

Force Chart

- Force is the dynamic power which is exported longitudinally through a hose, towards the ends.
- This is calculated by multiplying the area of the ID times the working pressure being used.
- Area of a circle = $r^2 \times \text{PI}$ (3.1416)
- Force = Area x Pressure
- Example: 3" hose operating at 500 PSI = $(1.5^2 \times 3.1416) \times 500 \text{ psi} = 3,534 \text{ PSI of Force}$

Hose ID	25 PSI	50 PSI	75 PSI	100 PSI	150 PSI	200 PSI	250 PSI	300 PSI	500 PSI	1000 PSI
1/4"	1	2	4	5	7	10	12	15	25	49
3/8"	3	6	8	11	17	22	28	33	55	110
1/2"	5	10	15	20	29	39	49	59	98	196
3/4"	11	22	33	44	66	88	110	133	221	442
1"	20	39	59	79	118	157	196	236	393	785
1-1/4"	31	61	92	123	184	245	307	368	614	1,227
1-1/2"	44	88	133	177	265	353	442	530	884	1,767
2"	79	157	236	314	471	628	785	942	1,571	3,142
2-1/2"	123	245	368	491	736	982	1,227	1,473	2,454	4,909
3"	177	353	530	707	1,060	1,414	1,767	2,121	3,534	7,069
4"	314	628	942	1,257	1,885	2,513	3,142	3,770	6,283	12,566
5"	491	982	1,473	1,964	2,945	3,927	4,909	5,891	9,818	19,635
6"	707	1,414	2,121	2,827	4,241	5,655	7,069	8,482	14,137	28,274
8"	1,257	2,513	3,770	5,027	7,540	10,053	12,566	15,080	25,133	50,266
10"	1,964	3,927	5,891	7,854	11,781	15,708	19,635	23,562	39,270	78,540
12"	2,827	5,655	8,482	11,310	16,965	22,620	28,724	33,929	56,549	113,098