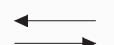
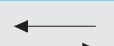
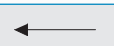
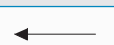
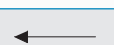
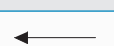
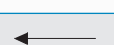
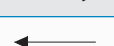
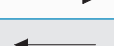
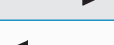
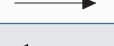
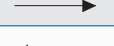
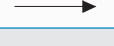
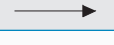


Technical data
اطلاعات فنی
Force table for double acting cylinders (N)
جدول نیروی سیلندرهایی دو طرفه (بر حسب نیوتن)

قطر سیلندر Cylinder Ø mm	قطر شفت Rod Ø mm	سطح مقطع پیستون Piston Area mm ²	نیروی رفت Input Force نیروی برگشت Output Force	فشار هوا (بار) Operating Pressure (bar)									
				1	2	3	4	5	6	7	8	9	10
12	6	113		11	22	33	44	55	66	77	88	99	110
				8	19	30	41	52	63	74	85	96	107
16	6	201		20	40	60	80	100	120	140	160	180	200
				17	34	51	69	86	103	120	138	155	172
20	8	314		31	62	94	125	157	188	219	251	282	314
				26	52	79	105	131	158	184	211	237	263
25	10	491		49	98	147	196	245	294	343	392	441	490
				41	82	123	165	206	247	288	330	371	412
32	12	804		80	160	241	321	401	482	562	643	723	803
				69	138	207	276	345	414	483	552	621	690
40	16	1258		125	251	376	502	628	753	879	1004	1130	1256
				105	211	316	422	527	633	738	844	949	1055
50	20	1963		196	392	588	785	981	1177	1373	1570	1766	1962
				164	623	494	659	824	989	1153	1318	1483	1648
63	20	3116		311	560	934	1246	1557	1869	2180	2492	2804	3115
				280	1004	840	1120	1400	1681	1961	2241	2521	2801
80	25	5024		502	906	1507	2009	2512	3014	3516	4019	4521	5024
				453	1570	1360	1813	2266	2720	3173	3626	4080	4533
100	25	7850		785	1471	2355	2140	3925	4710	5495	6280	7065	7850
				735	2453	2207	2943	3679	4415	5151	5887	6623	7359
125	32	12266		1226	2292	3679	4906	6132	7359	8585	9812	11039	12265
				1146	4019	3438	4584	5730	6877	8023	9169	10315	11461
160	40	20096		2009	3768	6028	8038	10048	12057	14067	16076	18086	20096
				1884	6280	5652	7536	9420	11304	13188	15072	16956	18840
200	40	31400		3140	6028	9420	12560	15700	18840	21980	25120	28260	31400
				3014	6280	9043	12057	15072	18086	21100	24115	27129	30144
250	50	49063		4906	9812	14718	19625	24531	29437	34343	39250	44156	49062
				4710	9420	14130	18840	23550	28260	32970	37680	42390	47100
320	63	80384		8038	16076	24115	32153	51192	48230	56268	64307	72345	80384
				7726	15453	23180	30907	38634	46361	54087	61814	69541	77268

The method of calculation(cylinder's force)
فرمول محاسبه نیروی سیلندر

$$F = P \cdot A - R$$

$$F = P \cdot \frac{d^2 \cdot \pi}{4} - R$$

$$1 \text{ bar} \simeq 1 \text{ kg/cm}^2 \quad 1 \text{ N} \simeq 0.1 \text{ kgf}$$

پارامترها Parameters	
F	Effective Piston Force (N) نیروی موثر پیستون (نیوتن)
P	Working Pressure (bar) فشار کاری (بار)
D	Piston diameter (cm) قطر پیستون (سانتی متر)
R	Friction (N) اصطکاک (نیوتن) 10% Force ۱۰ درصد نیرو