

# DADCO® Nitrogen Gas Spring Force Charts (Imperial)

## Micro – C Series



Model	A(in <sup>2</sup> )	Charging Pressure (psi)											Force (lb.)	
		2560	2175	1920	1750	1500	1280	1000	750	640	500	260		130
		Yellow		Red			Blue			Green		Purple		Orange
C.045	0.044	112	95	84	77	66	56	44	33	28	22	–	–	
C.090	0.078	200	169	150	136	117	100	78	58	50	39	20	10	
C.180	0.175	450	381	337	307	263	224	175	131	112	88	–	–	
C.250	0.274	701	596	526	479	411	351	274	205	175	137	–	–	

To calculate forces at pressures other than those listed use the following formula:  $F(\text{lb.}) = A(\text{in}^2) * P(\text{psi})$

## Ultra Force® and Ultra Force Extended® – U and UX Series



Model	A(in <sup>2</sup> )	Charging Pressure (psi)											Force (lb.)
		2600	2175	2000	1750	1500	1250	1000	750	500	250		
–	U.0175	0.147	383	320	295	258	221	184	147	110	74	37	
–	U.0325	0.274	715	596	548	479	411	342	274	205	137	68	
–	U.0400	0.312	810	678	623	545	467	390	312	234	156	78	
–	U.0600	0.487	–	1059	974	852	730	609	487	365	243	122	
–	U.0800	0.761	–	1655	1522	1331	1141	951	761	571	380	190	
UX.1000	U.1000	0.954	–	2076	1909	1670	1432	1193	954	716	477	239	
–	U.1200	1.096	–	2383	2191	1917	1643	1370	1096	822	548	274	
–	U.1600	1.578	–	3432	3155	2761	2367	1972	1578	1183	789	394	
UX.2600	U.2600	2.465	–	5362	4930	4314	3698	3081	2465	1849	1233	616	
UX.4600	U.4600	4.383	–	9532	8765	7669	6574	5478	4383	3287	2191	1096	
UX.6600	U.6600	6.848	–	14894	13695	11983	10272	8560	6848	5136	3424	1712	
UX.9600	U.9600	9.861	–	21447	19721	17256	14791	12326	9861	7396	4930	2465	
UX.20000	U.20000	20.574	–	44747	41147	36004	30860	25717	20574	15430	10287	5143	

To calculate forces at pressures other than those listed use the following formula:  $F(\text{lb.}) = A(\text{in}^2) * P(\text{psi})$

## Mini – LJ / L Series



Model	A(in <sup>2</sup> )	Charging Pressure (psi)										Force (lb.)
		2175	2000	1750	1500	1250	1000	750	500	250		
300	0.312	678	623	545	467	390	312	234	156	78		
500	0.487	1059	974	852	730	609	487	365	243	122		
750	0.761	1655	1522	1331	1141	951	761	571	380	190		

To calculate forces at pressures other than those listed use the following formula:  $F(\text{lb.}) = A(\text{in}^2) * P(\text{psi})$

## Large – 90.9 / 90.8 / 90.5B / 90.5B2 / 90.10 Series



Series	Model	A(in <sup>2</sup> )	Charging Pressure (psi)											Force (lb.)
			2175	2000	1750	1500	1250	1000	750	500	250			
–	–	–	90.10	00500	0.487	1059	974	852	730	609	487	365	243	122
–	90.8	90.5B2	90.10	00750	0.761	1655	1522	1331	1141	951	761	571	380	190
90.9	90.8	90.5B2	90.10	01500	1.578	3432	3155	2761	2367	1972	1578	1183	789	394
90.9	90.8	90.5B2	90.10	03000	3.043	6619	6087	5326	4565	3804	3043	2283	1522	761
90.9	90.8	90.5B	90.10	05000	5.143	11187	10287	9001	7715	6429	5143	3858	2572	1286
90.9	90.8	90.5B	90.10	07500	7.791	16946	15582	13635	11687	9739	7791	5843	3896	1948
–	–	–	90.10	10000	10.987	23896	21974	19227	16480	13733	10987	8240	5493	2747

To calculate forces at pressures other than those listed use the following formula:  $F(\text{lb.}) = A(\text{in}^2) * P(\text{psi})$

## Super Compact – SC and SCR Series



Series	Model	A(in <sup>2</sup> )	Charging Pressure (psi)											Force (lb.)
			2600	2175	2000	1750	1500	1250	1000	750	500	250		
–	SC	00420	0.439	–	956	879	769	659	549	439	330	220	110	
SCR	–	00500	0.394	1026	858	789	690	592	493	394	296	197	99	
–	SC	00740	0.761	–	1655	1522	1331	1141	951	761	571	380	190	
SCR	–	00800	0.761	1978	1655	1522	1331	1141	951	761	571	380	190	
–	SC	01000	1.096	–	2383	2191	1917	1643	1370	1096	822	548	274	
–	SC	01800	1.948	–	4236	3896	3409	2922	2435	1948	1461	974	487	
SCR	–	01900	1.491	3877	3244	2983	2610	2237	1864	1491	1118	746	373	
SCR	–	03200	2.465	6409	5362	4930	4314	3698	3081	2465	1849	1233	616	
–	SC	03500	3.292	–	7160	6584	5761	4938	4115	3292	2469	1646	823	
–	SC	04700	4.832	–	10509	9663	8456	7248	6040	4832	3624	2416	1208	
–	SC	07500	7.791	–	16946	15582	13635	11687	9739	7791	5843	3896	1948	
–	SC	11800	12.174	–	26478	24347	21304	18261	15217	12174	9130	6087	3043	
–	SC	18300	19.021	–	41372	38043	33287	28532	23777	19021	14266	9511	4755	

To calculate forces at pressures other than those listed use the following formula:  $F(\text{lb.}) = A(\text{in}^2) * P(\text{psi})$

## Miscellaneous Conversions

A = Area  
F = Force  
P = Pressure

$F(\text{kgf}) = F(\text{lb}) * .4536$        $F(\text{daN}) = F(\text{lb}) * .4448$        $P(\text{bar}) = P(\text{kg/cc}^2) * .9807$        $P(\text{kg/cc}^2) = P(\text{psi}) * .0703$   
 $F(\text{kN}) = F(\text{lb}) * .004448$        $F(\text{N}) = F(\text{lb}) * 4.448$        $P(\text{bar}) = P(\text{psi}) * .06895$

# DADCO Nitrogen Gas Spring Force Charts (Metric)

## Micro – C Series



		Charging Pressure (bar)											Force (daN)	
		177	150	132	125	100	88	80	75	50	44	18		9
Model	A(cm <sup>2</sup> )	Yellow		Red			Blue				Green	Purple		Orange
C.045	0.28	50	42	37	35	28	25	23	21	14	12	–	–	
C.090	0.50	89	75	66	63	50	44	40	38	25	22	9	5	
C.180	1.13	200	170	149	141	113	100	90	85	57	50	–	–	
C.250	1.77	313	265	233	221	177	156	141	133	88	78	–	–	

To calculate forces at pressures other than those listed use the following formula:  $F(\text{daN}) = A(\text{cm}^2) * P(\text{bar})$

## Ultra Force® and Ultra Force Extended® – U and UX Series



		Charging Pressure (bar)											Force (daN)
		180	150	125	110	100	80	75	50	30	25	20	
Model	A(cm <sup>2</sup> )												
–	U.0175	0.95	171	143	119	105	95	76	71	48	29	24	19
–	U.0325	1.77	320	265	221	194	177	141	133	88	53	44	35
–	U.0400	2.01	362	302	251	221	201	161	151	101	60	50	40
–	U.0600	3.14	–	471	393	346	314	251	236	157	94	79	63
–	U.0800	4.91	–	736	614	540	491	393	368	245	147	123	98
UX.1000	U.1000	6.16	–	924	770	677	616	493	462	308	185	154	123
–	U.1200	7.07	–	1060	884	778	707	565	530	353	212	177	141
–	U.1600	10.18	–	1527	1272	1120	1018	814	763	509	305	254	204
UX.2600	U.2600	15.90	–	2386	1988	1749	1590	1272	1193	795	477	398	318
UX.4600	U.4600	28.27	–	4241	3534	3110	2827	2262	2121	1414	848	707	565
UX.6600	U.6600	44.18	–	6627	5522	4860	4418	3534	3313	2209	1325	1104	884
UX.9600	U.9600	63.62	–	9543	7952	6998	6362	5089	4771	3181	1909	1590	1272
UX.20000	U.20000	132.73	–	19910	16592	14601	13273	10619	9955	6637	3982	3318	2655

To calculate forces at pressures other than those listed use the following formula:  $F(\text{daN}) = A(\text{cm}^2) * P(\text{bar})$

## Mini – LJ / L Series



		Charging Pressure (bar)										Force (daN)
		150	125	110	100	80	75	50	30	25	20	
Model	A(cm <sup>2</sup> )											
300	2.01	302	251	221	201	161	151	101	60	50	40	
500	3.14	471	393	346	314	251	236	157	94	79	63	
750	4.91	736	614	540	491	393	368	245	147	123	98	

To calculate forces at pressures other than those listed use the following formula:  $F(\text{daN}) = A(\text{cm}^2) * P(\text{bar})$

## Large – 90.9 / 90.8 / 90.5B / 90.5B2 / 90.10 Series



				Charging Pressure (bar)										Force (daN)
Series		Model	A(cm <sup>2</sup> )	150	125	110	100	80	75	50	25	20		
–	–	–	90.10	00500	3.14	471	393	346	314	251	236	157	79	
–	90.8	90.5B2	90.10	00750	4.91	736	614	540	491	393	368	245	123	98
90.9	90.8	90.5B2	90.10	01500	10.18	1527	1272	1120	1018	814	763	509	254	204
90.9	90.8	90.5B2	90.10	03000	19.63	2945	2454	2160	1963	1571	1473	982	491	393
90.9	90.8	90.5B	90.10	05000	33.18	4977	4148	3650	3318	2655	2489	1659	830	664
90.9	90.8	90.5B	90.10	07500	50.27	7540	6283	5529	5027	4021	3770	2513	1257	1005
–	–	–	90.10	10000	70.88	10632	8860	7797	7088	5671	5316	3544	1772	1418

To calculate forces at pressures other than those listed use the following formula:  $F(\text{daN}) = A(\text{cm}^2) * P(\text{bar})$

## Super Compact – SC and SCR Series



			Charging Pressure (bar)										Force (daN)	
Series		Model	A(cm <sup>2</sup> )	180	150	125	110	100	80	75	50	25		20
–	SC	00420	2.84	–	425	354	312	284	227	213	142	71		57
SCR	–	00500	2.54	458	382	318	280	254	204	191	127	64	51	
–	SC	00740	4.91	–	736	614	540	491	393	368	245	123	98	
SCR	–	00800	4.91	884	736	614	540	491	393	368	245	123	98	
–	SC	01000	7.07	–	1060	884	778	707	565	530	353	177	141	
–	SC	01800	12.57	–	1885	1571	1382	1257	1005	942	628	314	251	
SCR	–	01900	9.62	1732	1443	1203	1058	962	770	722	481	241	192	
SCR	–	03200	15.90	2863	2386	1988	1749	1590	1272	1193	795	398	318	
–	SC	03500	21.24	–	3186	2655	2336	2124	1699	1593	1062	531	425	
–	SC	04700	31.17	–	4676	3897	3429	3117	2494	2338	1559	779	623	
–	SC	07500	50.27	–	7540	6283	5529	5027	4021	3770	2513	1257	1005	
–	SC	11800	78.54	–	11781	9817	8639	7854	6283	5890	3927	1963	1571	
–	SC	18300	122.72	–	18408	15340	13499	12272	9817	9204	6136	3068	2454	

To calculate forces at pressures other than those listed use the following formula:  $F(\text{daN}) = A(\text{cm}^2) * P(\text{bar})$

## Miscellaneous Conversions

A = Area  
F = Force  
P = Pressure

$F(\text{lb}) = F(\text{N}) * .2248$   
 $F(\text{lb}) = F(\text{kN}) * 224.8$

$F(\text{lbs}) = F(\text{daN}) * 2.248$   
 $F(\text{lb}) = F(\text{kgf}) * 2.2046$

$P(\text{kg/cc}^2) = P(\text{bar}) * 1.0197$   
 $P(\text{psi}) = P(\text{bar}) * 14.50$