



## **VQH Vane Pump SERIES**

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(F3) - 25VQH 17 A - 1 C 22 L

-----  
 1            2    3    4    5    6    7    8  
 -----

1    Special Seals

-----  
 Omit - (Standard)  
 F3 - Viton Seals

2    Series No

-----  
 25VQH    35VQH    45VQH

3    Pump (GPM)

-----  
 (@1200 RPM, 100 PSI)  
 -----

25VQ	35VQ	45VQ
10	25	42
12	30	47
14	32	50
17	35	57
19	38	60
21		

4    Port Connection

-----  
 A - SAE 4-Bolt Flange (Standard)

5    Shaft Type

-----  
 1 - Straight Keyed (Standard)  
 11 - Splined  
 86 - Straight Keyed

6    Outlet Port Position

-----  
 (View From Cover End of Pump)  
 A - Opposite Inlet  
 B - 90° CCW From Inlet  
 C - Inline With Inlet (Standard)  
 D - 90° CW From Inlet

7    Design Number

-----  
 22 - (Standard)  
 10 - Design Change

8    Rotation

-----  
 (View From Shaft End of Pump)  
 Omit - Right Hand Rotation  
 (Standard)  
 L - Left Hand Rotation



ITEM	25VQH		35VQH		45VQH	
	10,12,14	17,19,21	25,30	32,35,38	42,47,50,57	60
<b>MAX SPEED (RPM)</b>	2700	2500	2500	2400	2200	
<b>MAX CONTINUOUS PRESSURE (PSI)</b>	3500		3300		3300	3000
<b>MAX PEAK PRESSURE (PSI)</b>	3800		3600		3600	

(F3) - 2520VQH 17 A 11 - 1 C C 22 L

-----  
 1                      2                      3    4    5                      6    7    8    9    10  
 -----

1    Special Seals

Omit - (Standard)  
 F3 - Viton Seals

2    Series No

2520VQH    3520VQH    3525VQH  
 4520VQH    4525VQH    4535VQH

3    Shaft End Pump (GPM)

(@1200 RPM, 100 PSI)  
 25\*\*VQH    35\*\*VQH    45\*\*VQH

10            25            42  
 12            30            47  
 14            32            50  
 17            35            57  
 19            38            60  
 21

4    Port Connection

A - SAE 4-Bolt Flange (Standard)

5    Cover End Pump (GPM)

(@1200 RPM, 100 PSI)  
 \*\*20VQH    \*\*25VQH    \*\*35VQH

2                      10                      25  
 5                      12                      30  
 8                      14                      32  
 9                      17                      35  
 11                     19                      38  
 12                     21  
 14

6    Shaft Type

1 - Straight Keyed (Standard)  
 11 - Splined  
 86 - Straight Keyed (Heavy Duty)

7    Outlet No 1 Port Position

(View From Cover End of Pump)  
 A - Opposite Inlet  
 B - 90° CCW From Inlet  
 C - Inline With Inlet (Standard)  
 D - 90° CW From Inlet

8    Outlet No 2 Port Position

(View From Cover End of Pump)  
 All Series Except 4535VQH

A - 135° CCW From Inlet  
 B - 45° CCW From Inlet  
 C - 45° CW From Inlet (Standard)  
 D - 135° CW From Inlet

Series 4535VQH

A - Opposite Inlet  
 B - 90° CCW From Inlet  
 C - Inline with Inlet (Standard)  
 D - 90° CW From Inlet

9    Design Number

22 - (Standard)  
 10 - Design Change

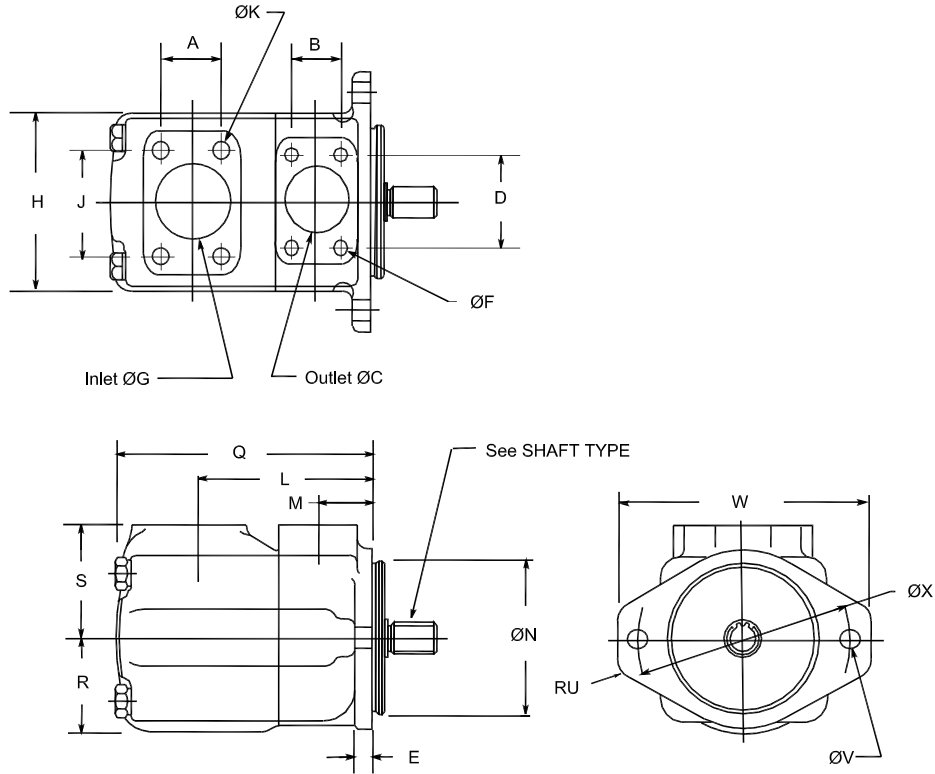
10    Rotation

(View From Shaft End of Pump)  
 Omit - Right Hand Rotation  
 (Standard)  
 L - Left Hand Rotation



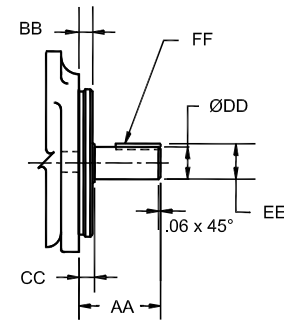
ITEM	**20VQH		25**VQH **25VQH		35**VQH **35VQH		45**VQH	
	5,8,11,12	14	10,12,14	17,19,21	25,30	32,35,38	42,47,50,57	60
MAX SPEED (RPM)	2700		2700	2500	2500	2400	2200	
MAX CONTINUOUS PRESSURE (PSI)	3300	3000	3500		3300		3300	3000

25VQH INSTALLATION DIMENSION

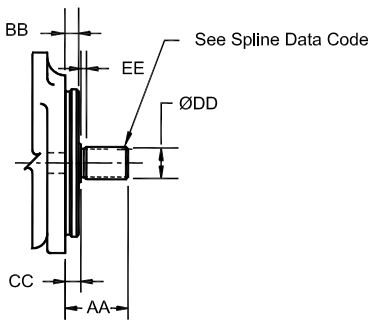


SHAFT TYPE

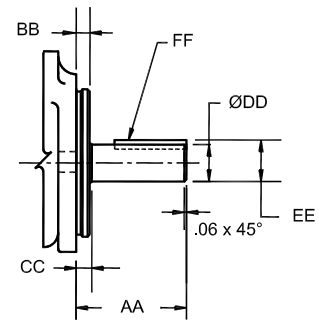
#1 Straight Shaft



#11 Splined Shaft

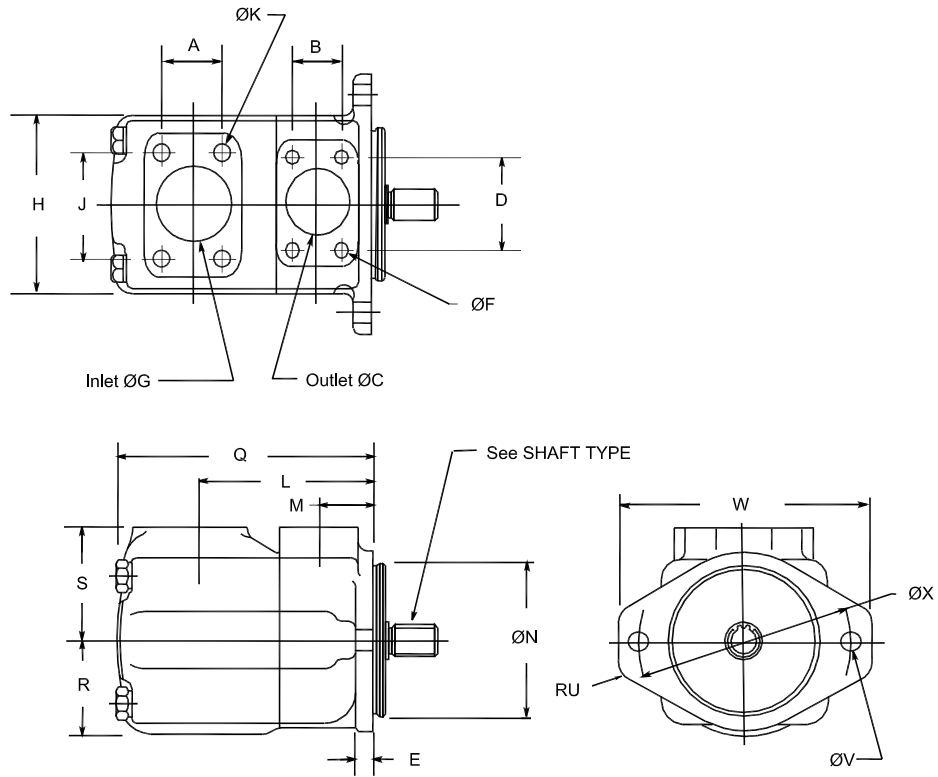


#86 Straight Shaft



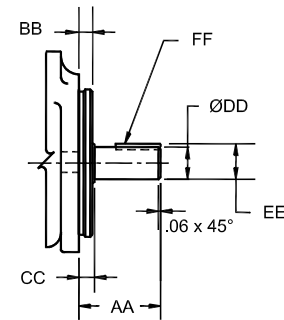
BODY	A	B	ØC	D	E	ØG	H	J	L	M	ØN
		1.41	1.03	1.00	2.06	0.50	1.50	4.62	2.75	4.76	1.50
PORT CONN.	Q		R	S	RU		ØV x 2		W	ØX	
	6.38		2.50	3.00	0.55		0.56		6.88	5.75	
SHAFT TYPE	ØF x 4 Holes		ØK x 4 Holes		Outlet Flange		Inlet Flange				
	3/8"-16UNC-2B x 0.75		1/2"-13UNC-2B x 0.94		F1-8-		F1-12-				
SHAFT TYPE	Shaft Type	AA	BB	CC	ØDD		EE	FF Key Width x Length			
	1	2.32	.375	.435	.875/.874		.966/.961	.187x1.25			
	86	3.06	.375	.435	.999/.998		1.11/1.10	.250x2.00			
	Shaft Type	AA	BB	CC	ØDD	EE	Spline Data Code				
11	1.75	.375	.437	1.09	.156	A (See Below Chart)					
Spline Data Code	Number of Teeth	Pitch	Major Diameter	Form Diameter	Minor Diameter	Minor Diameter					
A	13	16/32	.873/.872	.749	.734/.723	Major dia. fit					

35VQH INSTALLATION DIMENSION

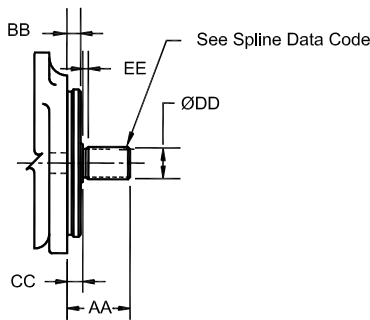


SHAFT TYPE

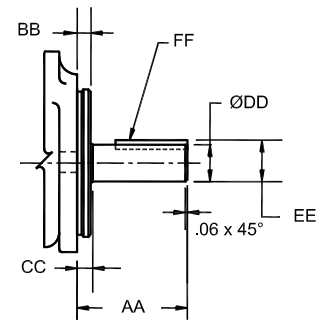
#1 Straight Shaft



#11 Splined Shaft

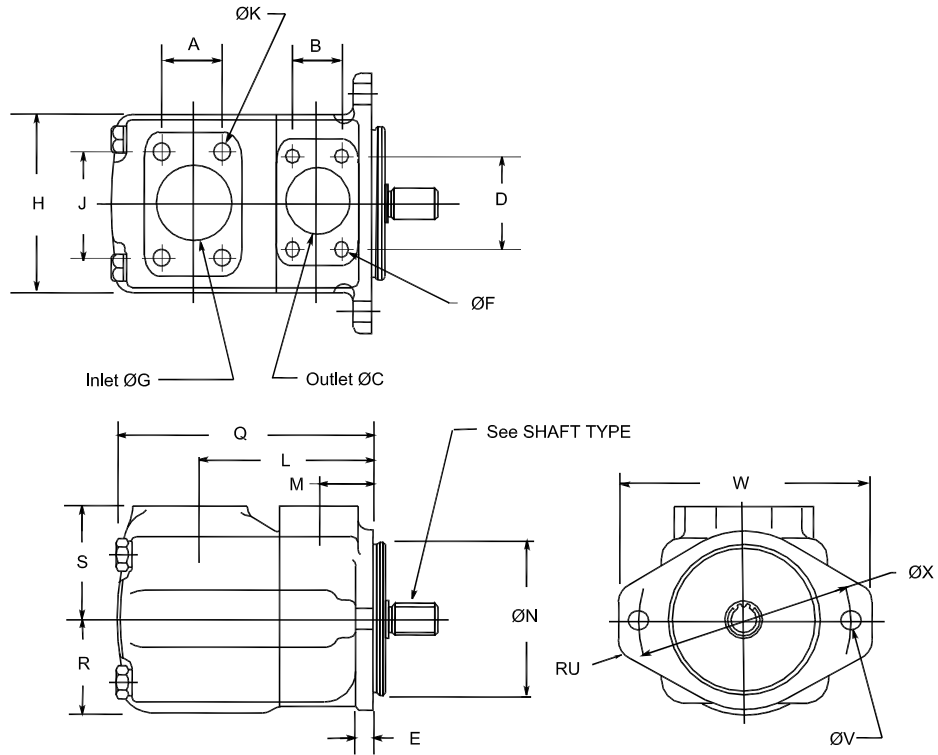


#86 Straight Shaft



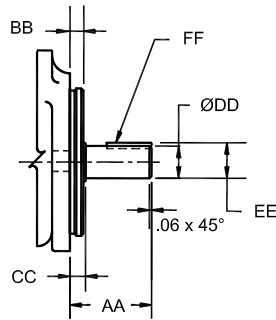
BODY	A	B	ØC	D	E	ØG	H	J	L	M	ØN
		1.69	1.19	1.25	2.31	0.63	2.00	5.50	3.06	4.94	1.50
PORT CONN.	Q		R	S	RU		ØV x 2		W	ØX	
		7.28	2.75	3.25	0.63	0.69	8.38	7.13			
SHAFT TYPE	ØF x 4 Holes		ØK x 4 Holes		Outlet Flange		Inlet Flange				
	7/16"-14UNC-2B x 0.88		1/2 "-13UNC-2B x 0.88		F1-10-		F1-16-				
	Shaft Type	AA	BB	CC	ØDD	EE	FF Key Width x Length				
	1	2.88	.375	.437	1.250/1.248	1.392/1.382	.313x1.50				
86	3.88	.375	.437	1.374/1.373	1.518/1.508	.312x2.13					
Shaft Type	AA	BB	CC	ØDD	EE	Spline Data Code					
11	2.31	.375	.437	1.38	.25	D (See Below Chart)					
Spline Data Code	Number of Teeth	Pitch	Major Diameter	Form Diameter	Minor Diameter	Minor Diameter					
D	14	12/24	1.248/1.247	1.07	1.063/1.050	Major dia. fit					

45VQH INSTALLATION DIMENSION

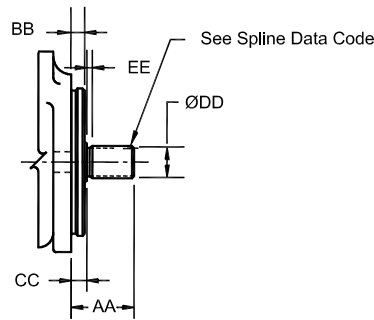


SHAFT TYPE

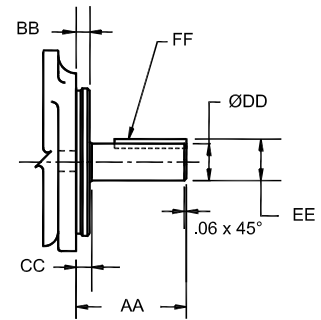
#1 Straight Shaft



#11 Splined Shaft

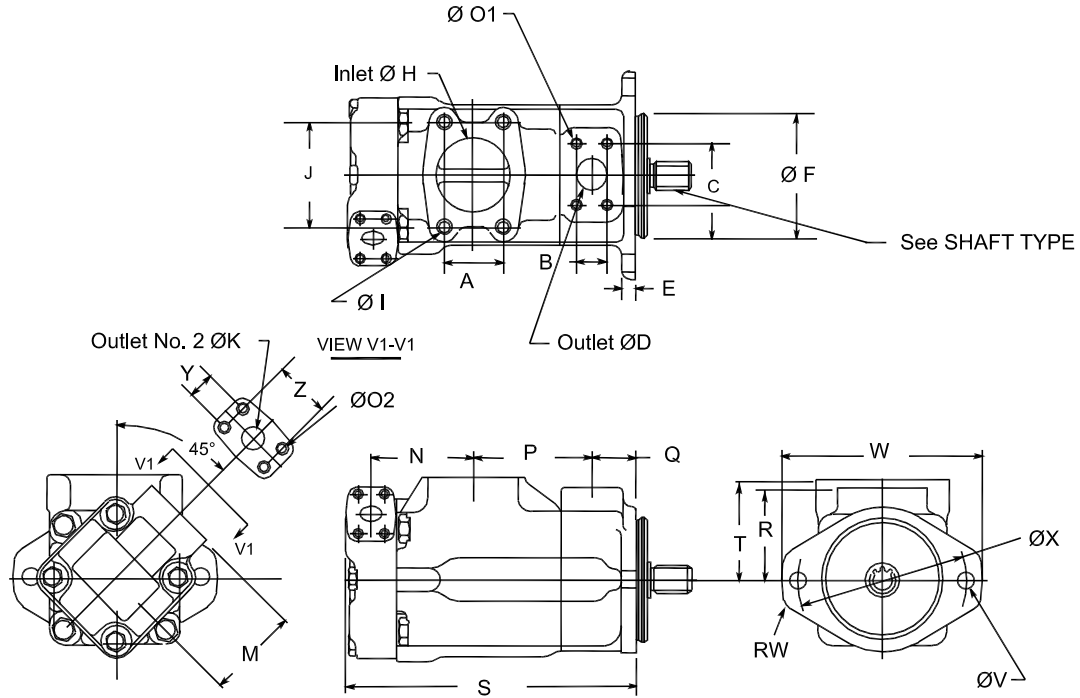


#86 Straight Shaft



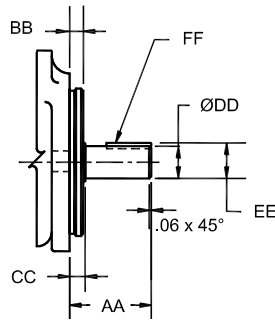
	A	B	ØC	D	E	ØG	H	J	L	M	ØN	
BODY	2.43	1.41	1.50	2.75	0.63	3.00	6.25	4.19	6.03	1.69	5.000/4.998	
	Q	R	S	RU	ØV x 2	W	ØX					
	8.50	3.25	3.69	0.63	0.69	8.38	7.13					
PORT CONN.	ØF x 4 Holes			ØK x 4 Holes			Outlet Flange		Inlet Flange			
	1/2"-13UNC-2B x 0.94			5/8 "-11UNC-2B x 1.18			F1-12-		F1-24-			
SHAFT TYPE	Shaft Type	AA	BB	CC	ØDD	EE	FF Key Width x Length					
	1	2.44	.500	.560	1.250/1.248	1.390/1.380	.312x1.12					
	86	3.44	.500	.560	1.499/1.498	1.669/1.659	.375x2.00					
	Shaft Type	AA	BB	CC	ØDD	EE	Spline Data Code					
	11	2.44	.500	.565	1.56	.38	D (See Below Chart)					
Spline Data Code	Number of Teeth	Pitch	Major Diameter	Form Diameter	Minor Diameter	Minor Diameter						
D	14	12/24	1.248/1.247	1.07	1.063/1.050	Major dia. fit						

2520VQH INSTALLATION DIMENSION

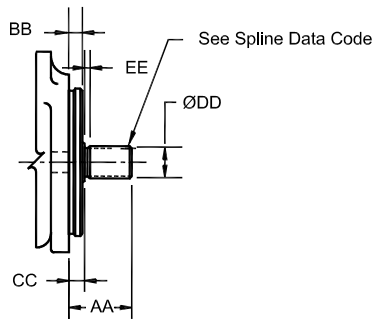


SHAFT TYPE

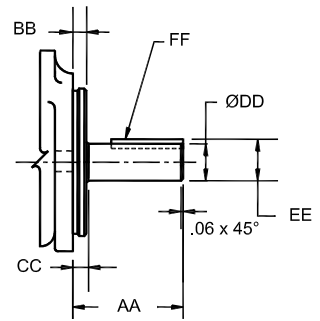
#1 Straight Shaft



#11 Splined Shaft



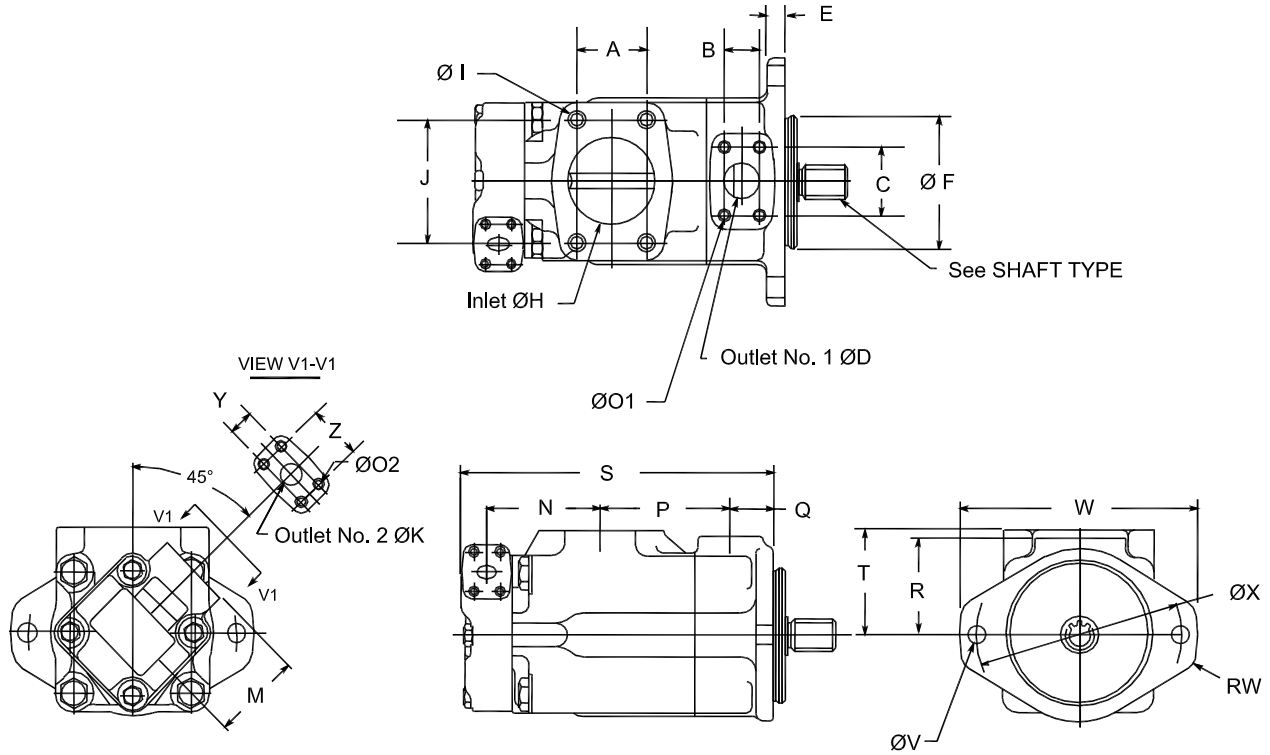
#86 Straight Shaft



BODY	A	B	C	øD	E	øF	øH	J	øK	M	N	P	Q	R
	2.00	1.03	2.06	1.00	0.50	4.000/3.998	2.50	3.50	0.75	3.00	3.47	4.00	1.50	3.00
PORT CONN.	S	T	øV x 2	RW	W	øX	Y	Z						
	9.94	3.31	0.56	0.55	6.88	5.75	0.88	1.88						
SHAFT TYPE	ØO1 x 4 Holes		ØO2 x 4 Holes		ØI x 4 Holes		Outlet No 1 Flange		Outlet No 2 Flange		Inlet Flange			
	3/8"-16UNC-2B x 0.75		3/8"-16UNC-2B x 0.75		1/2"-13UNC-2B x 0.94		F1-8-		F1-6-		F1-20-			
	Shaft Type	AA	BB	CC	øDD	EE	FF Key Width x Length							
	1	2.32	.375	.435	.875/.874	.966/.961	.187x1.25							
	86	3.06	.375	.435	.999/.998	1.11/1.10	.250x2.00							
	Shaft Type	AA	BB	CC	øDD	EE	Spline Data Code							
	11	1.75	.375	.437	1.09	.156	A (See Below Chart)							
Spline Data Code	Number of Teeth	Pitch	Major Diameter	Form Diameter	Minor Diameter	Minor Diameter								
A	13	16/32	.873/.872	.749	.734/.723	Major dia. fit								

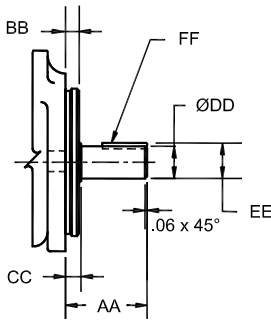


3520VQH INSTALLATION DIMENSION

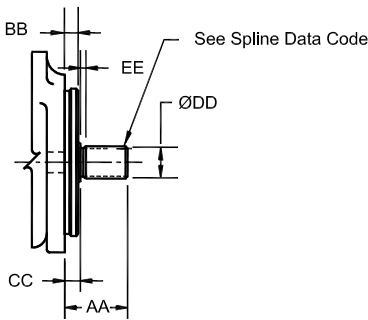


SHAFT TYPE

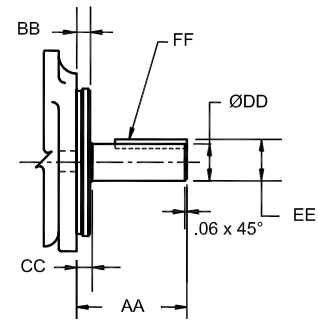
#1 Straight Shaft



#11 Splined Shaft

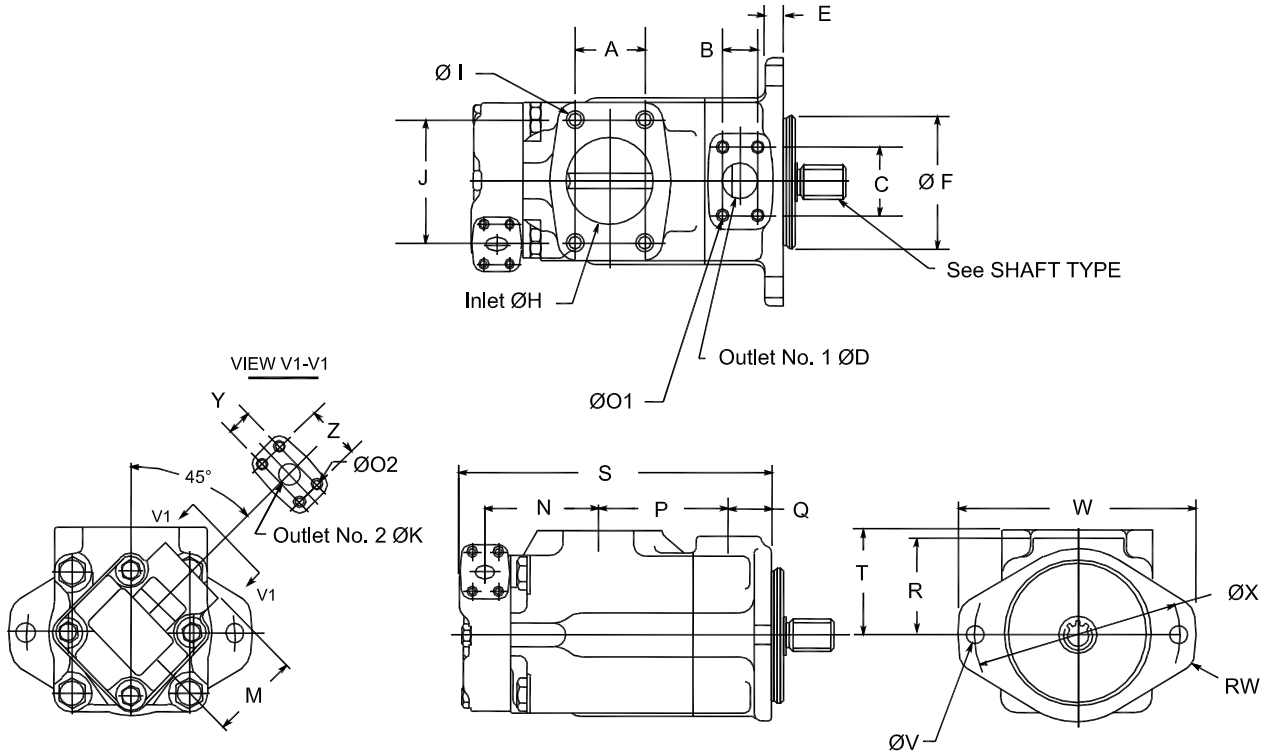


#86 Straight Shaft

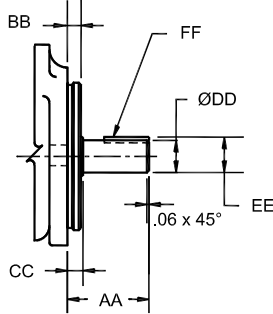


	A	B	C	øD	E	øF	øH	J	øK	M	N	P	Q	R	
BODY	2.44	1.19	2.31	1.25	0.62	5.000/4.998	3.00	4.19	0.75	3.00	3.92	4.50	1.50	3.25	
	S	T	øV x 2	RW	W	øX	Y	Z							
	10.9	3.50	0.69	0.63	8.38	7.13	0.88	1.88							
PORT CONN.	ØO1 x 4 Holes			ØO2 x 4 Holes			ØI x 4 Holes			Outlet No 1 Flange		Outlet No 2 Flange		Inlet Flange	
	7/16"-14UNC-2B x 0.88			3/8"-16UNC-2B x 0.75			5/8"-11UNC-2B x 1.125			F1-10-		F1-6-		F1-24-	
SHAFT TYPE	Shaft Type	AA	BB	CC	øDD	EE	FF Key Width x Length								
	1	2.88	.375	.435	1.250/1.248	1.392/1.382	.313x1.50								
	86	3.88	.375	.435	1.374/1.373	1.518/1.508	.312x2.13								
	Shaft Type	AA	BB	CC	øDD	EE	Spline Data Code								
11	2.31	.375	.437	1.38	.25	D (See Below Chart)									
Spline Data Code	Number of Teeth	Pitch	Major Diameter	Form Diameter	Minor Diameter	Minor Diameter									
D	14	12/24	1.248/1.247	1.07	1.063/1.050	Major dia. fit									

3525VQH INSTALLATION DIMENSION

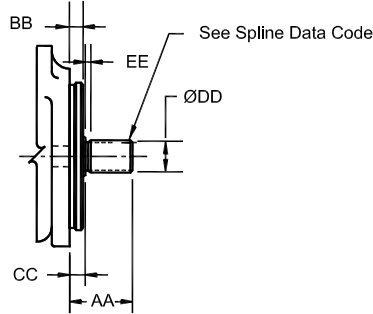


#1 Straight Shaft

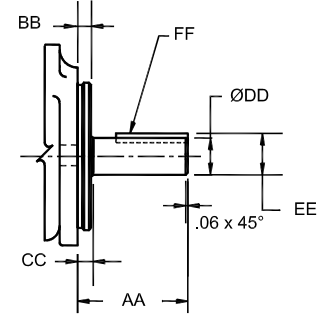


SHAFT TYPE

#11 Splined Shaft

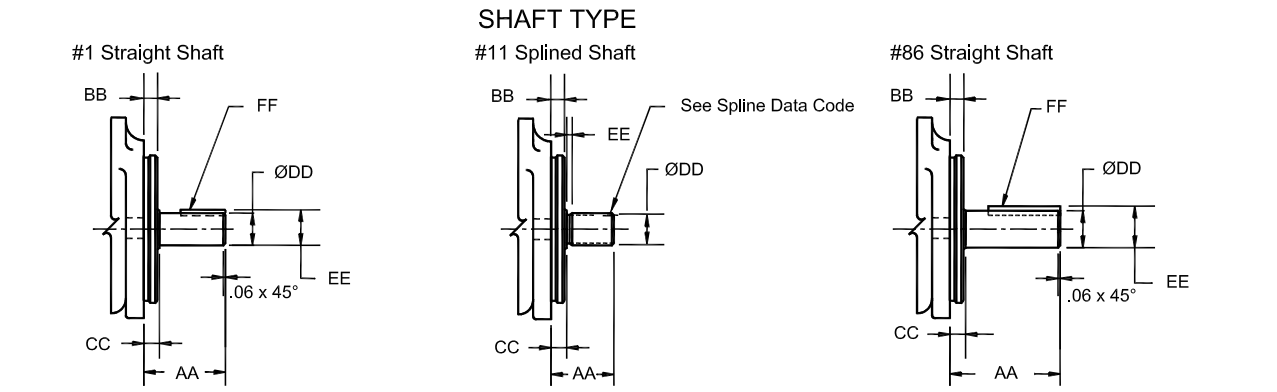
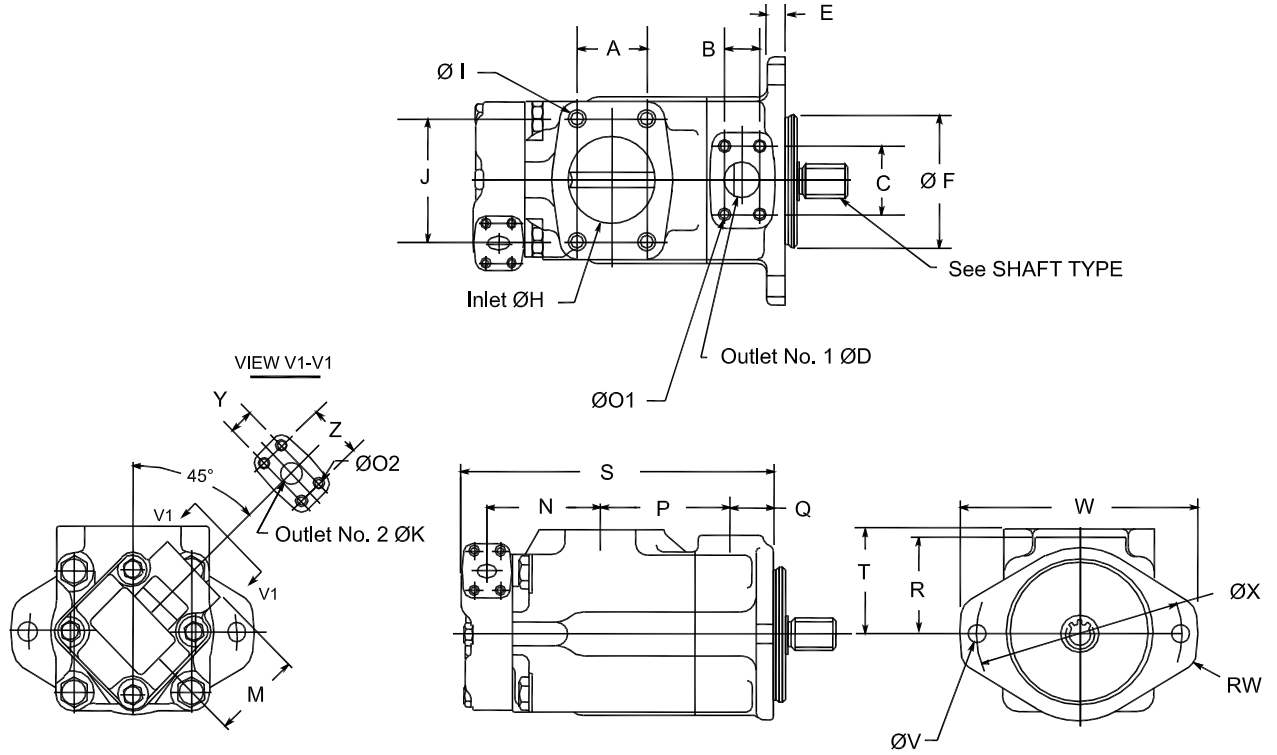


#86 Straight Shaft



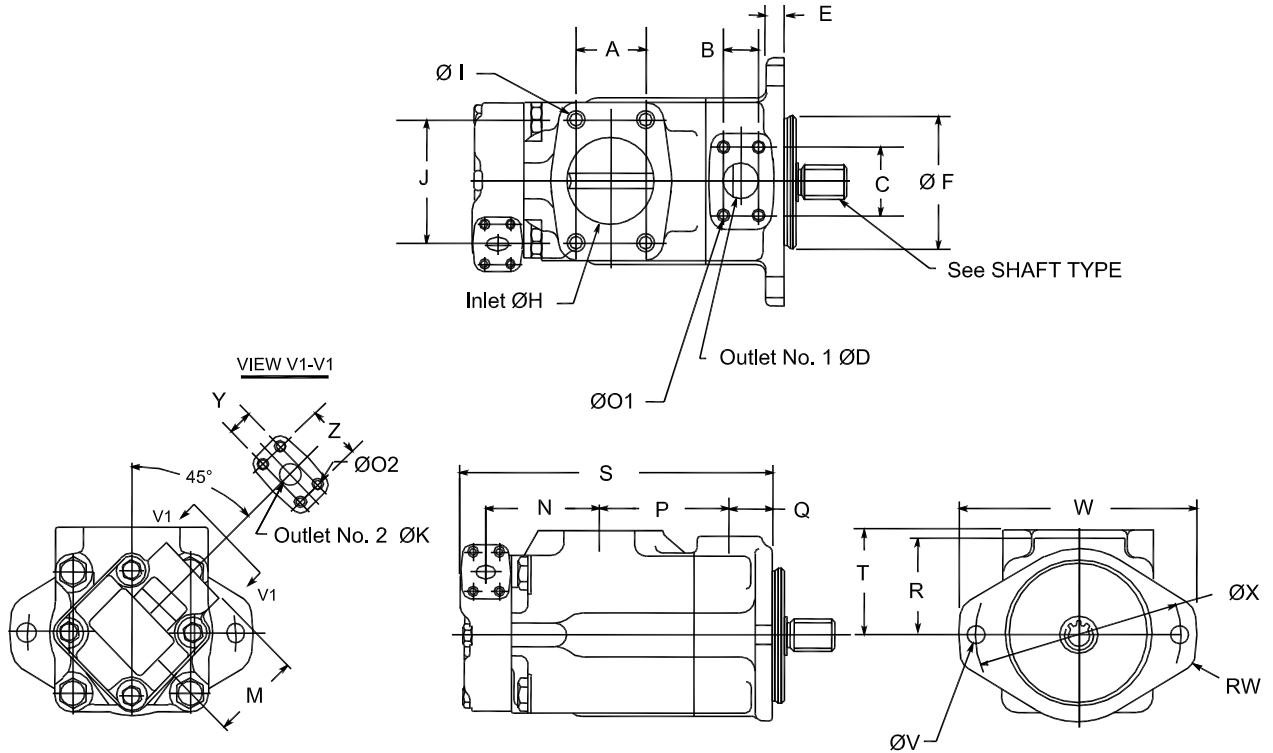
BODY	A	B	C	øD	E	øF	øH	J	øK	M	N	P	Q	R
		2.44	1.19	2.31	1.25	0.62	5.000/4.998	3.00	4.19	1.00	2.94	4.31	4.50	1.50
PORT CONN.	S	T	øV x 2	RW	W	øX	Y	Z						
	11.57	3.50	0.69	0.63	8.38	7.13	1.03	2.06						
SHAFT TYPE	øO1 x 4 Holes		øO2 x 4 Holes		øI x 4 Holes			Outlet No 1 Flange		Outlet No 2 Flange		Inlet Flange		
	7/16"-14UNC-2B x 0.88		3/8"-16UNC-2B x 0.66		5/8"-11UNC-2B x 1.125			F1-10-		F1-8-		F1-24-		
	Shaft Type	AA	BB	CC	øDD	EE	FF Key Width x Length							
	1	2.88	.375	.435	1.250/1.248	1.392/1.382	.313x1.50							
86	3.88	.375	.435	1.374/1.373	1.518/1.508	.312x2.13								
Shaft Type	AA	BB	CC	øDD	EE	Spline Data Code								
11	2.31	.375	.437	1.38	.25	D (See Below Chart)								
Spline Data Code	Number of Teeth	Pitch	Major Diameter	Form Diameter	Minor Diameter	Minor Diameter								
D	14	12/24	1.248/1.247	1.07	1.063/1.050	Major dia. fit								

4520VQH INSTALLATION DIMENSION

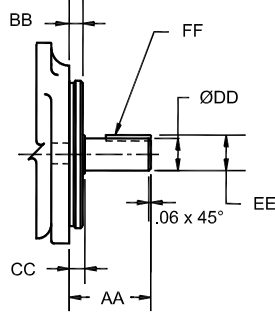


	A	B	C	øD	E	øF	øH	J	øK	M	N	P	Q	R	
BODY	2.75	1.41	2.75	1.50	0.62	5.000/4.998	3.50	4.75	0.75	3.00	4.72	4.70	1.69	3.69	
	S	T	øV x 2	RW	W	øX	Y	Z							
	12.08	4.03	0.69	0.63	8.38	7.13	0.88	1.88							
PORT CONN.	ØO1 x 4 Holes			ØO2 x 4 Holes			Ø I x 4 Holes			Outlet No 1 Flange		Outlet No 2 Flange		Inlet Flange	
	1/2"-13UNC-2B x 0.94			3/8"-16UNC-2B x 0.75			5/8"-11UNC-2B x 1.25			F1-12-		F1-6-		F1-28-	
SHAFT TYPE	Shaft Type	AA	BB	CC	øDD	EE	FF Key Width x Length								
	1	2.44	.500	.560	1.250/1.248	1.390/1.380	.312x1.12								
	86	3.44	.500	.560	1.499/1.498	1.669/1.659	.375x2.00								
	Shaft Type	AA	BB	CC	øDD	EE	Spline Data Code								
	11	2.44	.500	.565	1.56	.38	D (See Below Chart)								
Spline Data Code	Number of Teeth	Pitch	Major Diameter	Form Diameter	Minor Diameter	Minor Diameter									
D	14	12/24	1.248/1.247	1.07	1.063/1.050	Major dia. fit									

4525VQH INSTALLATION DIMENSION

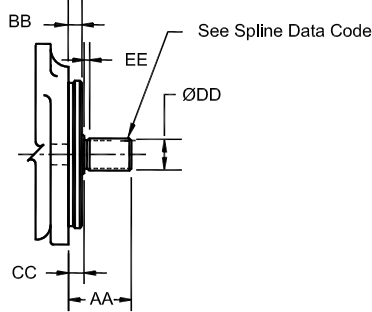


#1 Straight Shaft

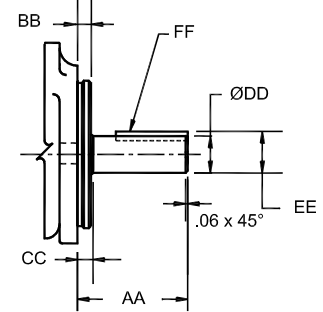


SHAFT TYPE

#11 Splined Shaft

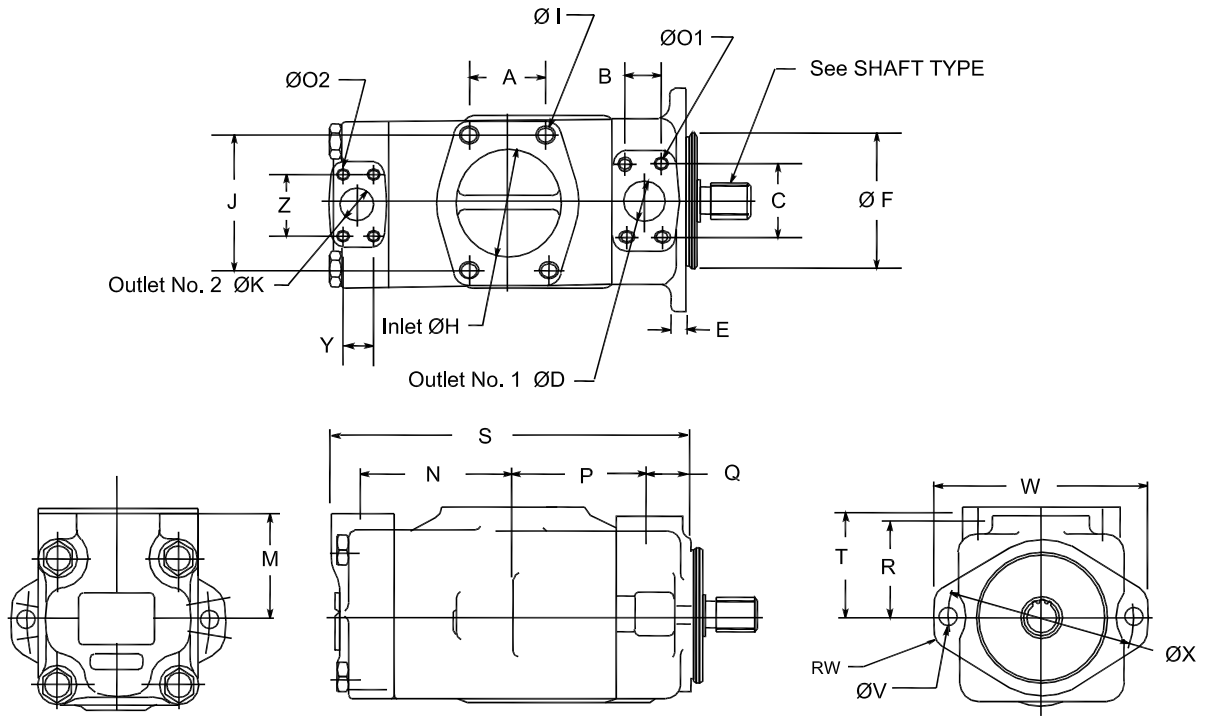


#86 Straight Shaft



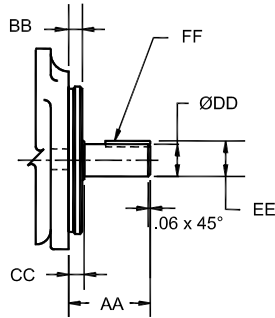
BODY	A	B	C	øD	E	øF	øH	J	øK	M	N	P	Q	R					
		2.75	1.41	2.75	1.50	0.62	5.000/4.998	3.50	4.75	1.00	2.94	5.35	4.70	1.69	3.69				
PORT CONN.	S	T	øV x 2	RW	W	øX	Y	Z	øO1 x 4 Holes		øO2 x 4 Holes		øI x 4 Holes		Outlet No 1 Flange	Outlet No 2 Flange	Inlet Flange		
	13.0	4.03	0.69	0.63	8.38	7.13	1.03	2.06							12"-13UNC-2B x 0.94	3/8"-16UNC-2B x 0.66	5/8"-11UNC-2B x 1.25	F1-12-	F1-8-
SHAFT TYPE	Shaft Type	AA	BB	CC	øDD	EE	FF Key Width x Length												
	1	2.44	.500	.560	1.250/1.248	1.390/1.380	.312x1.12												
	86	3.44	.500	.560	1.499/1.498	1.669/1.659	.375x2.00												
	Shaft Type	AA	BB	CC	øDD	EE	Spline Data Code												
11	2.44	.500	.565	1.56	.38	D (See Below Chart)													
Spline Data Code	Number of Teeth	Pitch	Major Diameter	Form Diameter	Minor Diameter	Minor Diameter													
D	14	12/24	1.248/1.247	1.07	1.063/1.050	Major dia. fit													

4535VQH INSTALLATION DIMENSION

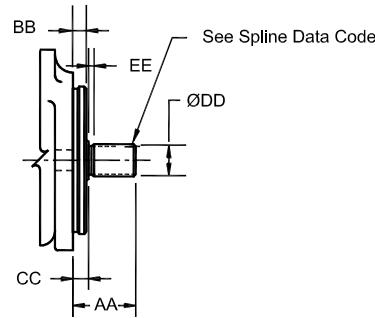


SHAFT TYPE

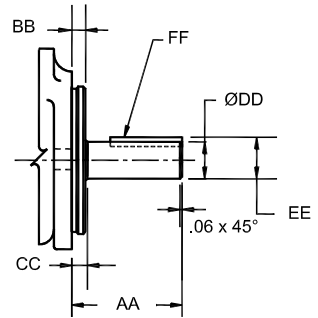
#1 Straight Shaft



#11 Splined Shaft

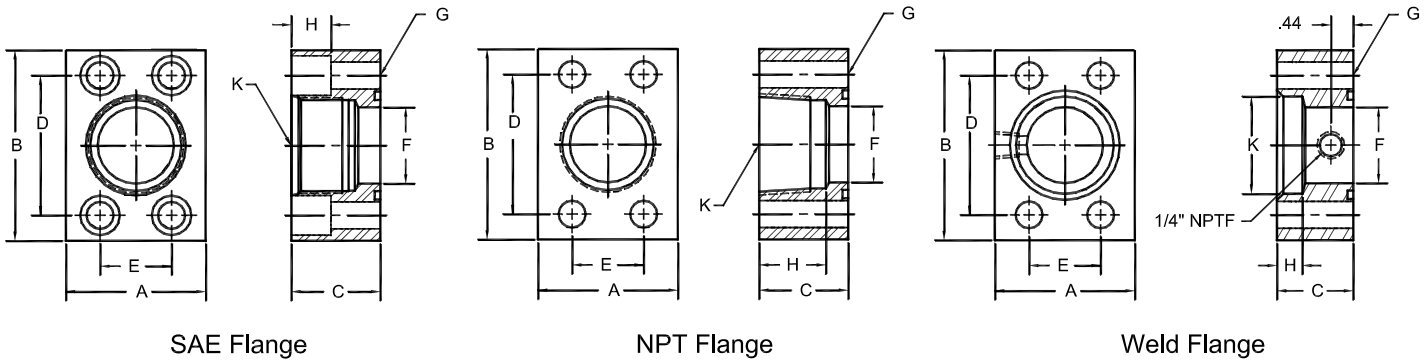


#86 Straight Shaft



	A	B	C	øD	E	øF	øH	J	øK	M	N	P	Q	R
BODY	3.06	1.41	2.75	1.50	0.62	5.000/4.998	4.00	5.13	1.25	4.00	5.84	5.25	1.69	3.69
	S	T	øV x 2	RW	W	øX	Y	Z						
	13.9	4.03	0.69	0.63	8.38	7.13	1.19	2.31						
PORT CONN.	ØO1 x 4 Holes			ØO2 x 4 Holes			Ø I x 4 Holes			Outlet No 1 Flange	Outlet No 2 Flange	Inlet Flange		
	1/2"-13UNC-2B x 0.94			7/16"-14UNC-2B x 0.88			5/8"-11UNC-2B x 1.25			F1-12-	F1-10-	F1-32-		
SHAFT TYPE	Shaft Type	AA	BB	CC	øDD	EE	FF Key Width x Length							
	1	2.44	.500	.560	1.250/1.248	1.390/1.380	.312x1.12							
	86	3.44	.500	.560	1.499/1.498	1.669/1.659	.375x2.00							
	Shaft Type	AA	BB	CC	øDD	EE	Spline Data Code							
11	2.44	.500	.565	1.56	.38	D (See Below Chart)								
Spline Data Code	Number of Teeth	Pitch	Major Diameter	Form Diameter	Minor Diameter	Minor Diameter								
D	14	12/24	1.248/1.247	1.07	1.063/1.050	Major dia. fit								

SAE 4-Bolt Flange



SAE Straight Threaded	Flange Size	A	B	C	D	E	F	G	H	K	BOLT SIZE ①
F1-6-S	3/4	1.75	2.62	1.5	1.875	0.875	0.75	0.41	0.59	1 1/16-12	3/8-16 x 1 1/2
F1-8-S	1	2	2.82	1.5	2.062	1.031	1	0.41	0.59	1 5/16-12	3/8-16 x 1 1/2
F1-10-S	1 1/4	2.5	3.19	1.5	2.312	1.188	1.25	0.47	0.71	1 5/8-12	7/16-14 x 1 1/2
F1-12-S	1 1/2	2.75	3.75	1.75	2.75	1.406	1.5	0.53	0.78	1 7/8-12	1/2-13 x 1 3/4

NPTF Pipe Threaded	Flange Size	A	B	C	D	E	F	G	H	K (NPTF)	BOLT SIZE ①
F1-6-P	3/4	1.75	2.62	1.25	1.88	0.88	0.75	0.41	1.06	3/4	3/8-16 x 2
F1-8-P	1	2.00	2.82	1.50	2.06	1.03	1.00	0.41	1.25	1	3/8-16 x 2 1/4
F1-10-P	1 1/4	2.50	3.19	1.50	2.31	1.19	1.25	0.47	1.31	1 1/4	7/16-14 x 2 1/4
F1-12-P	1 1/2	2.75	3.75	1.75	2.75	1.41	1.50	0.53	1.31	1 1/2	1/2-13 x 2 1/2
F1-16-P	2	3.25	4.00	1.75	3.06	1.69	1.94	0.53	1.31	2	1/2-13 x 2 1/2
F1-20-P ②	2 1/2	4.00	4.50	2.00	3.50	2.00	2.44	0.53	1.75	2 1/2	1/2-13 x 2 3/4
F1-24-P ③	3	4.50	5.50	2.25	4.19	2.44	2.94	0.66	2.00	3	5/8-11 x 3 1/2

Pipe Welded	Flange Size	A	B	C	D	E	F	G	H	K	BOLT SIZE ①
F1-8-W	1	2.00	2.82	1.25	2.062	1.031	1.00	0.41	0.50	1.335	3/8-16 x 2
F1-10-W	1 1/4	2.50	3.19	1.25	2.312	1.188	1.25	0.47	0.50	1.680	7/16-14 x 2
F1-12-W	1 1/2	2.75	3.75	1.25	2.750	1.406	1.50	0.53	0.50	1.920	1/2-13 x 2
F1-16-W	2	3.25	4.00	1.50	3.062	1.688	1.94	0.53	0.62	2.411	1/2-13 x 2 1/4
F1-20-W ②	2 1/2	4.00	4.50	1.75	3.500	2.000	2.44	0.53	0.75	2.911	1/2-13 x 2 1/2
F1-24-W ③	3	4.50	5.31	2.00	4.188	2.438	2.94	0.66	0.75	3.540	5/8-11 x 3
F1-28-W ④	3 1/2	5.00	6.00	1.50	4.750	2.750	3.44	0.66	0.75	4.045	5/8-11 x 2 1/2
F1-32-W ④	4	5.50	6.38	1.50	5.125	3.062	3.94	0.66	0.75	4.550	5/8-11 x 2 1/2

- ① Order Separately
- ② 2500 PSI Max
- ③ 2000 PSI Max
- ④ 500 PSI Max