

Hydraulic Pump/Motor

Series F11
Fixed Displacement



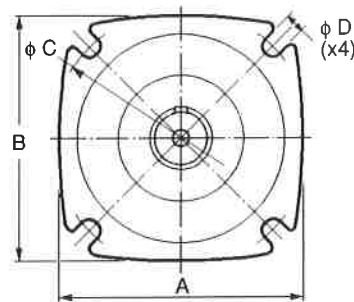
Specifications

Frame size	5	10	19	28	39	58	78	110	150	250	
Displacement [cm ³ /rev] [cu in/rev]	4.88	9.84	19.0	28.1	38.7	58.2	78.2	110	150	242	
	0.30	0.60	1.16	1.71	2.36	3.55	4.77	6.71	9.15	14.8	
Operating speed [rpm]	12000	10000	7500	6500	5200	4500	3500	3300	3000	2700	
	max intermittent	8500	6800	5400	5000	4200	3600	3100	2800	2600	2400
	max continuous	200	200	150	150	125	125	100	100	100	100
min continuous											
Pump selfprim. speed [rpm] L or R function; max	4600	4200	3500	3000	2400	2200	2100	1800	1700	1500	
Torque [Nm] (theor.) at 100 bar at 1000 psi [lb ft]	7.8	15.7	30.2	44.7	61.6	92.5	124	175	239	385	
	4.0	8.0	15.4	22.8	31.4	47.1	63	89	122	196	
Output power											
	max intermittent [kW] [hp]	18 24	28 38	45 60	58 78	72 97	95 127	120 161	150 201	200 268	300 402
max continuous [kW] [hp]	13 17.5	20 27	32 43	40 54	52 70	68 91	85 114	110 147	145 194	190 255	
Operating pressure											
	max intermittent [bar] [psi]	420 6000	420 6000	420 6000	420 6000	420 6000	420 6000	420 6000	420 6000	420 6000	420 6000
max continuous [bar] [psi]	350 5000	350 5000	350 5000	350 5000	350 5000	350 5000	350 5000	350 5000	350 5000	350 5000	
Main circuit temp., max [°C] [°F]	75	75	75	75	75	75	75	75	75	75	
	167	167	167	167	167	167	167	167	167	167	
	min [°C]	-35	-35	-35	-35	-35	-35	-35	-35	-35	-35
	min [°F]	-31	-31	-31	-31	-31	-31	-31	-31	-31	-31
Fluid viscosity, max [mm ² /s] [SUS]	1000	1000	1000	1000	1000	1000	1000	1000	1000	100	
	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	
min [mm ² /s] [SUS]	10 60	10 60	10 60	10 60	10 60	10 60	10 60	10 60	10 60	10 60	
Fluid contamination level (ISO code 4406)	18/13	18/13	18/13	18/13	18/13	18/13	18/13	18/13	18/13	18/13	
Moment of inertia (x10 ⁻³) [kg m ²] [ft lb s ²]	0.18	0.44	1.2	2.1	4.5	5.9	12	16	40	46	
	0.13	0.32	0.88	1.5	3.3	4.3	8.8	12	29	34	
Weight [kg] [lb]	5	7.5	11	14	22.5	23	39	46	70	77	
	11	16.5	24	31	50	51	86	101	154	170	

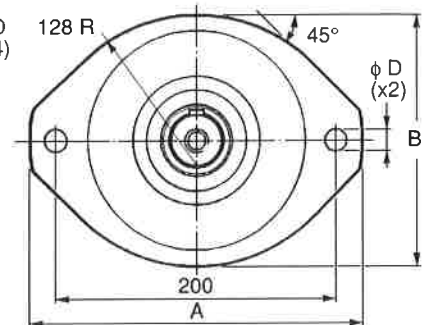
Installation dimensions

F11-78, F11-110 and F11-150 (CETOP-versions)

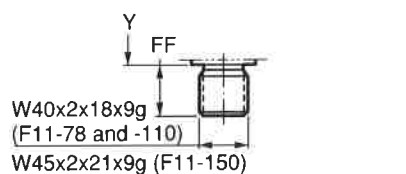
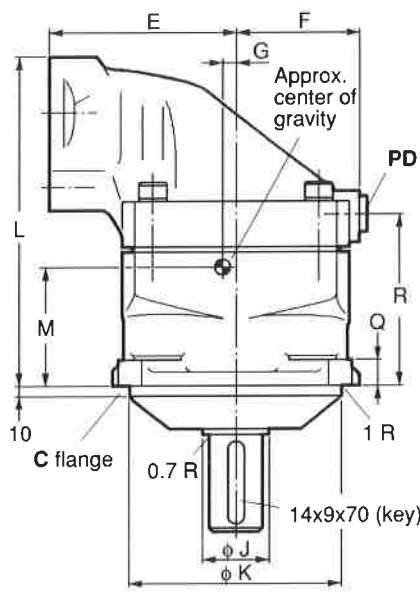
Dim.	F11-78	F11-110	F11-150
A max	242	210	236
B	180	210	236
C	-	224	250
D	18	18	22
E	140	160	172
F	95	105	118
G	15	22	18
J min	52	52	57
K (tol h8)	160.000/ 159.937	180.000/ 179.937	200.000/ 199.928
L	253	279	307
M	82	95	109
Q	22	23	25
R	139	144	159
S max	176	196	222
T	86	90	101
U	31.75	31.75	36.5
V (tol. k6)	45.018/ 45.002	45.018/ 45.002	50.018/ 50.002
W	48.5	48.5	53.5
X	205	231	250
Y	40	40	50
Z	72	62	85
AA	37.5	38.3	46
BB	82	82	82
CC	30	30	30
DD	M14 x25	M14 x25	M16 x35
EE	66.68	66.68	79.38
FF	44	44	50



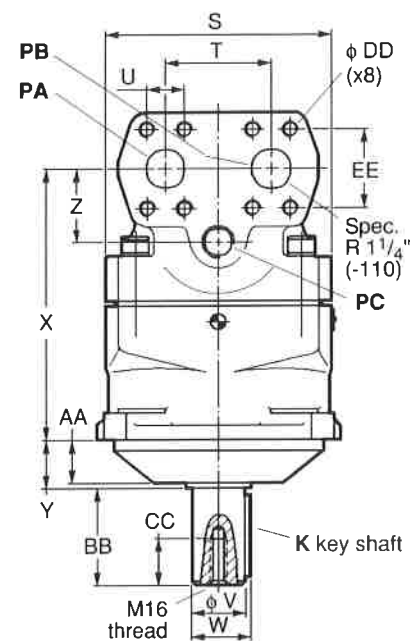
C mounting flange
(F11-110 and -150)



C mounting flange (F11-78)



D spline shaft (DIN 5480)



F11-110 shown

Ports F11-78 type F

PA, PB	1 1/4" *
PC, PD	BSP 3/4"

F11-110

Ports type F (std.) type B (spec.)

PA, PB	1 1/4" *	BSP 1 1/4"
PC, PD	BSP 3/4"	BSP 3/4"

Ports F11-150 type F

PA, PB	1 1/2" *
PC, PD	BSP 3/4"

* 6000 psi flange (SAE J581c)