

# DURAMASTER CYLINDERS

## FORCE & AIR CONSUMPTION TABLES

### FORCE CHART EXTEND (LBS.)

BORE	EFFECTIVE PISTON AREA	PRESSURE (PSI)											CUBIC FEET DISPLACEMENT PER IN. OF EXTEND STROKE
		40	50	60	80	90	100	125	150	175	200	400	
1 1/2	1.77	71	88	106	142	160	177	221	266	310	353	708	.00102
2	3.14	126	157	189	251	283	314	392	471	549	628	1256	.00182
2 1/2	4.91	196	246	295	393	442	491	614	737	859	982	1964	.00284
3 1/4	8.30	332	415	498	664	747	830	1037	1245	1452	1659	3320	.00480
4	12.57	503	629	754	1005	1131	1257	1571	1886	2200	2513	5028	.00727
5	19.64	785	982	1178	1571	1768	1964	2455	2946	3437	3928	7856	.01136
6	28.27	1130	1414	1696	2262	2544	2827	3534	4240	4947	5654	11308	.01636
8	50.26	2010	2513	3015	4020	4523	5026	6280	7539	8795	10052	20104	.02909

### FORCE CHART RETRACT (LBS.)

BORE	ROD	EFFECTIVE PISTON AREA	PRESSURE (PSI)											CUBIC FEET DISPLACEMENT PER IN. OF RETRACT STROKE
			40	50	60	80	90	100	125	150	175	200	400	
1 1/2	5/8"	1.46	58	73	87	116	131	146	182	219	255	292	584	.0008449
1 1/2	1"	.98	39	49	59	78	88	98	123	147	172	196	392	.0005671
2	5/8"	2.83	113	141	169	226	254	283	353	424	495	566	1132	.0016377
2	1"	2.35	94	118	141	188	212	235	294	353	411	470	940	.0013599
2 1/2	5/8"	4.60	184	230	276	368	414	460	575	690	805	920	1840	.0026620
2-1/2	1"	4.12	165	206	247	330	371	412	515	618	721	824	1648	.0023842
3 1/4	1"	7.51	300	375	450	600	675	751	938	1126	1314	1502	3004	.0043460
3 1/4	1 3/8"	6.81	272	341	409	545	613	681	851	1022	1192	1362	2724	.0039409
4	1"	11.78	471	589	706	942	1060	1178	1472	1767	2061	2356	4712	.0068171
4	1 3/8"	11.08	443	554	665	886	997	1108	1385	1662	1939	2216	4432	.0064120
5	1"	18.85	754	942	1131	1508	1696	1885	2356	2827	3298	3770	7540	.0109085
5	1 3/8"	18.15	726	908	1089	1452	1634	1815	2269	2723	3176	3630	7260	.0105034
6	1 3/8"	26.78	1071	1339	1606	2142	2410	2678	3347	4017	4686	5356	10712	.0154976
6	1 3/4"	25.86	1034	1293	1552	2069	2327	2586	3233	3879	4526	5172	10344	.0149652
8	1 3/8"	48.77	1951	2439	2936	3902	4389	4877	6096	7316	8535	9754	19508	.0282233
8	1 3/4"	47.85	1914	2392	2871	3828	4307	4785	5982	7178	8374	9571	19142	.0276909

### APPROXIMATE CYLINDER WEIGHT IN POUNDS

BORE	1 1/2"		2"		2 1/2"		3 1/4"		4"		5"		6"		8"		
	PISTON ROD DIA.	5/8"	1"	5/8"	1"	5/8"	1"	1"	1 3/8"	1"	1 3/8"	1"	1 3/8"	1 3/8"	1 3/4"	1 3/8"	1 3/4"
MS-4		2.1	2.8	2.7	3.4	3.6	4.3	7.1	8.4	9.3	10.8	13.0	14.0	22.0	22.5	35.2	37.0
MF-1, MF-2, ME-3, ME-4, MS-2		2.7	3.5	3.7	4.4	5.0	5.7	10.3	12.0	14.0	15.4	20.0	21.0	32.0	34.0	35.0	37.0
MP-1, MP-4		3.2	4.0	4.1	5.0	5.5	6.4	11.5	13.1	15.5	16.4	20.1	21.8	35.1	36.0	38.1	37.0
MT-1, MT-2		2.6	3.3	3.1	3.9	4.0	4.8	7.5	8.9	9.9	11.3	13.7	15.0	23.0	25.0	36.5	38.0
MP-1, MP-2, MX-2, MX-3, MS-1		2.3	3.0	2.8	3.5	3.7	4.5	7.5	9.0	9.9	11.3	13.3	15.0	23.0	25.0	36.4	38.0
PER INCH OF STROKE		.24	.40	.30	.40	.30	.44	.50	.70	.60	.80	.60	.80	.90	1.14	1.30	1.50

### AIR CONSUMPTION CHART

TO CALCULATE THE AIR CONSUMPTION FOR A COMPLETE CYCLE OF A DOUBLE ACTING CYLINDER, READ CUBIC FEET FROM THE CHART BASED UPON PRESSURE AND BORE SIZE AND USE THE FOLLOWING FORMULA.

CFM = CUBIC FT. X CYCLES PER MINUTE X STROKE IN INCHES.

