



A Series compressors

High-speed reciprocating compressors for natural gas applications

Our A Series natural gas compressors provide mid-range horsepower performance in a compact, high-speed design. The 3.5" stroke is an ideal fit for today's 1,800 rpm drivers. Built for high performance, the A Series compressors are ideal for high-pressure applications such as gas re-injection, CNG vehicle fueling, and high-pressure fuel gas boosting. They offer a wide-range of cylinders and rated discharge pressures as high as 6,000 psig.

Performance features

Type

Engineered for reliability and low-maintenance, balanced opposed for a smooth-operating, easy-to-service design.

Frame

Heavily-ribbed, reinforced cast iron frame with full-depth main bearing caps add strength and minimize vibration.

Crankshaft

Forged-steel design with main and crankpin journals of the same size allows for interchangeable bearings.

Cylinders

A wide range of air-cooled cylinder options is available. Cylinder arrangements include double-acting, tandem, and stepped-piston designs. Non-lube designs are available for special applications. Cylinders are available with MAWP up to 6,000 psig.

Compressor valves

Steel valve seats and guards; MTX or HTCX valve plates are standard. Valve springs, lifts and plates can be tailored to meet your performance conditions.

Piston/piston rods

Piston rods are heat-treated alloy steel with lubricated and vented packing.

Connecting rods

Drop forged steel connecting rods are split on the crank end to allow replacement of the bearings without removal of the crankshaft. Connecting rods are rifle-drilled for forced lubrication of the bearing.

Crossheads

Single-piece ductile iron crossheads with babbitted faces include bronze crosshead bushings and full-floating, hardened and ground crosshead pins. Crossheads and rod packing are easily accessible through oversized crosshead doors for fast and easy maintenance.

Compressor lubrication

Chain-driven positive-displacement lube oil pump contains an internal relief valve. Lubrication system includes a full-flow, non-bypassing, spin-on oil filter with a 10 Micron nominal rating and a thermostat. Compressors are assembled with stainless steel piping downstream of the lube oil filter.

Packing and cylinder lubrication

Plunger type force-feed lubricator contains a divider block distribution system, a cycle indicator and a DNFT no-flow shutdown switch. Stainless steel tubing includes plated fittings piped to the cylinders and packing. Lubrication feed rate is fully adjustable.

Standard testing

Compressor mechanical test run, hydrostatic test of all cylinders and post-test inspection meet GE's high standards.

Standard accessories

Specialized tools, where applicable, are included in the toolbox.

Optional items

Variable-volume clearance pockets, suction-valve unloaders, extra-long or two-compartment distance pieces, sour gas trim, CSA or XP no-flow switches and vibration switches, export boxing, immersion oil heaters, explosion relief doors, cylinder indicator valves, flywheels, oil coolers and drive couplings.

Throw configurations		
Compressor throws	2	4
Max. BHP (kW)	400 (298)	800 (597)
Frame weight lbs (kg) dry*	1,240 (563)	2,500 (1,134)
Frame length inches (cm)*	36 (91.4)	63.1 (106.3)
Frame width inches (cm)*	40.5 (102.9)	40.5 (102.9)
Frame height inches (cm)	28.6 (72.6)	28.6 (72.6)

Stroke configuration	
Stroke inches (mm)	3.5 (88.9)
Max. rated speed (rpm)	1,800

* without cylinders

Heavy-duty running gear		
Rod load - tension	12,500 lbs-f	55.60 kN
Rod load - compression	14,500 lbs-f	64.50 kN
Combined rod load	27,000 lbs-f	120.10 kN
Piston rod diameter	1.375 inches	34.9 mm
Crankshaft material	Forged Steel	
Connecting rod material	Forged Steel	
Crankpin & main bearing diameter	3.25 inches	82.6 mm
Crankpin & main bearing width	1.75 inches	44.5 mm

	Cylinders for the A Frame 90 Series						MAWP PSIG	Cylinder cooling	Material	Flange dia inch	Flange rating PSIG	VVCP
	Series	Cylinder bore - inches										
Double acting	90	2.50	2.75	3			2,500	Gas	D.I.	1.5	1,500	Yes
	90	3.25	3.50	3.75			1,725	Gas	D.I.	2	1,500	Yes
	90	4	4.25	4.50			1,850	Gas	D.I.	3	900	Yes
	90	4.75	5	5.25	5.50		1,750	Gas	D.I.	4	900	Yes
	90	5.75	6	6.25	6.50		1,140	Gas	D.I.	4	600	Yes a
	90	6.75	7	7.25	7.50		840	Gas	D.I.	4	600	Yes a
	90	7.75	8	8.25	8.50		635	Gas	D.I.	6	300	Yes
	90	9	9.50	10	10.50		525	Gas	D.I.	6	300	Yes
	90	11	11.50	12	12.50	13	275	Gas	D.I.	8	300	Yes
	90	13.50	14	14.50	15	15.50	200	Gas	D.I.	10	150	Yes
Double acting	H35		3				1,440	Gas	D.I.	1.5	1,500	No
	H35		3				1,250	Gas	D.I.	1.5	600	No
	H35	4	4.50	5			1,250	Gas	D.I.	3	600	Yes b
	H35	5.50					1,000	Gas	D.I.	3	600	Yes b
	H35	6	6.50	7.50	8		500	Gas	D.I.	4	300	Yes c
	H35		9				300	Gas	D.I.	4	300	Yes c
Stepped	Crank end single acting	H35	3	3.50	4	5	1,250	Gas	C.I.	1.5	600	No
		Head end single acting	H35	5				1,250	Gas	D.I.	1.5	600
		H35	6.50	7.50			500	Gas	D.I.	3	300	Yes
Tandem (CNG)	SACE	H35	2.50	3			3,500	Gas	F.S.	1	6,000	No
		H35	2.50	3			2,500	Gas	D.I.	1.5	1,500	No
		H35	3.50	4			3,500	Gas	F.S.	2	6,000	No
		90	6	6.50			1,140	Gas	D.I.	4	600	No
	SAHE	H35	1.25	1.50			6,000	Gas	F.S.	1	6,000	No
		H35	1.75	2			6,000	Gas	F.S.	1.25	6,000	No
		90	2.75	3.25			1,270	Gas	C.I.	1.5	600	No

L = Nitrided Liner - field replaceable
NL = No Liner

D.I. = Ductile Iron
F.S. = Forged Steel
C.I. = Cast Iron

SAHE = Tandem cylinder - Single Acting Head End
SACE = Tandem cylinder - Single Acting Crank End

a, b, c, etc. Designates cylinders having identical XYZ flange dimensions to assist interchangeability and package piping standardization.
(1) The 1.25" piston can be trimmed to add 14% or 25% additional clearance
(2) The 1.50" piston can be trimmed to add 10% or 20% additional clearance

Designed for flexibility

- The A Series is backed by 100 years of GE compressor design experience
- Part of a complete line of reciprocating compressors featuring advanced technology and work-proven designs
- Broadest selection of cylinders available
- Many cylinders have identical X, Y, and Z flange locations, allowing packages to be reconfigured without any changes to the piping and bottles
- Over 18,000 GE high-speed reciprocating compressors have been built to date

All GE high-speed reciprocating compressors are packaged, serviced and maintained by a worldwide network of authorized packagers and distributors.

Operating benefits

- Compressor is easily reconfigured to meet your changing requirements
- Reduces lifecycle cost and increases production
- Reduces required inventory of machinery and spare parts
- Higher efficiency, lower fuel or electricity consumption
- Lower cost of reconfiguration
- Greater utilization of driver power over a wide-range of conditions

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