Low noise bell-housing will help to attenuate the transmission of vibrations and the emission of noise generated by the system.
Self-evidently, however, the mere adoption of a low noise bell-housing will achieve little unless the motor and pump are correctly installed on the machine or on the tank of the hydralic power unit.

Should be followed in order to achieve best possible results and correct installation:

1 MOTOR AND PUMP UNIT MOUNTED HORIZONTALLY ON OIL TANK LID

- The suction pipe attached to the pump must be rigid and fitted using a resilient bulkhead flange of the FTA series, which helps to cushion the vibrations propagated between the pipe and the tank lid.
  If pipes need to be bent, the radius of curvature must be at least 3 times the pipe diameter.
  Do not use elbow fittings, as these will significantly increase pressure losses.

- The pressure pipeline of the pump must be flexible and long enough to include bends with the minimum radius of curvature recommended by the manufacturer for the specified operating pressure.

- The return pipeline running from the service to the filter must be flexible.
  Where oil is returned directly to the tank of the hydraulic power unit through a rigid pipe, it is advisable to use a resilient bulkhead flange of the FTR series, which helps to cushion the vibrations propagated between the pipe and the tank lid.

- Anti-vibration devices (resilient mounts or damping rods) must be located under the feet of the electric motor or the PDM foot brackets, depending on the mounting position of the motor.

- The lids of hydraulic oil tanks must be sturdy enough to support the load they carry.

2 MOTOR AND PUMP UNIT MOUNTED HORIZONTALLY ON MACHINE

- As a matter of good practice, the oil tank and motor-pump unit should be mounted on a single supporting frame of strength sufficient to support the load.

- If the hydraulic system is fitted with a side-mounted filter, the suction pipeline to the pump must be flexible and long enough to include bends with the minimum radius of curvature recommended by the manufacturer.

- If the suction filter is not side mounted, the pipeline should be rigid and installed in conjunction with a compensating coupling.

- The pressure pipeline of the pump must be flexible, and long enough to include bends with the minimum radius of curvature recommended by the manufacturer for the specified operating pressure.

- The return pipeline running from the service to the filter must be flexible.
  Where oil is returned directly to the tank of the hydraulic power unit through a rigid pipe, it is advisable to use a resilient bulkhead flange of the FTR series, which helps to cushion the vibrations propagated between the pipe and the tank lid.

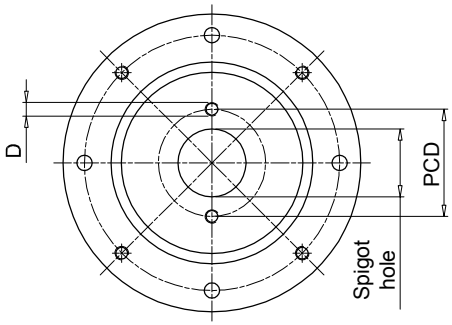
- Anti-vibration devices (resilient mounts or damping rods) must be located under the feet of the electric motor or the PDM foot brackets, depending on the mounting position of the motor.

Note:
The above guidelines are indicative only and subordinate to the solutions adopted ultimately by design engineers.

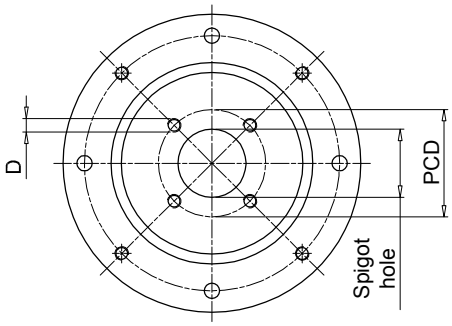
FINAL CONSIDERATION

For best results, in any event, the motor-and-pump unit should be incorporated into the hydraulic system in such a way that no one component is rigidly associated with another, resulting in the propagation of vibration, and consequently noise.

Valid configuration for bell-housing up to ø400

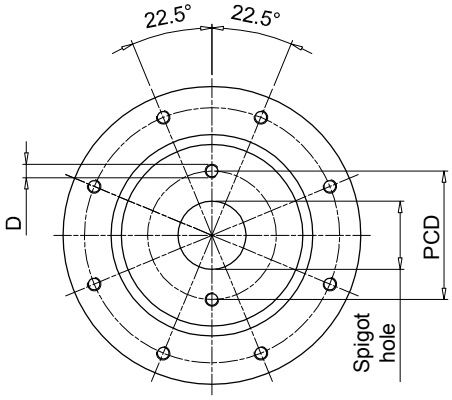


Bell-housing with nr. 2 holes at pump interface, aligned with through holes at motor interface.

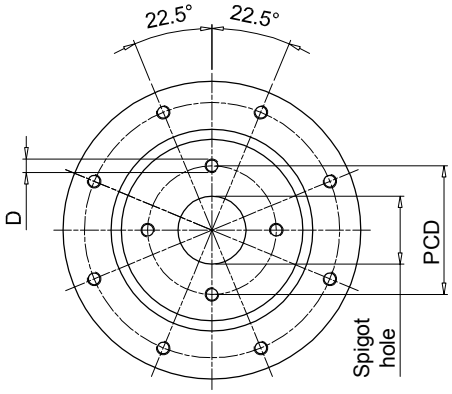


Bell-housing with nr. 4 holes at pump interface, aligned with thread holes at motor interface.

Valid configuration for bell-housing from ø450 to ø660



Bell-housing with nr. 2 holes at pump interface + 22,5° compared to through holes at motor interface.



Bell-housing with nr. 4 holes at pump interface + 22,5° compared to thread holes at motor interface.

Spigot hole [mm]	PCD	D	Nr. holes	Code	Type
40	72.00	M8	2	**191**	-
45.2	88.90	M8	4	**096**	-
	71.80	M8	4	**120**	-
50	80.00	M8	2	**052**	ISO3019-2-50-B2
	93.00	M10	2	**053**	-
	60.00	M5	4	**280**	-
	63.00	Ø7	4	**057**	-
	93.00	M8	2	**287**	-
50.8	82.50	M8	2	**050**	SAE A-A 50-2
56	76.00	M6	4	**234**	-
57.15	106.40	Ø11	2	**212**	-
60	74.00	M10	4	**098**	-
	98.50	M6	4	**147**	-
	75.00	M6	4	**227**	-
62.7	157.20	M12	4	**231**	-
63	100.00	M8	2	**042**	ISO3019-2-63-B2
	125.00	M6	4	**043**	-
	85.00	M8	4	**044**	-
	80.00	M8	2	**051**	-
	80.00	Ø8,5	4	**058**	-
	100.00	M10	2	**062**	-
	85.00	M8	4	**168**	ISO3019-2-63-B4
	90.00	M8	4	**271**	-
65	90.00	M8	4	**073**	-
70	84.00	Ø7	4	**289**	-
71.8	88.90	M10	4	**047**	-
75	102.00	M10	4	**139**	-
80	100.00	M8	4	**024**	ISO3019-2-80-B4
	103.20	M8	2	**045**	ISO3019-2-80-B2
	100.00	Ø11	4	**059**	-
	100.00	M10	2	**061**	-
	110.00	M10	2	**063**	-
	140.00	M10	2	**064**	-
	115.00	M10	2	**065**	-
	100.00	M10	4	**067**	-
	106.40	M10	2	**083**	-
	130.00	M8	4	**087**	-
	100.00	Ø8,5	4	**093**	-
	113.00	M12	4	**104**	-
	95.00	M8	4	**169**	-
	103.00	M8	4	**242**	-
	110.00	M10	4	**272**	-
82.55	106.40	M10	2	**060**	SAE A 82-2
	105.00	M10	4	**097**	-
	106.40	M8	2	**254**	-
	146.00	M12	2	**260**	-
	110.00	M10	2	**284**	-
85	106.40	M10	2	**066**	-
90	112.00	M8	2	**134**	-
	105.00	M8	4	**156**	-
	118.00	Ø9	2	**163**	-
	112.00	Ø9	2	**164**	-
92	140.00	M8	4	**088**	-
	145.00	M10	4	**089**	-

"-": configuration out of ISO & SAE Standard

Spigot hole [mm]	PCD	D	Nr. holes	Code	Type
95	115.00	M8	4	137	-
	127.00	M10	4	131	-
98.4	125.00	Ø11	4	128	-
100	125.00	M10	4	023	ISO3019-2-100-B4
	125.00	M10	2	025	ISO3019-2-100-B2
	125.00	Ø11	2	031	-
	125.00	M5	4	032	-
	190.00	Ø7	4	038	-
	125.00	ø13	4	041	-
	125.00	M12	2	071	-
	140.00	M12	2	072	-
	146.00	M12	2	075	-
	126.00	M10	2	106	-
	120.00	M8	4	122	-
	160.00	M10	4	141	-
	150.00	M10	4	150	-
101.6	161.50	M12	4	029	-
	146.00	M12	2	070	SAE B 101-2
	127.00	M12	4	125	-
	146.00	M10	2	159	-
	127.00	M10	4	224	-
105	146.00	M12	2	076	-
110	175.00	M10	4	110	-
	130.00	M8	4	154	-
	200.00	M10	4	202	-
	135.00	M10	4	219	-
	145.00	M12	4	273	-
112	140.00	M12	2	074	-
	140.00	M10	2	138	-
	130.00	M10	4	264	-
115	180.00	M12	4	198	-
116	160.00	M14	2	084	-
120	210.00	M16	2	094	-
	145.00	M10	4	155	-
	150.00	Ø13	4	267	-
125	160.00	M12	4	026	ISO3019-2-125-B4
	160.00	Ø13	4	033	-
	160.00	M12	2	079	-
	180.00	M16	2	082	ISO3019-2-125-B2
	155.00	M10	4	102	-
	160.00	Ø17	4	113	-
	200.00	M12	4	114	-
	181.20	M16	2	136	-
	200.00	M16	4	200	-
	180.00	Ø20	4	215	-
	170.00	Ø18	4	237	-
127	161.50	M12	4	021	-
	181.20	M16	2	080	SAE C 127-2
	161.50	M14	4	140	-
130	165.00	Ø11	4	054	-
	150.00	M12	4	068	-
	181.20	M16	2	085	-
	165.00	M12	4	124	-
	165.00	M14	4	135	-

"-": configuration out of ISO & SAE Standard

Spigot hole [mm]	PCD	D	Nr. holes	Code	Type
130	165.00	M10	4	253	-
135	160.00	M10	4	151	-
	175.40	M12	4	220	-
140	180.00	M14	4	077	ISO3019-2-140-B4
	180.00	M12	2	081	-
	165.00	M10	4	157	-
	200.00	M16	4	176	ISO3019-2-140-B2
	165.00	M10	4	223	-
	180.00	M16	2	232	-
150	185.00	M16	4	069	-
152.4	228.60	M16	4	022	-
	228.60	M18	2	090	-
	228.60	M18	4	108	-
	217.50	Ø17	4	118	-
	228.60	M20	2	166	SAE D 152-2
	228.60	M20	4	192	SAE D 152 -4
	190.50	M8	4	207	-
160	200.00	M16	4	027	ISO3019 - 2 -160 B4
	200.00	Ø17	4	035	-
	200.00	M16	2	091	-
	224.00	M20	2	092	ISO3019 - 2 -160 B2
	200.00	M12	2	107	-
	230.00	M22	4	111	-
	185.00	M12	4	152	-
	224.00	M16	4	184	-
	230.00	M22	4	228	-
162	188.00	M12	4	263	-
165.1	317.35	M20	4	143	SAE E 165 - 4
	317.35	M24	2	145	SAE E 165 - 2
	229.00	M20	4	201	-
	317.35	M18	4	204	-
175	200.00	M12	4	153	-
	230.00	M18	2	185	-
177.8	350.00	M24	4	146	SAE F 177 - 4
	216.00	M12	4	222	-
	350.00	M24	2	203	SAE F 177 - 2
180	216.00	M12	4	055	-
	216.00	M16	4	078	-
	224.00	M16	4	112	ISO3019 - 2 -180 B4
	216.00	M12	4	132	-
	215.00	M22	4	148	-
	230.00	M22	4	226	-
200	250.00	M20	4	028	ISO3019 - 2 -200 B4
	250.00	Ø22	4	095	-
	280.00	M24	2	117	-
	230.50	M12	4	214	-
203.2	254.00	M14	4	210	-
205	240.00	M16	4	133	-
224	280.00	M20	4	144	ISO3019 - 2 -224 B4
	280.00	Ø22	4	205	-
250	310.00	M24	4	238	-
	315.00	M20	4	282	ISO3019 - 2 -250 B4
275	355.00	M16	4	233	-
	355.00	Ø18	4	281	-

"-": configuration out of ISO & SAE Standard