

Vertical Industrial Gas Compressors

Operating Specifications

Specifications	Single-Stage Compressors							Two-Stage Compressors								
D-style (single-distance piece)	D91	D291	D491	D491-3	D691	D691-4	D891 ^a	FD151	D191	FD351	D391	WFD551	D590	FD591	D791 ^a	
T-style (double-distance piece)	T91	T291	T491	T491-3	T691	T691-4	T891 ^a	FT151	T191	FT351	T391	WFT551	T590	FT591	T791 ^a	
Bore of cylinder inches (mm)																
First stage	3.0 (76.2)	3.0 (76.2)	4.0 (101.6)	3.0 (76.2)	4.5 (114.3)	4.0 (101.6)	4.5 (114.3)	2.5 (63.5)	3.0 (76.2)	2.75 (69.9)	4.5 (114.3)	4.0 (101.6)	6.0 (152.4)	6.0 (152.4)	6.0 (152.4)	
Second stage							3.0 (76.2)	1.25 (31.8)	1.75 (44.5)	1.75 (44.5)	2.5 (63.5)	2.5 (63.5)	3.25 (82.5)	3.25 (82.5)	3.25 (82.5)	
Stroke inches (mm)	2.5 (63.5)	2.5 (63.5)	3.0 (76.2)	3.0 (76.2)	4.0 (101.6)	4.0 (101.6)	4.0 (101.6)	2.5 (63.5)	2.5 (63.5)	3.0 (76.2)	3.0 (76.2)	4 (101.6)	4.0 (101.6)	4.0 (101.6)	4.0 (101.6)	
Piston displacement CFM (m ³ /hr)	@ 400 rpm	4.1 (7.0)	8.2 (13.9)	17.5 (29.7)	9.8 (16.7)	29.5 (50.1)	23.3 (39.6)	56.7 (96.3)	2.8 (4.76)	4.1 (7.0)	4.1 (7.0)	11.1 (18.9)	11.6 (19.7)	26.2 (44.5)	26.2 (44.5)	52.4 (89.0)
	@ 825 rpm	8.4 (14.3)	16.9 (28.7)	36.0 (61.2)	20.3 (34.5)	60.8 (103.3)	48.0 (81.6)	117.0 (198.8)	5.9 (10.0)	8.9 (15.2)	8.5 (14.4)	22.8 (38.7)	24.8 (42.1)	54.0 (91.7)	54.0 (91.7)	105.8 (179.8)
Maximum working pressure psig (bar g)	335 (23.1)	335 (23.1)	335 (23.1)	600 (41.4)	335 (23.1)	600 (41.4)	450 (31.0)	1,200 (82.8)	600 (41.4)	1,200 (82.8)	600 (41.4)	1,000 (69.0)	335 (23.1)	600 (41.4)	600 (41.4)	
Maximum brake horsepower (kW)	7.5 (5.6)	15 (11)	15 (11)	15 (11)	35 (26.1)	35 (26.1)	45 (34)	15 (11)	15 (11)	15 (11)	15 (11)	35 (26.1)	35 (26.1)	35 (26.1)	45 (34)	
Maximum rod load lbs (kg)	3,600 (1,633)	3,600 (1,633)	4,000 (1,814)	4,000 (1,814)	7,000 (3,175)	7,000 (3,175)	7,000 (3,175)	3,600 (1,633)	3,600 (1,633)	4,000 (1,814)	4,000 (1,814)	7,000 (3,175)	7,000 (3,175)	7,000 (3,175)	7,000 (3,175)	
Maximum discharge temperature °F (°C) ^b	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	350 (177)	
Bare unit weight with flywheel lbs (kg)	150 (68.0)	210 (95.2)	390 (176.9)	390 (176.9)	745 (337.9)	745 (337.9)	900 (408.2)	215 (97.5)	215 (97.5)	340 (154)	350 (158.8)	815 (369.7)	790 (358.8)	790 (358.8)	930 (421.9)	
ANSI/DIN flange option	Yes	Yes	Yes	Yes	Yes	Yes	–	Yes	Yes	Yes	Yes	Yes	–	Yes	–	
Water-cooled option	–	–	–	–	Yes	Yes	–	–	–	Yes	Yes	Yes	Yes	Yes	–	

^a Double-acting compressor

^b 350°F discharge temperature requires use of high temperature O-rings, such as PTFE or Viton. Maximum recommended discharge temperature for use with Buna N or Neoprene O-rings is 250°F.

Note: Specific application conditions may limit a compressor's operating performance to less than the values shown on this page. Contact a Corken distributor or the factory for verification. Specifications may be changed without liability or advance notice.

Selection Criteria for Vertical and Horizontal Compressors

Corken's vertical industrial gas compressors offer piston displacement ranging from 2.8 to 117 CFM (4.76 to 198.8 m³/hr) while horizontal gas compressors offer piston displacement ranging from 7.6 to 414 CFM (12.9 to 704 m³/hr). Sizing and selection of a gas compressor requires many pieces of information. Corken applications engineers and sales staff have the skills to properly size and select the best machine to meet your needs.

When applying Corken gas compressors, please provide the engineer the following information:

- Gas name (give % composition if a mixture)
- Gas characteristics if not common (material compatibility, toxicity, EPA regulated, etc.)

- Gas data if not common (critical temperature, critical pressure, specific gravity, molecular weight)
- Ambient temperatures
- Ambient pressure if above or below sea level
- Gas suction pressure (specify psia or psig, bar a or bar g and if the compressor will pull a vacuum)
- Gas suction temperature
- Gas discharge pressure and any temperature limitations
- Desired flow rate in ACFM, lbs/hr, SCFM, Actual m³/hr, kg/hr, or Standard m³/hr
- Description of the application

With this information, our engineers will size the compressor and select materials and options that suit the gas and your particular application. A computer printout of your performance data is also provided with the quotation.