Landalucía, 7 - P.I. Júndiz 01015 Vitoria / Spain +34 945 290 010 azolgas@azolgas.com www.azolgas.com

GAS SPRINGS

AZOL GAS

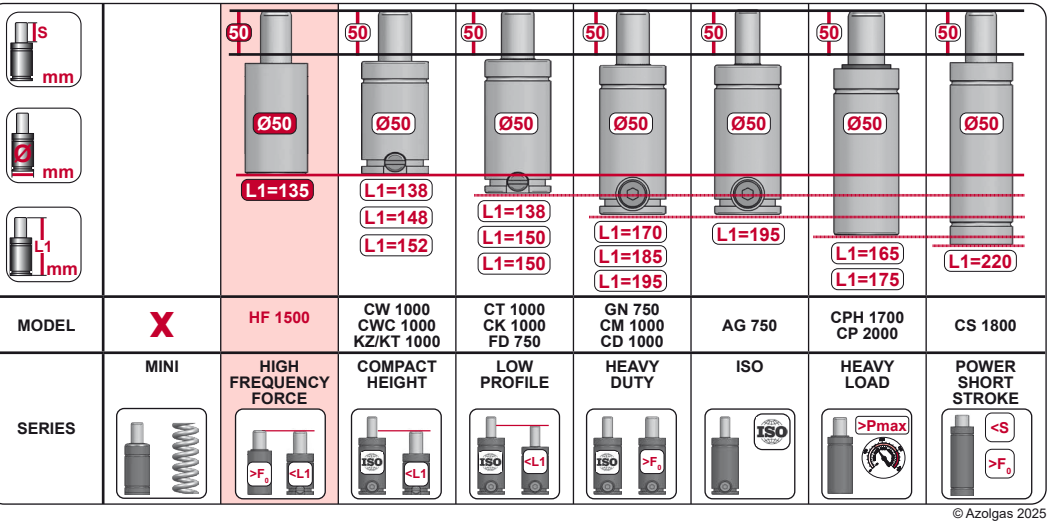
HIGH FREQUENCY HF

- The shortest height size gas springs
- Most powerful per diameter
- Medium range contact force (300-5000 daN)
- Ideal for high frequency applications

AZOL GAS

HF HIGH FREQUENCY-FORCE

MODEL	F_0 daN / lb	Ø mm / inch	S mm / inch	L1 mm / inch	Pmax bar / psi	Charge Port		
HF 300	300 674	Ø25 Ø0.98	5 - 125 0.20 - 4.92	40 - 280 1.57 - 11.02	170 2466	M6	X	✔
HF 500	500 1124	Ø32 Ø1.26	5 - 125 0.20 - 4.92	40 - 280 1.57 - 11.02	160 2321	M6	X	✔
HF 750	750 1686	Ø38 Ø1.50	5 - 125 0.20 - 4.92	40 - 280 1.57 - 11.02	160 2321	M8	X	✔
HF 1500	1500 3372	Ø50 Ø1.97	5 - 125 0.20 - 4.92	45 - 285 1.77 - 11.22	212 3075	M10	X	✔
HF 3000	3000 6744	Ø75 Ø2.95	5 - 125 0.20 - 4.92	50 - 295 1.97 - 11.61	190 2755	M12	X	✔
HF 5000	5000 11240	Ø95 Ø3.74	5 - 125 0.20 - 4.92	60 - 300 2.36 - 11.81	180 2610	M12	X	✔



MODEL	X	HF 1500	CW 1000 CWC 1000 KZ/KT 1000	CT 1000 CK 1000 FD 750	GN 750 CM 1000 CD 1000	AG 750	CPH 1700 CP 2000	CS 1800
SERIES	MINI	HIGH FREQUENCY FORCE	COMPACT HEIGHT	LOW PROFILE	HEAVY DUTY	ISO	HEAVY LOAD	POWER SHORT STROKE

© Azolgas 2025

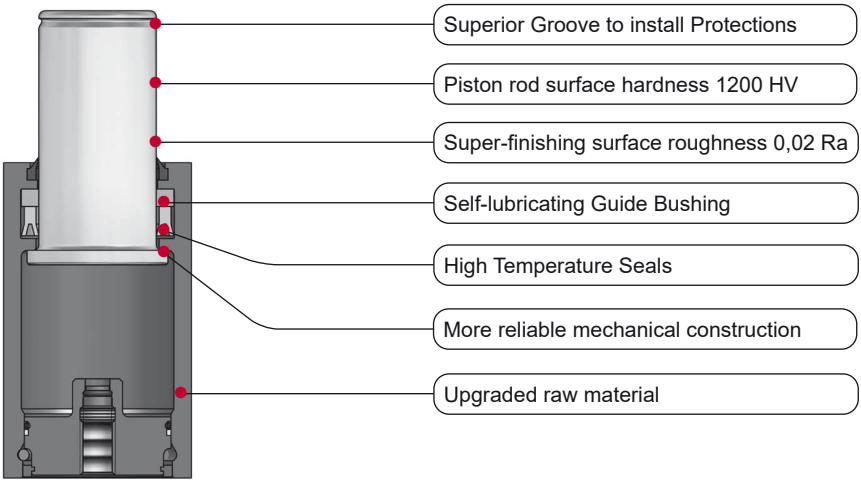
HF HIGH FREQUENCY-FORCE

© Azolgas 2025

AZOL GAS

HF HIGH FREQUENCY-FORCE

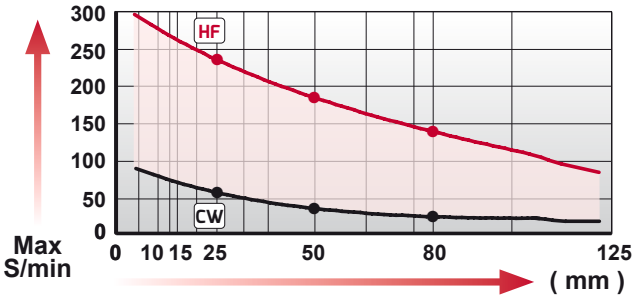
TECHNICAL DATA



ADVANTAGES

- Extremely powerful gas springs in the **shortest size**
- Up to **2-3 times force** compared to AG ISO Standard series
- Ideal to meet requirements of **progressive tools**
- Useful for **compact** DIE MANUFACTURING
- Convenient for a **long life service** at STAMPING USER
- Higher **productivity** achieved at a high working frequency

HIGH FREQUENCY APPLICATIONS



✔ Sucessfully bearing challenging **applications > 100 spm**

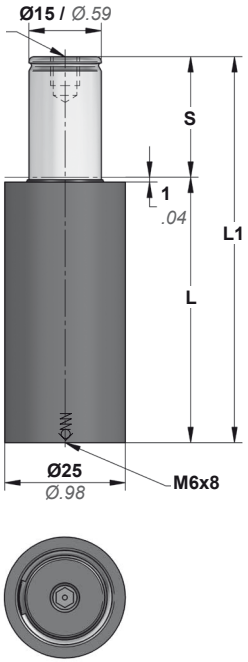
✔ **2-3 times higher working frequency** than CW compact series

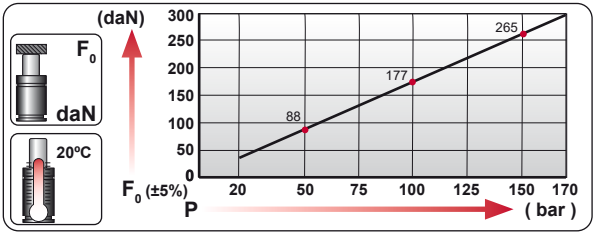
© Azolgas 2025

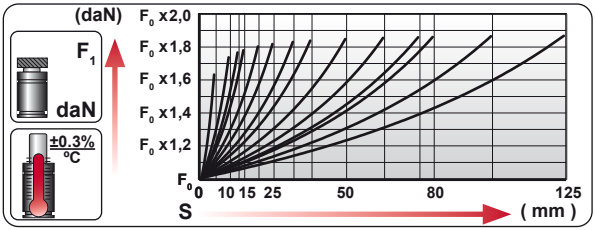
HF 300

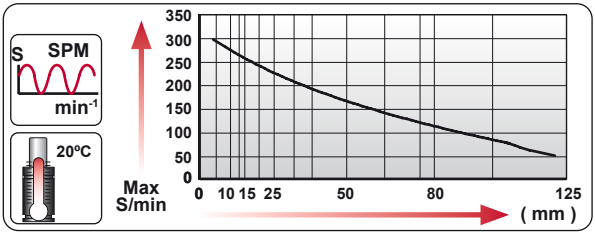
High Frequency-Force

AZOL GAS









VDI SAFETY

STANDARDS

ORDER	S		L1 ±0.25		L		F0 Initial Force		F1 (ISOTHERMAL) End Force		Vol.			
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	Kg.	lb
HF 300 005	5	0.20	40	1.57	35	1.38			528	1187	2	0.1	0.11	0.24
HF 300 010	10	0.39	50	1.97	40	1.57			543	1221	4	0.2	0.12	0.26
HF 300 013	13	0.51	56	2.20	43	1.69	300	674	547	1230	5	0.3	0.12	0.26
HF 300 015	15	0.59	60	2.36	45	1.77			549	1233	6	0.4	0.13	0.29
HF 300 020	20	0.79	70	2.76	50	1.97			552	1240	8	0.5	0.14	0.31
HF 300 025	25	0.98	80	3.15	55	2.17			553	1244	10	0.6	0.15	0.33
HF 300 032	32	1.26	94	3.70	62	2.44			555	1247	12	0.8	0.17	0.37
HF 300 038	38	1.50	106	4.17	68	2.68			556	1249	15	0.9	0.18	0.40
HF 300 050	50	1.97	130	5.12	80	3.15			557	1252	19	1.2	0.21	0.46
HF 300 063	63	2.48	156	6.14	93	3.66			557	1253	24	1.5	0.24	0.53
HF 300 075	75	2.95	180	7.09	105	4.13			558	1254	29	1.7	0.26	0.57
HF 300 080	80	3.15	190	7.48	110	4.33			558	1255	31	1.9	0.28	0.62
HF 300 100	100	3.94	230	9.06	130	5.12			559	1256	38	2.3	0.32	0.71
HF 300 125	125	4.92	280	11.02	155	6.10			559	1256	48	2.9	0.38	0.84

±5%
170 bar
2466 psi
at
20ºC
68ºF

TECHNICAL DATA

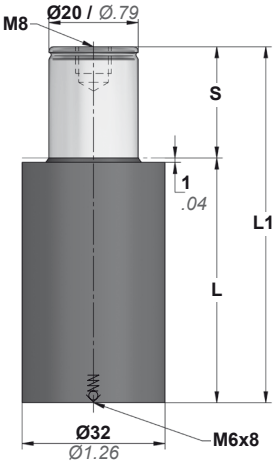
Fluid	N_2	Pmin Pmax 20ºC / 68ºF	20 bar 290 psi	170 bar 2466 psi	Charging Adapter	06 CG 2-Q
Smax	< 90%	Tmin Tmax	0 ºC 32 ºF	80 ºC 176 ºF	Connection	X
Vmax	0,5 m/s	Force variation by temperature	±0,3% / ºC		Seal Kit	S-XXXXXXX

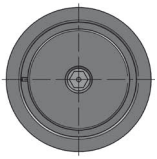
© Azolgas 2025

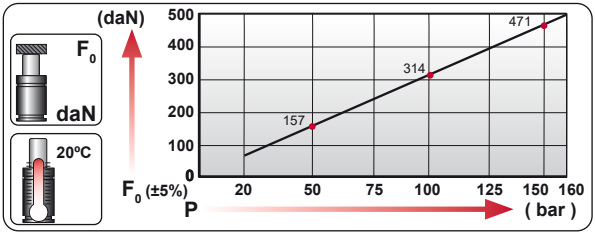
AZOL GAS

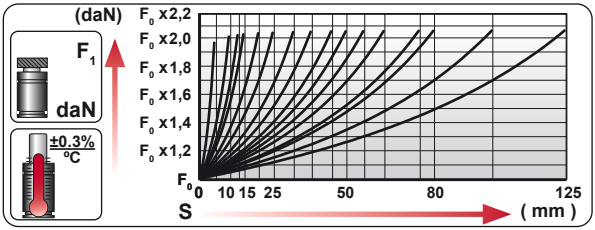
HF 500

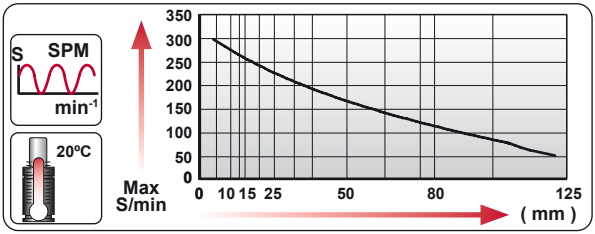
High Frequency-Force











VDI SAFETY

STANDARDS PED

ORDER	S		L1 ±0.25		L		F0 Initial Force		F1 (ISOTHERMAL) End Force		Vol.			
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	Kg.	lb
HF 500 005	5	0.20	40	1.57	35	1.38	500	1124	1016	2285	3	0.2	0.18	0.40
HF 500 010	10	0.39	50	1.97	40	1.57			1024	2302	6	0.4	0.20	0.44
HF 500 013	13	0.51	56	2.20	43	1.69			1026	2306	8	0.5	0.21	0.46
HF 500 015	15	0.59	60	2.36	45	1.77			1027	2308	9	0.6	0.22	0.49
HF 500 020	20	0.79	70	2.76	50	1.97			1028	2311	12	0.7	0.24	0.53
HF 500 025	25	0.98	80	3.15	55	2.17			1029	2313	15	0.9	0.26	0.57
HF 500 032	32	1.26	94	3.70	62	2.44			1029	2314	20	1.2	0.29	0.64
HF 500 038	38	1.50	106	4.17	68	2.68			1030	2315	23	1.4	0.31	0.68
HF 500 050	50	1.97	130	5.12	80	3.15			1030	2316	31	1.9	0.36	0.79
HF 500 063	63	2.48	156	6.14	93	3.66			1031	2317	38	2.3	0.41	0.90
HF 500 075	75	2.95	180	7.09	105	4.13			1031	2317	46	2.8	0.46	1.01
HF 500 080	80	3.15	190	7.48	110	4.33			1031	2318	49	3.0	0.48	1.06
HF 500 100	100	3.94	230	9.06	130	5.12			1031	2318	61	3.7	0.56	1.23
HF 500 125	125	4.92	280	11.02	155	6.10			1031	2318	76	4.7	0.66	1.46

±5%
160 bar
2321 psi
at
20ºC
68ºF

TECHNICAL DATA

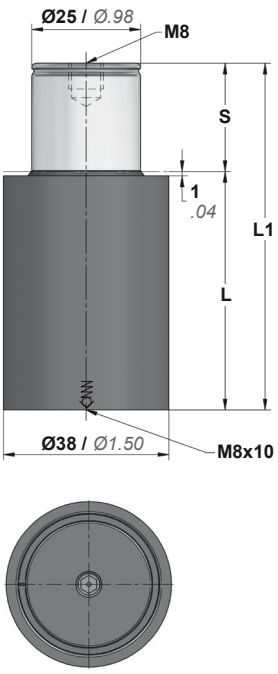
Fluid	N_2	Pmin Pmax 20ºC / 68ºF	20 bar 290 psi	160 bar 2321 psi	Charging Adapter	06 CG 2-Q
Smax	< 90%	Tmin Tmax	0 ºC 32 ºF	80 ºC 176 ºF	Connection	X
Vmax	0,5 m/s	Force variation by temperature	±0,3% / ºC		Seal Kit	S-XXXXXXX

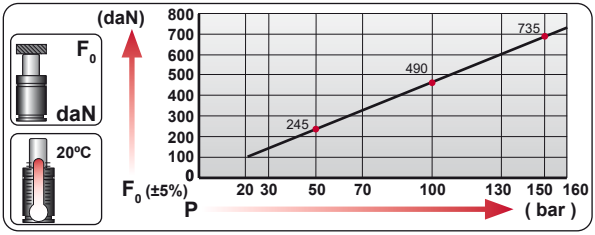
© Azolgas 2025

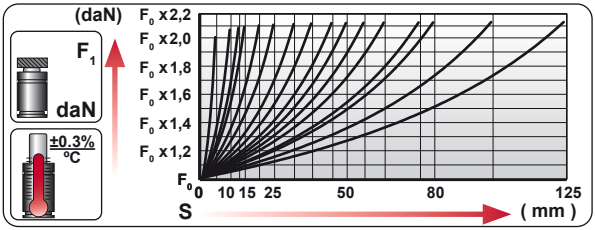
HF 750

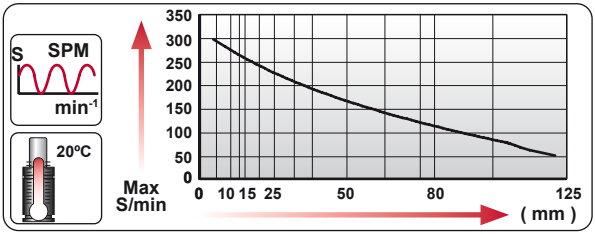
High Frequency-Force

AZOL GAS









VDI
SAFETY

STANDARDS

ORDER	S		L1 ±0.25		L		F_0 Initial Force		F_1 (ISOTHERMAL) End Force		Vol.			
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	Kg.	lb
HF 750 005	5	0.20	40	1.57	35	1.38	785	1765	1619	3640	5	0.3	0.25	0.55
HF 750 010	10	0.39	50	1.97	40	1.57			1614	3629	10	0.6	0.28	0.62
HF 750 013	13	0.51	56	2.20	43	1.69			1613	3627	12	0.8	0.30	0.66
HF 750 015	15	0.59	60	2.36	45	1.77			1613	3625	14	0.9	0.31	0.68
HF 750 020	20	0.79	70	2.76	50	1.97			1612	3624	19	1.2	0.33	0.73
HF 750 025	25	0.98	80	3.15	55	2.17			1611	3623	24	1.5	0.36	0.79
HF 750 032	32	1.26	94	3.70	62	2.44			1611	3622	31	1.9	0.40	0.88
HF 750 038	38	1.50	106	4.17	68	2.68			1611	3621	36	2.2	0.43	0.95
HF 750 050	50	1.97	130	5.12	80	3.15			1611	3621	48	2.9	0.49	1.08
HF 750 063	63	2.48	156	6.14	93	3.66			1610	3620	60	3.7	0.56	1.23
HF 750 075	75	2.95	180	7.09	105	4.13			1610	3620	72	4.4	0.62	1.37
HF 750 080	80	3.15	190	7.48	110	4.33			1610	3620	77	4.7	0.65	1.43
HF 750 100	100	3.94	230	9.06	130	5.12			1610	3620	96	5.8	0.75	1.65
HF 750 125	125	4.92	280	11.02	155	6.10			1610	3619	120	7.3	0.88	1.94

±5%
160 bar
2321 psi
at
20ºC
68ºF

TECHNICAL DATA

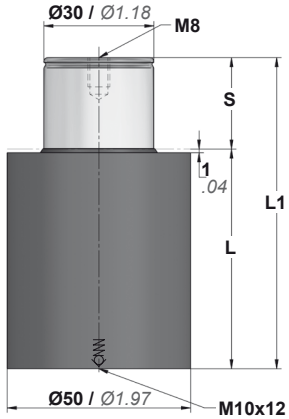
Fluid	N_2	Pmin Pmax 20ºC / 68ºF	20 bar 290 psi	160 bar 2321 psi	Charging Adapter	08 GA 2
Smax	< 90%	Tmin Tmax	0 ºC 32 ºF	80 ºC 176 ºF	Connection	X
Vmax	0,5 m/s	Force variation by temperature	±0,3% / ºC		Seal Kit	S-XXXXXXX

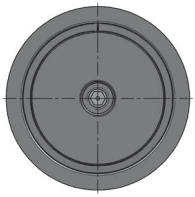
© Azolgas 2025

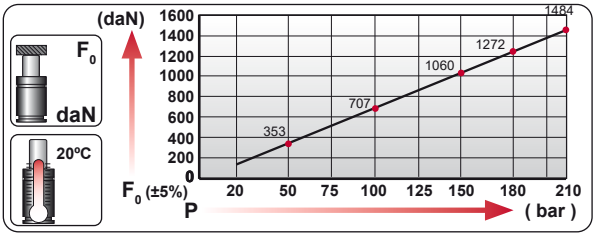
AZOL GAS

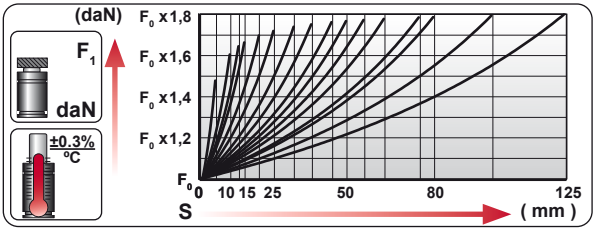
HF 1500

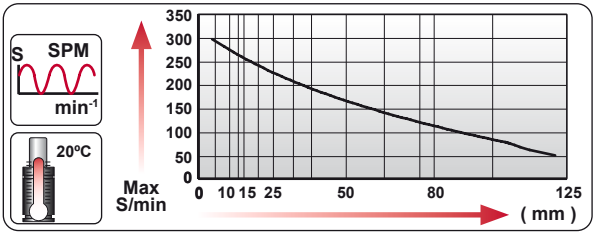
High Frequency-Force











VDI SAFETY

STANDARDS PED

ORDER	S		L1 ±0.25		L		F_0 Initial Force		F_1 (ISOTHERMAL) End Force		Vol.			
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm^3	in^3	Kg.	lb
HF 1500 005	5	0.20	45	1.77	40	1.57	1500	3372	2847	6400	7	0.5	0.52	1.15
HF 1500 010	10	0.39	55	2.17	45	1.77			2791	6274	15	0.9	0.56	1.23
HF 1500 013	13	0.51	61	2.40	48	1.89			2779	6247	20	1.2	0.58	1.28
HF 1500 015	15	0.59	65	2.56	50	1.97			2773	6235	23	1.4	0.60	1.32
HF 1500 020	20	0.79	75	2.95	55	2.17			2765	6216	31	1.9	0.64	1.41
HF 1500 025	25	0.98	85	3.35	60	2.36			2760	6204	39	2.4	0.69	1.52
HF 1500 032	32	1.26	99	3.90	67	2.64			2755	6194	50	3.0	0.75	1.65
HF 1500 038	38	1.50	111	4.37	73	2.87			2753	6188	59	3.6	0.80	1.76
HF 1500 050	50	1.97	135	5.31	85	3.35			2750	6181	78	4.7	0.91	2.01
HF 1500 063	63	2.48	161	6.34	98	3.86			2748	6177	98	6.0	1.02	2.25
HF 1500 075	75	2.95	185	7.28	110	4.33			2746	6174	117	7.1	1.12	2.47
HF 1500 080	80	3.15	200	7.87	120	4.72			2746	6173	125	7.6	1.19	2.62
HF 1500 100	100	3.94	235	9.25	135	5.31			2745	6170	156	9.5	1.34	2.95
HF 1500 125	125	4.92	285	11.22	160	6.30			2744	6168	195	11.9	1.56	3.44

±5%
212 bar
3075 psi
at
20ºC
68ºF

TECHNICAL DATA

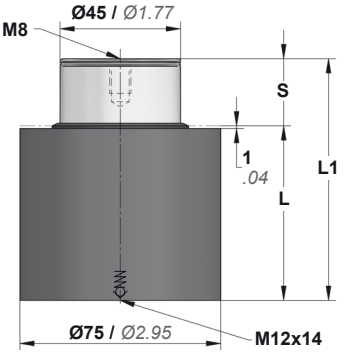
Fluid	N_2	Pmin Pmax 20ºC / 68ºF	20 bar 290 psi	212 bar 3075 psi	Charging Adapter	10 GA 1
Smax	< 90%	Tmin Tmax	0 ºC 32 ºF	80 ºC 176 ºF	Connection	X
Vmax	0,5 m/s	Force variation by temperature	±0,3% / ºC		Seal Kit	S-XXXXXXX

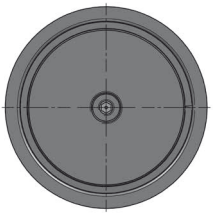
© Azolgas 2025

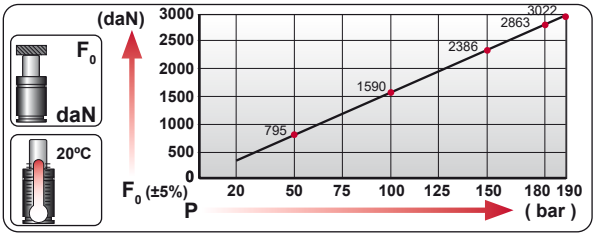
HF 3000

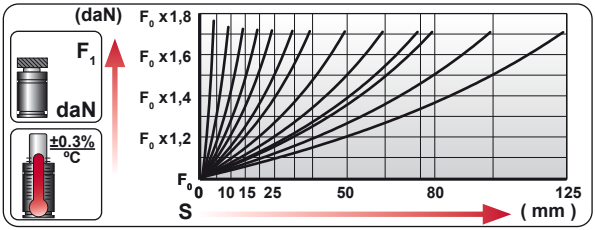
High Frequency-Force

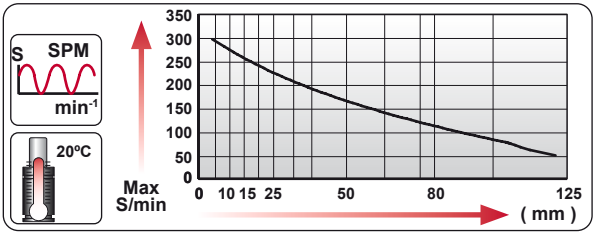
AZOL GAS











VDI SAFETY

STANDARDS PED

ORDER	S		L1 ±0.25		L		F_0 Initial Force		F_1 (ISOTHERMAL) End Force		Vol.			
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm³	in³	Kg.	lb
HF 3000 005	5	0.20	50	1.97	45	1.77	3020	6789	5342	12010	18	1.1	1.30	2.87
HF 3000 010	10	0.39	60	2.36	50	1.97			5253	11809	37	2.3	1.39	3.06
HF 3000 015	15	0.59	70	2.76	55	2.17			5225	11746	57	3.4	1.48	3.26
HF 3000 020	20	0.79	80	3.15	60	2.36			5211	11715	76	4.6	1.57	3.46
HF 3000 025	25	0.98	90	3.54	65	2.56			5203	11696	95	5.8	1.65	3.64
HF 3000 032	32	1.26	104	4.09	72	2.83			5195	11680	122	7.4	1.77	3.90
HF 3000 038	38	1.50	115	4.53	77	3.03			5191	11671	144	8.8	1.86	4.10
HF 3000 050	50	1.97	140	5.51	90	3.54			5186	11659	190	11.6	2.08	4.59
HF 3000 063	63	2.48	166	6.54	103	4.06			5183	11652	240	14.7	2.30	5.07
HF 3000 075	75	2.95	190	7.48	115	4.53			5181	11647	286	17.5	2.51	5.53
HF 3000 080	80	3.15	205	8.07	125	4.92			5180	11646	305	18.6	2.65	5.84
HF 3000 100	100	3.94	245	9.65	145	5.71			5178	11641	382	23.3	2.99	6.59
HF 3000 125	125	4.92	295	11.61	170	6.69			5177	11638	477	29.1	3.42	7.54

±5%
190 bar
2755 psi
at
20ºC
68ºF

TECHNICAL DATA

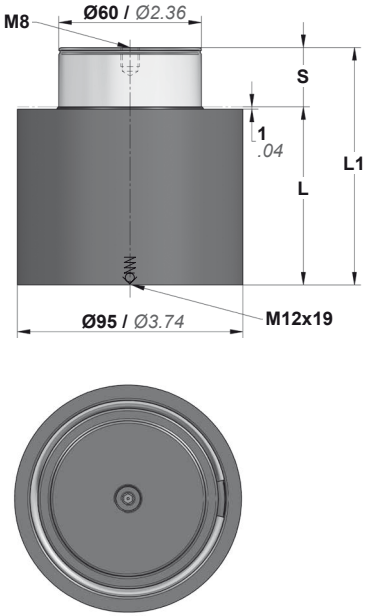
Fluid	N_2	Pmin Pmax 20ºC / 68ºF	20 bar 290 psi	190 bar 2755 psi	Charging Adapter	12 GA 1
Smax	< 90%	Tmin Tmax	0 ºC 32 ºF	80 ºC 176 ºF	Connection	X
Vmax	0,5 m/s	Force variation by temperature	±0,3% / ºC		Seal Kit	S-XXXXXXX

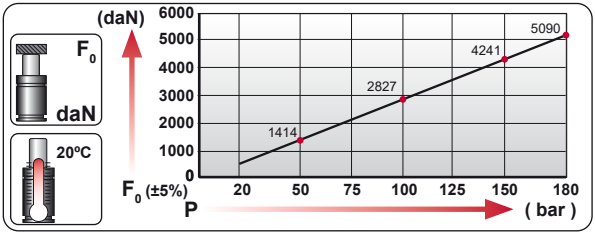
© Azolgas 2025

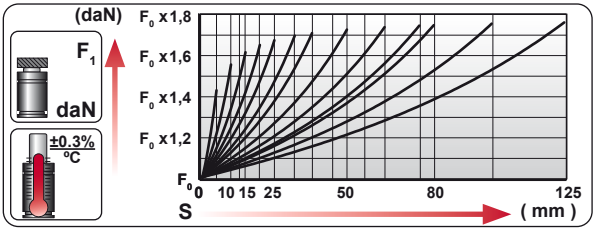
AZOL GAS

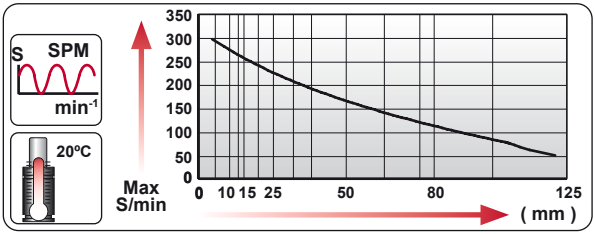
HF 5000

High Frequency-Force









VDI SAFETY

STANDARDS PED

ORDER	S		L1 ±0.25		L		F_0 Initial Force		F_1 (ISOTHERMAL) End Force		Vol.			
	mm	inch	mm	inch	mm	inch	daN	lb	daN	lb	cm^3	in^3	Kg.	lb
HF 5000 005	5	0.20	60	2.36	55	2.17	5090	11443	7273	16351	47	2.9	2.45	5.40
HF 5000 010	10	0.39	70	2.76	60	2.36			7919	17803	79	4.8	2.66	5.86
HF 5000 015	15	0.59	80	3.15	65	2.56			8229	18498	111	6.8	2.80	6.17
HF 5000 020	20	0.79	90	3.54	70	2.76			8410	18907	143	8.7	2.93	6.46
HF 5000 025	25	0.98	100	3.94	75	2.95			8530	19175	175	10.7	3.07	6.77
HF 5000 032	32	1.26	114	4.49	82	3.23			8641	19426	220	13.4	3.26	7.19
HF 5000 038	38	1.50	126	4.96	88	3.46			8708	19575	259	15.8	3.43	7.56
HF 5000 050	50	1.97	150	5.91	100	3.94			8796	19775	336	20.5	3.76	8.29
HF 5000 063	63	2.48	176	6.93	113	4.45			8856	19910	419	25.6	4.12	9.08
HF 5000 075	75	2.95	200	7.87	125	4.92			8894	19995	496	30.3	4.45	9.81
HF 5000 080	80	3.15	210	8.27	130	5.12			8907	20024	528	32.2	4.58	10.10
HF 5000 100	100	3.94	250	9.84	150	5.91			8946	20110	656	40.0	5.14	11.33
HF 5000 125	125	4.92	300	11.81	175	6.89			8977	20181	816	49.8	5.82	12.83

±5%
180 bar
2610 psi
at
20ºC
68ºF

TECHNICAL DATA

Fluid	N_2	Pmin Pmax 20ºC / 68ºF	20 bar 290 psi	180 bar 2610 psi	Charging Adapter	12 GA 1
Smax	< 90%	Tmin Tmax	0 ºC 32 ºF	80 ºC 176 ºF	Connection	X
Vmax	0,5 m/s	Force variation by temperature	±0,3% / ºC		Seal Kit	S-XXXXXXX

© Azolgas 2025