

Roots 24 URAI Blower

Comparison with Tuthill M-D Kinney CP 2004

The 2004 model is in the Tuthill / M-D Pneumatics Competitor series and is also referred to as a 2004 CP. This unit is available in either a 2-lobe or 3-lobe design. This comparison document applies to the 2-lobe unit.



LUBRICATION

Both the 24 URAI and 2004 CP utilize oil lubrication on the gear end and grease on the drive end.

	24 URAI	2004 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

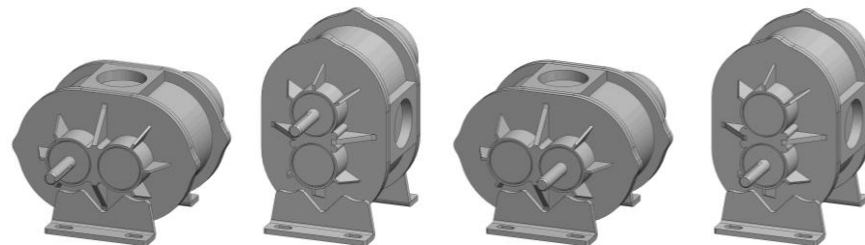
These manufacturers use different types of grease which should not be mixed. If you plan to change to a different grease than the type that came in your blower, a full purge must be done.

SPECIFICATIONS

	ROOTS 24 URAI	TUTHILL 2004 CP
Flow Range:	to 148 CFM	to 137 CFM
Max Δ Pressure:	7 psi	7 psi
Max Δ Vacuum:	15" Hg	15" Hg
Maximum RPM:	5275	5275
Minimum RPM:	1530	1750
Max Δ T:	210° F	185° F
Connection:	2" NPT	2" NPT
Shaft Diameter:	5/8"	5/8"
Unit Weight:	43 lb	53 lb

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
24 URAI	6510302L	6510302T	6510302R	6510302B
2004 CP	2004-A6L2CV1-A	2004-A6T2CV1-A	2004-A6R2CV1-A	2004-A6B2CV1-A

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

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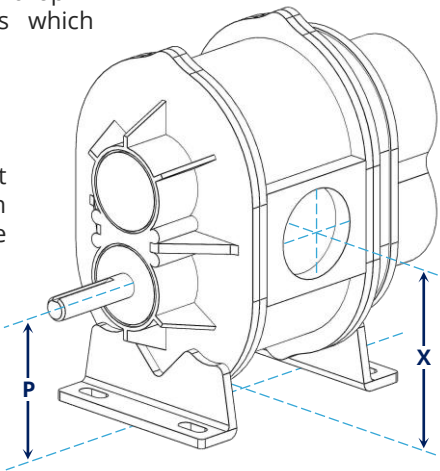
Dimensional Comparison with 2-Lobe 2004 CP

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).

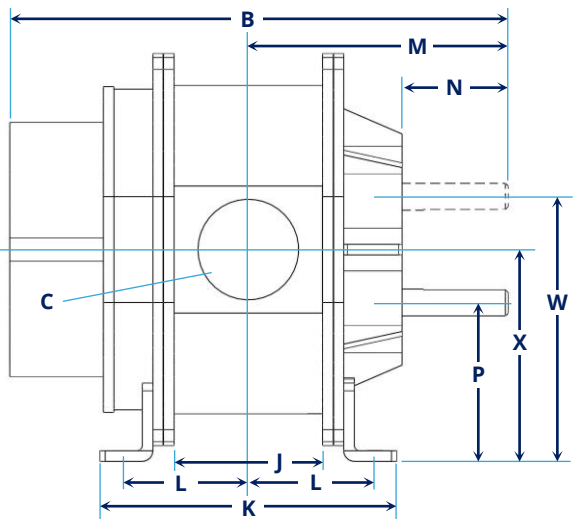
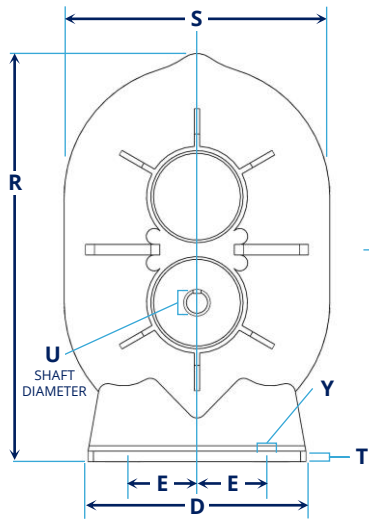
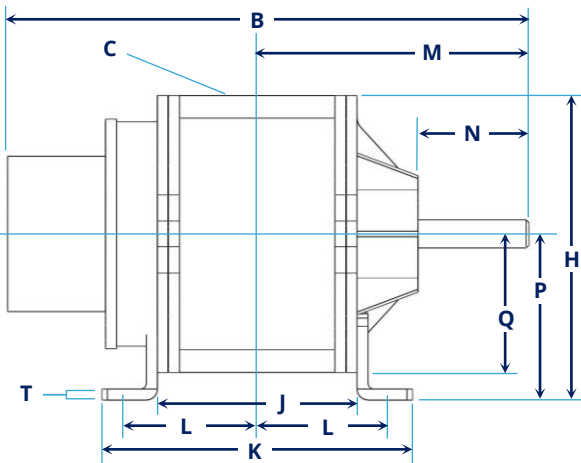
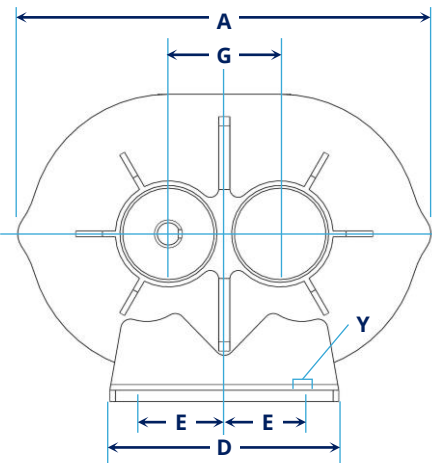
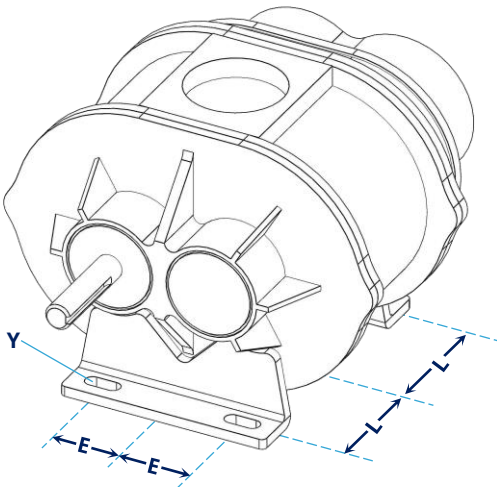


MATERIALS

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.

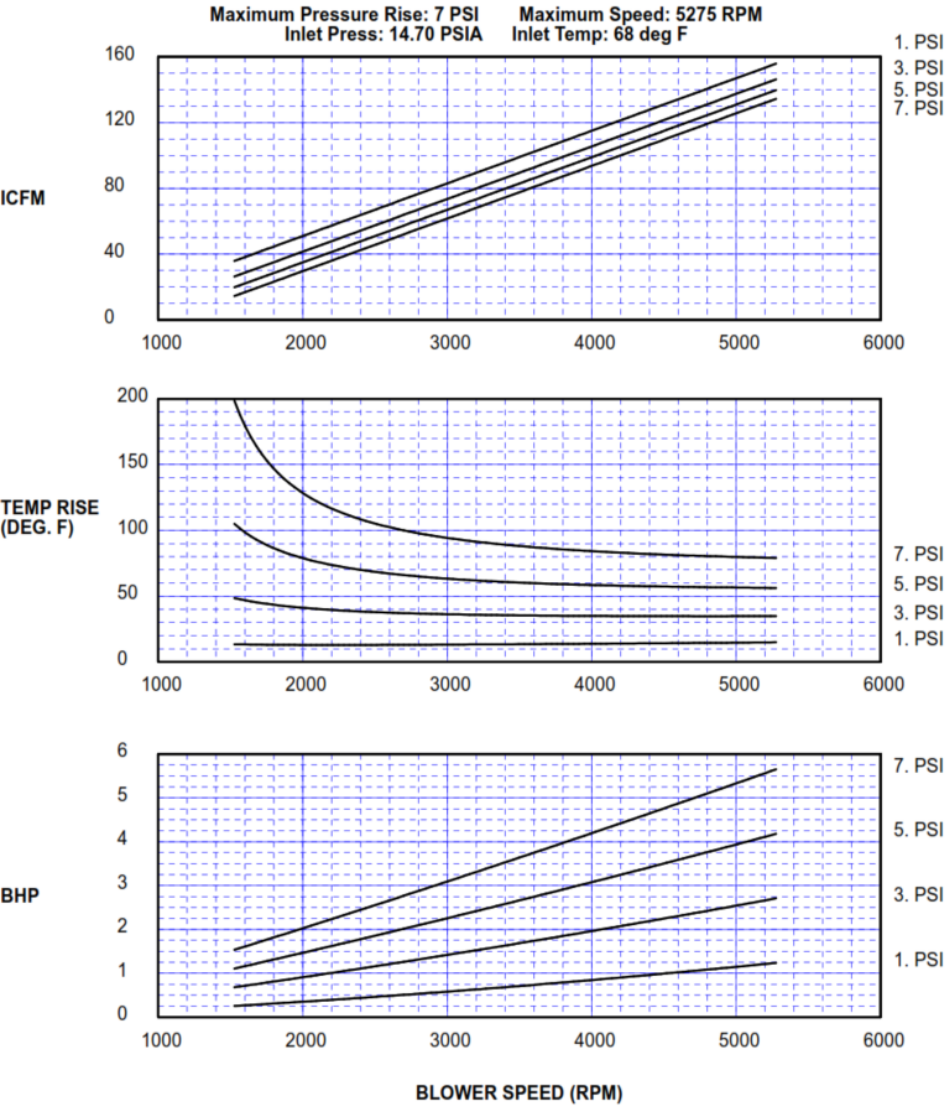


MAKE	MODEL	A	B	C	D	E	G	H	J	K	L	M	N	P	Q	R	S	T	U	W	X	Y
Roots	24 URAI	9.25	11.75	2" NPT	5.13	1.5 - 2	2.5	6.88	4.5	7	3	6.13	2.5	3.75	3.13	9.63	6.25	0.25	0.625	6.25	5	0.38 bolts
Tuthill	2004 CP	9.38	12.13	2" NPT	5.13	1.75	2.5	6.88	4.56	7.06	3	6.13	2.5	3.75	3.13	9.69	6.26		0.625	6.25	5	3/8" bolts

All measurements shown in inches

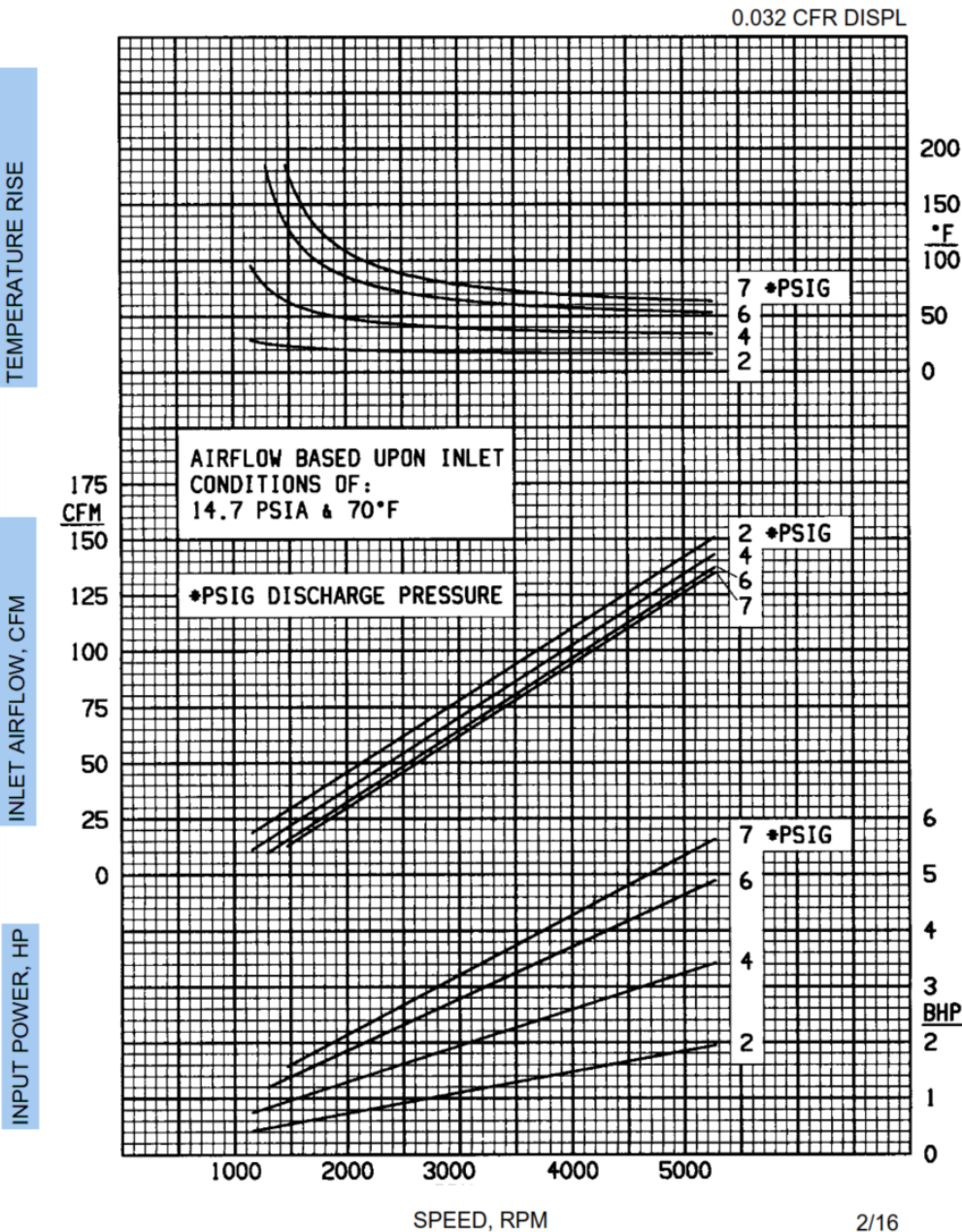
Roots 24 URAI

PRESSURE PERFORMANCE



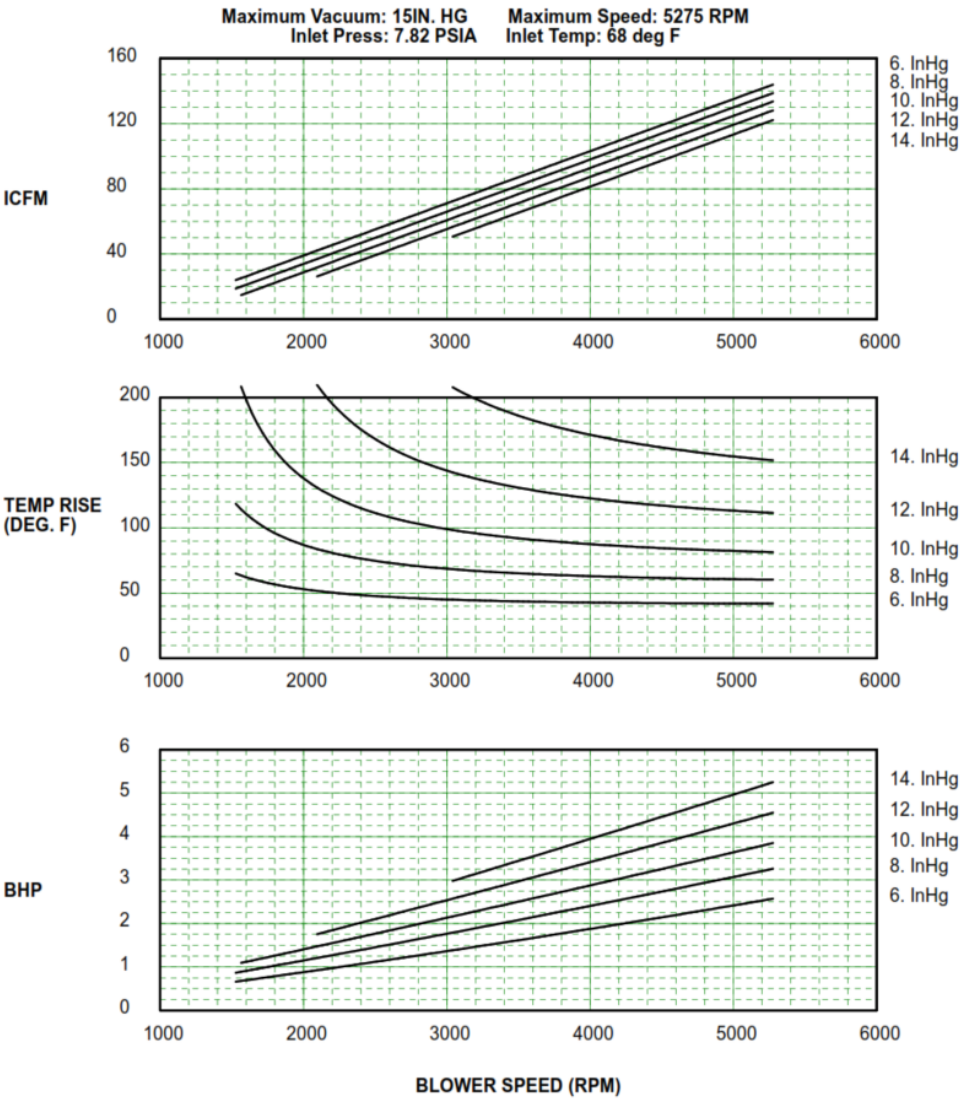
Tuthill 2004 CP, 2-Lobe

PRESSURE PERFORMANCE



Roots 24 URAI

VACUUM PERFORMANCE



Tuthill 2004 CP, 2-Lobe

VACUUM PERFORMANCE

