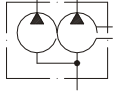
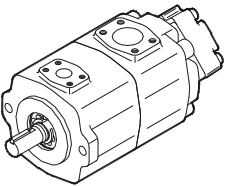
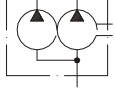


(S)HQ35-125



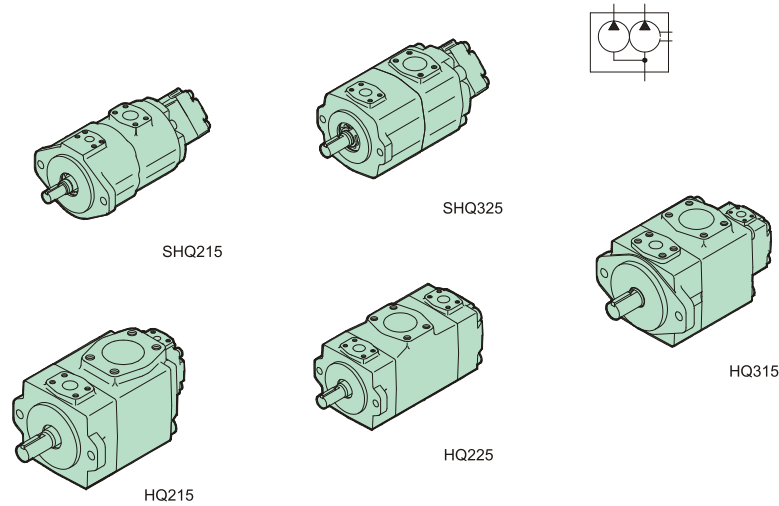
# B

**B**

DOUBLE VANE PUMP		Graphic Symbol	Cover End Pump Nominal Displacement cm <sup>3</sup> /rev	Shaft End Pump Nominal Displacement cm <sup>3</sup> /rev	P max. bar(PSI)	Max. r.p.m	Ref. Page
 <p>HQ215</p>	HQ215-**-		6.2	18.1	210(3000)	1800	141
	HQ215-**-		8.1	22.1			
	HQ215-**-		11.2	26.2			
	HQ215-**-		14.3	32.1	245(3500)		
	HQ215-**-		17.1	38.2			
	HQ215-**-		19.2	43.2			
	HQ215-**-		23.3	52.3	1500		
	HQ215-**-		26.1	60.2			
	HQ215-**-		31.1	65.3			
 <p>HQ225</p>	HQ225-**-		18.1	18.1	250(3600)	1800	141
	HQ225-**-		22.1	22.1			
	HQ225-**-		26.2	26.2			
	HQ225-**-		32.1	32.1	210(3000)		
	HQ225-**-		38.2	38.2			
	HQ225-**-		43.2	43.2			
	HQ225-**-		52.3	52.3	175(2500)		
	HQ225-**-		60.2	60.2			
	HQ225-**-		65.3	65.3			
HQ225-**-	75	75					
 <p>HQ315</p>	HQ315-**-		6.2	60.3	210(3000)	1800	142
	HQ315-**-		8.1	66.4			
	HQ315-**-		11.2	76.3			
	HQ315-**-		14.3	82.2	175(2500)		
	HQ315-**-		17.1	88.3			
	HQ315-**-		19.2	94.5			
	HQ315-**-		23.3	108.2	1500		
	HQ315-**-		26.1	116.1			
	HQ315-**-		31.1	124.6			
 <p>SHQ215</p>	SHQ215-**-			18.1	250(3600)	1800	144
	SHQ215-**-			22.1			
	SHQ215-**-		11.2	26.2			
	SHQ215-**-		14.3	32.1	210(3000)		
	SHQ215-**-		17.1	38.2			
	SHQ215-**-		19.2	43.2			
	SHQ215-**-		23.3	52.3	175(2500)		
	SHQ215-**-		26.1	60.2			
	SHQ215-**-		31.1	65.3			
SHQ215-**-			75				
 <p>SHQ325</p>	SHQ325-**-		18.1	60.3	210(3000)	1800	144
	SHQ325-**-		22.1	66.4			
	SHQ325-**-		26.2	76.3			
	SHQ325-**-		32.1	82.2	175(2500)		
	SHQ325-**-		38.2	88.3			
	SHQ325-**-		43.2	94.5			
	SHQ325-**-		52.3	108.2	1500		
	SHQ325-**-		60.2	116.1			
	SHQ325-**-		65.3	124.6			
SHQ325-**-							



**(S)HQ Series  
Fixed Displacement Double Vane Pump**



**(S)HQ Ordering Code - Double Pump**

(S)HQ	225	225	L	L	R	B	A	30
Series No.	P1: Discharge Port c.c/rev Shaft End	P2: Discharge Port c.c/rev Cover End	F: Mounting Form	Shaft Rotation (view from Shaft End)	Discharge Port Position (P1) Shaft End Pump (view from Shaft End)	Suction Port Position (view from Shaft End)	Discharge Port Position (P2) Cover End Pump (view from Shaft End)	Design
225	-60 18, 22, 26, 32 38, 43, 47, 52 60, 65, 75	-52 18, 22, 26, 32 38, 43, 47, 52 60, 65, 75	F: Flange Mounting	R: Clockwise  L: Counter-Clockwise	A: Upward (Normal) B: Downward  R: On Right Hand L: On Left Hand	A: Upward (Normal) B: Downward  R: On Right Hand L: On Left Hand	A: Upward (Normal) B: Downward R: On Right Hand L: On Left Hand	30
315	60, 66, 76 82, 88, 94 108, 116, 125	6, 8, 11, 14, 17, 19, 23, 26, 31	L: Foot Mounting					
215	18, 22, 26, 32 38, 43, 47, 52 60, 65, 75	6, 8, 11, 14, 17, 19, 23, 26, 31						
325	60, 66, 76 82, 88, 94 108, 116, 125	18, 22, 26, 32 38, 43, 47, 52 60, 65, 75					A: On Right Hand Upward 45° (normal) B: On Right Hand Downward 45° C: On Left Hand Downward 45° B: On Left Hand Upward 45°	
425	136, 156 189, 216 237	18, 22, 26, 32 38, 43, 47, 52 60, 65, 75						

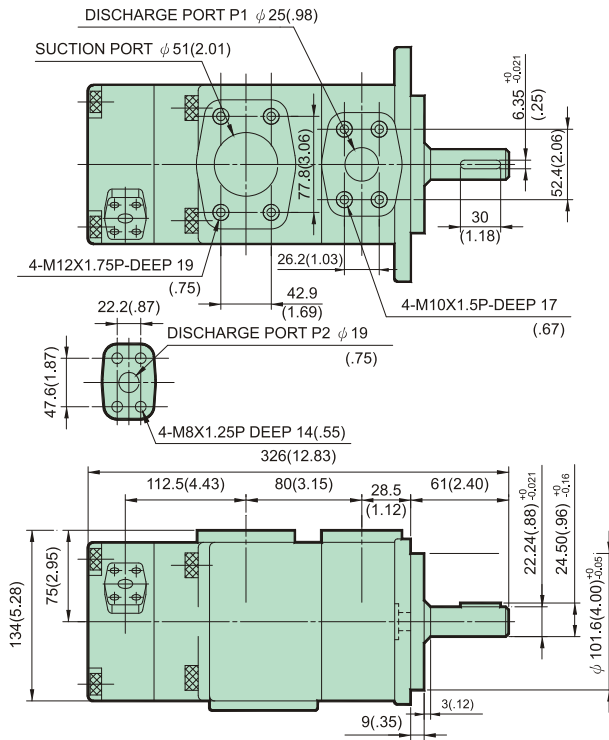
- Max Pressure: 245bar
- HQ: FIXED DISPLACEMENT VANE PUMP
- SHQ: LOW NOISE FIXED DISPLACEMENT VANE PUMP

## DIMENSIONS

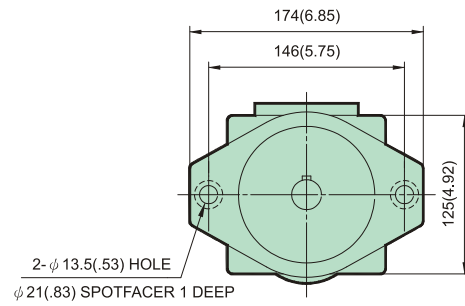
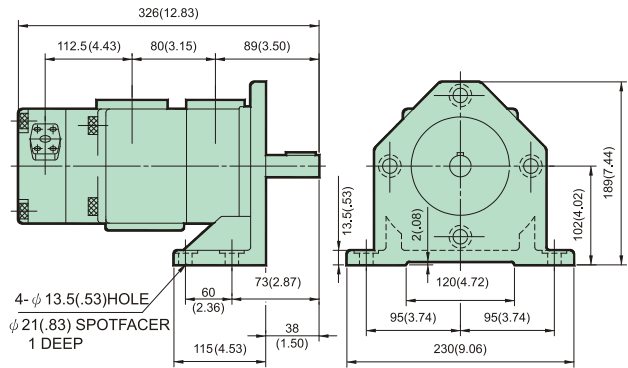
## MILLIMETERS(INCHES)

**B**

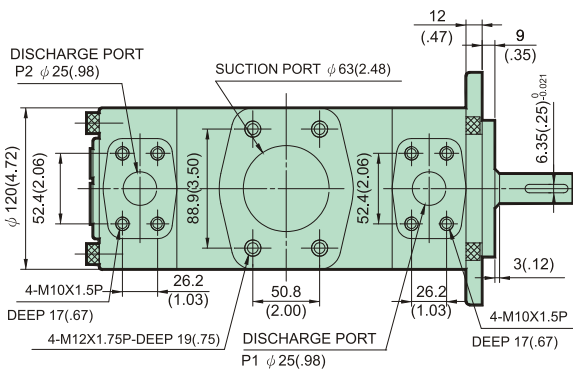
**HQ215 Flange Mounting**



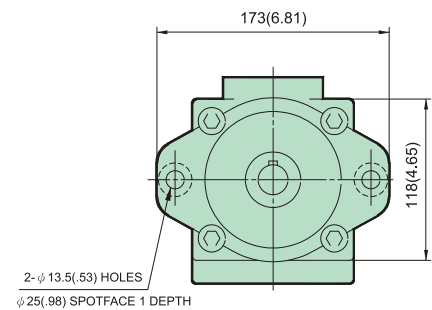
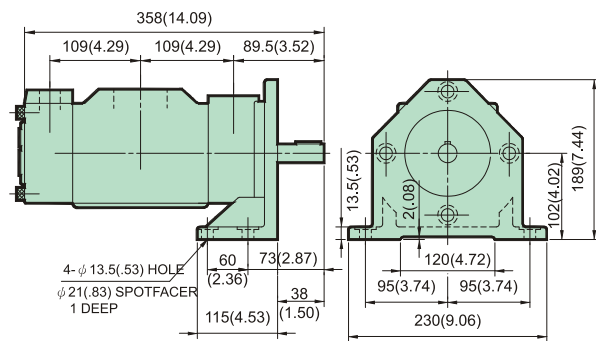
**HQ215 Foot Mounting**



**HQ225 Flange Mounting**



**HQ225 Foot Mounting**



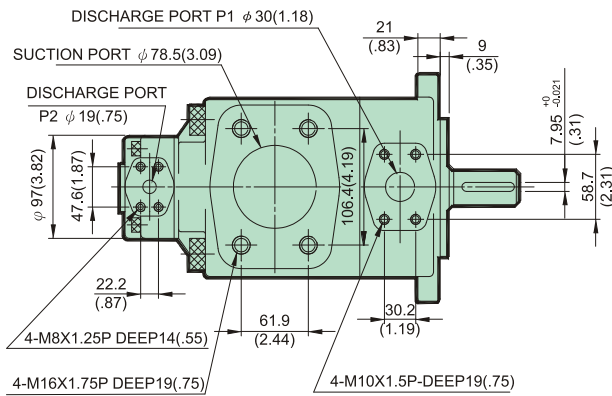


## DIMENSIONS

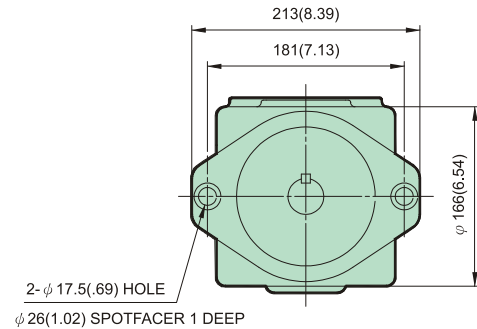
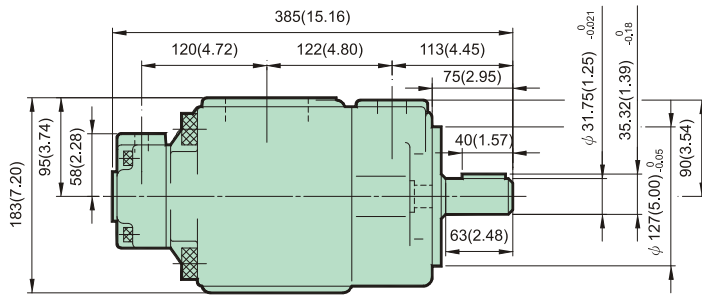
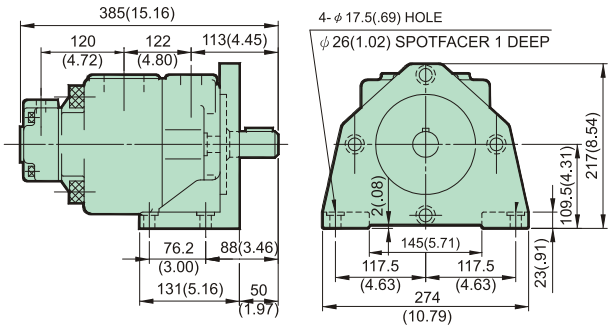
## MILLIMETERS(INCHES)

# B

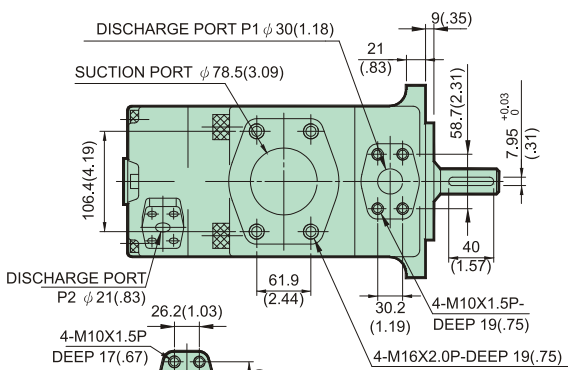
### HQ315 Flange Mounting



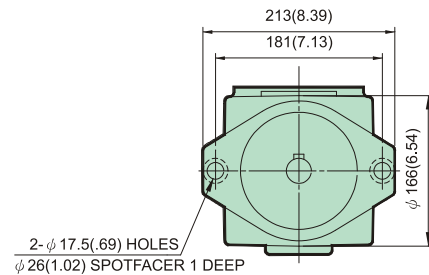
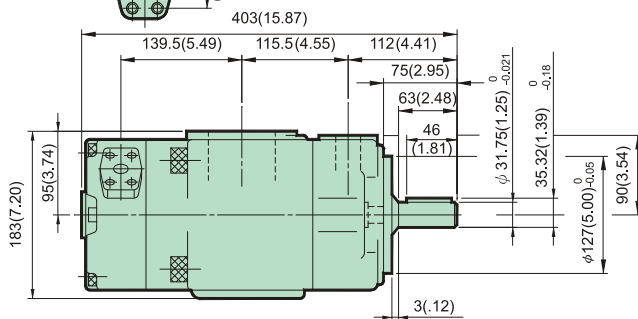
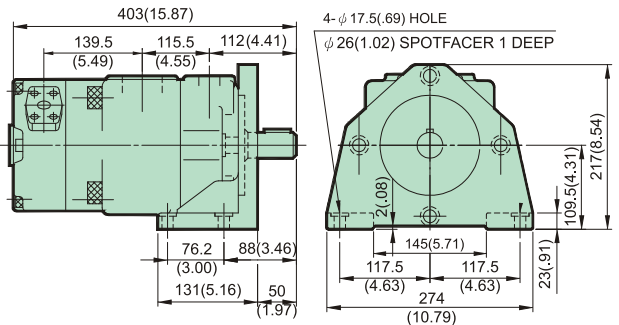
### HQ315 Foot Mounting



### HQ325 Flange Mounting



### HQ325 Foot Mounting



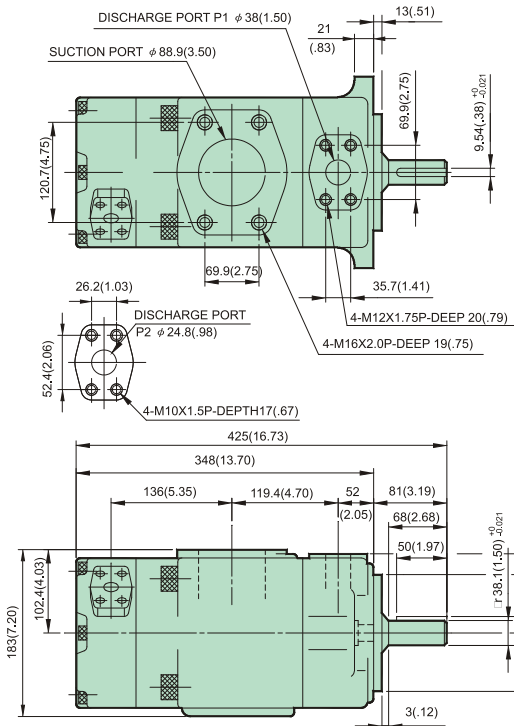


## DIMENSIONS

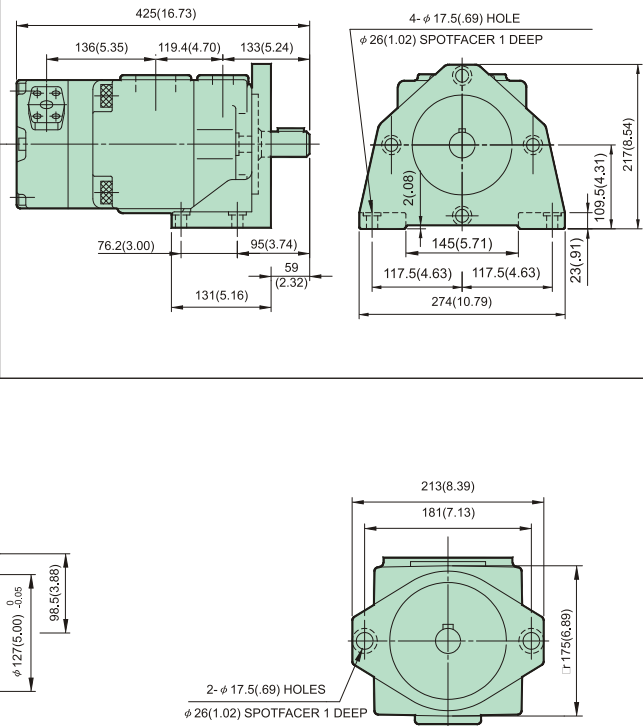
## MILLIMETERS(INCHES)

**B**

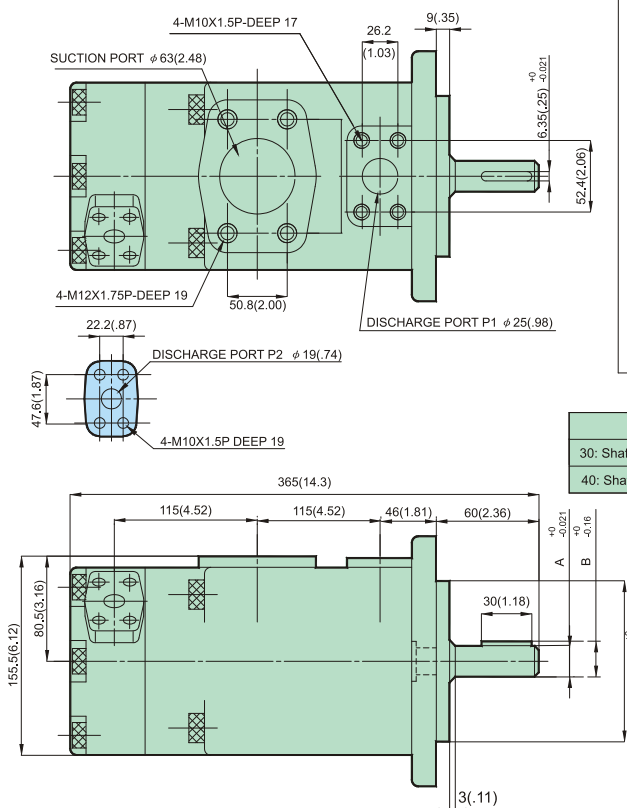
### HQ425 Flange Mounting



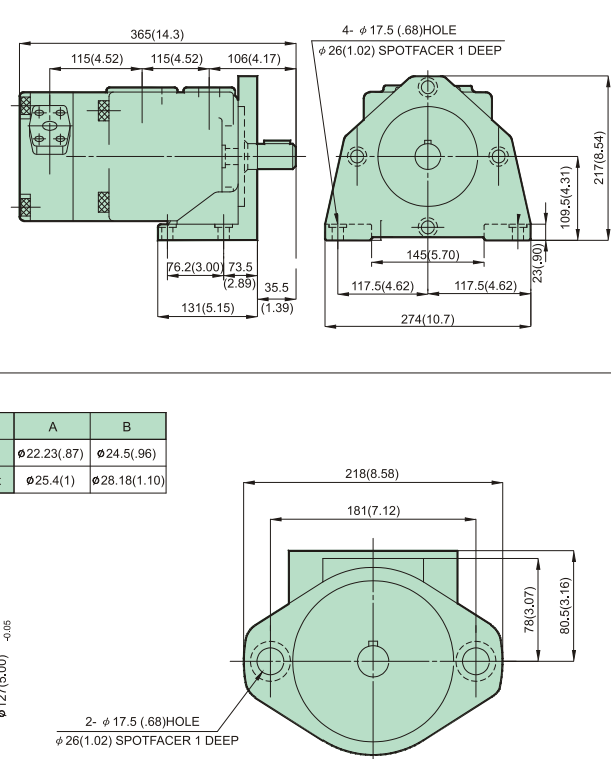
### HQ425 Foot Mounting



### SHQ215 Flange Mounting



### SHQ215 Foot Mounting



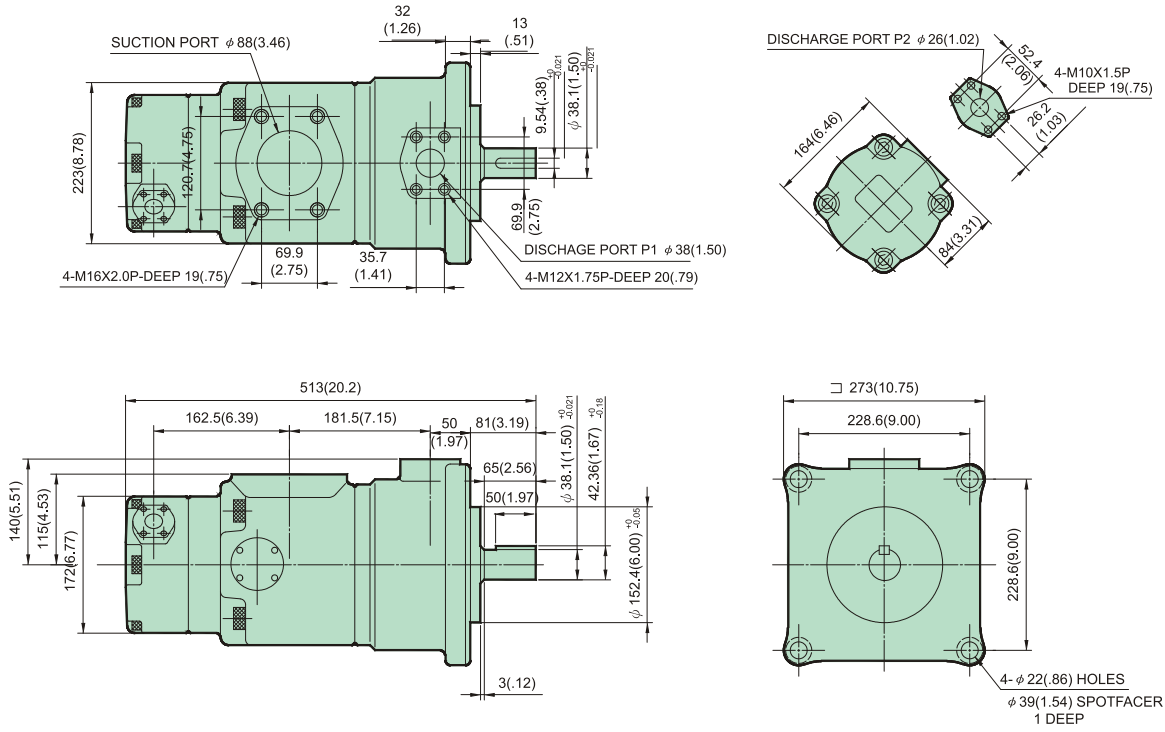
	A	B
30: Shaft	$\phi$ 22.23(.87)	$\phi$ 24.5(.96)
40: Shaft	$\phi$ 25.4(1)	$\phi$ 28.18(1.10)



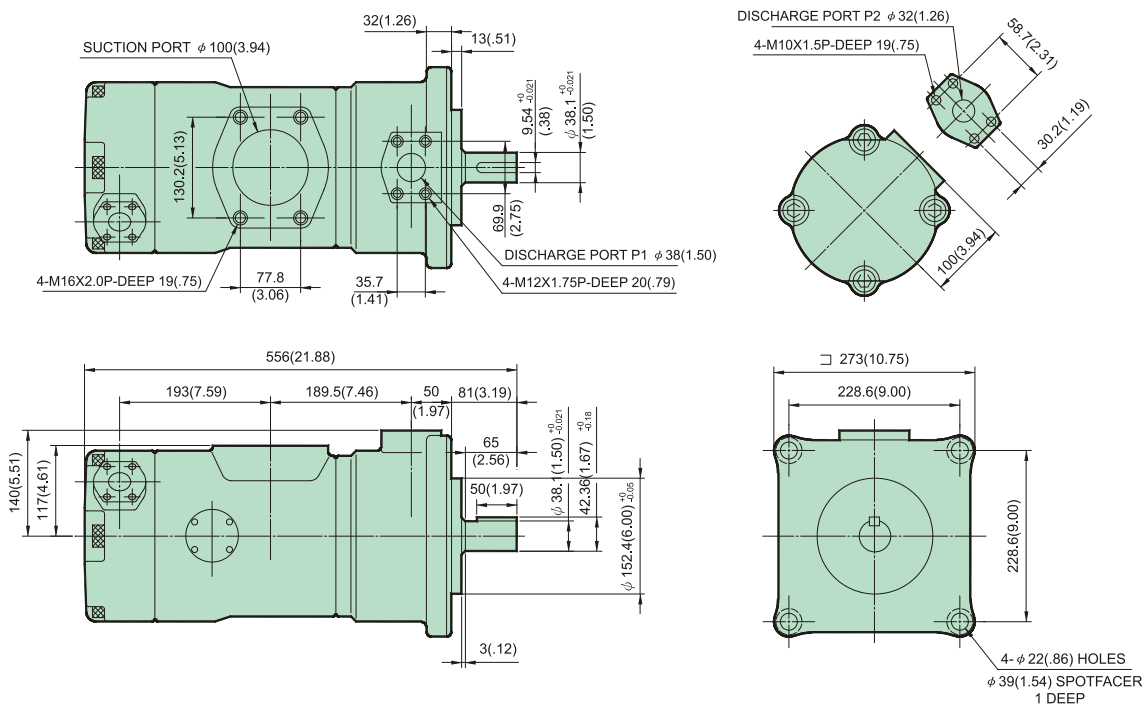
## DIMENSIONS

## MILLIMETERS(INCHES)

### SHQ425 Flange Mounting



### SHQ435 Flange Mounting

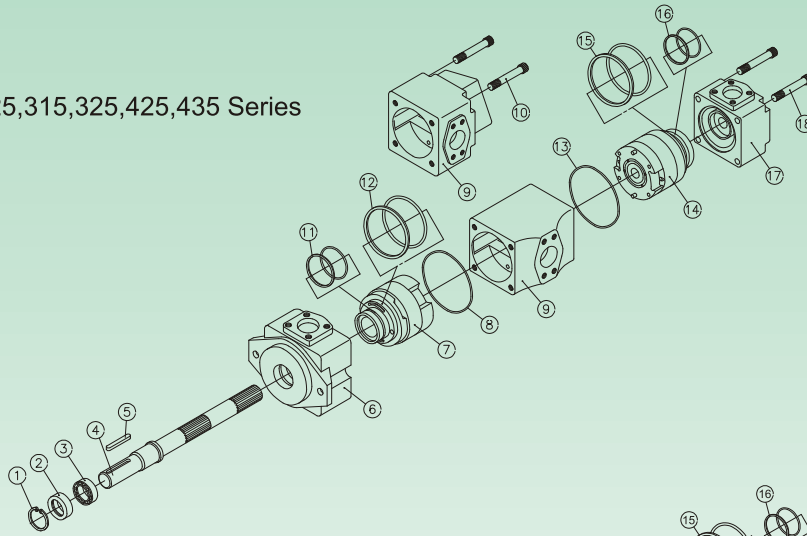


# B

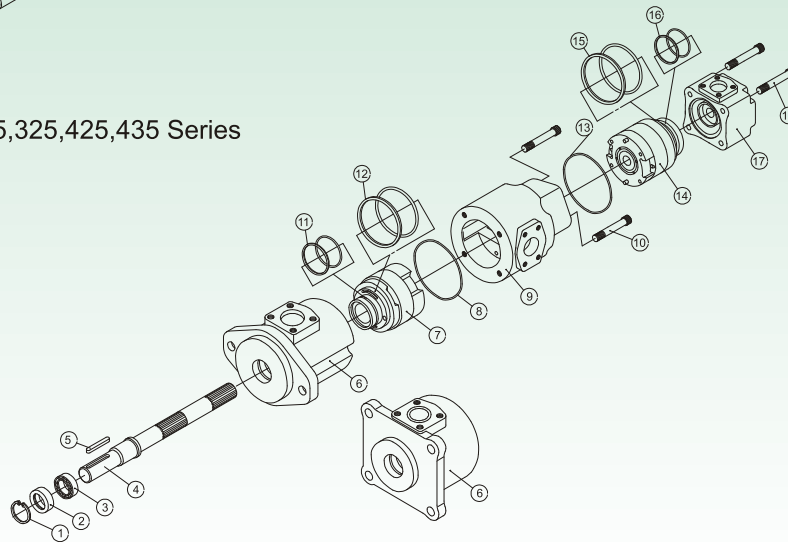
## Assembly and Parts List

**B**

HQ215,225,315,325,425,435 Series



SHQ215,225,315,325,425,435 Series



### DOUBLE PUMP PARTS LIST

Model	No. 2	No. 3	No. 11	No. 12	No. 8	No. 13	No. 15	No. 16
	Seal	Bearing	O-Ring & Endless Back-Up Ring	O-Ring & Endless Back-Up Ring	For Cover O-Ring	For Housing Endless Back-Up Ring	O-Ring & Endless Back-Up Ring	O-Ring & Endless Back-Up Ring
HQ215	30x52x11	6205zz	P46	90.2x3.5	G100	G85	71.5x3.5	P36
HQ225	30x52x11	6205zz	P46	90.2x3.5	G100	G100	90.2x3.5	P46
HQ315	35x72x12	6207zz	65.5x3.5	G115	G135	G85	71.5x3.5	P36
HQ325	35x72x52	6207zz	65.5x3.5	G115	G135	G100	90.2x3.5	P46
HQ425	50x85x10	6209zz	G80	G130	G140	G100	90.2x3.5	P46
SHQ215	30x52x11	6205zz	P46	90.2x3.5	G100	G85	71.5x3.5	P36
SHQ425	50x85x10	6209zz	G80	G130	G140	G100	90.2x3.5	P46
SHQ435	50x85x10	6209zz	G80	G130	G140	G135	G115	65.5x3.5