



L SERIES ENGINEERING DATA PACK

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L/4100 Pump Performance Data

SIZE	40 SSU										200 SSU										500 SSU																
	0 PSI		50 PSI		100 PSI		200 PSI		300 PSI		500 PSI		0 PSI		50 PSI		100 PSI		200 PSI		300 PSI		500 PSI		0 PSI		50 PSI		100 PSI		200 PSI		300 PSI		500 PSI		
	RPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	RPM	HP	GPM	HP	GPM	HP	RPM	HP	GPM	HP	RPM	HP	GPM	HP	RPM	HP	GPM	HP	RPM	HP	GPM	HP			
30	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	900	0.2	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8		
	1200	0.3	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8		
	1800	0.4	1/8	0.4	1/8	0.3	1/8	0.4	1/8	0.3	1/8	0.3	1/8	0.4	1/8	0.3	1/8	0.3	1/8	0.4	1/8	0.3	1/8	0.3	1/8	0.4	1/8	0.3	1/8	0.3	1/8	0.4	1/8	0.3	1/8	0.3	1/8
	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
00	300	.15	1/8	.10	1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	900	.45	1/8	.40	1/8	.35	1/8	.4	1/8	.35	1/8	.4	1/8	.4	1/8	.35	1/8	.4	1/8	.4	1/8	.35	1/8	.4	1/8	.4	1/8	.35	1/8	.4	1/8	.35	1/8	.4	1/8	.35	1/8
	1200	.65	1/8	.55	1/8	.50	1/8	.5	1/8	.45	1/8	.5	1/8	.5	1/8	.45	1/8	.5	1/8	.5	1/8	.45	1/8	.5	1/8	.5	1/8	.45	1/8	.5	1/8	.45	1/8	.5	1/8	.45	1/8
	1800	.95	1/8	.90	1/8	.85	1/8	.9	1/8	.85	1/8	.9	1/8	.9	1/8	.85	1/8	.9	1/8	.9	1/8	.85	1/8	.9	1/8	.9	1/8	.85	1/8	.9	1/8	.85	1/8	.9	1/8	.85	1/8
	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
0	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	900	0.8	1/8	0.7	1/8	0.6	1/8	0.8	1/8	0.7	1/8	0.7	1/8	0.8	1/8	0.7	1/8	0.7	1/8	0.8	1/8	0.7	1/8	0.7	1/8	0.8	1/8	0.7	1/8	0.7	1/8	0.8	1/8	0.7	1/8	0.7	1/8
	1200	1.0	1/8	0.9	1/8	0.8	1/8	1.0	1/8	0.9	1/8	0.9	1/8	1.0	1/8	0.9	1/8	0.9	1/8	1.0	1/8	0.9	1/8	0.9	1/8	1.0	1/8	0.9	1/8	0.9	1/8	1.0	1/8	0.9	1/8	0.9	1/8
	1800	1.6	1/4	1.4	1/4	1.3	1/4	1.6	1/4	1.4	1/4	1.5	1/4	1.6	1/4	1.4	1/4	1.5	1/4	1.6	1/4	1.4	1/4	1.4	1/4	1.6	1/4	1.4	1/4	1.4	1/4	1.5	1/4	1.4	1/4	1.4	1/4
	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
1	300	0.4	1/8	0.3	1/8	-	-	0.4	1/8	0.2	1/8	0.1	1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	900	1.4	1/4	1.1	1/4	1.1	1/4	1.4	1/4	1.2	1/4	1.0	1/4	1.4	1/4	1.2	1/4	1.3	1/4	1.4	1/4	1.2	1/4	1.3	1/4	1.4	1/4	1.2	1/4	1.3	1/4	1.2	1/4	1.3	1/4	1.2	1/4
	1200	1.9	1/4	1.7	1/4	1.5	1/4	1.9	1/4	1.7	1/4	1.5	1/4	1.9	1/4	1.7	1/4	1.8	1/4	1.9	1/4	1.7	1/4	1.7	1/4	1.9	1/4	1.7	1/4	1.6	1/4	1.7	1/4	1.6	1/4	1.7	1/4
	1800	2.9	1/4	2.7	1/4	2.5	1/4	2.9	1/4	2.8	1/4	2.5	1/4	2.9	1/4	2.7	1/4	2.8	1/4	2.9	1/4	2.7	1/4	2.7	1/4	2.9	1/4	2.7	1/4	2.6	1/4	2.7	1/4	2.6	1/4	2.7	1/4
	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2	300	0.9	1/8	0.7	1/8	0.5	1/8	0.9	1/8	0.8	1/8	0.7	1/8	0.9	1/8	0.8	1/8	0.8	1/8	0.9	1/8	0.8	1/8	0.8	1/8	0.9	1/8	0.8	1/8	0.8	1/8	0.9	1/8	0.8	1/8	0.8	1/8
	900	2.8	1/4	2.5	1/4	2.2	1/4	2.8	1/4	2.7	1/4	2.6	1/4	2.8	1/4	2.7	1/4	2.7	1/4	2.8	1/4	2.7	1/4	2.7	1/4	2.8	1/4	2.7	1/4	2.6	1/4	2.7	1/4	2.6	1/4	2.7	1/4
	1200	3.7	1/3	3.4	1/2	3.1	3/4	3.7	1/3	3.4	1/4	3.1	1/4	3.7	1/3	3.4	1/4	3.5	1/4	3.7	1/3	3.4	1/4	3.3	1/3	3.7	1/3	3.4	1/4	3.3	1/3	3.5	1/4	3.3	1/3	3.4	1/4
	1800	5.4	1/2	4.9	3/4	4.8	1	5.4	1/2	4.9	1/3	4.9	1/2	5.4	1/2	4.9	1/3	5.2	1/3	5.4	1/2	4.9	1/2	4.9	1/2	5.4	1/2	4.9	1/2	4.8	1	4.9	1/2	4.8	1	4.9	1/2
	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5	300	2.0	1/8	1.4	1/8	0.8	1/4	2.2	1/8	1.7	1/8	1.4	1/4	2.2	1/8	1.7	1/8	2.0	1/8	2.2	1/8	1.8	1/4	2.2	1/8	2.0	1/8	1.8	1/4	2.2	1/8	1.8	1/4	2.2	1/8	1.8	1/4
	900	6.3	1/8	5.0	1/2	3.6	1	6.8	1/4	6.4	1/2	6.0	3/4	6.8	1/4	6.4	1/2	6.6	1/2	6.8	1/4	6.3	3/4	6.6	1/2	6.8	1/4	6.3	3/4	6.1	1 1/2	6.3	3/4	6.1	1 1/2	6.3	3/4
	1200	9.0	1/4	7.6	3/4	6.0	1	9.0	1/3	8.6	1/2	8.2	1	9.0	1/3	8.6	1/2	8.7	1/2	9.0	1/3	8.5	1 1/2	8.7	1/2	9.0	1/3	8.6	3/4	8.2	2	8.7	1/2	8.5	1 1/2	8.2	2
	1800	11.5	1/3	11.1	1	10.7	1 1/2	13.7	1/2	13.3	1	12.9	1 1/2	13.7	1/2	13.3	1	12.9	1	13.7	1/2	12.8	1 1/2	12.9	1	13.7	1/2	12.8	1 1/2	12.7	2	12.5	3	12.0	5	-	
	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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L/4100 Pump Performance Data

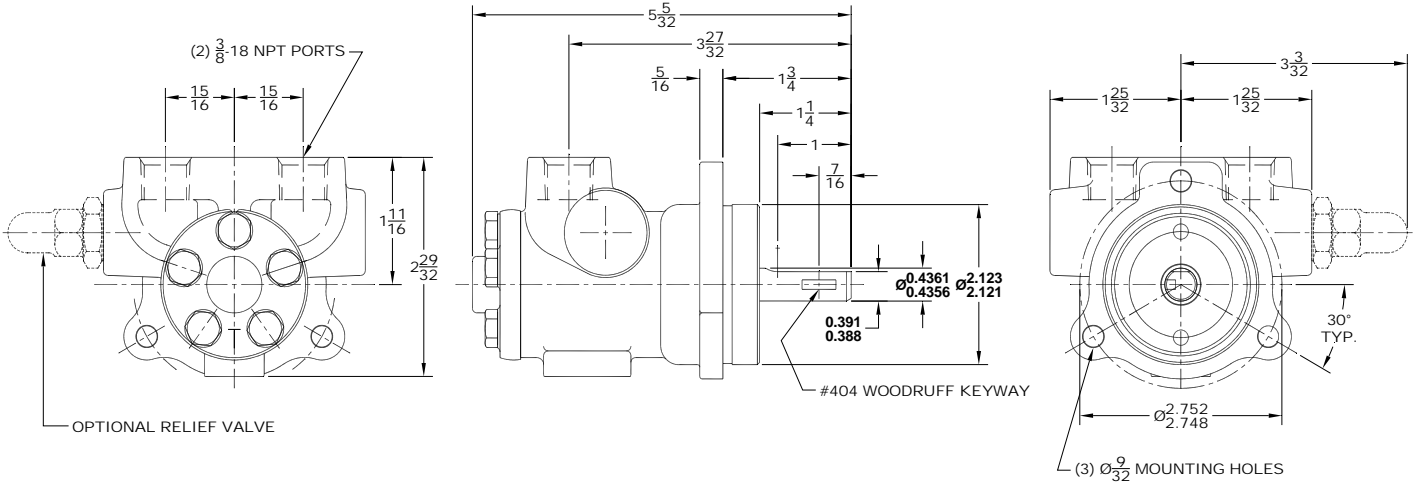
SIZE	RPM	1000 SSU										5000 SSU													
		0 PSI		50 PSI		100 PSI		200 PSI		300 PSI		500 PSI		0 PSI		50 PSI		100 PSI		200 PSI		300 PSI		500 PSI	
		GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP	GPM	HP
30	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	900	0.2	1/8	0.2	1/8	0.1	1/8	0.1	1/8	0.1	1/8	0.1	1/8	-	-	-	-	-	-	-	-	-	-	-	-
	1200	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/8	0.2	1/4	-	-	-	-	-	-	-	-	-	-	-	-
	1800	0.4	1/8	0.4	1/8	0.4	1/8	0.3	1/4	0.3	1/4	0.3	1/3	-	-	-	-	-	-	-	-	-	-	-	-
	3600	0.8	1/4	0.7	1/4	0.7	1/3	0.7	1/3	0.7	1/3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
00	900	0.4	1/8	0.4	1/8	0.4	1/8	0.4	1/8	0.3	1/4	0.3	1/4	-	-	-	-	-	-	-	-	-	-	-	-
	1200	0.6	1/8	0.6	1/8	0.6	1/8	0.5	1/4	0.5	1/4	0.4	1/3	-	-	-	-	-	-	-	-	-	-	-	-
	1800	0.8	1/8	0.8	1/8	0.8	1/4	0.8	1/4	0.8	1/3	0.8	1/2	-	-	-	-	-	-	-	-	-	-	-	-
	3600	1.7	1/3	1.7	1/3	1.7	1/2	1.7	1/2	1.6	3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	900	0.8	1/8	0.7	1/8	0.7	1/8	0.7	1/4	0.7	1/4	0.6	1/2	-	-	-	-	-	-	-	-	-	-	-	-
0	1200	1.0	1/8	1.0	1/8	1.0	1/4	1.0	1/4	0.9	1/3	0.8	1/2	-	-	-	-	-	-	-	-	-	-	-	-
	1800	1.5	1/4	1.5	1/4	1.5	1/4	1.4	1/2	1.4	1/2	1.3	3/4	-	-	-	-	-	-	-	-	-	-	-	-
	3600	2.5	1/2	2.5	1/2	2.5	3/4	2.3	1	2.3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	300	0.4	1/8	0.4	1/8	0.4	1/8	0.3	1/8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	900	1.4	1/8	1.4	1/8	1.3	1/8	1.2	1/4	1.1	1/3	0.9	3/4	-	-	-	-	-	-	-	-	-	-	-	-
	1200	1.9	1/8	1.9	1/8	1.8	1/4	1.7	1/3	1.6	1/2	1.4	3/4	-	-	-	-	-	-	-	-	-	-	-	-
1	1800	2.8	1/4	2.7	1/4	2.7	1/4	2.6	1/2	2.5	3/4	2.2	1 1/2	-	-	-	-	-	-	-	-	-	-	-	-
	3600	4.5	1/2	4.4	1/2	4.4	3/4	4.4	1 1/2	4.4	1 1/2	-	-	-	-	-	-	-	-	-	-	-	-	-	
	300	0.9	1/8	0.9	1/8	0.6	1/8	0.6	1/8	0.5	1/4	0.3	1/3	-	-	-	-	-	-	-	-	-	-	-	-
	900	2.7	1/8	2.6	1/4	2.5	1/4	2.2	1/2	1.6	3/4	0.7	1	-	-	-	-	-	-	-	-	-	-	-	-
	1200	3.5	1/4	3.4	1/4	3.3	1/3	3.0	3/4	2.6	3/4	1.8	1 1/2	-	-	-	-	-	-	-	-	-	-	-	-
	1800	5.0	1/3	4.9	1/2	4.9	3/4	4.7	1	4.2	1 1/2	3.4	2	-	-	-	-	-	-	-	-	-	-	-	-
2	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	300	2.2	1/8	2.1	1/4	2.0	1/3	1.8	1/2	1.5	3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	900	6.7	1/2	6.5	3/4	6.5	1	6.1	1 1/2	5.5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1200	8.8	3/4	8.7	1	8.5	1 1/2	8.2	2	7.8	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1800	13.0	1 1/2	12.7	2	12.5	2	10.2	3	9.9	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	300	2.2	1/8	2.1	1/4	2.0	1/3	1.8	1/2	1.5	3/4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	900	6.7	1/2	6.5	3/4	6.5	1	6.1	1 1/2	5.5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1200	8.8	3/4	8.7	1	8.5	1 1/2	8.2	2	7.8	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1800	13.0	1 1/2	12.7	2	12.5	2	10.2	3	9.9	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	3600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	300	2.2	1/3	2.2	1/2	2.1	1/2	2.1	1/2	2.0	3/4	1.9	3/4	-	-	-	-	-	-	-	-	-	-	-	-



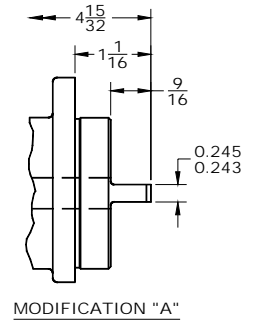
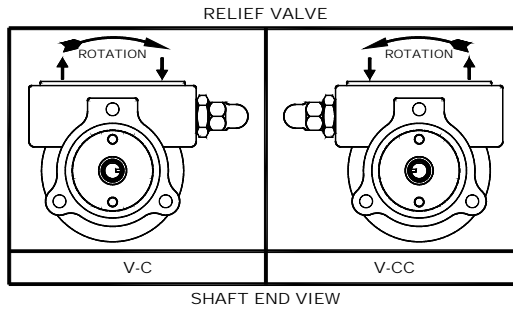
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30LE Pump Mounting Dimensions



Port Types	
3/8"-18 NPT	STD
3/8"-19 BSPP	OPT

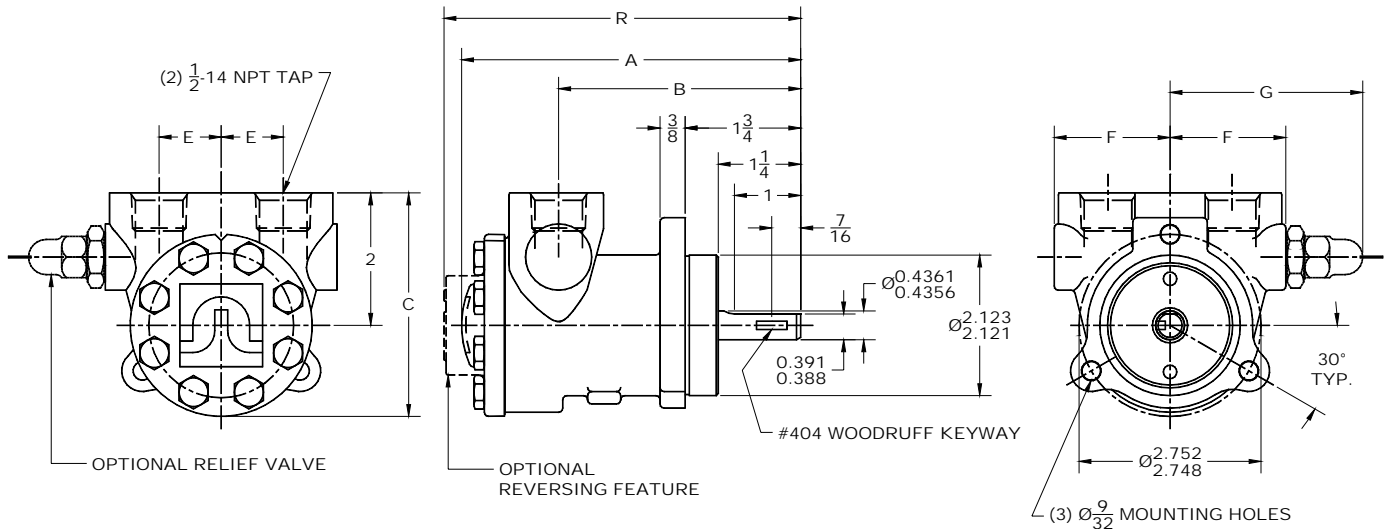




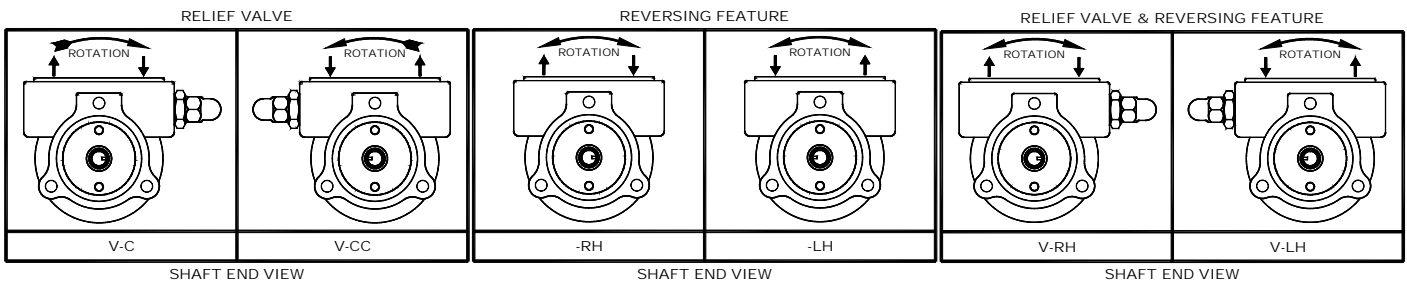
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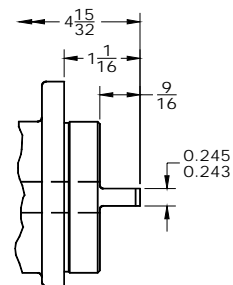
00, 0, 1, and 2LE Pump Mounting Dimensions



PUMP MODEL		OVERALL LENGTH		B	C	E	F	G
		BI-ROT.	REV.					
BI-ROTATIONAL	REVERSING	A	R					
00LE	00RLE	4 15/16	5 3/16	3 15/32	3 15/32	15/16	1 29/32	3 3/32
0LE	0RLE	4 15/16	5 3/16	3 15/32	3 15/32	15/16	1 29/32	3 3/32
1LE	-	5 3/32	-	3 5/8	3 5/16	15/16	1 3/4	3 1/8
-	1RLE	-	5 1/4	3 17/32	3 5/16	15/16	1 3/4	3 1/8
2LE	2RLE	5 15/16	6 1/16	4 7/16	3 5/8	15/16	1 7/8	3 1/8



PORT SIZE	PUMP MODEL			
	00LE 00RLE	0LE 0RLE	1LE 1RLE	2LE 2RLE
1/2"-14 NPT	STD.	STD.	STD.	STD.
3/4"-16 UNF (SAE 8)	OPT	OPT	OPT	OPT
1/2"-14 BSPP	OPT	OPT	OPT	OPT



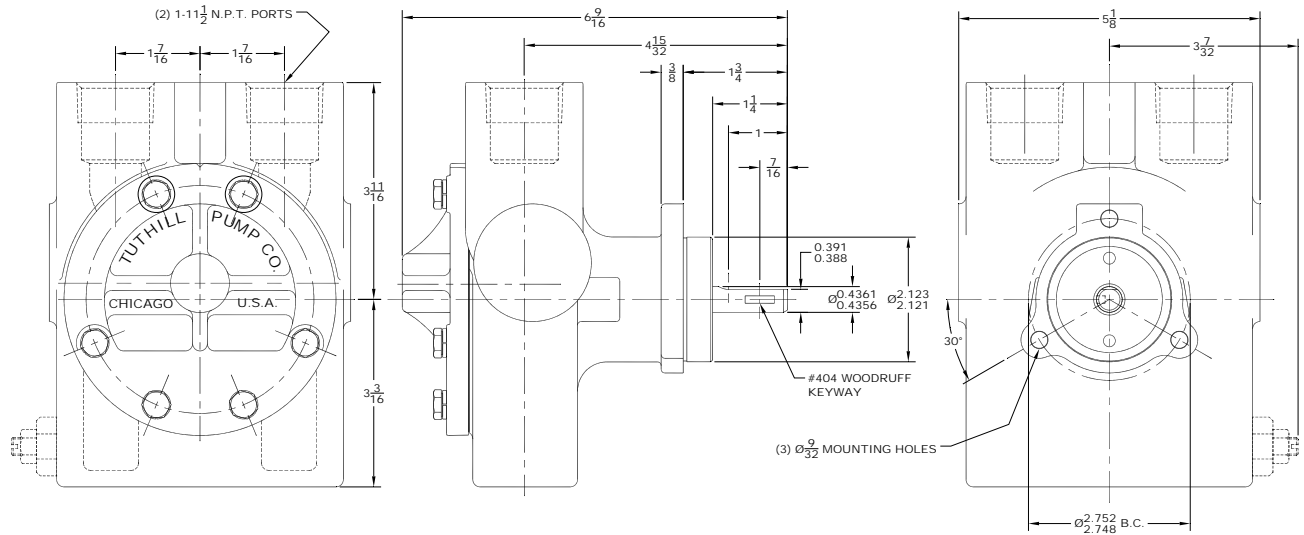
MODIFICATION "A"



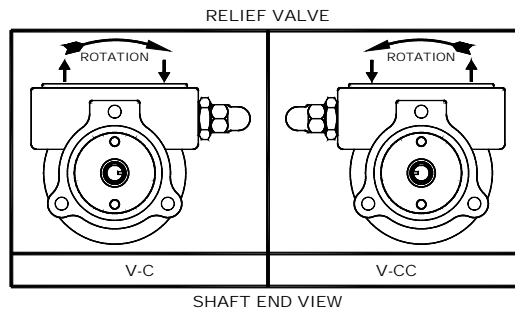
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Pump Group

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Alsip, Illinois USA 60803
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5LE Pump Mounting Dimensions



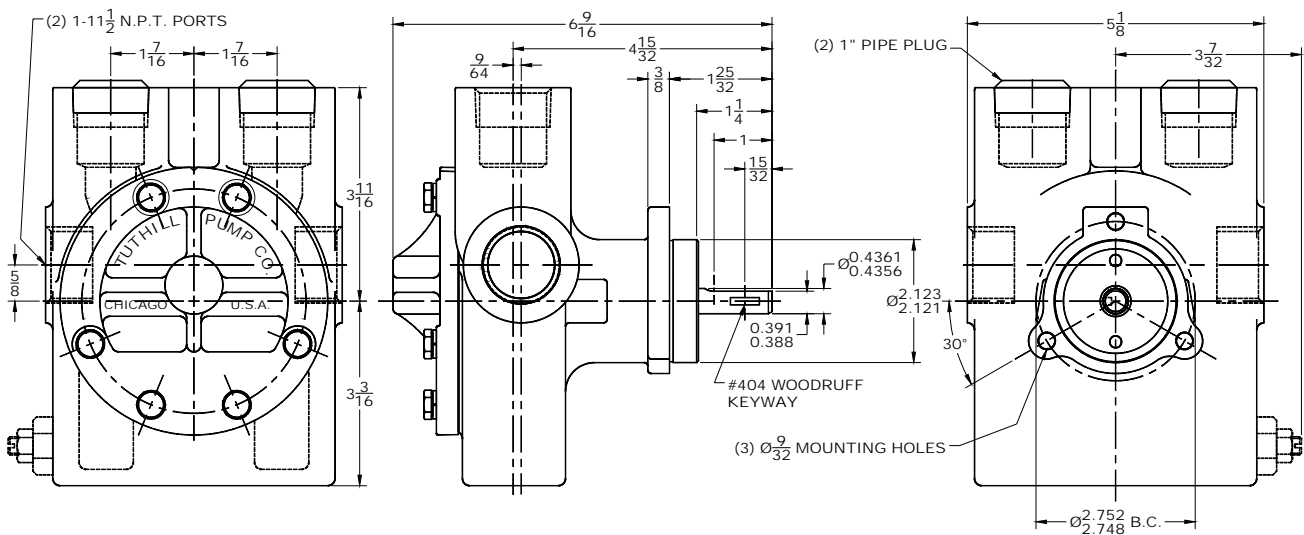
Port Types	
1"-11 1/2 NPT	STD
1 3/16"-12 UNC (SAE 14)	OPT
1 5/16"-12 UNC (SAE 16)	OPT
1"-11 BSPP	OPT



SHAFT END VIEW

MODIFICATION "A"

5LE WITH OPTIONAL SIDE PORTING

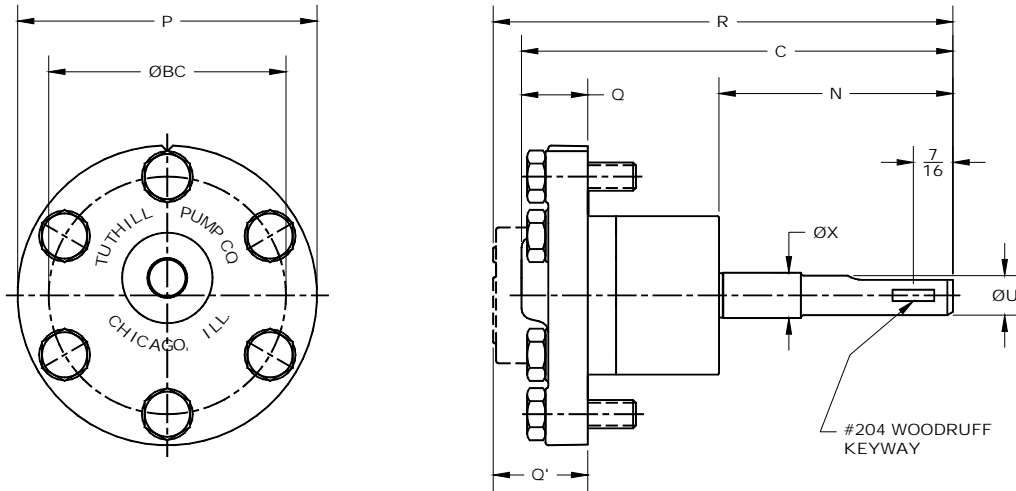




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LSA Pump Mounting Dimensions

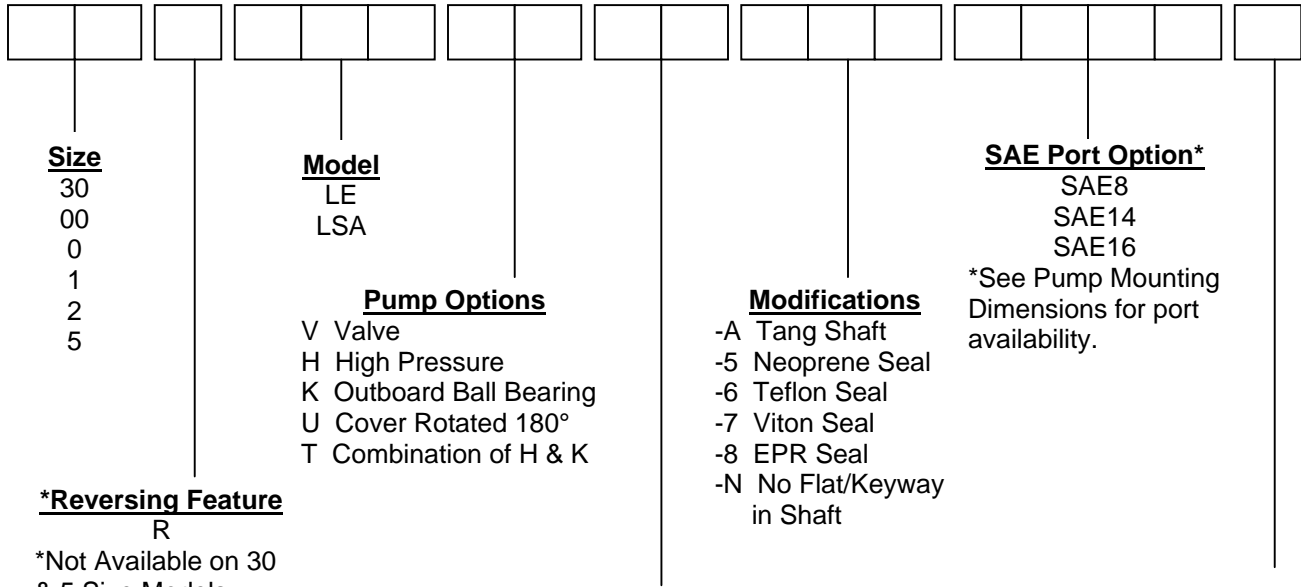


PUMP MODEL		OVERALL LENGTH		BC	N	P	Q	Q'	U	X
		BI-ROT.	REV.							
BI-ROTATIONAL	REVERSING	C	R							
30LSA	-	5	-	1 7/16	3 31/32	2	15/32	-	.4361 .4356	-
00LSA	00RLSA	5 3/8	5 5/8	2 3/16	4 1/16	2 3/4	5/8	7/8	.4361 .4356	-
0LSA	0RLSA	5 3/8	5 5/8	2 3/16	4 1/16	2 3/4	5/8	7/8	.4361 .4356	-
1LSA	1RLSA	5 3/8	5 5/8	2 3/16	4 1/16	2 3/4	5/8	7/8	.4361 .4356	-
2LSA	2RLSA	6 3/8	6 1/2	2 5/8	4 3/16	3 5/16	11/16	13/16	.4361 .4356	.4992 .4987

Note: For information on recommended housing bore and bushing support please call Tuthill Pump Group.



L Pump Model Number System



Rotation (Valved Models)

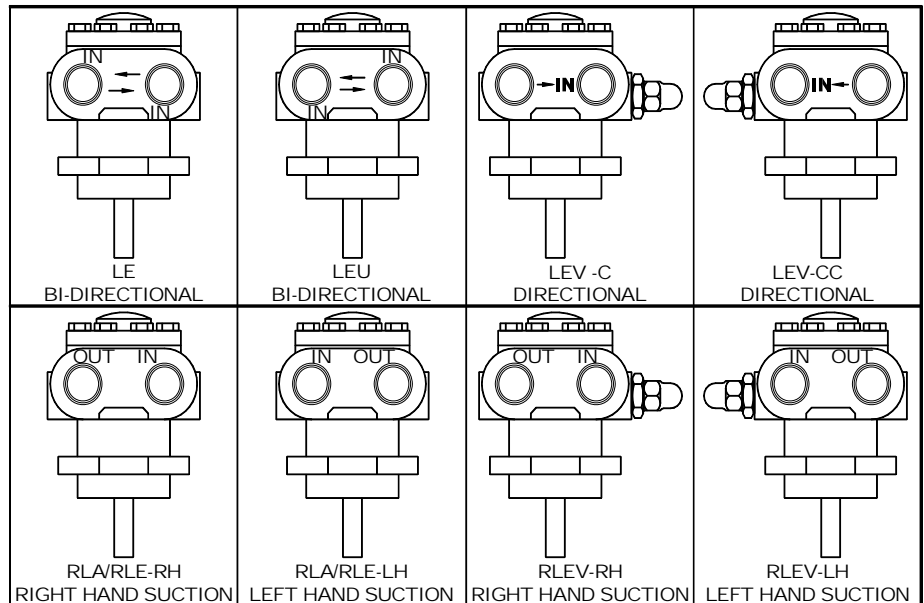
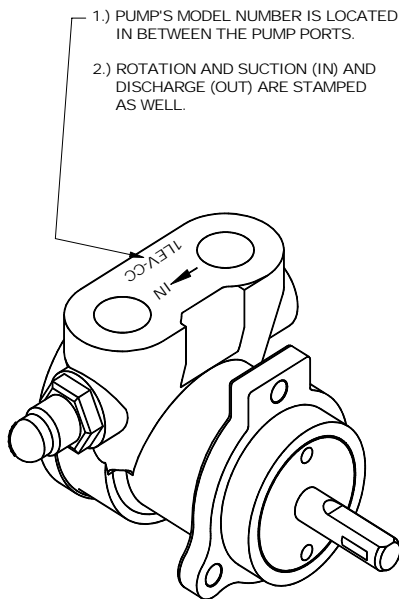
- C Clockwise Rotation
 - CC Counterclockwise Rotation
- Or

Suction Port Location (On Pumps With reversing Feature)

- RH Right Hand Suction
- LH Left Hand Suction

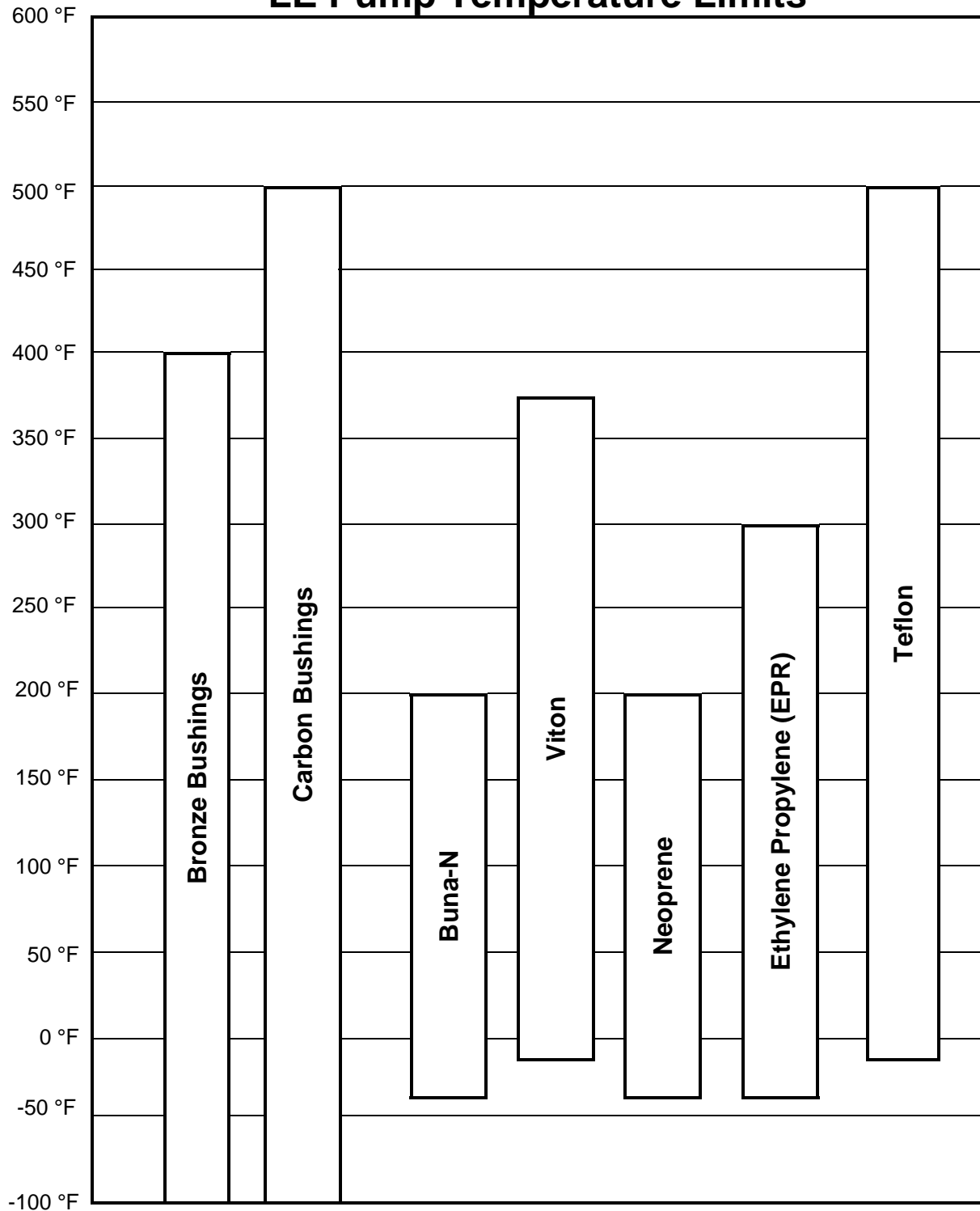
Carbon Bushing Option

-Z





LE Pump Temperature Limits



Notes:

1. A pump's performance is dependent on more than just the temperature ranges of the component materials.



LE Pump Materials of Construction

<i>Part Name</i>	<i>Material</i>	<i>Standard</i>	<i>Comments</i>	<i>Availability</i>
Housing	Cast Iron	ASTM A48 – 96a	Classes 25, 30, 35, or 40	Std.
Housing Bushing	Steel	AISI 12L14		Std.
	Carbon	Carbon Graphite Resin		Opt.
	Bronze	SAE 660	Available on 2L size only	Std.
Cover	Cast Iron	ASTM A48 – 96a	Classes 25, 30, 35, or 40	Std.
Rotor	Steel	ASTM A311	Stressproof	Std.
Idler	P/M Steel	MPIF-0508-P		Std.
	Steel	C1118 or C1117		Opt.
	Plastic	PPS	Available on 30L size only	Std.
Idler Pin	Steel	C1117	Heat Treated	Std.
Idler Bushing	Bronze	SAE 660		Std.*
	Carbon	Carbon Graphite Resin		Opt.
Housing Plug	Steel	AISI 12L14	DU Bushing is assembled in housing plug	Std.
Gaskets	Standard	Oriented Polyester		Std.
	Standard	Buna Coated Aluminum	Available on 2L size only	Std.
O-Rings	Buna			Std.
	Viton			Opt.
	Neoprene			Opt.
	EPR			Opt.
	Teflon			Opt.

* Bronze idler bushing standard on 5LE pumps only.



4100/LE Cross Reference List

<u>4000 Series</u>	<u>LE Pump</u>	<u>4100 Series Additional Features</u>
4101	30LE	- Carbon housing bushing Vs. cast iron - Steel idler gear Vs. PPS plastic
4101K	30LEK	Same as above
4101	30LEH	- Carbon housing bushing Vs. cast iron
4101K	30LET	- Carbon housing bushing Vs. cast iron

Options: -A-V-5-6-7-8 and 0L81-C are available on both pumps.
Note: The Tuthill reversing feature is not available on either pump series.

4102	00LE	- Hardened steel idler gear Vs. powdered metal - Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel
4102K	00LEK	Same as above
4102	00LEH	- Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel
4102K	00LET	- Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel

Options: -A-V-5-6-7-8 and 0L81-C are available on both pumps.

4103	0LE	- Hardened steel idler gear Vs. powdered metal - Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel
4103K	0LEK	Same as above
4103	0LEH	- Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel
4103K	0LET	- Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel

Options: -A-V-5-6-7-8 and 0L81-C are available on both pumps.

4104	1LE	- Hardened steel idler gear Vs. powdered metal - Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel
4104K	1LEK	Same as above
4104	1LEH	- Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel
4104K	1LET	- Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel



4100/LE Cross Reference List

<u>4000 Series</u>	<u>LE Pump</u>	<u>4100 Series Additional Features</u>
4105	2LE	- Hardened steel idler gear Vs. powdered metal - Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel
4105K	2LEK	Same as above
4105	2LEH	- Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel
4105K	2LET	- Carbon idler bushing Vs. none - Carbon housing bushing Vs. steel

Options: -A-V-5-6-7-8 and 0L81-C are available on both pumps.

4108	5LE	- Hardened steel idler gear Vs. powdered metal - Carbon idler bushing Vs. bronze - Carbon housing bushing Vs. bronze
4108K	5LEK	Same as above
4108S	5LES	Same as above
4108	5LEH	- Carbon idler bushing Vs. bronze - Carbon housing bushing Vs. bronze
4108K	5LET	- Carbon idler bushing Vs. bronze - Carbon housing bushing Vs. bronze

Options: -A-V-5-6-7-8 and 0L81-C are available on both pumps.

Note: The Tuthill reversing feature is not available on either pump series.

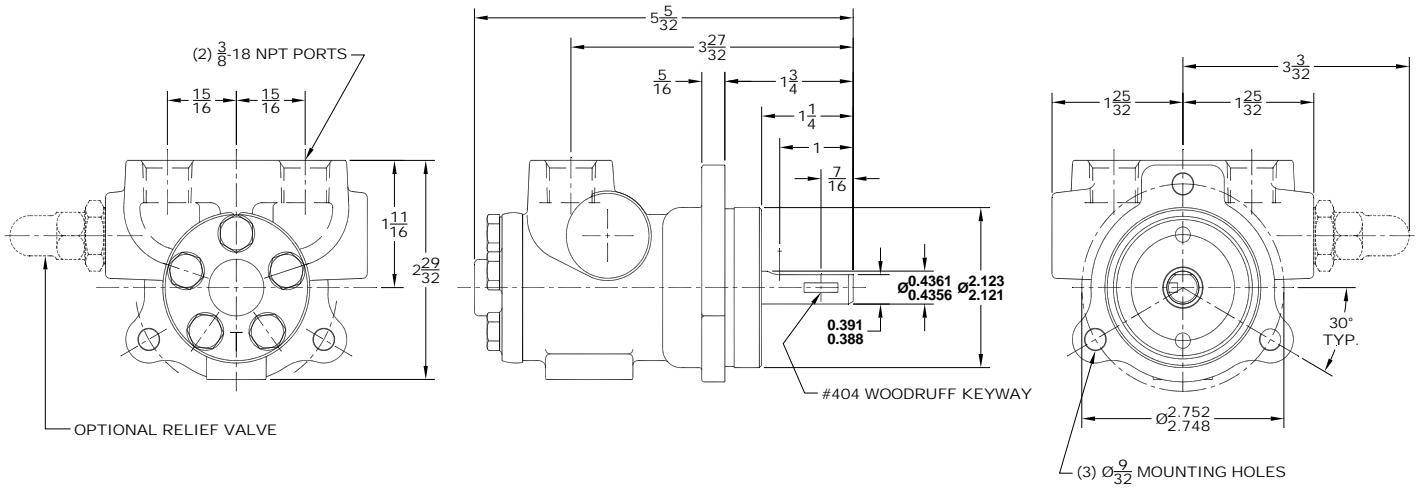
- 4100 and 4120 pumps have the same assembled dimensions as their LE pump counterparts.
- Please see the LE dimensional pages for pump and pump/motor dimensions.



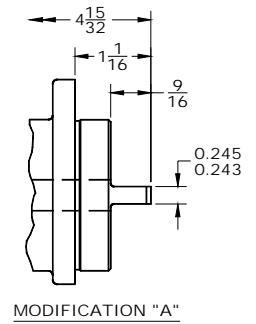
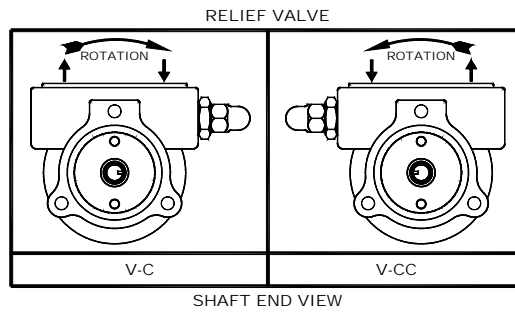
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4101/4121 Pump Mounting Dimensions



Port Types	
3/8"-18 NPT	STD
3/8"-19 BSPP	OPT

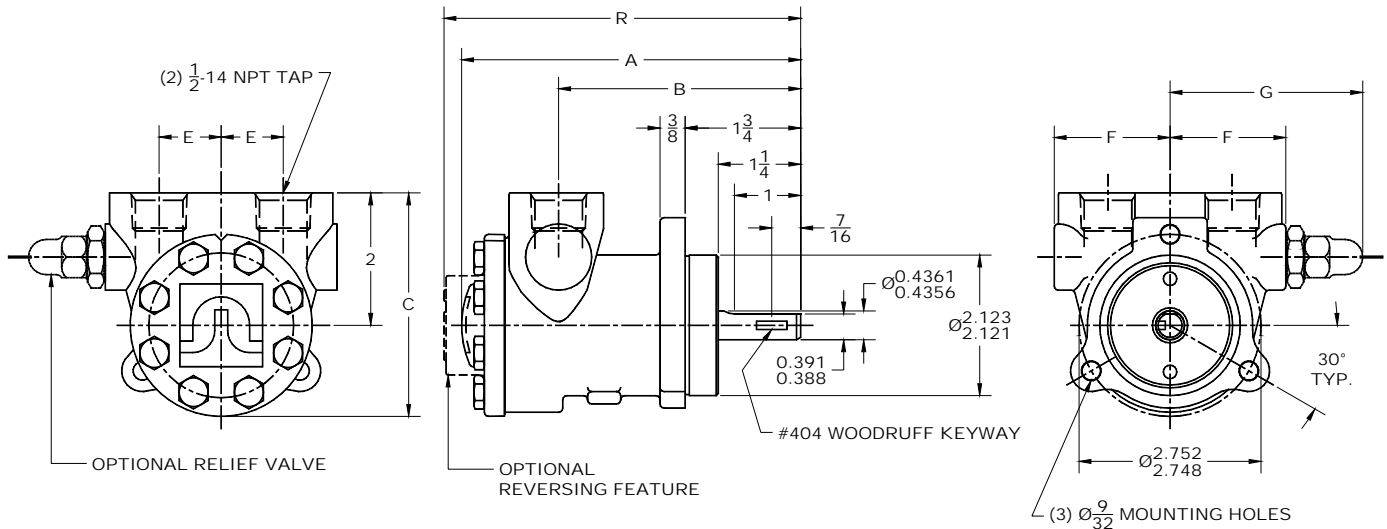




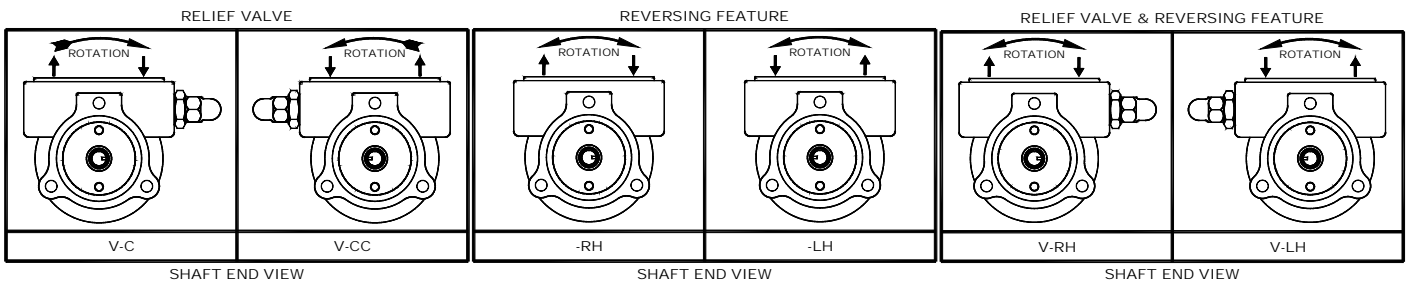
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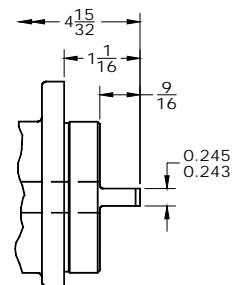
4102-4105 & 4122-4125 Pump Mounting Dimensions



PUMP MODEL		OVERALL LENGTH		B	C	E	F	G
		BI-ROT.	REV.					
BI-ROTATIONAL	REVERSING	A	R					
00LE	00RLE	4 15/16	5 3/16	3 15/32	3 15/32	15/16	1 29/32	3 3/32
0LE	0RLE	4 15/16	5 3/16	3 15/32	3 15/32	15/16	1 29/32	3 3/32
1LE	-	5 3/32	-	3 5/8	3 5/16	15/16	1 3/4	3 1/8
-	1RLE	-	5 1/4	3 17/32	3 5/16	15/16	1 3/4	3 1/8
2LE	2RLE	5 15/16	6 1/16	4 7/16	3 5/8	15/16	1 7/8	3 1/8



PORT SIZE	PUMP MODEL			
	00LE 00RLE	0LE 0RLE	1LE 1RLE	2LE 2RLE
1/2"-14 NPT	STD.	STD.	STD.	STD.
3/4"-16 UNF (SAE 8)	OPT	OPT	OPT	OPT
1/2"-14 BSPP	OPT	OPT	OPT	OPT



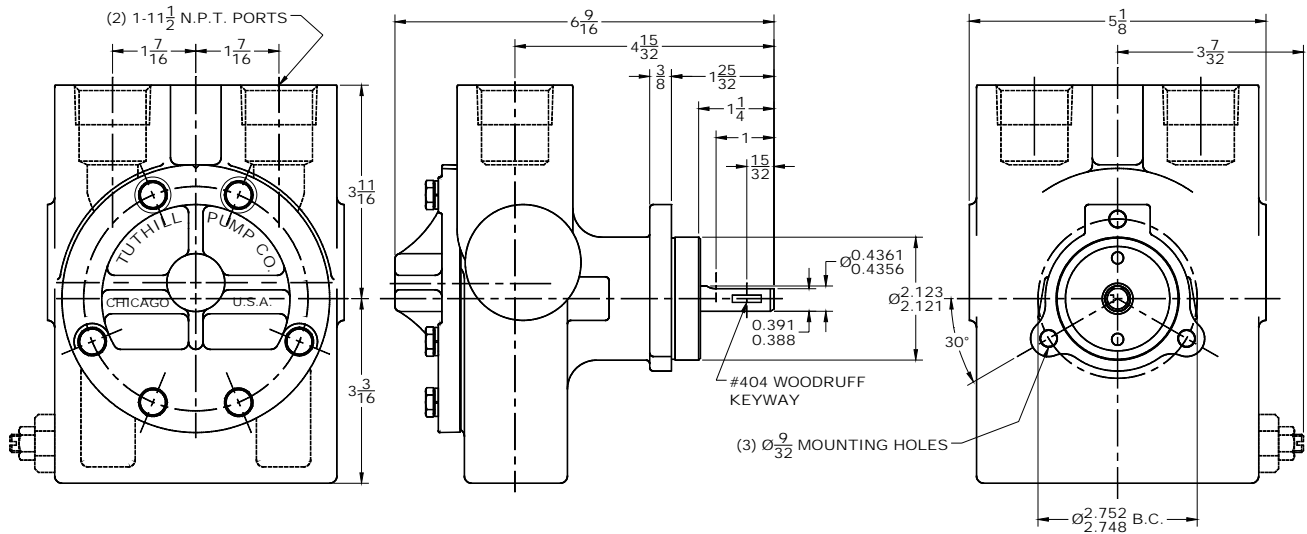
MODIFICATION "A"



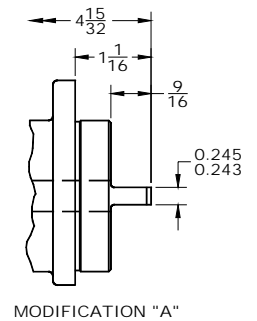
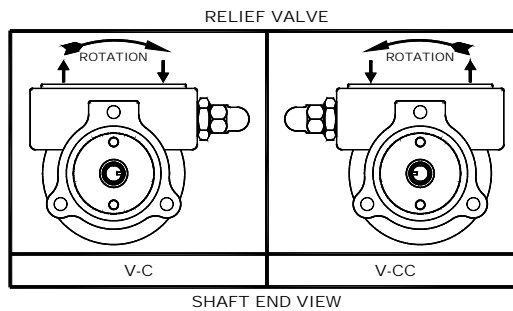
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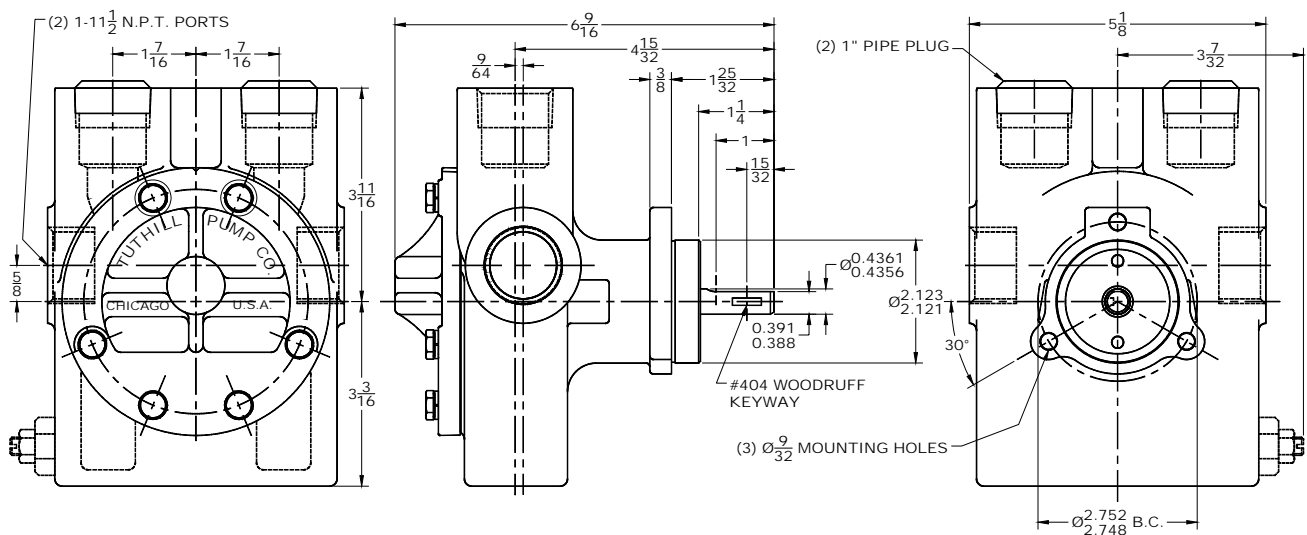
4108/4128 Pump Mounting Dimensions



Port Types	
1"-11 1/2 NPT	STD
1 3/16"-12 UNC (SAE 14)	OPT
1 5/16"-12 UNC (SAE 16)	OPT
1"-11 BSPP	OPT



4108/4128 WITH OPTIONAL SIDE PORTING

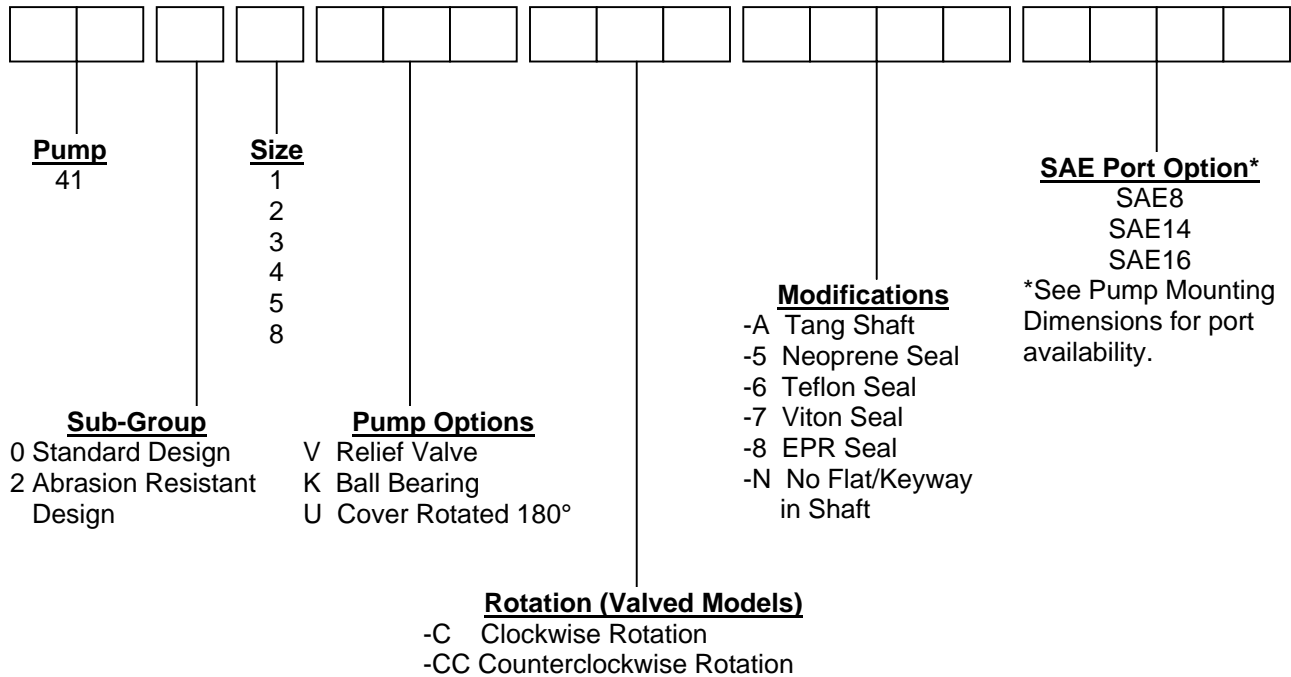




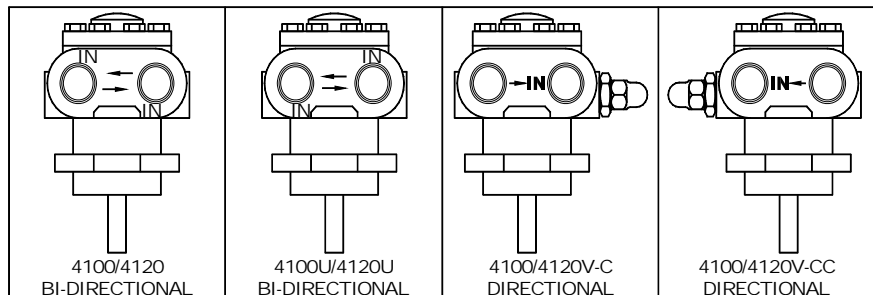
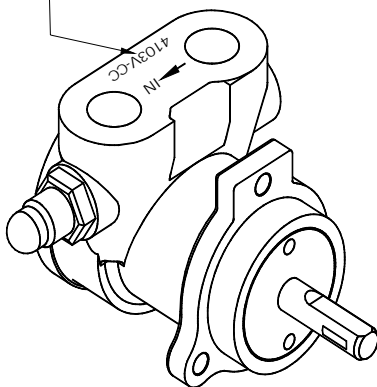
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4100 Pump Model Number System

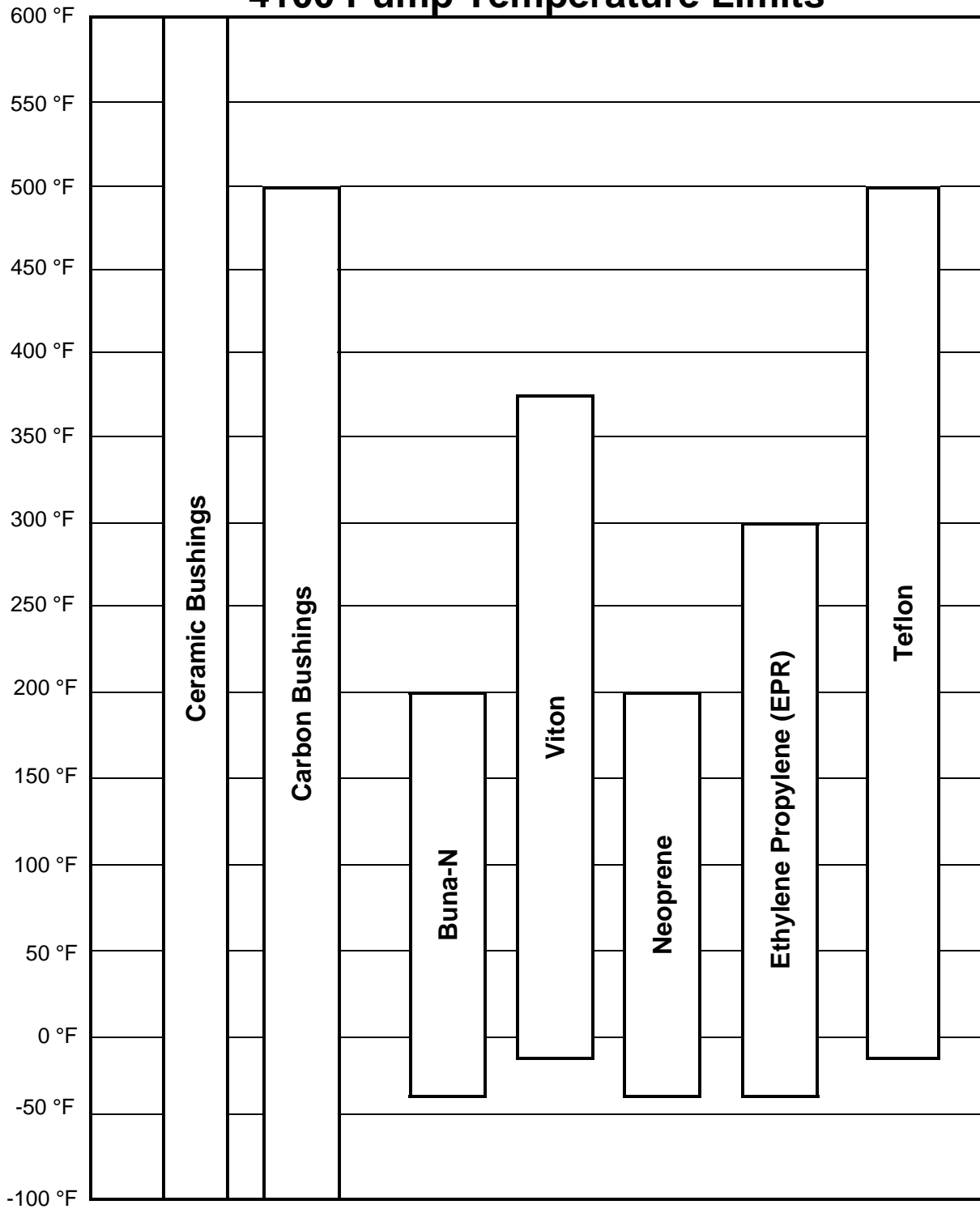


- 1.) PUMP'S MODEL NUMBER IS LOCATED IN BETWEEN THE PUMP PORTS.
- 2.) ROTATION AND SUCTION (IN) AND DISCHARGE (OUT) ARE STAMPED AS WELL.





4100 Pump Temperature Limits



Notes:

1. A pump's performance is dependent on more than just the temperature ranges of the component materials.



4100 Pump Materials of Construction

<i>Part Name</i>	<i>Material</i>	<i>Standard</i>	<i>Comments</i>	<i>Availability</i>
Housing	Cast Iron	ASTM A48 – 96a	Classes 25, 30, 35, or 40	Std.
Housing Bushing	Carbon	Carbon Graphite Resin		Std.
	Ceramic	Alumina Ceramic, Diamonite	Standard on 4120 Models	Opt.
Cover	Cast Iron	ASTM A48 – 96a	Classes 25, 30, 35, or 40	Std.
	Cast Iron	ASTM A48 – 96a	Heat Treated (Standard on 4120 Models)	Opt.
Rotor	Steel	ASTM A311	Stressproof	Std.
	Steel	ASTM A311	Stressproof and Heat Treated (Standard on 4120 Models)	Opt.
Idler	Steel	C1118 or C1117		Std.
Idler Pin	Steel	C1117	Heat Treated	Std.
Idler Bushing	Carbon	Carbon Graphite Resin		Std.
Housing Plug	Steel	AISI 12L14	DU Bushing is assembled in housing plug	Std.
Gaskets	Standard	Oriented Polyester		Std.
	Standard	Buna Coated Aluminum	Available on 2L size only	Std.
O-Rings	Buna			Std.
	Viton		Standard on 4120 Models	Opt.
	Neoprene			Opt.
	EPR			Opt.
	Teflon			Opt.



L/4100/Cartridge Pump NPSH Data

NPSH Required for Tuthill “L/4100/Cartridge” Series pumps 0-1000 SSU

SPEED RPM PUMP SERIES		300	600	900	1200	1500	1800
		30L & 4101	FT.		1.0	1.7	1.9
00L & 4102	FT.		1.0	1.7	2.0	2.3	2.6
0L & 4103	FT.		1.0	1.8	2.2	2.5	2.9
1L & 4104	FT.		1.1	1.8	2.3	2.9	3.5
2L & 4105	FT.	1.1	2.3	3.0	3.8	5.8	7.0
5L & 4108	FT.	1.7	2.8	4.6	6.6	9.2	12.3

Notes:

1. For liquid viscosity up to 1000 SSU.
2. NPSHA (Net Positive Suction Head Available) must be greater than the NPSHR (Net Positive Suction Head Required) value provided in the table.
3. Values above are for feet of liquid with a Specific Gravity of 1.0

Viscosity Correction Factor

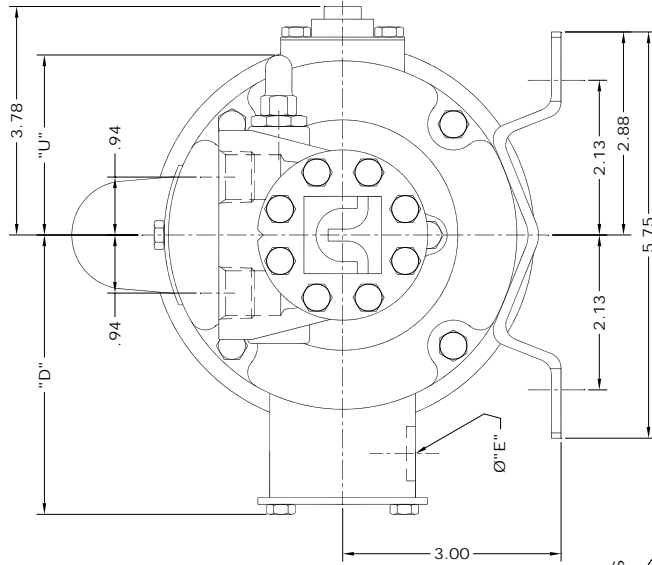
	Viscosity (SSU)		
	2500	5000	10000
Correction Factor	1.3	1.7	2.0



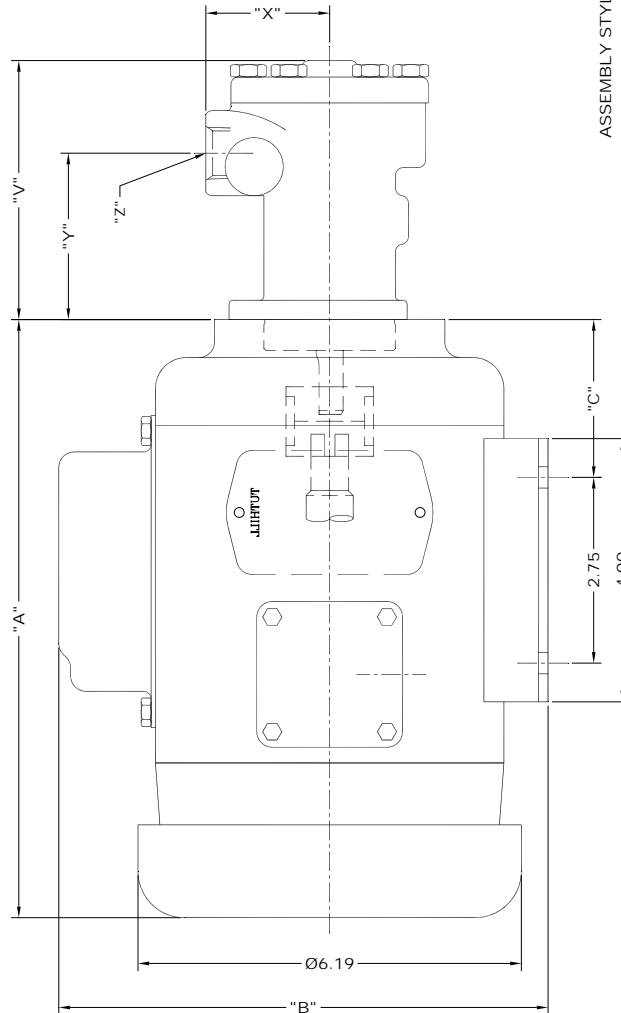
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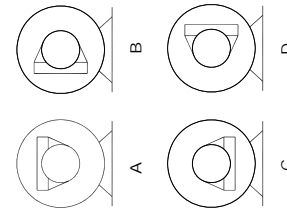
Dimensions for 30LE-2LE, 4101-4105 & 4121-4125
Close Coupled to a 48 Frame Single Phase Motor



MODEL #	"U"	"V"	"X"	"Y"	"Z" NPT
30LE / 4101 / 4121	3 $\frac{3}{32}$	3 $\frac{13}{32}$	1 $\frac{11}{16}$	2 $\frac{3}{32}$	3 $\frac{18}{8}$
00LE / 4102 / 4122	3 $\frac{3}{32}$	3 $\frac{3}{16}$	2	1 $\frac{23}{32}$	1 $\frac{14}{2}$
0LE / 4103 / 4123	3 $\frac{3}{32}$	3 $\frac{3}{16}$	2	1 $\frac{23}{32}$	1 $\frac{14}{2}$
1LE / 4104 / 4124	3 $\frac{1}{8}$	3 $\frac{11}{32}$	2	1 $\frac{7}{8}$	1 $\frac{14}{2}$
2LE / 4105 / 4125	3 $\frac{1}{8}$	4 $\frac{3}{16}$	2	2 $\frac{11}{16}$	1 $\frac{14}{2}$



ASSEMBLY STYLES



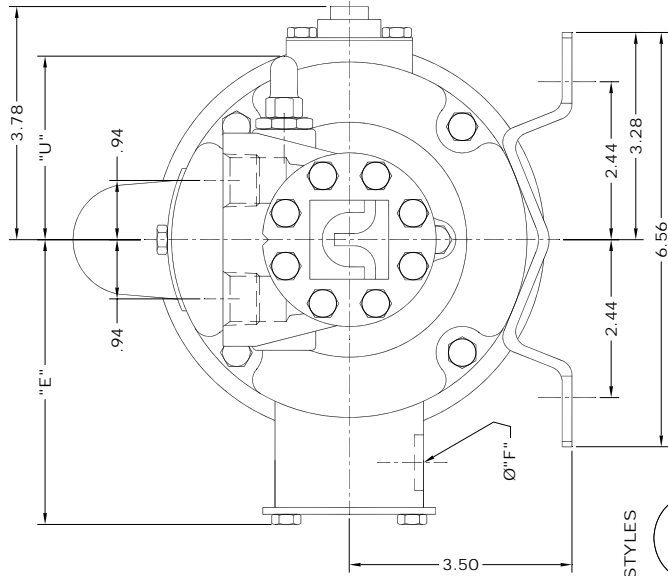
MODEL #	HP	DESCRIPTION	"A"	"B"	"C"	"D"	"E"	WT. (LBS)
88514	1/4	1/60/115/230 VOLT, 1725 RPM, TEFC, 48YZ FRAME	9.60	7.41	2.50	4.51	.88	23
88600	1/4	1/60/115/230 VOLT, 1725 RPM, XPFC, 48YZ FRAME	12.95	5.84	4.11	6.50	.50	38
88513	1/3	1/60/115/230 VOLT, 1725 RPM, TEFC, 48YZ FRAME	9.60	7.41	2.50	4.51	.88	26
88516	1/2	1/60/115/230 VOLT, 1725 RPM, TEFC, 48YZ FRAME	9.60	7.41	2.50	4.51	.88	29



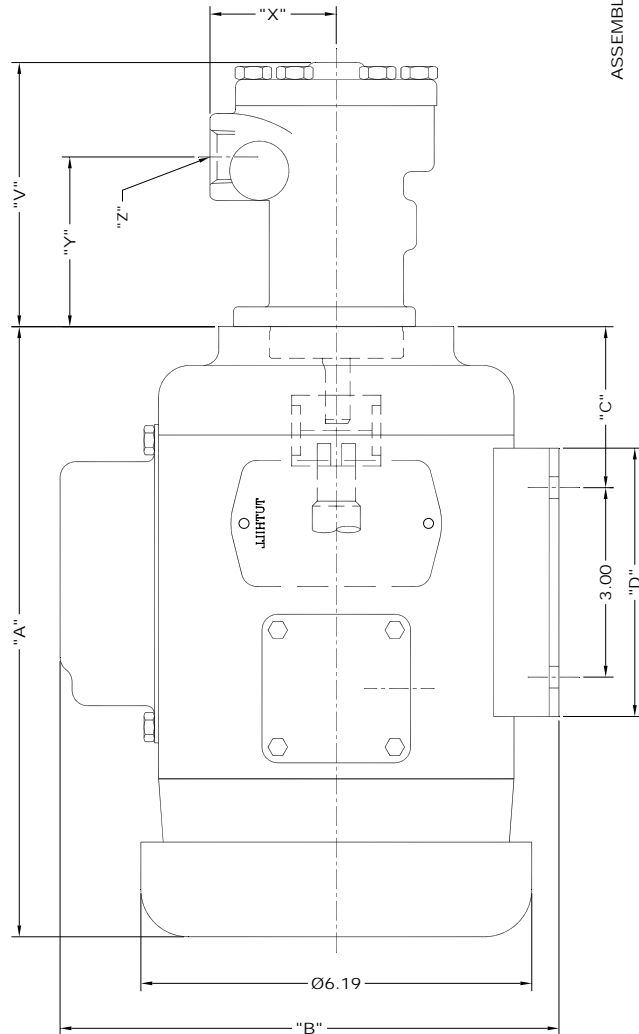
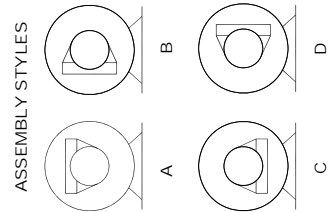
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**Dimensions for 30LE-2LE, 4101-4105 & 4121-4125
Close Coupled to a 56 Frame Single Phase Motor**



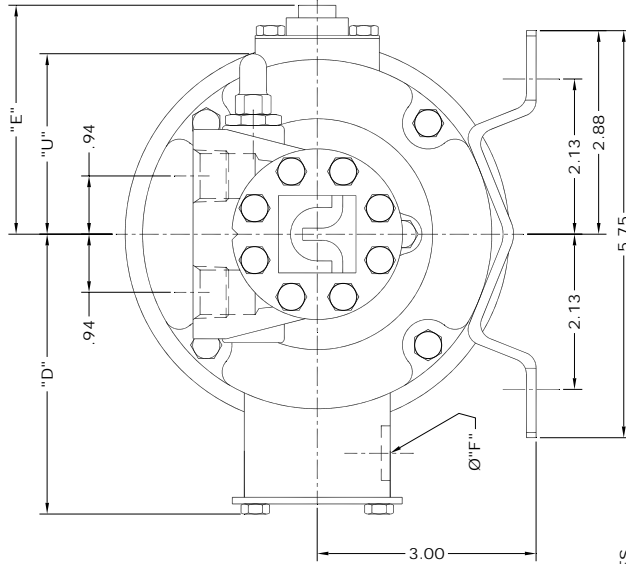
MODEL #	"U"	"V"	"X"	"Y"	"Z", NPT
30LE	3 $\frac{3}{32}$	3 $\frac{13}{32}$	1 $\frac{11}{16}$	2 $\frac{3}{32}$	3 $\frac{18}{8}$
00LE	3 $\frac{3}{32}$	3 $\frac{3}{16}$	2	1 $\frac{23}{32}$	1 $\frac{14}{2}$
0LE	3 $\frac{3}{32}$	3 $\frac{3}{16}$	2	1 $\frac{23}{32}$	1 $\frac{14}{2}$
1LE	3 $\frac{1}{8}$	3 $\frac{11}{32}$	2	1 $\frac{7}{8}$	1 $\frac{14}{2}$
2LE	3 $\frac{1}{8}$	4 $\frac{3}{16}$	2	2 $\frac{11}{16}$	1 $\frac{14}{2}$



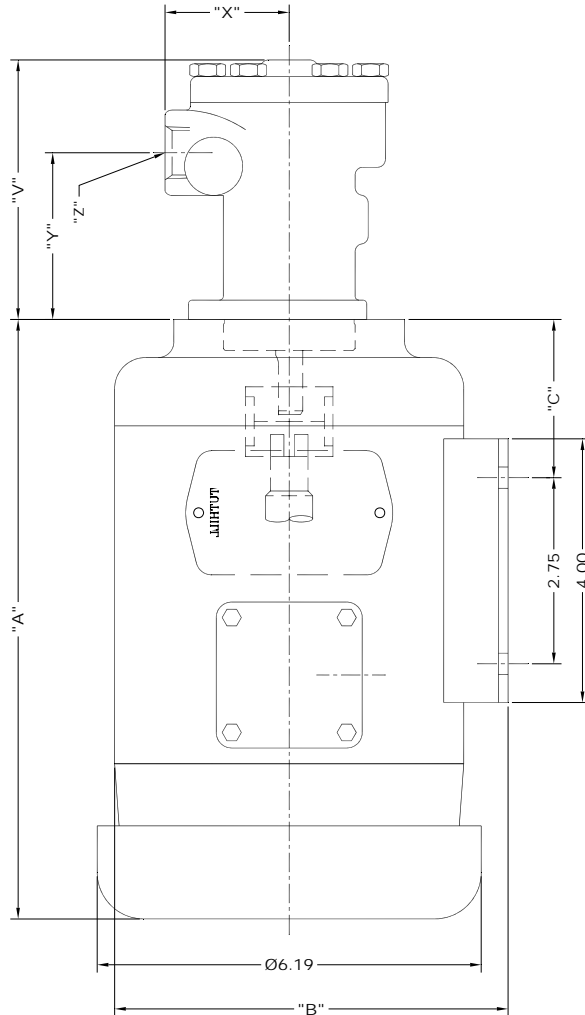
MODEL #	HP	DESCRIPTION	"A"	"B"	"C"	"D"	"E"	"F"	WT. (LBS)
88494	1/2	1/60/115/230 VOLT, 1725 RPM, TEFC, 56YZ FRAME	9.65	7.90	2.75	4.00	4.90	.88	33
88601	1/2	1/60/115/230 VOLT, 1725 RPM, XPFC, 56YZ FRAME	13.96	6.60	4.36	4.25	6.50	.50	44
88602	3/4	1/60/115/230 VOLT, 1725 RPM, TEFC, 56YZ FRAME	11.78	8.68	2.75	4.25	4.51	.88	36



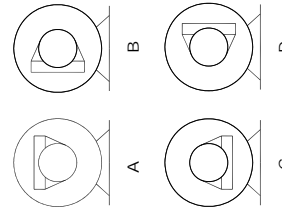
Dimensions for 30LE-2LE, 4101-4105 & 4121-4125
Close Coupled to a 48 Frame Three Phase Motor



MODEL #	"U"	"V"	"X"	"Y"	"Z"-NPT
30LE / 4101 / 4121	3 $\frac{3}{32}$	3 $\frac{13}{32}$	1 $\frac{11}{16}$	2 $\frac{3}{32}$	3 $\frac{3}{8}$ 18
00LE / 4102 / 4122	3 $\frac{3}{32}$	3 $\frac{3}{16}$	2	1 $\frac{23}{32}$	1 $\frac{1}{2}$ 14
0LE / 4103 / 4123	3 $\frac{3}{32}$	3 $\frac{3}{16}$	2	1 $\frac{23}{32}$	1 $\frac{1}{2}$ 14
1LE / 4104 / 4124	3 $\frac{1}{8}$	3 $\frac{11}{32}$	2	1 $\frac{7}{8}$	1 $\frac{1}{2}$ 14
2LE / 4105 / 4125	3 $\frac{1}{8}$	4 $\frac{3}{16}$	2	2 $\frac{11}{16}$	2 $\frac{1}{2}$ 14



ASSEMBLY STYLES



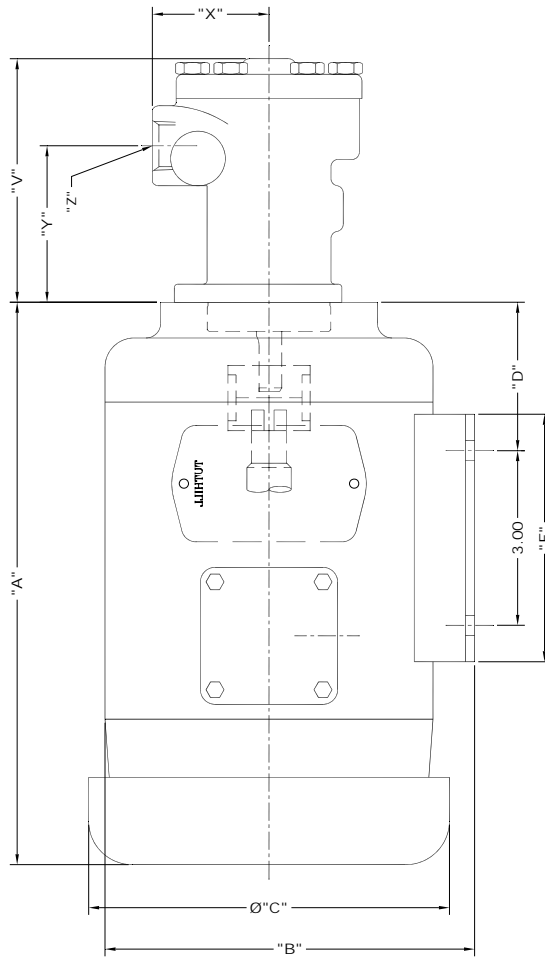
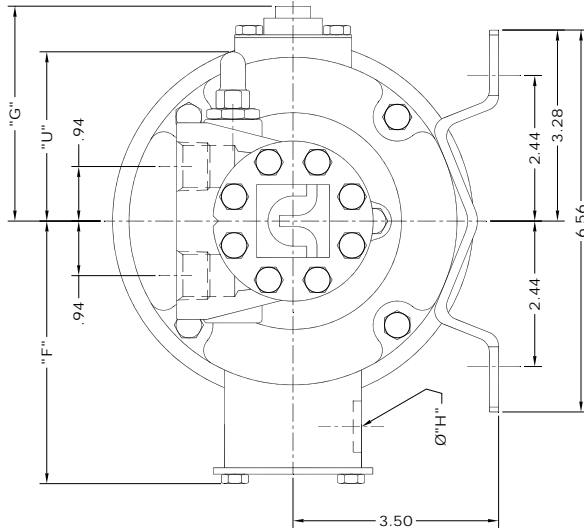
MODEL #	HP	DESCRIPTION	"A"	"B"	"C"	"D"	"E"	"F"	WT. (LBS)
88515	1/4	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, 1425/1725 RPM, TEFC, 48YZ FRAME	9.10	5.84	2.50	4.90	3.78	.88	33
88603	1/4	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, 1425/1725 RPM, XPFC, 48YZ FRAME	12.95	6.10	4.11	6.50	.50	33	
88495	1/3	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, 1425/1725 RPM, TEFC, 48YZ FRAME	9.10	5.84	2.50	4.90	3.78	33	
88519	1/2	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, 1425/1725 RPM, TEFC, 48YZ FRAME	9.10	5.84	2.50	4.90	3.78	33	



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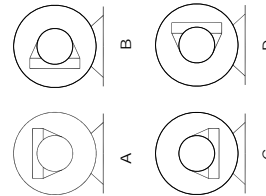
12500 South Pulaski Road
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email: tuthillpump@tuthill.com
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**Dimensions for 30LE-2LE, 4101-4105 & 4121-4125
Close Coupled to a 56 Frame Three Phase Motor**



MODEL #	"U"	"V"	"X"	"Y"	"Z"-NPT
30LE / 4101 / 4121	3 $\frac{3}{32}$	3 $\frac{13}{32}$	1 $\frac{11}{16}$	2 $\frac{3}{32}$	3 $\frac{8}{18}$
00LE / 4102 / 4122	3 $\frac{3}{32}$	3 $\frac{3}{32}$	2	1 $\frac{23}{32}$	1 $\frac{1}{4}$
0LE / 4103 / 4123	3 $\frac{3}{32}$	3 $\frac{3}{16}$	2	1 $\frac{23}{32}$	1 $\frac{1}{4}$
1LE / 4104 / 4124	3 $\frac{1}{8}$	3 $\frac{11}{32}$	2	1 $\frac{7}{8}$	1 $\frac{1}{4}$
2LE / 4105 / 4125	3 $\frac{1}{8}$	4 $\frac{3}{16}$	2	2 $\frac{11}{16}$	1 $\frac{1}{4}$

ASSEMBLY STYLES



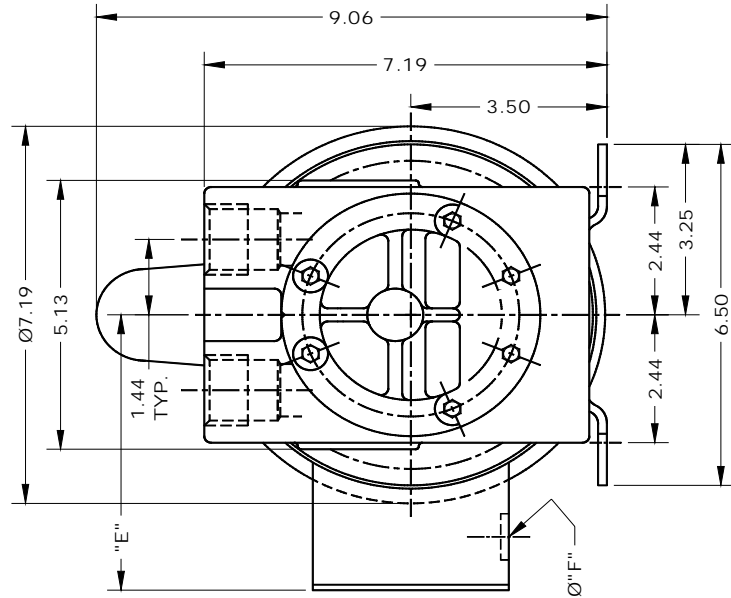
MODEL #	HP	DESCRIPTION	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	WT.
88520	1/2	3PH/50/60/190-220/380-440 VOLT, 1425/1725 RPM, TEFC, 56YZ FRAME	9.78	6.34	6.19	2.75	4.25	4.51	3.69	.88	30
88604	1/2	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, XPFC, 56YZ FRAME	13.96	6.60	6.20	4.36	4.25	6.50	-	.50	42
88521	3/4	3PH/50/60/190-220/380-440 VOLT, 1425/1725 RPM, TEFC, 56YZ FRAME	10.36	6.83	7.19	2.84	4.50	5.20	4.19	.88	36
88605	1	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, XPFC, 56YZ FRAME	10.36	6.83	7.19	2.84	4.50	5.20	4.19	.88	36
88606	1 1/2	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, XPFC, 56YZ FRAME	11.36	6.83	7.19	2.84	4.50	5.20	4.19	.88	40



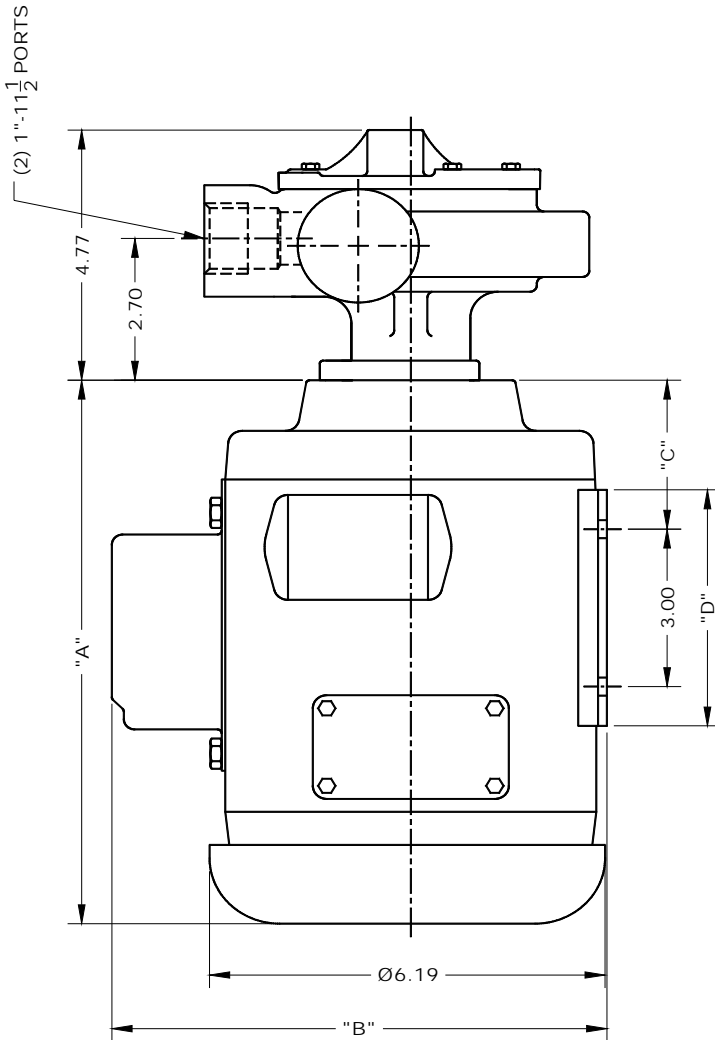
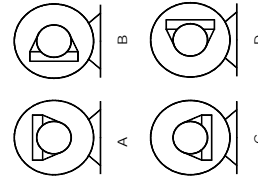
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Dimensions for 5LE, 4108 & 4128 Close Coupled to a 56 Frame Single Phase Motor



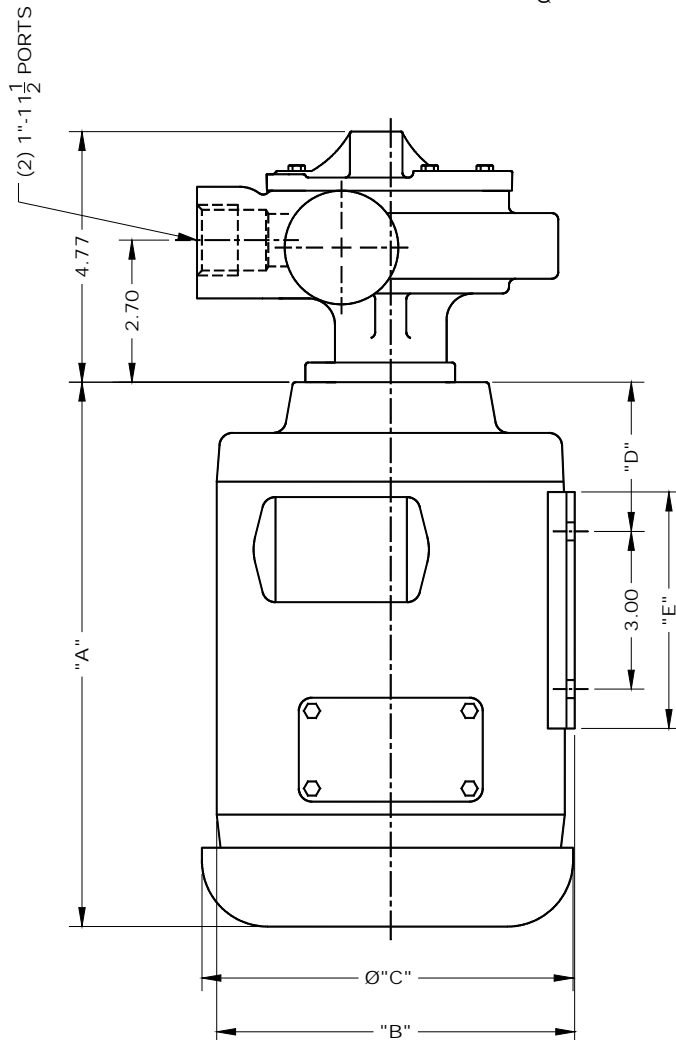
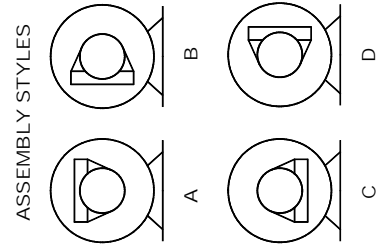
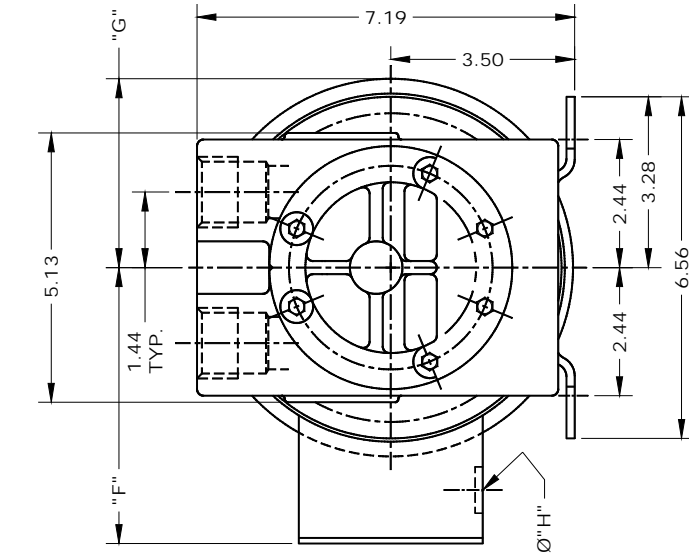
ASSEMBLY STYLES



MODEL #	HP	DESCRIPTION	"A"	"B"	"C"	"D"	"E"	"F"	WT. (LBS)
88494	1/2	1/60/115/230 VOLT, 1725 RPM, TEFC, 56YZ FRAME	9.65	7.90	2.75	4.00	4.90	.88	33
88601	1/2	1/60/115/230 VOLT, 1725 RPM, XPFC, 56YZ FRAME	13.96	6.60	4.36	4.25	6.50	.50	44
88602	3/4	1/60/115/230 VOLT, 1725 RPM, TEFC, 56YZ FRAME	11.78	8.68	2.75	4.25	4.51	.88	36



Dimensions for 5LE, 4108 & 4128 Close Coupled to a 56 Frame Three Phase Motor



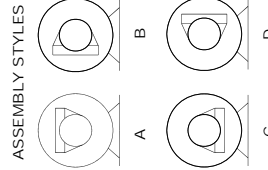
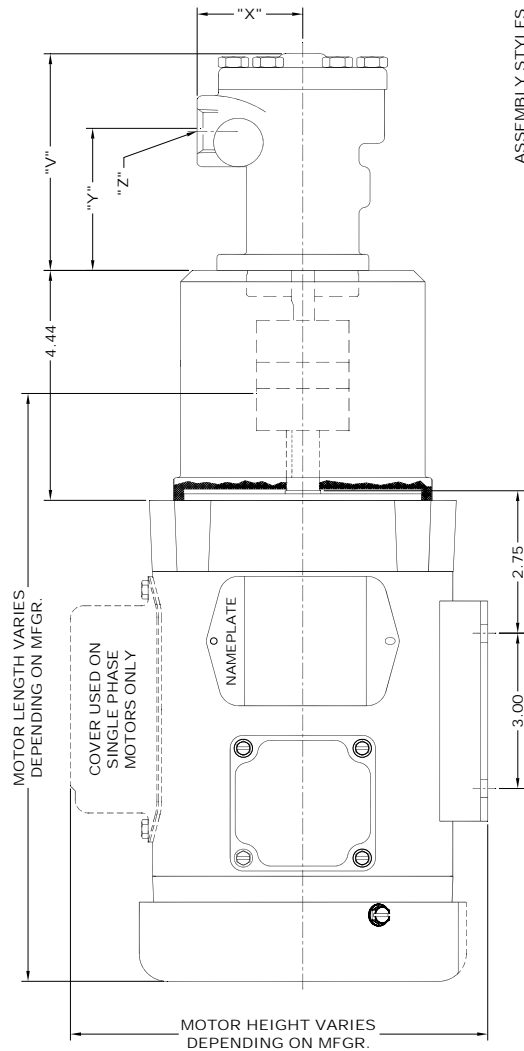
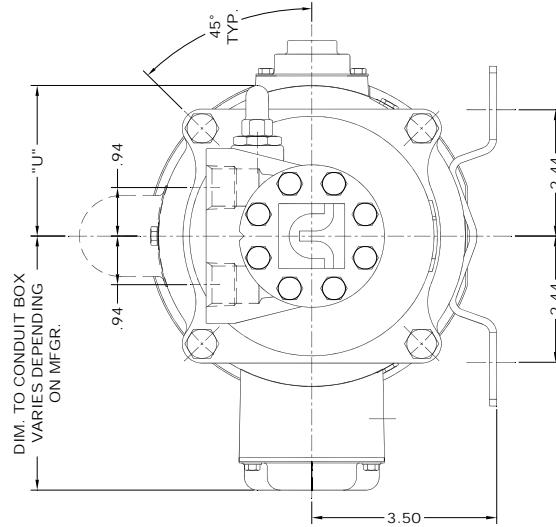
MODEL #	HP	DESCRIPTION	"A"	"B"	"C"	"D"	"E"	"F"	"G"	"H"	WT.
88520	1/2	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, 1425/1725 RPM, TEFC, 56YZ FRAME	9.78	6.34	6.19	2.75	4.25	4.51	3.69	.88	30
88604	1/2	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, 1425/1725 RPM, XPFC, 56YZ FRAME	13.96	6.60	6.20	4.36	4.25	6.50	-	.50	42
88521	3/4	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, 1425/1725 RPM, TEFC, 56YZ FRAME	10.36	6.83	7.19	2.84	4.50	5.20	4.19	.88	36
88605	1	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, 1425/1725 RPM, TEFC, 56YZ FRAME	10.36	6.83	7.19	2.84	4.50	5.20	4.19	.88	36
88606	1 1/2	3PH/50/60/190-220/380-440 VOLT, 208-230/460 VOLT, 1425/1725 RPM, TEFC, 56YZ FRAME	11.36	6.83	7.19	2.84	4.50	5.20	4.19	.88	40



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Dimensions for 30LE-2LE, 4101-4105 & 4121-4125
Adapter Mounted to a 56 Frame Single & Three Phase Motor



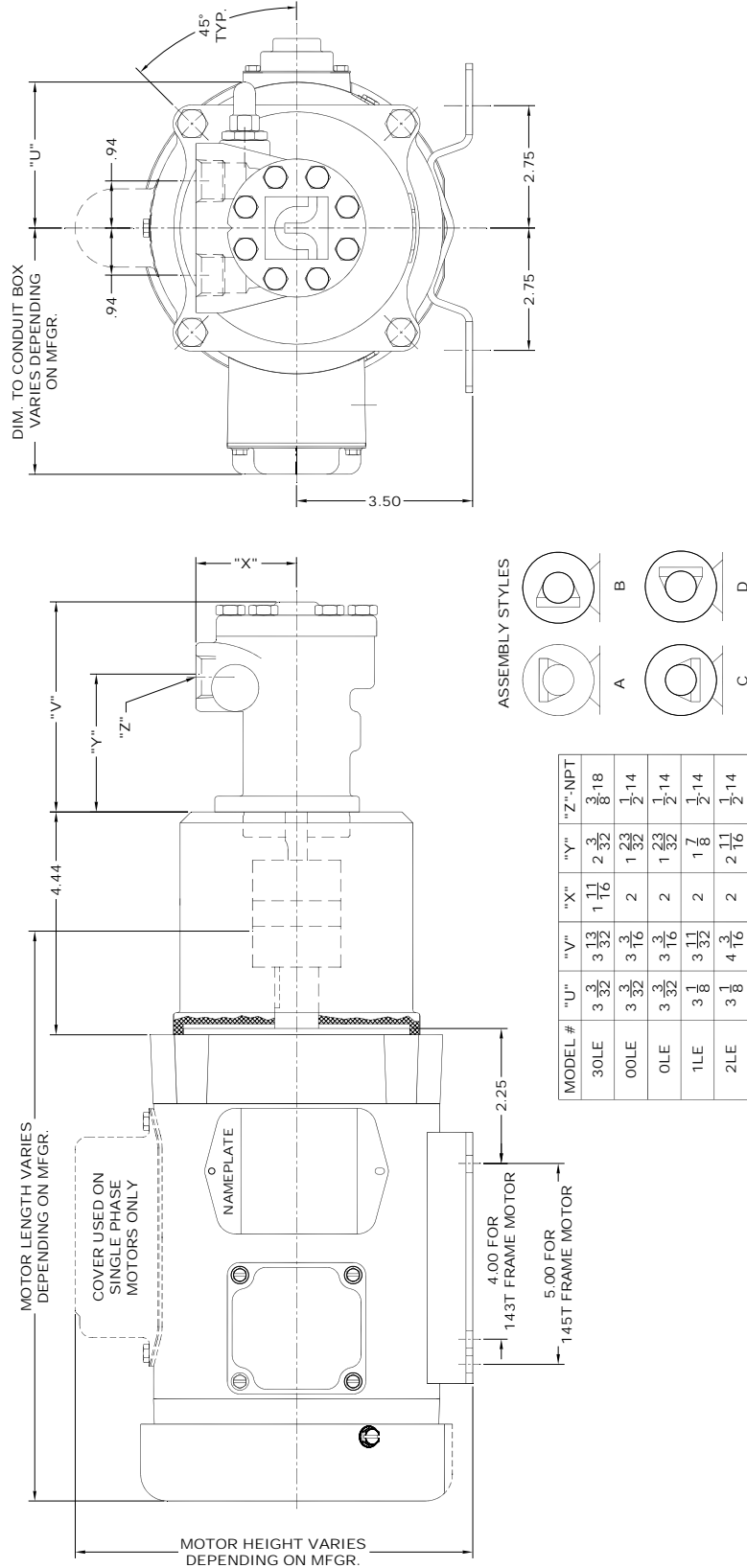
MODEL #	"U"	"V"	"X"	"Y"	"Z"-NPT
30LE	3 $\frac{3}{32}$	3 $\frac{13}{32}$	1 $\frac{11}{16}$	2 $\frac{3}{32}$	3 $\frac{18}{8}$
00LE	3 $\frac{3}{32}$	3 $\frac{3}{16}$	2	1 $\frac{23}{32}$	1 $\frac{14}{2}$
0LE	3 $\frac{3}{32}$	3 $\frac{3}{16}$	2	1 $\frac{23}{32}$	1 $\frac{14}{2}$
1LE	3 $\frac{1}{8}$	3 $\frac{11}{32}$	2	1 $\frac{7}{8}$	1 $\frac{14}{2}$
2LE	3 $\frac{1}{8}$	4 $\frac{3}{16}$	2	2 $\frac{11}{16}$	1 $\frac{14}{2}$



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Dimensions for 30LE-2LE, 4101-4105 & 4121-4125
Adapter Mounted to a 143/145TC Frame Single & Three Phase Motor

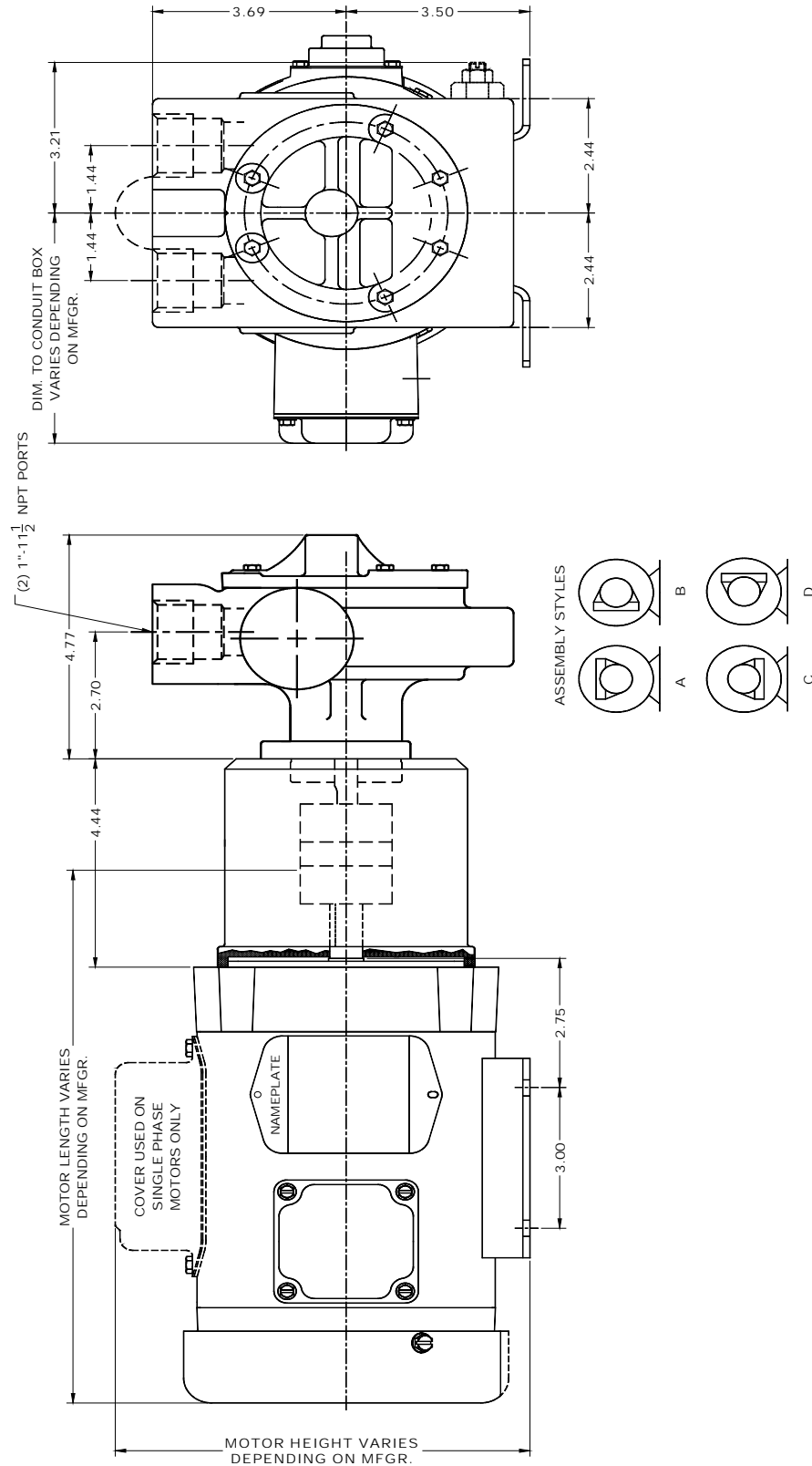




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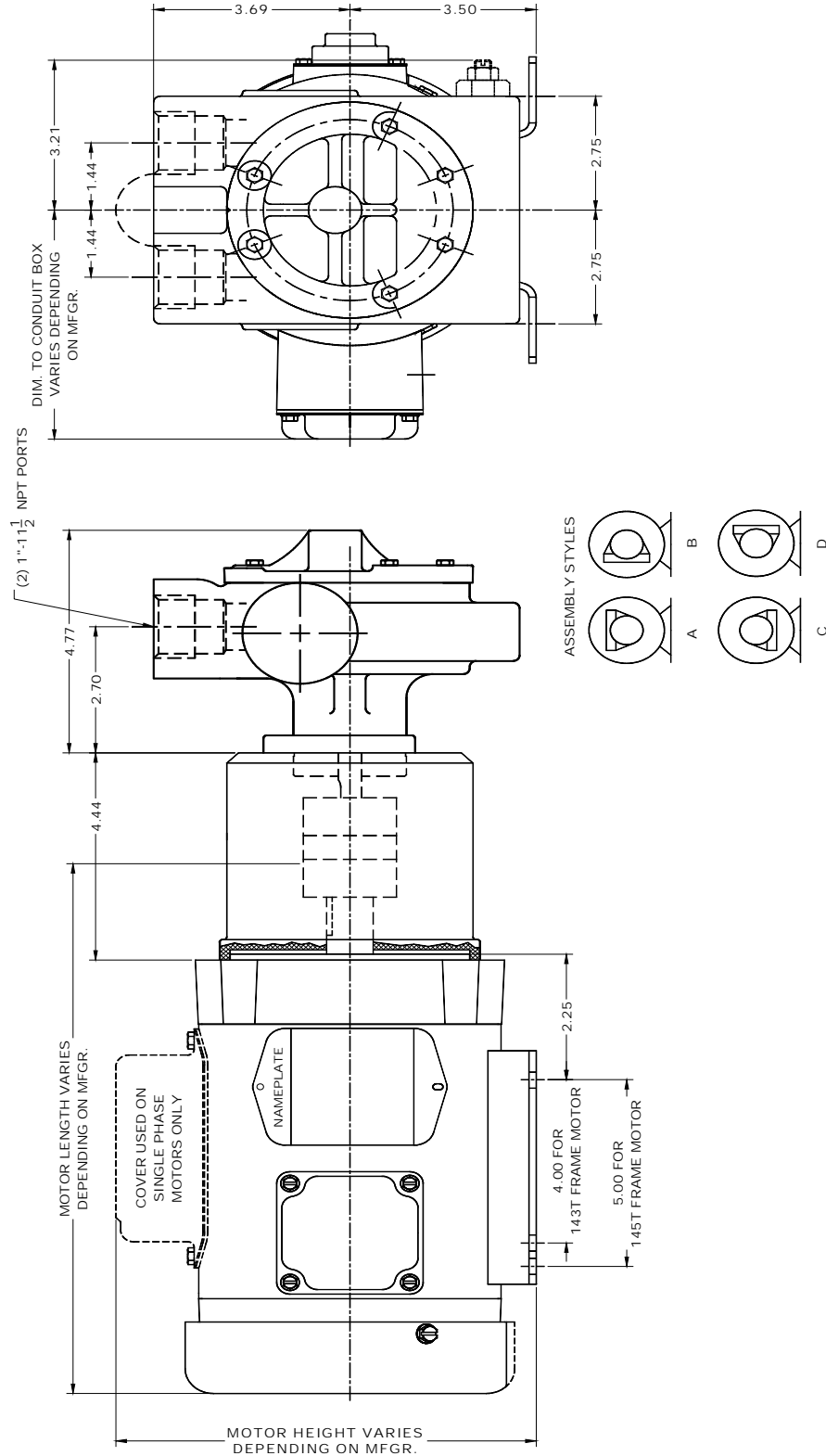
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Dimensions for 5LE, 4108 & 4128
Adapter Mounted to a 56 Frame Single & Three Phase Motor





Dimensions for 5LE, 4108 & 4128
Adapter Mounted to a 143/145TC Frame Single & Three Phase Motor

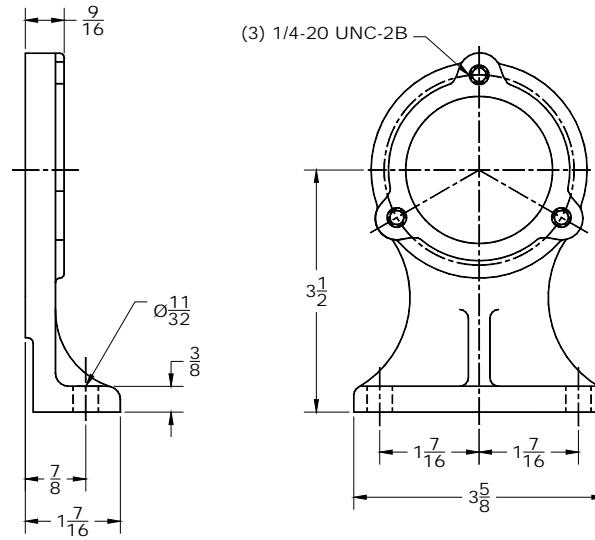




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Dimensions for LE Series Mounting Foot (0L81-C)

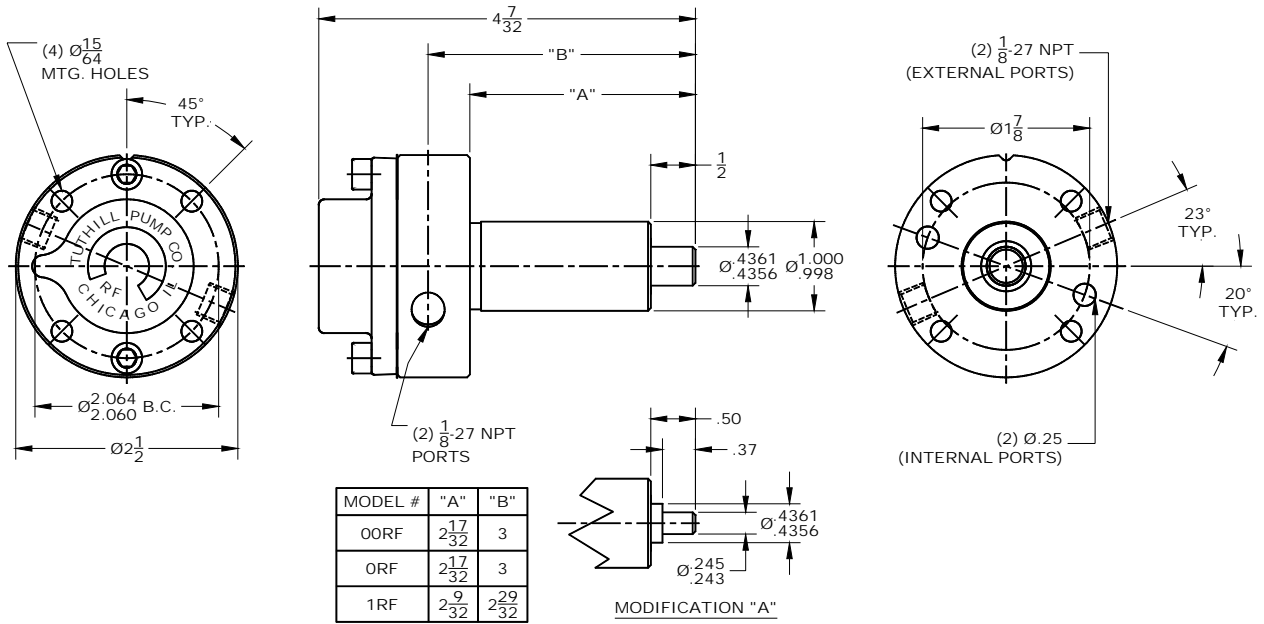




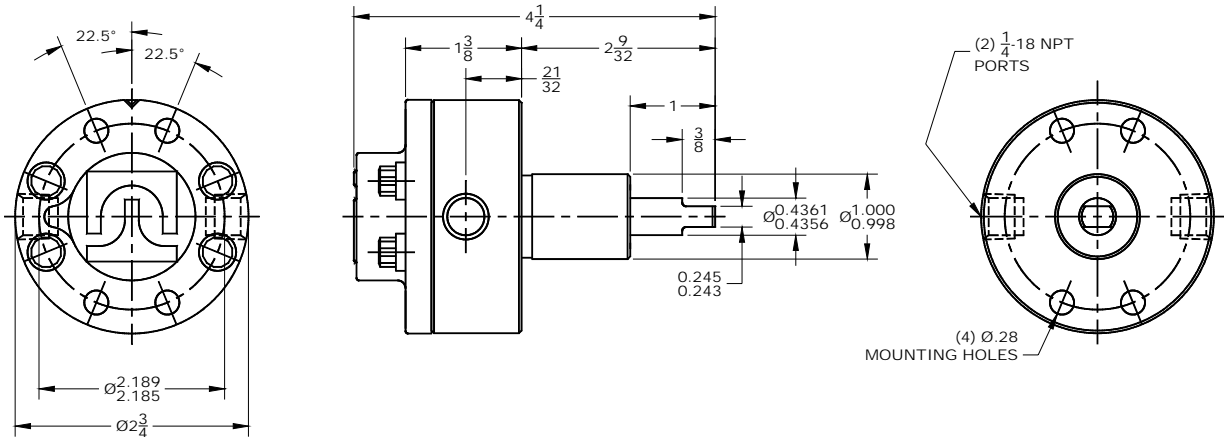
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00RF, 0RF, and 1RF Pump Mounting Dimensions



1R1F-A Pump Mounting Dimensions

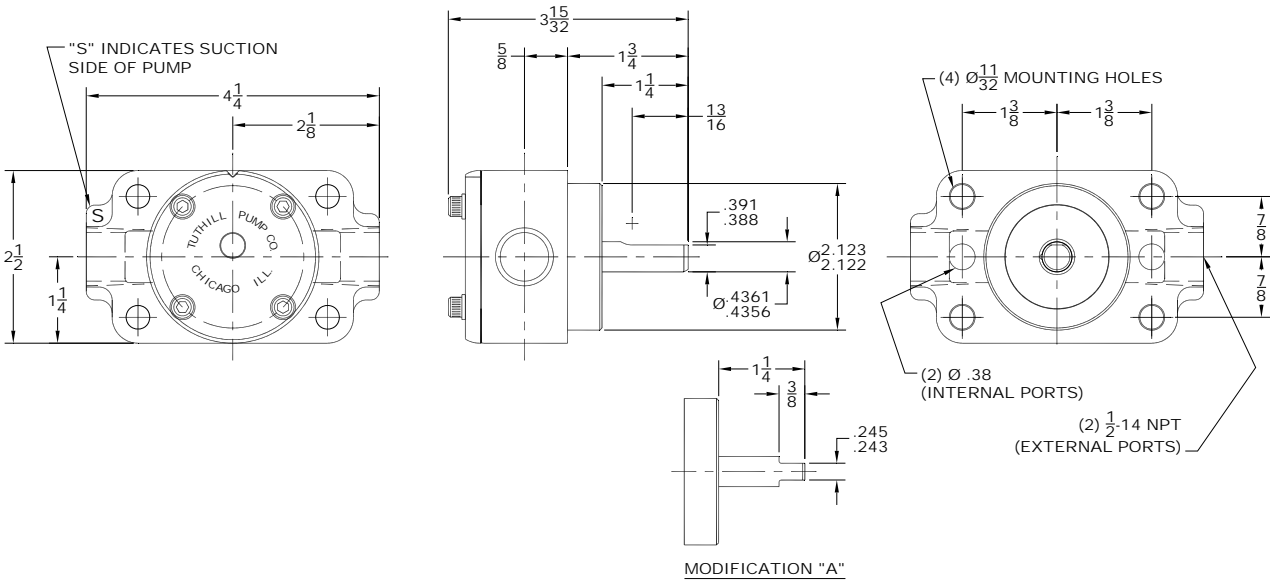




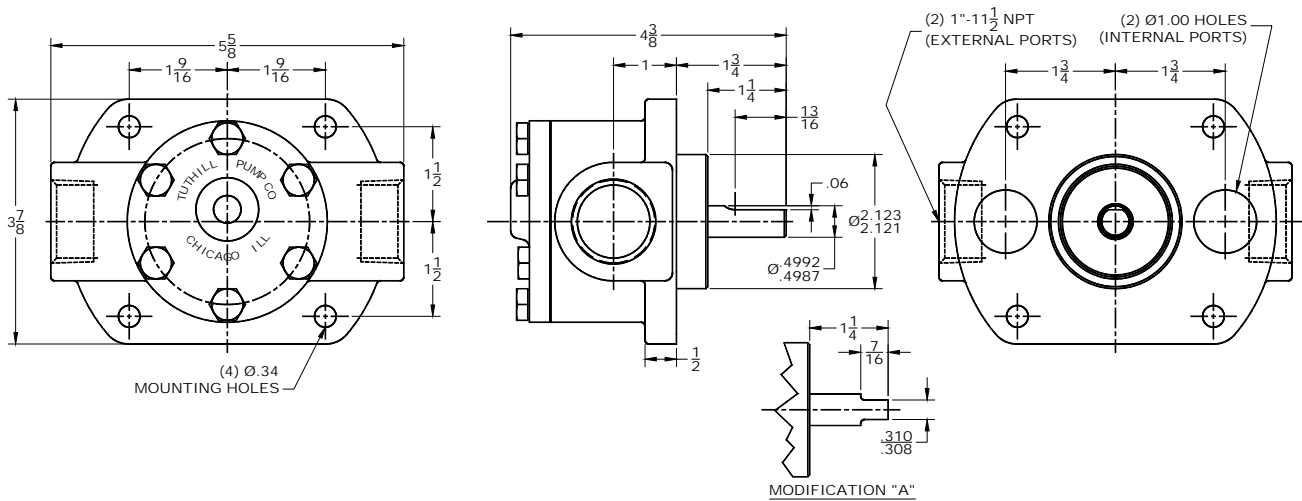
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00LFD, 0LFD, and 1LFD Pump Mounting Dimensions



2LFD Pump Mounting Dimensions

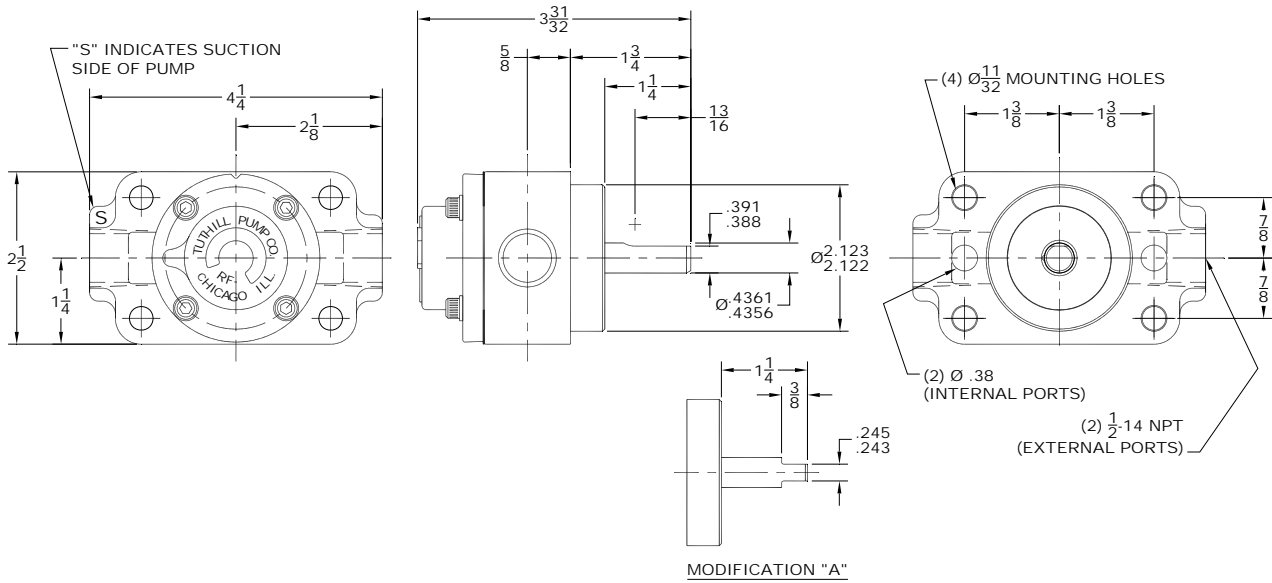




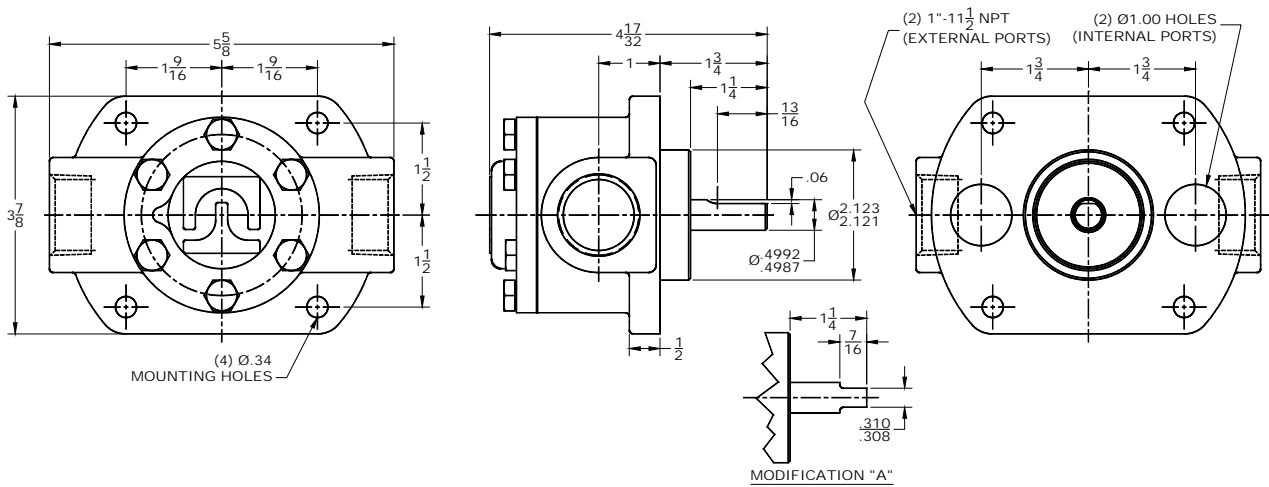
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00RFD, 0RFD, and 1RFD Pump Mounting Dimensions



2RFD Pump Mounting Dimensions





Cartridge Pump Model Number System



Size

00
0
1
2

Model

RF
LFD
RFD

Pump Options

B Shaft Lip Seal
U Cover Rotated 180°
K Ball Bearing*
* Available on 00-1 Size
LFD & RFD Models

Modifications

-A Tang Shaft
-1 External Ports
-2 Internal/External Ports
-7 Viton Seal**
** Available on 00-1 Size
LFD & RFD Models

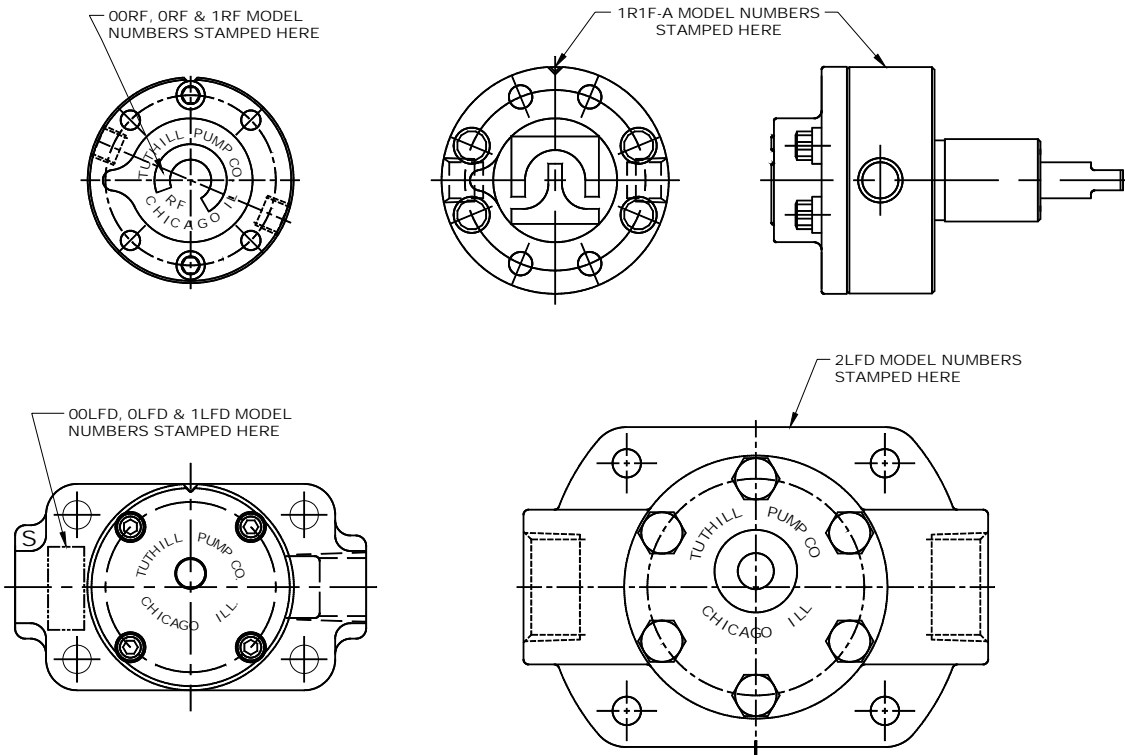
Rotation (Sealed Models)

-C Clockwise Rotation
-CC Counterclockwise Rotation

Note:

- 1. Shaft seal not available on RF model pumps.
- 2. 1R1F-A pump available as shown.

Model Number Locations





Cartridge Pump Materials of Construction

<i>Part Name</i>	<i>Material</i>	<i>Standard</i>	<i>Comments</i>	<i>Availability</i>
Housing	Cast Iron	ASTM A48 – 96a	Classes 25, 30, 35, or 40	Std.
Housing Bushing	Steel	AISI 12L14		Std.
Cover	Cast Iron	ASTM A48 – 96a	Classes 25, 30, 35, or 40	Std.
Rotor	Steel	ASTM A311	Stressproof	Std.
Idler	P/M Steel	MPIF-0508-P		Std.
	Steel	C1118 or C1117		Opt.
Idler Pin	Steel	C1117	Heat Treated	Std.
Idler Bushing	Bronze	SAE 660		Opt.
	Carbon	Carbon Graphite Resin		Opt.
Gaskets	Standard	Oriented Polyester		Std.
	Standard	Buna Coated Aluminum		Std.