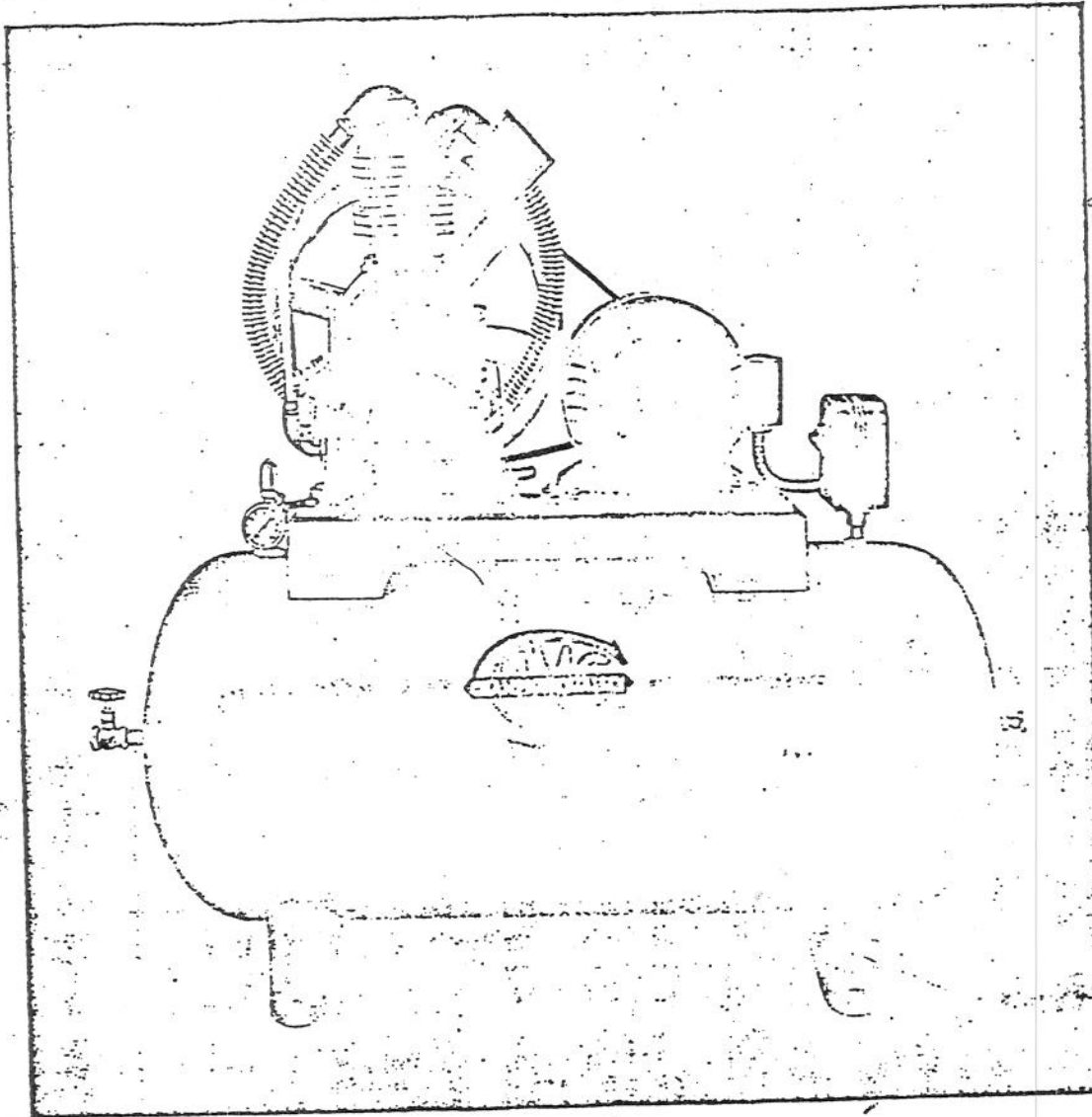


TWO STAGE AUTOMATIC AIR COMPRESSORS



REID
REID

OE BALL BEARING OR ROLLER BEARING TWO CYLINDER TYPE

Features Include

Totally enclosed (dirt proof) crankcase with patented crankshaft seal.
 Totally enclosed centrifugal unloader which automatically unloads compressor every time current is cut off.
 Motor never starts against load.
 Honed cylinders.
 Thin, quiet plate valves.
 Main bearings—annular ball bearings or roller bearings.
 Drop forged crankshaft and connecting rods.
 Babbitt lined connecting rod bearings.
 Copper finned intercooler.

CHAMPION patented after cooler.

Large diameter fan blade flywheel.
 "V" belt drive (two belts) running in grooved pulleys. Smooth and quiet in operation.

- Automatic pressure switch set to cut in at 140 and out at 180 pounds.

When furnished with direct current motor, D.C. automatic starter is included with 1½ to 3 H.P. sizes.
 For compressors only used on these equipments see page 7.

Delivery ~ 70% Disp.

SPECIFICATIONS

Equipment No.	No. of Cylinders	Bore and Stroke	R.P.M.	Cubic Foot Displacement	Motor H.P.	Size Tank Gal- lons	Max. Working Pressure lbs.	Dimensions, Inches			Weight Pounds		Export		Code Word		
								Leth.	Wdth.	Hght.	Net	Ship- ping	Gross Wt.	Cubic Feet	220 Volt 60 Cycle 3 Phase	220 Volt 60 Cycle 1 Phase	230 Volt Direct Current
OE-33-60	2	3 1/4 - 1 1/2 x 2 1/2	390	4	3/4	60	200	53	20	47	455	505	660	39	yewet	yewiv	yewss
OE-34-60	2	3 1/4 - 1 1/2 x 2 1/2	300	5.1	1	60	200	53	20	47	465	515	670	39	yeybd	yeycf	yeyev
OE-38-60	2	3 1/4 - 1 1/2 x 3	500	7.2	1 1/2	60	200	53	20	48	517	567	725	41	yemck	yemil	yemjs
OE-38-80	2	3 1/4 - 1 1/2 x 3	500	7.2	1 1/2	60	200	55	20	48	605	660	860	49	yicyk	yidaf	yideg
OE-40-60	2	3 1/2 - 2 x 3	480	9.25	2	60	200	53	20	48	535	590	745	41	yalac	yalca	yalde
OE-40-80	2	3 1/2 - 2 x 3	480	9.25	2	60	200	55	20	48	625	635	885	49	yaeng	yaeph	yaerk
OE-40-90	2	3 1/2 - 2 x 3	480	9.25	2	60	200	53	20	48	555	615	770	41	yibed	yibgo	yibif
OE-416	2	4 1/2 - 2 1/2 x 3	495	14.4	3	80	200	63	20	46	645	700	900	49	yibij	yibog	yibub
OE-418	2	4 1/2 - 2 1/2 x 3	495	14.4	3	80	200	63	20	46	645	700	900	49	yibij	yibog	yibub

CHAMPION PNEUMATIC MACHINERY CO.

TWO STAGE (BALL OR ROLLER BEARING) COMPRESSORS

Two Cylinder Type

RE-4, RE-7, RE-10, RE-14

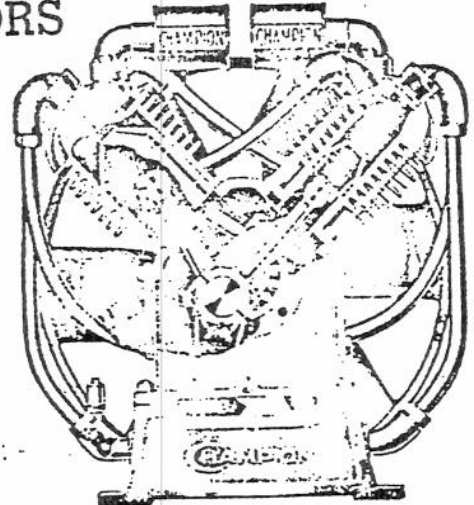
(See Illustration on Opposite Page)

Four Cylinder Type

RE-15 - RE-20

RE-36

200 Lbs. Maximum Pressure



Four Cylinder Type

Models RE-4, RE-7, RE-10 and RE-14 are two cylinder up-right two-stage compressors.

Models RE-15-V and RE-20-V are four cylinder two-stage compressors. All models are air cooled.

On the two cylinder compressors the cylinders are cast en bloc. On the four cylinder V type compressors two cylinder blocks are used.

CENTRIFUGAL UNLOADER—Totally enclosed, operated by two heavy governor weights and springs.

CRANKCASE—Totally enclosed and provided with crankshaft seal. No dirt or grit can enter.

CYLINDERS—Cylinders and domed cylinder heads are of semi-steel and cast integral in a baked sand mold so as to secure the benefit of large, thin, closely spaced cooling fins, not only around the cylinder itself but the cylinder head as well. Cylinder head gaskets are eliminated and cylinder blocks are removable from the crank-case. Air after compression is immediately exhausted into manifold and away from cylinder (no cylinder head chamber to store heat). **CHAMPION DESIGN OF DOMED CYLINDERS AND PISTONS PREVENTS OVERHEATING OF CYLINDERS AND BREAKING DOWN OF OIL FILM BETWEEN CYLINDER WALL AND PISTONS.** Cylinder walls are honed to a high finish, thus eliminating rapid wear of cylinder walls and rings.

PISTONS—The domed pistons are of unusual length and made of close grained, high grade semi-steel castings, ground to accurately fit cylinder bore.

PISTON RINGS—Pistons are fitted with three compression rings. Bottom of low pressure piston is fitted with special oil ring.

VALVES—CHAMPION patented quick acting plates valves are used. Each valve assembly consists of steel double seat,

steel valve cage, heat resisting alloy steel plate controlled by alloy heat resisting light conical springs; all assembled in one unit; easily accessible, unusually quiet and having large unrestricted air flow area.

CRANK SHAFTS AND CONNECTING RODS—Are drop-forgings of high grade S.A.E. specification open hearth forging steel.

CONNECTING ROD BEARINGS—Are babbit-lined and provided with laminated shims for easy take-up. Also readily interchangeable.

MAIN BEARINGS—Are Annular Ball-Bearing or Roller Bearing of large size. Frictional losses and starting inertia are reduced to a minimum, assuring easy running, long life and saving in power.

WRIST PINS are of the automotive type, alloy steel, hollow, hardened and ground, with hydro-lapped finish. Wrist-pin oscillates in piston, insuring ample lubrication and large bearing surfaces.

INTER COOLER—Efficient copper intercooler of ample size and length to cool the air from the low to high pressure cylinder.

ON TWO CYLINDER TYPE, AFTER COOLER AND FILTERING TRAP—Is embodied in the base of compressor with CHAMPION patented baffle plates. Cools the air, condenses moisture from discharge of compressor. If compressor is used on an automatic unit the air in the filtering trap is automatically emptied after each pumping operation.

PIPING—Copper with special compression fittings.

FAN FLY-WHEEL—Balanced fan blade type fly-wheel of exceptionally large diameter directs air directly to the cylinder heads and intercooler where efficient cooling is most essential.

OILING SYSTEM—The controlled system of lubrication provides a positive distribution of the proper amount of oil to all bearing surfaces in compressor.

SPECIFICATIONS

Model No.	No. of Cylinders	Bore and Stroke	Cu. Ft. Displacement	R.P.M.	Maximum Working Pressure Lbs.	Motor Required	Size Fly-Wheel Inches	No. of "V" Belts Required	Net Weight	Shipping Weight	Export Weight	Cu. Ft. Export	Code Word
RE-4	2	3 1/4 - 1 3/4 x 2 1/8	4 to 5.1	390-500	200	3/4 - 1	16 3/8 x 2 1/2	2	140	160	200	11	Yehfe
RE-7	2	3 1/4 - 1 3/4 x 3	7.2	500	200	1 1/2	18 x 2 1/2	2	170	190	235	11	Yemke
RE-10	2	3 3/4 - 2 x 3	9.25 to 12	500-600	200	2-3	18 x 2 1/2	2	175	195	240	11	Yajeb
RE-14	2	4 3/8 - 2 1/2 x 3	14.4	495	200	3	18 x 2 1/2	2	185	205	250	11	Yehlo
RE-15V	4	3 1/4 - 1 3/4 x 3	14.4	500	200	3	18 x 2 1/2	2	260	295	345	13	Yanyrk
RE-20V	4	3 3/4 - 2 x 3	20 to 23	500-600	200	5	19 3/8 x 3 1/2	4	285	320	370	13	Yajic
RE-36V	4	4 3/8 - 2 1/2 x 3	31	530	200	7 1/2	19 3/8 x 3 1/2	4	305	355	425	13	Yeacy

Compressors equipped with tight pulley only.

CHAMPION PNEUMATIC MACHINERY CO.

RE-10 2-STAGE AIR COMPRESSOR USED ON OE-40, OE-41, TU-55
RE-14 2-STAGE COMPRESSOR USED ON OE-416, OE-418, OE-42-5, TU-57, TU-42-5, TU-42-5G

Item No.	DESCRIPTION OF PART	RE-10	RE-14
		(3¾x2x3)	(4½x2½x3)
		PART NO.	PART NO.
	Exhaust Pipe (Less Fittings)	RE-10-1	RE-14-1
	Compression Fitting Nut	SE-5-41	SE-5-41
	Ferrule	SE-5-42	SE-5-42
2	L. P. Intake Manifold	RE-10-2A	RE-14-2
2A	L. P. Exhaust Manifold	RE-10-2E	RE-10-2E
2B	H. P. Intake Manifold	SE-5-2A	SE-5-2A
2C	H. P. Exhaust Manifold	SE-5-2	SE-5-2
	Manifold Studs W/Nuts (8)	SE-5-72	SE-5-72
3	L. P. Connecting Rod Assembly (For Full Floating Pin)	SE-5-3A	SE-5-3A
3A	H. P. Connecting Rod Assembly (For Full Floating Pin)	RE-10-3A**	SE-5-3B
	H. P. Connecting Rod Assembly (Lock In Rod)	RE-10-3	Not Used on RE-14
4	L. P. Piston	SE-40-4	RE-14-4
4A	H. P. Piston (Full Floating Pin)	RE-10-4B**	RE-36-4A
	H. P. Piston (Lock In Rod)	RE-10-4A	Not Used on RE-14
5	Crankshaft	SE-14-5	SE-14-5A
6	Cylinder Block	RE-10-6B	RE-14-6
7	Flywheel	SE-5-7VA	SE-5-7VA
7***	Flywheel	SE-5-7VG	SE-5-7VG
8	Governor Housing	SE-14-80	SE-14-80
	Governor Housing Cover	RE-10-100	RE-10-100
9	Crankcase	RE-10-9A	RE-14-9A
10	L. P. Piston Ring Set (Old Style)	Z-178	Z-179
#	L. P. Piston Ring Set (New Style)	Z-178A	Z-179A
#	H. P. Piston Ring Set (Old Style)	Z-188	Z-189
#	H. P. Piston Ring Set (New Style)	Z-188A	Z-189A
11	Subbase	SE-14-11A	SE-14-11A
	Subbase Ell	SE-14-32	SE-14-32
12	Inter-Cooler	RE-7-12	RE-7-12
13	Connecting Rod Shims (4)	N-39	N-39
	Oil Filler Cap	SE-30-17	SE-30-17
	Handhole Plate	SE-14-15	SE-14-15
	Handhole Plate (Oil Filler)	SE-14-15B	SE-14-15B
16*	Ball Bearing (2)	307	307
	Roller Bearing	332-339	332-339
	Visible Oil Gauge (Not Shown)	RE-7-14	RE-7-14
	Muffler	Z-65	Z-66
20	Connecting Rod Bolt W/Nut (4)	SE-5-20	SE-5-20
21	L. P. Piston Pin (Full Floating)	RE-10-21B	RE-14-21B
21A	H. P. Piston Pin (Full Floating)	RE-10-21**	RE-36-21A
	H. P. Piston Pin (Lock In Rod)	RE-10-21A	Not Used On RE-14
22	Oil Seal	212W112	212W112
23	Oil Drain Cap	H-23	H-23
24	L. P. Oil Slinger	SE-5-24	SE-5-24
	H. P. Oil Scoop (New Style)	RE-10-24	RE-10-24
29	Cylinder Flange Gasket	SE-14-29	RE-36-29
30	Governor Housing Gasket	SE-14-30	SE-14-30
30A*	Governor Housing Gasket (Set of 3 Shims)	SE-14-30A	SE-14-30A
	Governor Housing Cover Gasket	SE-14-89	SE-14-89
	Oil Filler Gasket	SE-30-18	SE-30-18
	Cylinder Flange Stud W/Nut (6)	SE-5-78	RE-36-78A
	Subbase Stud W/Nut (4)	SE-5-78	SE-5-78
	Handhole Plate Gasket	SE-14-31	SE-14-31
	Handhole Plate Gasket (Oil Filler)	SE-14-33	SE-14-33
38	Connecting Rod Bearing (2)	SE-5-38	SE-5-38
77A	H. P. Piston Pin Bolt	RE-10-77A	Not Used on RE-14
78	L. P. Piston Pin Retainer (2)	5000-93	5000-93
	H. P. Piston Pin Retainers (2)	5000-75	5000-93
	L. P. Piston Pin Bushing	SE-5-37	SE-5-37
	H. P. Piston Pin Bushing	RE-10-37**	RE-36-37A
	Flywheel Bolt W/Nut	SE-5-105	SE-5-105
	Flywheel Key	SE-5-8	SE-5-28
TUBING WITH FITTINGS			
(Subbase To Check Valve)			
	All 60 Gallon Vertical Models	V-T-60	V-T-60
	All 80 Gallon Vertical Models	V-T-80	V-T-80
	All Horizontal Models	H-T-60	H-T-60
	Unloader to Manifold	U-B-250	U-B-250
	Subbase To Unloader	S-B-250	S-B-250
	COMPLETE PISTON RING SET (Old Style)	Z-10	Z-14
	COMPLETE PISTON RING SET (New Style)	Z-10A	Z-14A
	COMPLETE SET VALVES WITH GASKETS	Z-101	Z-102
For Component Valve Parts, See Valve Chart, Form #1005			

Note: * Parts Used Prior To Serial No. 58375
 ** Parts Used After Serial No. 79600

*** Parts Used After Serial No. 80200
 # Parts Used After Serial No. 85000

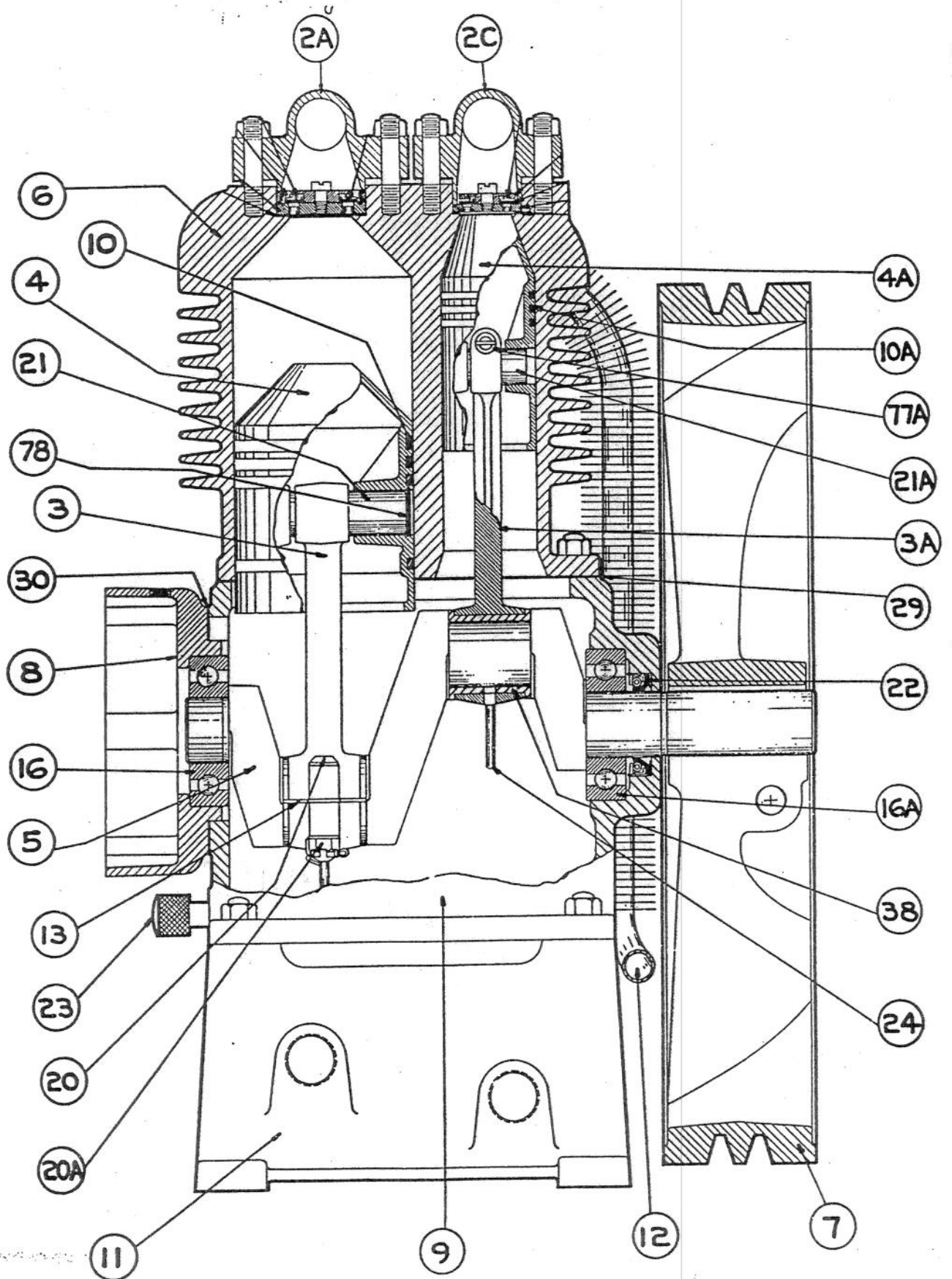
CHAMPION PNEUMATIC MACHINERY COMPANY

825 NORTH PLEASANT STREET

PRINCETON, ILLINOIS

PRINTED IN U. S. A.

CHAMPION MODELS RE TWO-STAGE AIR COMPRESSORS



CHAMPION PNEUMATIC MACHINERY COMPANY

825 North Pleasant Street
PRINTED IN U. S. A.

Princeton, Illinois

Obsolete parts → Phillips Air (773) 778-1100

Air compressor Sales & Serv 313-565-4801
R10D 1000

RE-10 2-STAGE AIR COMPRESSOR USED ON OE-40, OE-41, TU-66
RE-14 2-STAGE COMPRESSOR USED ON OE-416, OE-418, OE-42-5, TU-57, TU-42-5, TU-42-5G (2) Belt 5LL68C

Item No.	DESCRIPTION OF PART	PART NO.	
		RE-10 (3 3/4 x 2 x 3)	RE-14 (4 3/4 x 2 1/2 x 3)
	Exhaust Pipe (Less Fittings)	obsolete	obsolete
	Compression Fitting Nut	SE-5-41	SE-5-41
	Ferrule	SE-5-42	SE-5-42
2	L. P. Intake Manifold	S-20-2	R-10-B2
2A	L. P. Exhaust Manifold	RE-10-2E	RE-10-2E
2B	H. P. Intake Manifold	SE-5-2A	SE-5-2A
2C	H. P. Exhaust Manifold	NR-2	NR-2
	Manifold Studs W/Nuts (8)	obsolete	obsolete
3	L. P. Connecting Rod Assembly (For Full Floating Pin)	obsolete	obsolete
3A	H. P. Connecting Rod Assembly (For Full Floating Pin)	obsolete	obsolete
	H. P. Connecting Rod Assembly (Lock In Rod)	obsolete	Not Used on RE-14
4	L. P. Piston	SE-40-4e less Pin obs	obsolete
4A	H. P. Piston (Full Floating Pin)	obsolete	obsolete
	H. P. Piston (Lock In Rod)	obs	Not Used on RE-14
5	Crankshaft	obs	obs
6	Cylinder Block	obs RE109	obs
7	Flywheel ccw pump rotation-gov end	obs	obs
7...	Flywheel CW	NR-7A	NR-7A
8	Governor Housing	obs	obs
	Governor Housing Cover	RE-10-100A	RE-10-100A
9	Crankcase	obs	obs
10	L. P. Piston Ring Set (Old Style)	RE-10 Rings obs	Z-179
#	L. P. Piston Ring Set (New Style)	obsolete	obsolete
#	H. P. Piston Ring Set (Old Style)	"	Z-189
#	H. P. Piston Ring Set (New Style)	"	obsolete
11	Subbase	obs	obs
	Subbase Ell	"	"
12	Inter-Cooler	RE-4-12A	RE-4-12A
13	Connecting Rod Shims (4)	obsolete	obsolete
	Oil Filler Cap	obs	obs
	Handhole Plate	"	"
	Handhole Plate (Oil Filler)	"	"
16*	Ball Bearing (2)	"	"
	Roller Bearing	"	"
	Visible Oil Gauge (Not Shown)	RE-7-14	RE-7-14
	Muffler	Z-828	Z-828
20	Connecting Rod Bolt W/Nut (4)	"	SE-5-20
21	L. P. Piston Pin (Full Floating)	"	obsolete
21A	H. P. Piston Pin (Full Floating)	"	obsolete
	H. P. Piston Pin (Lock In Rod)	"	Not Used On RE-14
	Oil Seal	OS-n4	OS-n4
	Oil Drain Cap	"	obs
24	L. P. Oil Slinger	"	"
	H. P. Oil Scoop (New Style)	"	"
29	Cylinder Flange Gasket	SE-14-29	"
30	Governor Housing Gasket	SE-14-30	SE-14-30
30A*	Governor Housing Gasket (Set of 3 Shims)	Z-130	Z-130
	Governor Housing Cover Gasket	SE-14-89	SE-14-89
	Oil Filler Gasket	obs	obs
	Cylinder Flange Stud W/Nut (6)	"	"
	Subbase Stud W/Nut (4)	"	"
	Handhole Plate Gasket	obs	obs
	Handhole Plate Gasket (Oil Filler)	"	"
38	Connecting Rod Bearing (2) Phillips Air	obsolete	obsolete
77A	H. P. Piston Pin Bolt	obs	Not Used on RE-14
78	L. P. Piston Pin Retainer (2)	SE-5-102A obs	SE-5-102A Z253
	H. P. Piston Pin Retainers (2)	RE-10-102 obs	"
	L. P. Piston Pin Bushing	SE-5-37B	SE-5-37B
	H. P. Piston Pin Bushing	RE-10-37A	RE-36-37B
	Flywheel Bolt W/Nut	obs	obs
	Flywheel Key	SE-5-8	SE-5-28
	TUBING WITH FITTINGS		
	(Subbase To Check Valve)		
	All 60 Gallon Vertical Models	OBSOLETE	OBSOLETE
	All 80 Gallon Vertical Models	"	"
	All Horizontal Models	"	"
	Unloader to Manifold	U-8-250	U-8-250
	Subbase To Unloader	S-8-250	S-8-250
	COMPLETE PISTON RING SET (Old Style)	Z-40-4C LP Ass'y obs	Z-14
	COMPLETE PISTON RING SET (New Style)	obsolete	obs
	COMPLETE SET VALVES WITH GASKETS	Z-101	Z-102
	Pump Gasket Set	Z253	OBSOLETE

Note: * Parts Used Prior To Serial No. 58375
** Parts Used After Serial No. 79600
*** Parts Used After Serial No. 80200
Parts Used After Serial No. 85000

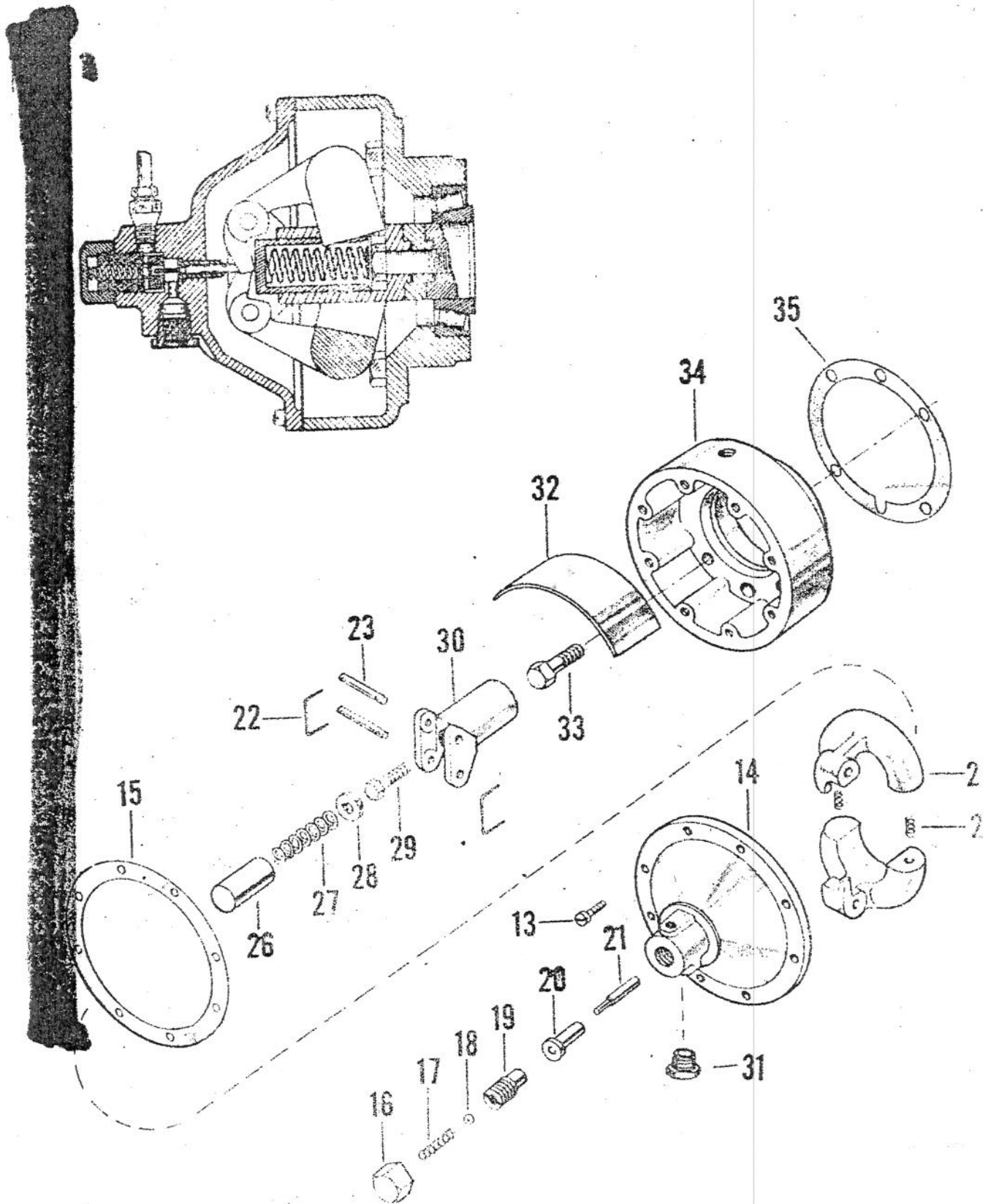
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Austin
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CHAMPION PNEUMATIC MACHINERY COMPANY
825 NORTH PLEASANT STREET
PRINCETON, ILLINOIS

Form #1010

Revised 6/15/56

CHAMPION CENTRIFUGAL UNLOADER



CHAMPION PNEUMATIC MACHINERY COMPANY

825 North Pleasant Street

Princeton, Illinois

CHAMPION CENTRIFUGAL UNLOADER

ITEM NO.	NAME	MODELS USED ON	NO. REQUIRED	PART NO.
13	Fillister Head Machine Screw	ALL	8	SE-14-84
14	Governor Housing Cover	ALL 4 Cyl.	1	SE-30-100
	Governor Housing Cover (old style)	ALL RE & SE Models 1 & 2 Cyl.	1	RE-10-100
	Governor Housing Cover Gasket	RE-36	1	*SE-5-100
15	Governor Housing Cover Gasket	ALL 4 Cyl.	1	SE-30-89
	Governor Housing Cover Gasket (old style)	ALL RE & SE Models 1 & 2 Cyl.	1	SE-14-89
	Release Valve Cap	RE-36	1	*SE-5-89
16	Release Valve Gasket	ALL	1	SE-5-85
	Release Valve Spring	ALL	1	H-122
*17	Valve Ball (stainless steel)	ALL	1	SE-5-91
*18	Release Valve Body	ALL	1	SE-5-95
*19	Plunger Sleeve	ALL	1	SE-30-101
20	Release Valve Plunger	ALL 4 Cyl.	1	SE-5-86B
*21	Lock Wire	ALL RE & SE Models 1 & 2 Cyl.	1	SE-5-86A
22	Governor Weight Pin	ALL	2	SE-5-98
23	Governor Weights	ALL	2	SE-5-92
24	Bumper Springs	ALL	2	SE-5-82
25	Spring Sleeve	ALL	1	H-110-P
26	Governor Spring	ALL	1	SE-5-87
27	Spring Plate (3/8" Washer)	ALL	1	SE-5-90
28	Cap Screw 7/16" SAE 1"	ALL Except	1	SE-5-88
29	Spindle	RE-14	1	SE-5-94
	Spindle Washer (not shown)	RE-14	1	RE-14-94
	Muffler	ALL	1	SE-5-83B
30	Muffler	ALL	1	RE-14-83B
31	Governor Baffle Plate	ALL 4 Cyl.	1	Z-60
32	Cap Screws	ALL RE & SE 1 & 2 Cyl. Except	1	*Z-60A
	Governor Housing	RE-14	1	RE-20-104
	Governor Housing	RE-14	1	RE-7-104
	Governor Housing	RE-14	1	RE-14-104
	Governor Housing	ALL	4	RE-20-106
33	Governor Housing	SE-5 - SE-10	1	RE-4-80
34	Governor Housing	ALL 4 Cyl.	1	SE-30-113C
	Governor Housing	ALL 4 Cyl. Except	1	*SE-30-113A
	Governor Housing	RE-36	1	*RE-36-80
	Governor Housing	RE-4	1	RE-4-80A
	Governor Housing	RE-14	1	RE-14-80
	Governor Housing	RE-7 - RE-10, SE-14 - SE-20	1	SE-14-80
35	Governor Housing Shim Gaskets (set of 3)	ALL 4 Cyl.	1	SE-30-30A
	Governor Housing Shim Gaskets (set of 3)	ALL RE & SE 2 Cyl. Except	1	SE-14-30A
	Governor Housing Gaskets	ALL RE & SE 1 & 2 Cyl.	1	SE-14-30
	Governor Housing Gasket	ALL 4 Cyl.	1	SE-30-30
	Governor Housing Gasket	RE-36	1	*RE-36-30
	Governor Inlet Fitting w/nut (not shown)	ALL	1	SE-5-96
	Complete Centrifugal Unloader	ALL		

*Used Prior to 65600

†Used After—80000

17, 18, 19, 21 = Z124B (plunger needs to be shortened - 1/2 length w/ original)
 Release Valve Body

CHAMPION PNEUMATIC MACHINERY COMPANY

825 North Pleasant Street

Princeton, Illinois