

GENERAL REFERENCE DATA

TUBING SIZE	WALL	O.D.	I.D.	AREA	WORKING PRESSURE	WEIGHT PER FT.	GALLONS PER FT.	TUBING SUPPORT
LOW PRESSURE STEEL TUBING								
5/8"	0.035	0.625	0.555	0.242	2500	0.221	0.0126	8 ft. O.C.
3/4"	0.035	0.750	0.680	0.363	2100	0.267	0.0188	8 ft. O.C.
1"	0.049	1.000	0.902	0.639	2200	0.498	0.0332	8 ft. O.C.
Tubing conforming to SAE J525 and J536 specifications								
HIGH PRESSURE STEEL TUBING								
5/8"	0.083	0.625	0.459	0.166	8100	0.480	0.0086	8 ft. O.C.
3/4"	0.095	0.750	0.560	0.246	7700	0.665	0.0128	8 ft. O.C.
1"	0.120	1.000	0.760	0.454	7250	1.130	0.0236	8 ft. O.C.
Tubing conforming to SAE J525 and J536 specifications								
LOW PRESSURE SCHEDULE 40 STEEL PIPE								
1/2"	0.109	0.840	0.620	0.304	640	0.850	0.00158	
3/4"	0.113	1.050	0.824	0.533	560	1.130	0.0277	8 ft. O.C.
1"	0.133	1.315	1.049	0.864	490	1.678	0.0449	8 ft. O.C.
1 1/4"	0.140	1.660	1.380	1.496	440	2.272	0.0777	8 ft. O.C.
1 1/2"	0.145	1.900	1.610	2.036	420	2.717	0.1058	
LOW PRESSURE TYPE "L" COPPER TUBING								
1/2"	0.040	0.625			613	0.285		
3/4"	0.045	0.875	0.660	0.342	495	0.455		8 ft. O.C.
1"	0.050	1.125	0.900	0.636	420	0.655		8 ft. O.C.
1 1/4"	0.055		1.140	1.020	373	0.884		8 ft. O.C.
1 1/2"	0.060	1.625	1.380	1.495	347	1.140		
LOW PRESSURE TYPE "M" COPPER TUBING								
1/2"	0.028							
3/4"	0.032	0.875	0.686	0.369	346	0.328		8 ft. O.C.
1"	0.035	1.125	0.930	0.679	286	0.465		8 ft. O.C.
1 1/4"	0.042	1.375	1.166	1.067	287	0.682		8 ft. O.C.
1 1/2"	0.049	1.625	1.527	1.831	282	0.940		

The following viscosity information is provided as a general guide to help you determine which pump would be most suitable for your application. It is also helpful in determining consequences of changes in temperature and how it will affect system performance. Please contact Liquidynamics if you need help in choosing equipment for your specific application and environment.

Technical information provided in the plumbing chart is a composite of generally available industry information and is meant to be used as a guide only. For specific information pertaining to your installation please contact your plumbing supplier.

TEMPERATURE		100 F	90 F	80 F	70 F	60 F	50 F	40 F	30 F	20 F	10 F	0 F
Fluid	ISO No.	38 C	32 C	27 C	21 C	15 C	10 C	4 C	-1 C	-7 C	-12 C	-18 C
A.T.F		35	44	56	72	95	127	176	250	366	544	872
5w-20		46	59	76	101	136	188	268	394	598	944	1557
10 w	32	37	49	64	87	122	176	263	407	659	1120	2012
5w-30		61	78	101	134	182	252	359	528	801	1262	2070
Hydraulic	46	46	61	82	114	163	241	370	592	995	1763	3319
10w-30		70	91	121	165	230	331	491	755	1205	2010	3517
20w	68	68	92	127	181	266	405	640	1059	1843	3392	6651
30w	100	100	135	187	267	392	596	940	1547	2670	4854	9364
10w-40		97	126	168	228	317	454	669	1017	1605	2635	4523
15w-40		123	164	223	311	445	656	998	1575	2585	4437	7999
40w	150	128	178	253	370	562	887	1457	2510	4555	8765	18015
20w-50		164	222	308	440	645	976	1530	2494	4243	7575	14266
80w-90		143	198	282	412	622	975	1591	2717	4880	9275	18770
50w	220	226	321	470	709	1110	1807	3074	5491	10358	20769	44595
80w-140		263	359	502	720	1062	1615	2542	4152	7068	12596	23621
90w gear	320	331	479	713	1099	1757	2926	5099	9346	18121	37417	82894
140w gear	460	479	702	1060	1658	2693	4557	8077	15065	29745	62574	141305
#2 grease					60,000							
Peanut Butter					250,000							

Numbers shown are absolute viscosity in centipoise (In this case; centipoise = centistokes x 0.9)

Grease is a thixotropic fluid: a fluid whose viscosity decreases as shear rate or agitation increases