

COMMANDAIR

1/2 - 5 HORSEPOWER

ONE AND TWO STAGE RECIPROCATING



**WHEN COMPRESSED AIR  
QUALITY COUNTS.**



**CHAMPION**<sup>®</sup>  
A Gardner Denver Product

# COMMANDAIR

## PROVEN DESIGN...

Now there is a high quality compressor for when you need dependable air power that's a real value, too. Champion's full line of compact Commandair reciprocating air compressors are built to the same exact quality standards as our larger models, but sized for smaller air requirements, such as small industrial plants, schools, small automotive centers and do-it-yourselfers.

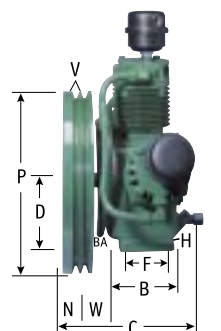
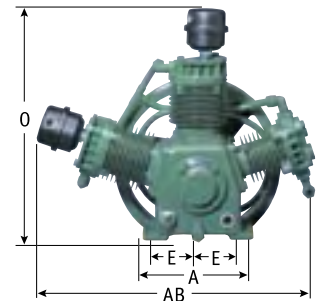
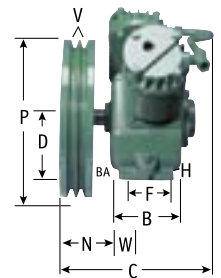
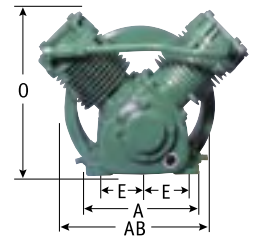
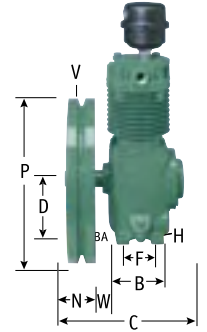
## SINGLE-STAGE ELECTRIC DRIVEN

The single-stage series of Commandair air compressor units are available from 1/2 through 3 HP, with the option of horizontal, vertical style receivers, and base mounted units. Air pressure ratings are available up to 125 PSIG. Thermal overload protected motors are standard on 1/2 through 1 HP, single phase, 115 Volt units.

## TWO-STAGE ELECTRIC DRIVEN

Available in sizes from 3/4 through 2 HP with pressures ratings up to 175 PSIG. Two-stage Commandair air compressor models are available mounted on horizontal, or a space-saving vertical receiver, or as a base mounted package. Thermal overload protected motor is standard on 3/4 HP, single phase, 115 Volt units. 1750 RPM motors are standard equipment on all packages.

- Unamated aluminum cylinders with cast-iron liners combine maximum wear of iron with cooling efficiency of an aluminum casting. Multi-finned for superior heat dissipation and longer life.
- Lightweight aluminum alloy pistons ensure proper reciprocating balance. Two compression rings and one oil-control ring are used for better oil control, less air blow-by and higher efficiency.
- High density, high silicon die-cast aluminum alloy connecting rods minimize reciprocating weight and offer exceptional bearing life. All single-stage models have integral, precision bored crank pin and piston pin bearing to properly distribute bearing loads. (Also applies to first stage of two stage models; second stage has bronze bushing on piston pin end.)
- High-quality Swedish Steel reed-type valves provide long life. Also, second stage of two-stage models feature single unit (disc valve) design.
- Tapered roller bearings on two and three-cylinder models provide longer life.
- Precision balanced flywheel has fan blades for maximum compressor cooling resulting in extended compressor life.
- Rugged ductile iron crankshaft has large diameter throws for minimum bearing loads, and counterweights to minimize vibration.
- Rugged cast iron crankcase designed to rigidly support the crankshaft and bearings. Convenient oil level sight gauge on 2 and 3 cylinder models, and large oil drain.
- Removable cartridge-type intake filter features a 10-micron rated element.



## COMPRESSOR DIMENSIONS

Model	A1, B1, C1	AV1	BV1	CV1	CW1	CAV1	CAW1	
A	Base width	6¼	7¼	7¼	7¼	8	7¼	8
AA	Pipe size	½	½	½	½	½	½	½
AB	Overall width	10¼	18¼	18½	18½	24½	15¾	20½
B	Base depth	3	3½	3½	3½	3¾	3½	3¾
BA	Flywheel to hole	2	2	1¼	1¼	2	1¾	2
C	Overall depth	7¼	8	8	8	8¾	8¾	8¾
D	Base to shaft	3¼	3¼	3¼	3¼	4	3¼	4
E	Hole spacing	2¾	3¼	3¼	3¼	3½	3¼	3½
F	Hole spacing	2¾	2¾	2¾	2¾	2¾	2¾	2¾
H	Hole dia.	1¼	½	½	½	½	½	½
N	Flywheel width	1¾	1¾	2¾	2¾	2½	2½	2½
O	Pump height	14½	11¾	11¾	11¾	16¼	12¼	16¼
P	Flywheel dia.	*10¼	10¼	10¼	10¼	12¾	12¾	12¾
V	No. & Sections	1A	1A	2A	2A	2A	2A	2A
W	Flywheel to base	1½	1½	¾	¾	1¼	1½	1¼

\*A1 Pump with pressed steel flywheel - 9" diameter

**SINGLE STAGE - HORIZONTAL UNITS (ELECTRIC) - MODEL MATRIX CESCAA**

HP	TANK CAP	UNIT MODEL	COMPRESSOR PUMP MODEL	RPM	90 PSIG		BORES IN. DIA.	STROKE IN.	NO. CYC.	OVERALL DIMS. L x W x H IN.	BOLT DOWN L x W IN.	NET WEIGHT APPROX. LBS.
					CFM DISPL	CFM* DEL'Y						
1/2	30	30A5H	A1	1020	2.8	1.8	1¾	2	1	42 x 19 x 35¾	20 x 11	122
¾	30	30B7H	B1	725	3.7	2.4	2½	2	1	42 x 19 x 35¾	20 x 11	137
1	30	30C10H	C1	800	5.0	3.1	2¾	2	1	42 x 19 x 35¾	20 x 11	166
1	30	30AV10H	AV1	935	5.1	2.9	1¾	2	2	42 x 21 x 34¾	20 x 11	172
1½	30	30BV15H	BV1	780	8.0	5.3	2½	2	2	42 x 21 x 34¾	20 x 11	180
2	30	30CV20H	CV1	775	9.7	6.7	2¾	2	2	42 x 21 x 34¾	20 x 11	188
2	30	30CW20H	CW1	580	10.9	7.2	2¾	2	3	42 x 21 x 37¾	20 x 11	203
2	60	60CW20H	CW1	580	10.9	7.2	2¾	2	3	51 x 22 x 42¾	28 x 18	294
3	30	30CV30HS	CV1	940	11.8	7.6	2¾	2	2	42 x 21 x 33¾	20 x 11	240
3	30	30CW30HS	CW1	895	16.8	10.5	2¾	2	3	42 x 21 x 37¾	20 x 11	290

**SINGLE STAGE - VERTICAL UNITS (ELECTRIC) - MODEL MATRIX CESCAA**

HP	TANK CAP	UNIT MODEL	COMPRESSOR PUMP MODEL	RPM	90 PSIG		BORES IN. DIA.	STROKE IN.	NO. CYC.	OVERALL DIMS. L x W x H IN.	BOLT DOWN L x W IN.	NET WEIGHT APPROX. LBS.
					CFM DISPL	CFM* DEL'Y						
1/2	30	30A5V	A1	1020	2.8	1.8	1¾	2	1	24 x 22 x 582¾	4 on 18" BC	136
¾	30	30B7V	B1	725	3.7	2.4	2½	2	1	24 x 22 x 582¾	4 on 18" BC	148
1	30	30C10V	C1	800	5.0	3.1	2¾	2	1	24 x 22 x 582¾	4 on 18" BC	152
1	30	30AV10V	AV1	935	5.1	2.9	1¾	2	2	30 x 22 x 57¼	4 on 18" BC	158
1½	30	30BV15V	BV1	780	8.0	5.3	2½	2	2	30 x 22 x 57¼	4 on 18" BC	182
2	30	30CV20V	CV1	775	9.7	6.7	2¾	2	2	30 x 22 x 57¼	4 on 18" BC	190
3	30	30CV30VS	CV1	940	11.8	7.6	2¾	2	2	30 x 22 x 57¼	4 on 18" BC	245
3	30	30CW30VS	CW1	895	16.8	10.5	2¾	2	3	30 x 24 x 612¾	4 on 18" BC	295

**SINGLE STAGE - BASE-MOUNTED UNITS (ELECTRIC) - MODEL MATRIX CEBCAA**

HP	UNIT MODEL	COMPRESSOR PUMP MODEL	RPM	90 PSIG		BORES IN. DIA.	STROKE IN.	NO. CYC.	OVERALL DIMS. L x W x H IN.	BOLT DOWN L x W IN.	NET WEIGHT APPROX. LBS.
				CFM DISPL	CFM* DEL'Y						
1/2	BMA5	A1	1020	2.8	1.8	1¾	2	1	18½ x 10¼ x 18	17 x 7¼	56
¾	BMB7	B1	725	3.7	2.4	2½	2	1	18½ x 10¼ x 18½	17 x 7¼	63
1	BMC10	C1	800	5.0	3.1	2¾	2	1	18½ x 10¼ x 18½	17 x 7¼	76
1	BMAV10	AV1	935	5.1	2.9	1¾	2	2	20½ x 10¼ x 16¾	17 x 7¼	79
1½	BMBV15	BV1	780	8.0	5.3	2½	2	2	20½ x 10¼ x 17	17 x 7¼	82
2	BMCV20	CV1	775	9.7	6.7	2¾	2	2	20½ x 10¼ x 17	17 x 7¼	86
2	BMCW20	CW1	580	10.9	7.2	2¾	2	3	21½ x 13 x 19½	25½ x 10¼	93

**TWO STAGE - HORIZONTAL UNITS (ELECTRIC) - MODEL MATRIX CESCAA**

HP	TANK CAP	UNIT MODEL	COMPRESSOR PUMP MODEL	RPM	90 PSIG		BORES IN. DIA.	STROKE IN.	NO. CYC.	OVERALL DIMS. L x W x H IN.	BOLT DOWN L x W IN.	NET WEIGHT APPROX. LBS.
					CFM DISPL	CFM* DEL'Y						
¾	30	30CAV7H	CAV1	590	3.7	2.6	2¾ & 1¾	2	2	42 x 22 x 33¾	20 x 11	183
1	30	30CAV10H	CAV1	780	4.9	3.8	2¾ & 1¾	2	2	42 x 22 x 33¾	20 x 11	190
1	60	60CAV10H	CAV1	780	4.9	3.8	2¾ & 1¾	2	2	52 x 22 x 38¾	28 x 18	280
1½	30	30CAW15H	CAW1	565	7.1	5.4	2¾ (2) & 1¾	2	3	42 x 22 x 37¾	20 x 11	194
1½	60	60CAW15H	CAW1	565	7.1	5.4	2¾ (2) & 1¾	2	3	52 x 22 x 42¾	28 x 18	280
2	30	30CAW20H	CAW1	720	9.0	6.7	2¾ (2) & 1¾	2	3	42 x 22 x 37¾	20 x 11	196
2	60	60CAW20H	CAW1	720	9.0	6.7	2¾ (2) & 1¾	2	3	52 x 22 x 42¾	28 x 18	287

# COMMANDAIR

## TWO STAGE - VERTICAL UNITS (ELECTRIC) - MODEL MATRIX CESGAA

HP	TANK CAP	UNIT MODEL	COMPRESSOR PUMP MODEL	RPM	90 PSIG		BORES IN. DIA.	STROKE IN.	NO. CYC.	OVERALL DIMS. L X W X H IN.	BOLT DOWN L X W IN.	NET WEIGHT APPROX. LBS.
					CFM DISPL	CFM* DEL'Y						
3/4	30	30CAV7V	CAV1	590	3.7	2.6	2 3/4 & 1 3/4	2	2	30 x 22 x 56 3/4	4 on 18" BC	178
1	30	30CAV10V	CAV1	780	4.9	3.8	2 3/4 & 1 3/4	2	2	30 x 22 x 56 3/4	4 on 18" BC	182
1 1/2	60	30CAW15V	CAW1	565	7.1	5.4	2 3/4 (2) & 1 3/4	2	3	33 x 22 x 69 3/4	4 on 23" BC	315
2	60	30CAW20V	CAW1	720	9.0	6.7	2 3/4 (2) & 1 3/4	2	3	33 x 22 x 69 3/4	4 on 23" BC	322

## TWO STAGE - BASE-MOUNTED UNITS (ELECTRIC) - MODEL MATRIX CEBGAA

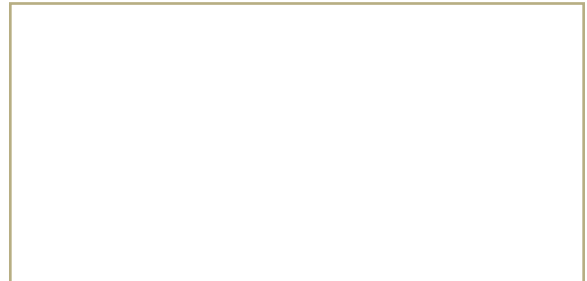
HP	UNIT MODEL	COMPRESSOR PUMP MODEL	RPM	90 PSIG		BORES IN. DIA.	STROKE IN.	NO. CYC.	OVERALL DIMS. L X W X H IN.	BOLT DOWN L X W IN.	NET WEIGHT APPROX. LBS.
				CFM DISPL	CFM* DEL'Y						
3/4	BMCAV7	CAV1	590	3.7	2.6	2 3/4 & 1 3/4	2	2	21 1/4 x 10 1/2 x 16 1/4	17 x 7 1/4	84
1	BMCAV10	CAV1	780	4.9	3.8	2 3/4 & 1 3/4	2	2	21 1/4 x 10 1/2 x 16 1/4	17 x 7 1/4	87
1 1/2	BMCAW15	CAW1	565	7.1	5.4	2 3/4 (2) & 1 3/4	2	3	31 1/4 x 13 x 19 1/2	25 1/2 x 10 1/4	88
2	BMCAW20	CAW1	720	9.0	6.7	2 3/4 (2) & 1 3/4	2	3	31 1/4 x 13 x 19 1/2	25 1/2 x 10 1/4	90

## SPRINKLER SYSTEMS: 40 PSIG SYSTEM (30 MINUTES MAXIMUM PUMPING TIME)

HP	Max Volume Gallons	Unit Model	Comp Pump Model	RPM	CFM Displ	CFM/FA* Del'y	Dimensions in Inches								I-NPT
							A	B	C	D	E	F	G	H	
1/2	265	BMB-5SS	B1	845	4.3	3.2	18 1/2	8 3/4	16 3/4	1/2	15	NA	2 1/2	12 1/4	1/2
3/4	350	BMC-7SS	C1	845	5.3	4.2	18 1/2	8 3/4	16 3/4	1/2	15	NA	2 1/2	12 1/4	1/2
1	600	BMBV-10SS	BV1	965	9.9	7.3	27	13 3/4	14 1/2	1/2	19 1/2	10 1/4	2 1/2	7 3/4	1/2
1 1/2	745	BMCV-15SS	CV1	960	12.0	9.0	27	13 3/4	14 1/2	1/2	19 1/2	10 1/4	2 1/2	7 3/4	1/2
2	1050	BMCW-20SS	CW1	900	16.9	12.7	29 1/2	13 3/4	18 3/4	1/2	19 1/2	10 1/4	2 1/2	9 1/2	1/2
3	1625	BS-3SS	S-20	655	25.1	19.7	29 1/4	16 1/4	23	1/2	26	14 1/4	4	6 1/2	3/4
5	2180	BS-5SS	S-20	980	37.5	26.4	29 1/4	16 1/4	23	1/2	26	14 1/4	4	6 1/2	3/4

\*Units tested in accordance with CAGI/PNEUROPE acceptance test code PN2CPTC2 or PN2CPTC3

Champion Authorized Distributor



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