

**Technical Information Series 90 Axial Piston Pumps**

Feature	Unit	Frame						
		042	055	075	100	130	180	250
Displacement	cm <sup>3</sup> /rev. [in <sup>3</sup> /rev.]	42 [2.56]	55 [3.35]	75 [4.59]	100 [6.10]	130 [7.93]	180 [10.98]	250 [15.25]
Flow at rated speed (theoretical)	l/min. [US gal/ min.]	176 [46]	215 [57]	270 [71]	330 [87]	403 [106]	468 [124]	575 [160]
Torque at maximum displacement (theoretical)	N·m/bar [lbf·in/1000 psi]	0.67 [410]	0.88 [530]	1.19 [730]	1.59 [970]	2.07 [1260]	2.87 [1750]	3.97 [2433]
Mass moment of inertia of rotating components	kg·m <sup>2</sup> [slug·ft <sup>2</sup> ]	0.0023 [0.0017]	0.0060 [0.0044]	0.0096 [0.0071]	0.0150 [0.0111]	0.023 [0.0170]	0.0380 [0.0280]	0.0650 [0.0479]
Weight (with control opt. MA)	kg [lb]	34 [75]	40 [88]	49 [108]	68 [150]	88 [195]	136 [300]	154 [340]
Mounting (per ISO 3019-1)		Flange 102-2 (SAE B)	Flange 127-4 (SAE C)			Flange 152-4 (SAE D)	Flange 165-4 (SAE E)	
Rotation		Right hand or Left hand rotation						
Main ports: 4-bolt split-flange (per SAE J518 code 62)	mm [in]	19.05 [0.75]	25.4 [1.0]	25.4 [1.0]	25.4 [1.0]	31.75 [1.25]	31.75 [1.25]	38.1 [1.5]
Main port configuration		Twin port	Twin or side port			Twin port		
Case drain ports (SAE O-ring boss)	UNF thread (in.)	0.875-14	1.0625-12	1.0625-12	1.0625-12	1.3125-12	1.625-12	1.625-12
Other ports		SAE O-ring boss						
Shafts		Splined, and tapered shafts available						
Auxiliary mounting		SAE-A, B, C				SAE-A, B, C, D	SAE-A, B, C, D, E	

**Operating Parameters**

Parameter	Unit	Frame						
		042	055	075	100	130	180	250
Input speed								
Minimum	min-1(rpm)	500	500	500	500	500	500	500
Rated Speed		4200	3900	3600	3300	3100	2600	2300
Maximum		4600	4250	3950	3650	3400	2850	2500

**Operating parameters**

System pressure	Maximum working pressure	bar	[psi]	450	[6525]
	Maximum pressure			480	[6960]
	Maximum low loop			45	[650]
	Minimum low loop pressure			10	[145]
Charge pressure	Minimum	bar	[psi]	18	[261]
	Maximum			34	[493]
Control pressure	Minimum (at corner power for EDC and FNR)	bar	[psi]	14	[203]
	Minimum (at corner power for NFPE)			22	[319]
	Maximum			40	[580]
Charge pump inlet pressure	Rated	bar (absolute)	[in Hg vacuum]	0.7	[9]
	Minimum (cold start)			0.2	[24]
	Maximum	bar	[psi]	4.0	[58]
Case pressure	Rated	bar	[psi]	3.0	[44]
	Maximum			5.0	[73]
Lip seal external pressure	Maximum	bar	[psi]	0.4	[5.8]