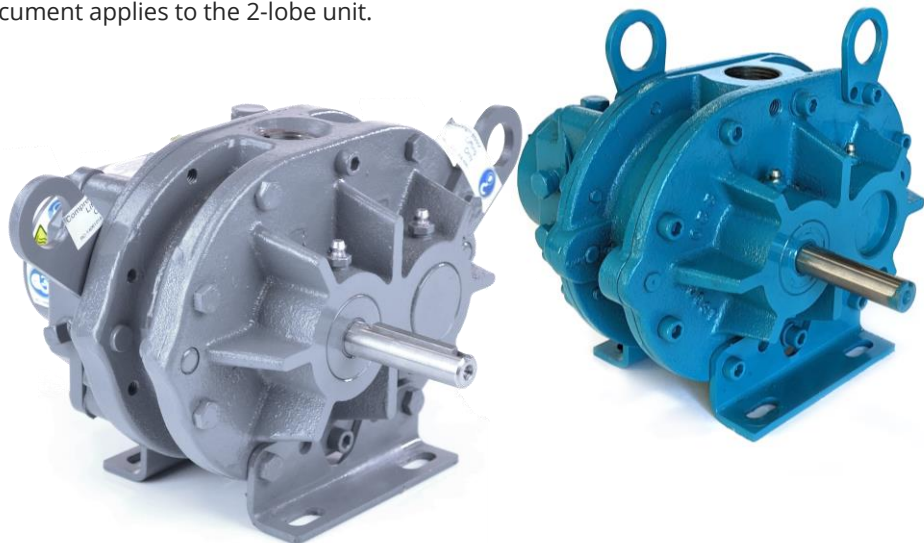


# Roots 22 URAI Blower

## Comparison with Tuthill M-D Kinney CP 2002

The 2002 model is in the Tuthill / M-D Pneumatics Competitor series and is also referred to as a 2002 CP. This unit is available in either a 2-lobe or 3-lobe design. This comparison document applies to the 2-lobe unit.



### SPECIFICATIONS

	ROOTS 22 URAI	TUTHILL 2002 CP
Flow Range:	to 68 CFM	to 64 CFM
Max $\Delta$ Pressure:	12 psi	12 psi
Max $\Delta$ Vacuum:	15" Hg	15" Hg
Maximum RPM:	5275	5275
Minimum RPM:	1530	1750
Max $\Delta$ T:	225° F	225° F
Connection:	1" NPT	1" NPT
Shaft Diameter:	5/8"	5/8"
Unit Weight:	32 lb	41 lb

### LUBRICATION

Both the 22 URAI and 2002 CP utilize oil lubrication on the gear end and grease on the drive end.

	22 URAI	2002 CP
Required Oil (Horizontal Unit)	6.1 oz	3.4 oz
Required Oil (Vertical Unit)	3.4 oz	1.7 oz
Grease Type	Aluminum Complex NLGI #2	Lithium Complex NLGI #2

#### Gear End Oil Lubrication

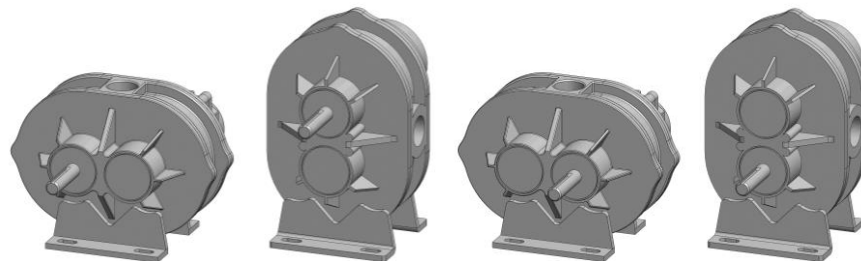
Blowers ship dry from factory and oil must be added before startup. Oil must be an industrial type non-detergent, rust inhibiting, anti-foaming oil of the correct viscosity. See your manual or contact us for assistance selecting the viscosity.

#### Drive End Grease Lubrication

These manufacturers use different types of grease which should not be mixed. If you plan to change to a different grease than the type that came in your blower, a full purge must be done.

### CONFIGURATIONS

Both models feature movable mounting feet that allow the blower to be flipped into four different configurations. The manufacturer's part numbers are listed below.



	LEFT HAND	TOP DRIVE	RIGHT DRIVE	BOTTOM DRIVE
22 URAI	6510202L	6510202T	6510202R	6510202B
2002 CP	2002-A6L2CV1-A	2002-A6T2CV1-A	2002-A6R2CV1-A	2002-A6B2CV1-A

\*Characters in the Tuthill model designations indicate materials, configurations, and special options.

# Roots 22 URAI Blower

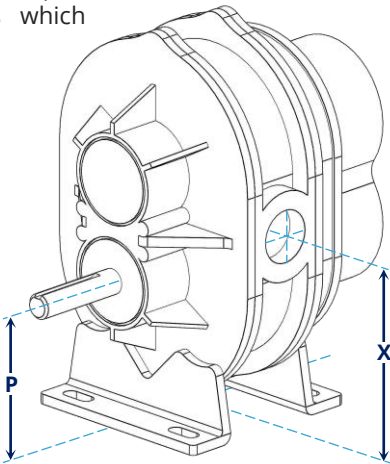
## Dimensional Comparison with 2-Lobe 2002 CP

While these models are typically considered drop-in equivalents, there are minor differences which should be considered for your situation.

### SHAFT AND CONNECTIONS

Shaft size and connection size are the most important dimensions to compare. With these two models both measurements are the same.

To determine whether any changes to your piping or enclosure will be needed, take note of the placement of the connections (X,H) and the shaft (P,W).

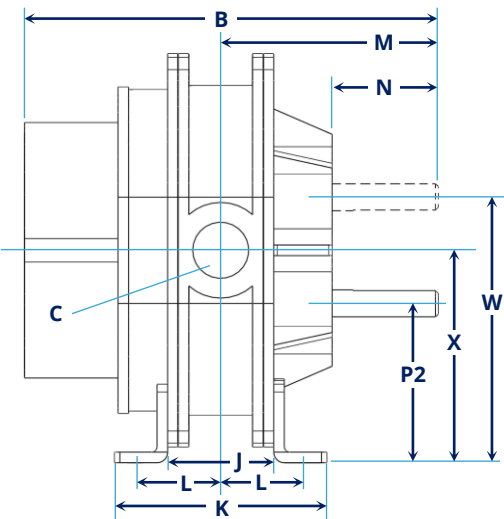
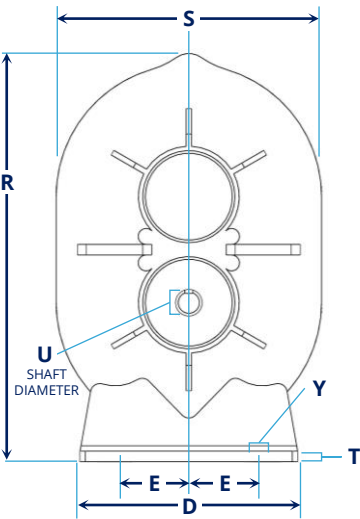
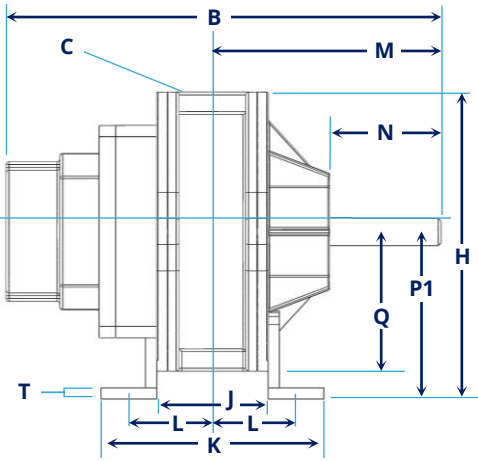
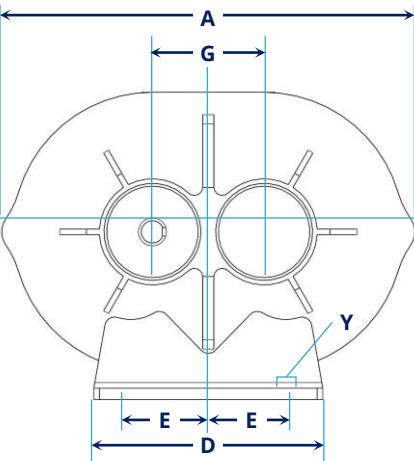
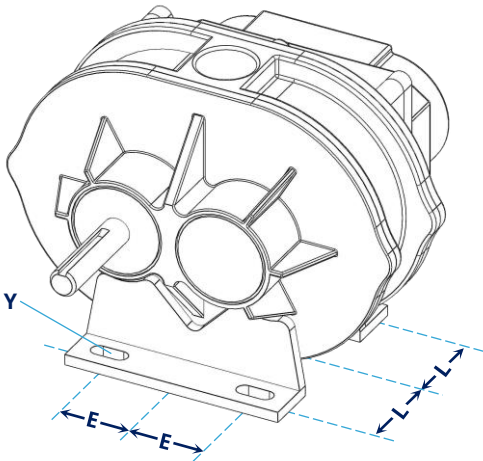


### MATERIALS

Both units have cast iron cylinders and headplates. Tuthill blowers have ductile iron impellers and shafts while Roots units have cast iron impellers with steel shafts.

### MOUNTING FEET

The placement of the bolt slots in the mounting feet is also important to consider. Both units feature universal mounting feet that can be moved to accommodate changes in configuration.

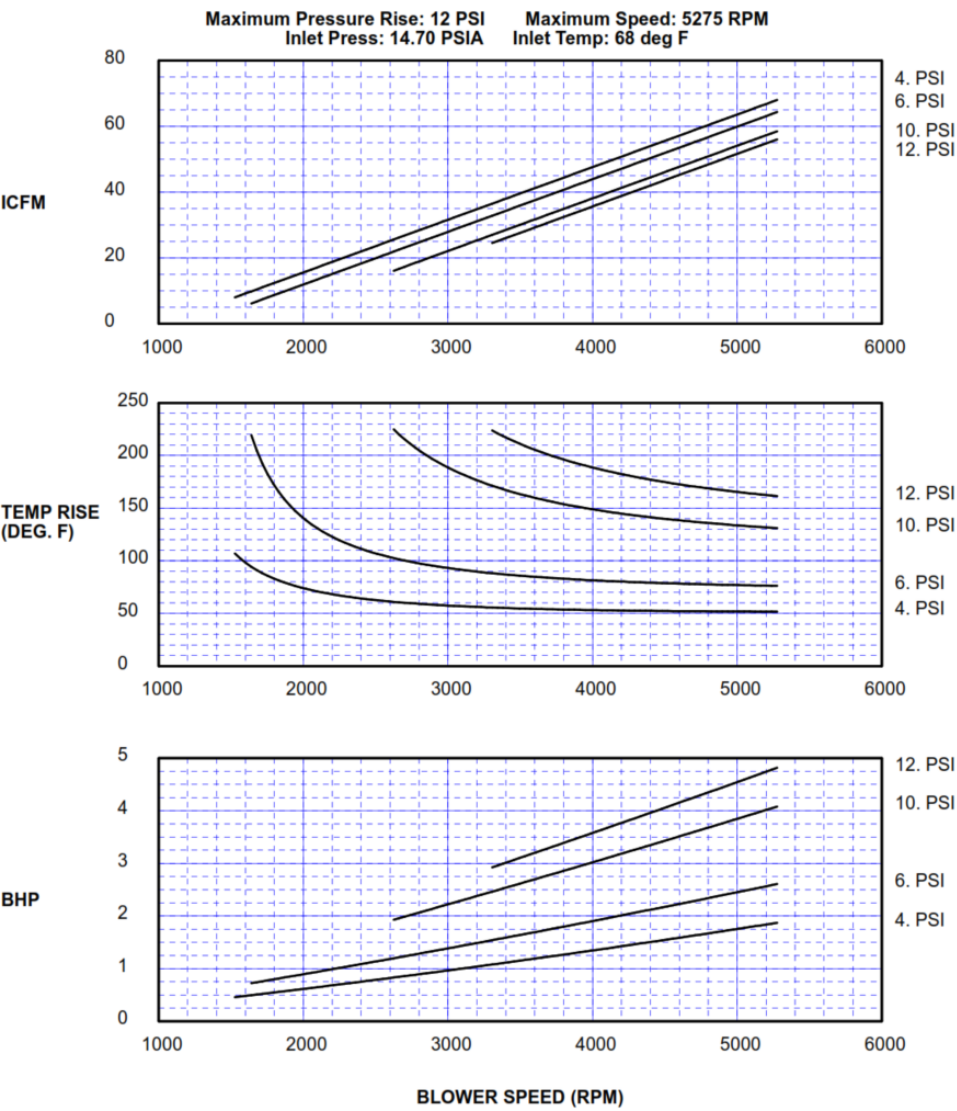


MAKE	MODEL	A	B	C	D	E	G	H	J	K	L	M	N	P	Q	R	S	T	U	W	X	Y
Roots	22 URAI	9.25	9.75	1" NPT	5.13	1.5 - 2	2.5	6.88	2.5	5	2	5.13	2.5	3.75	3.13	9.63	6.25	0.25	0.625	6.25	5	0.38 bolts
Tuthill	2002 CP	9.38	10.13	1" NPT	5.13	1.75	2.5	6.88	2.56	5.06	2	5.13	2.5	3.75	3.13	9.69	6.26		0.625	6.25	5	3/8" bolts

All measurements shown in inches

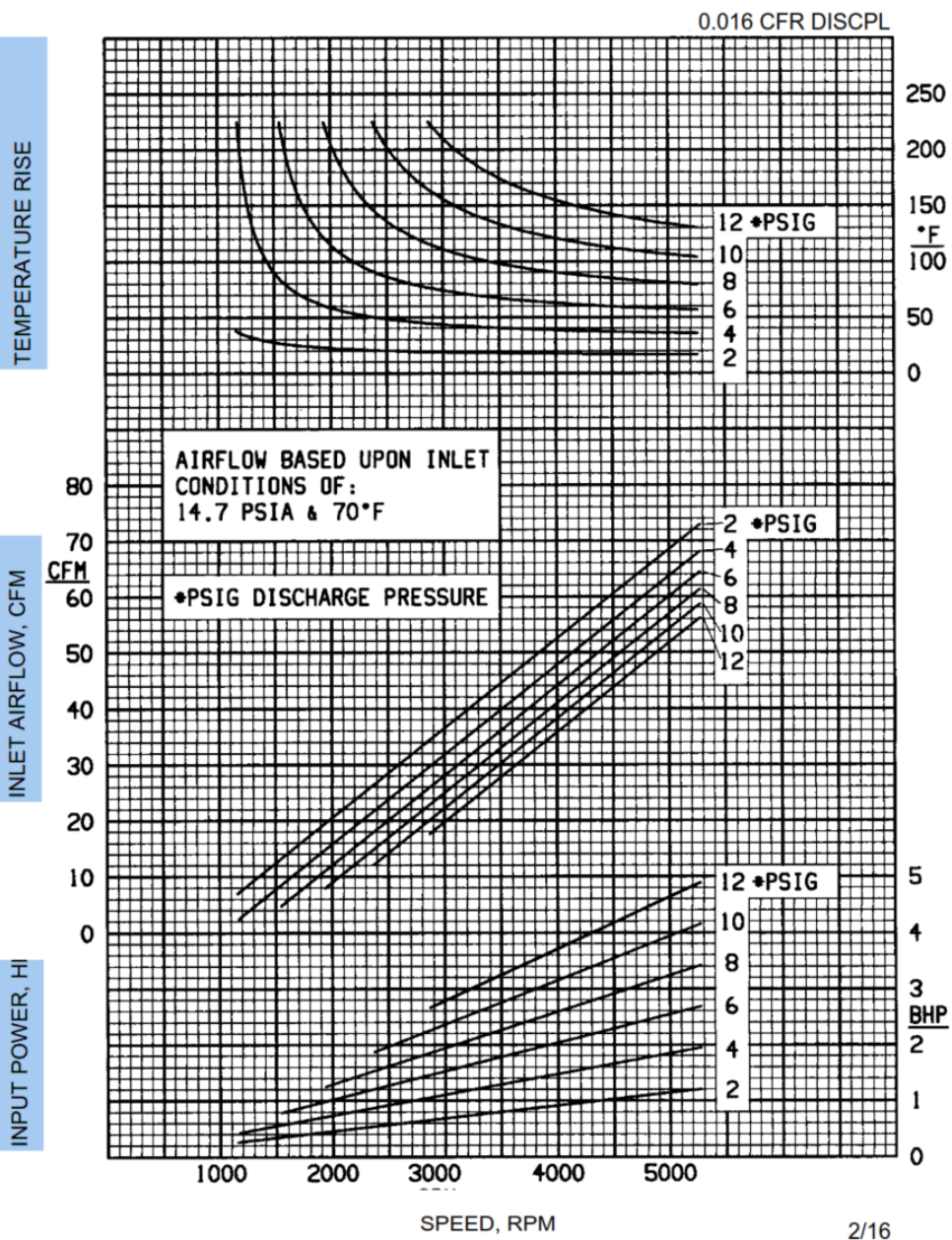
# Roots 22 URAI

PRESSURE PERFORMANCE



# Tuthill 2002 CP, 2-Lobe

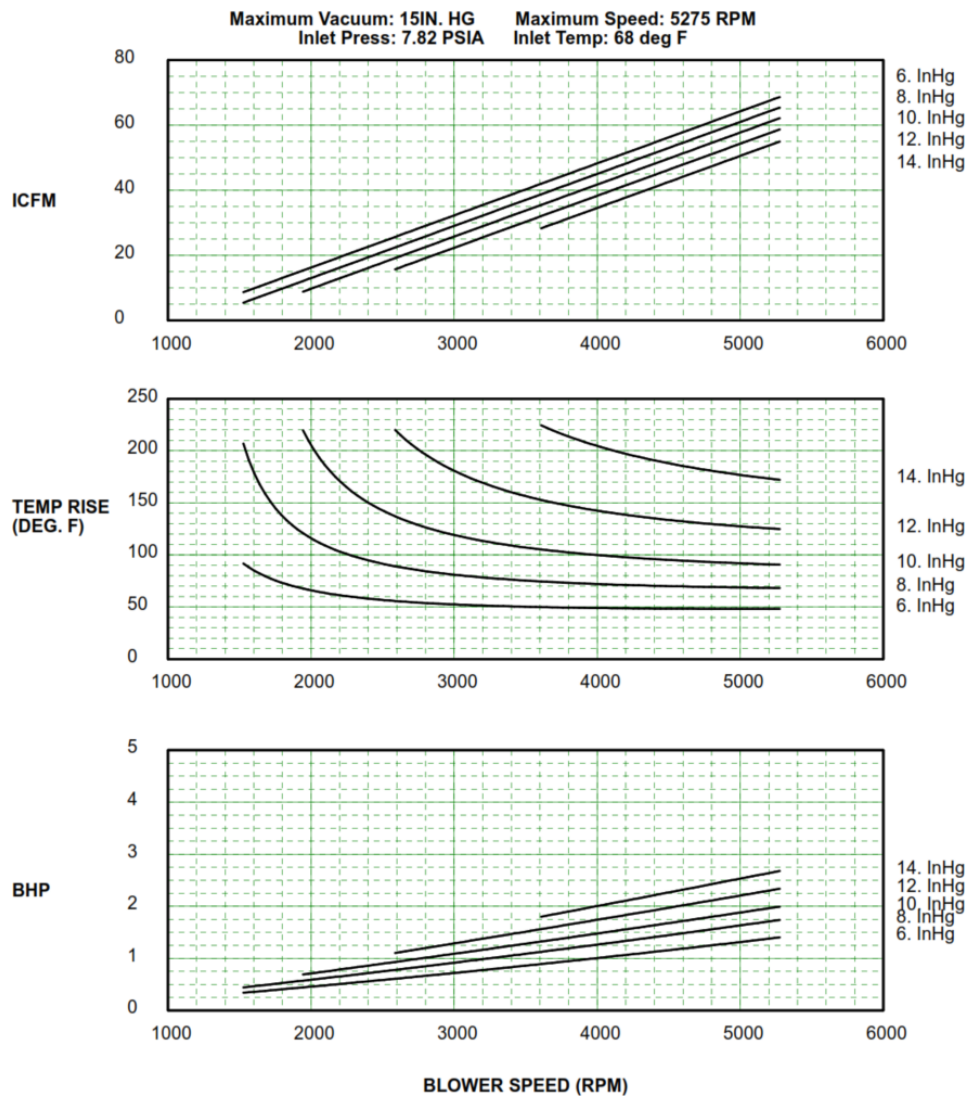
PRESSURE PERFORMANCE





# Roots 22 URAI

## VACUUM PERFORMANCE



# Tuthill 2002 CP, 2-Lobe

## VACUUM PERFORMANCE

