5505H Flange Springs

Increase reliability, lower emissions, and reduce total costs by using tailored sealing solutions for critical flanges.

Gaskets perform the sealing in most flanges, but the flange bolts provide the stored tension necessary to make gaskets work. Maintaining constant bolt load is essential to proper compression of a gasket. In normal operation, flanges are subject to thermal expansion and contraction, pressure surges, vibration and gasket creep. All these factors serve to decrease bolt load and gasket compression which can lead to premature leakage and failure of gasketed joints.

Chesterton® 5505H Flange Springs compensate for all these factors. These specially designed, high-strength springs deliver a reserve of elastic energy to each bolt, allowing them to maintain constant load on the flange and gasket during normal operation, or during upset conditions from thermal cycling.

Properly selected and installed, Chesterton's 5505H Flange Springs can provide dramatic improvements in leakage performance and service life.

- For bolted heat exchangers and pipe flanges
- Maintains constant load on gasket joints
- Eliminate leakage problems caused by thermal cycling, vibration and pressure surges
- Designed for three stress classifications
- High temperature capabilities

Technical Data

Service	High-temperature flanges in non-corrosive service
Temperature Limit	minimum -17°C (0°F) to 593°C (1100°F) maximum
Color	black
Material	H13 Chromium Steel with oxide coating
Typical Installation	Use drawing from installation instructions (071071). 5505H Springs are offered in three standard loads: 30ksi, 45ksi and 60ksi bolt stresses, with one spring installed under each side of the bolt or stud.

Bolt Size		Bolt Stress	Spring Height		Reorder Number
inches	mm	ksi	inches	mm	
1/2	–	60	0.173	4.49	004952
		45	0.153	3.89	004953
		30	0.133	3.38	004954
5/8	16	60	0.211	5.36	004955
		45	0.185	4.70	004956
		30	0.157	3.39	004957
3/4	–	60	0.256	6.50	004958
		45	0.225	5.72	004959
		30	0.195	4.83	004960
–	20	60	0.254	6.45	004961
		45	0.288	5.79	004962
		30	0.192	4.88	004963
7/8	22	60	0.300	7.62	004971
		45	0.625	6.73	004972
		30	0.224	5.96	004982
–	24	60	0.311	7.90	004984
		45	0.274	6.96	004986
		30	0.233	5.92	004988
1	–	60	0.342	8.69	004950
		45	0.302	7.67	004991
		30	0.256	6.50	004992
–	27	60	0.349	8.86	005427
		45	0.307	7.80	005428
		30	0.260	6.60	005429
1–1/8	–	60	0.390	9.91	004993
		45	0.344	8.74	004995
		30	0.291	7.39	004949
–	30	60	0.416	10.57	004996
		45	0.346	8.79	004997
		30	0.292	7.42	004999
1–1/4	32	60	0.443	11.25	005017
		45	0.400	10.16	005018
		30	0.330	8.38	005019

Bolt Size		Bolt Stress	Spring Height		Reorder Number
inches	mm	ksi	inches	mm	
–	33,0	60	0.438	11.13	005049
		45	0.386	9.80	005101
		30	0.325	8.26	005102
1–3/8	–	60	0.487	12.37	005105
		45	0.429	10.90	005106
		30	0.326	9.19	005107
1–1/2	38	60	0.533	13.54	005108
		45	0.470	11.94	005109
		30	0.396	10.06	005110
1–5/8	–	60	0.586	14.88	004951
		45	0.516	13.11	004962
		30	0.435	11.05	005112
1–3/4	–	60	0.633	16.08	005119
		45	0.557	14.15	005120
		30	0.470	11.94	005121
1–7/8	48	60	0.614	15.60	005386
		45	0.599	15.21	005388
		30	0.505	12.83	005391
2	–	60	0.656	16.66	005392
		45	0.641	16.28	005393
		30	0.540	13.72	005398
2–1/4	–	60	0.742	18.85	005399
		45	0.725	18.42	005400
		30	0.610	15.49	005406
2–1/2	64	60	0.828	21.03	005407
		45	0.809	20.55	005412
		30	0.681	17.30	005419
2–3/4	–	60	0.915	23.24	005420
		45	0.894	22.71	005421
		30	0.752	19.10	005422
3	–	60	1.002	25.45	005423
		45	0.978	24.84	005425
		30	0.822	20.88	005426

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