

## Reciprocating gas compressors

### Eagle Series

#### Eagle 4000 Series



The mainstay of Knox Western large compressors for many years. Built in two-throw and four-throw models in both 3" and 4-1/2" strokes. Frame load for this compressor is 20,000 pounds Tension and Compression.

SPECIFICATIONS	Two throw units models		Four throw units models	
	4230	4235	4430	4445
No. of crankthrows	2	2	4	4
Stroke (in.)	3	4.5	3	4.5
RPM, continuous	1800	1200	1800	1200
Piston speed, Ft./Min.	900	900	900	900
Rated horsepower	500	500	1000	1000
Crankshaft Cl. height (in.)	13	13	13	13
Overall width, max. (in.)	140	140	140	140
Overall length, max. (in.)	45	45	84	84
Crankshaft dia.- Drive end	5.000	5.000	5.000	5.000
Approx. wt. (lbs.)	3000	3000	6500	6500
Oil pump capacity (GPM)	35	35	55	55
Sump capacity (gallons)	12	12	30	30
Rod loads (tension) (lbs.)	20000	20000	20000	20000
Rod loads (compression) (lbs.)	20000	20000	20000	20000
Rod loads (combined) (lbs.)	40000	40000	40000	40000
Crankpin diameter (in.)	5.250	5.250	5.250	5.250
Journal diameter (in.)	5.11	5.11	5.11	5.11
Main bearing (dia.) (in.)	9.05	9.05	9.05	9.05
Piston rod diameter (in.)	1.875	1.875	1.875	1.875

**COMPONENTS**

	4000
<b>Crankshaft</b>	
Crankpin Diameter	5.25
Bearing Journal Diameter	5.12
Main Bearing Diameter	9.05
Connecting Rod CL to CL	13.75
Connecting Rod Bearing Width	3.00
Connecting Rod Bolting Size	5/8-11
Connecting Rod Bushing Width	3.25
<b>Crosshead</b>	
Crosshead Surface Area/Side (Sq. In.)	50.0
Floating Crosshead Pin Diameter	3.25
<b>Piston rod diameter</b>	1.88

**Compressor materials Eagle Series\***

Components	Material
Crankcase	Grey iron
Crosshead guides	Grey iron
Crankshaft	Ductile iron
Connecting rods	Ductile iron 60-40-18
Connecting rod bearings	Steel backed babbit
Main bearings	Double row spherical roller
Connecting rod bushings	Phosphor bronze
Crossheads	Ductile iron 60-40-18 babbitt faced
Crosshead pin	Alloy steel 8620
Crosshead pin bushings	660 bronze
Piston rod	Alloy steel 4140
Rod packing rings	Non metallic full floating
All stress bolts	High tensile alloy
Pistons	Steel, grey iron, or alum
Standard piston rings	Non metallic
Standard rider rings	Non metallic
Valve cover O rings	Viton
Valve seats	Carbon steel
Valve guards	Carbon steel

\* API 618: Packages can be designed to API 618 third edition requirements including all piping, instrumentation and electrical systems. With some published exceptions, Knox Western compressors also meet the API 618 discipline.

**Eagle class double acting cylinder specifications \*\***

Bore Diameter (in.)	2	3	4	4.5	5	5.75	6	7	8	9	10	11	12	12.5	13	15	16	17	18.5	
Cylinder Material	STL	STL	STL	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.	D.I.

\*\* For Special Cylinder Applications, contact your Knox Western Representative.

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