

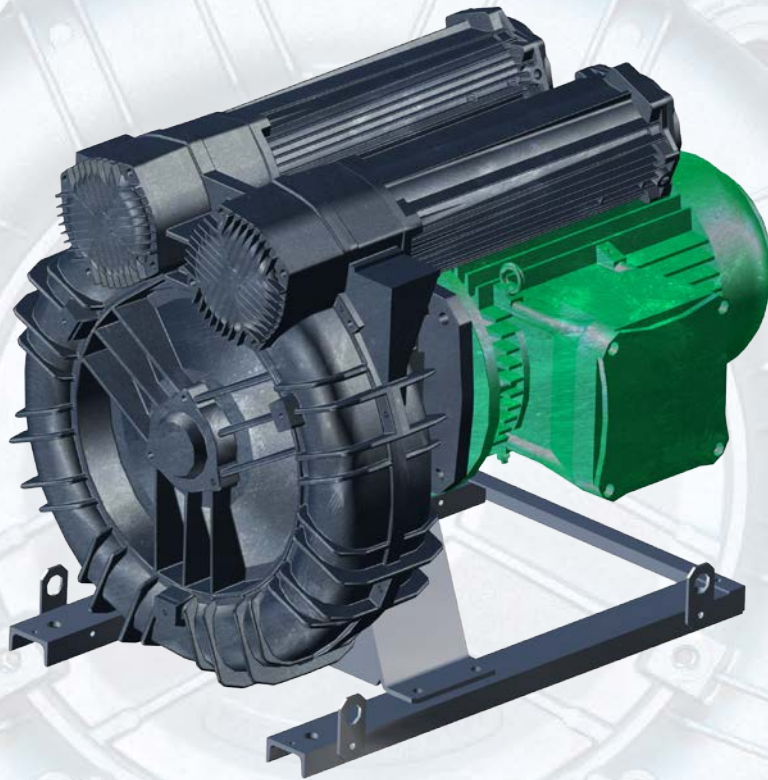


**SIMPLIFIED** FLUID HANDLING

# FPZ REGENERATIVE BLOWERS

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**MS-MD SERIES WITH EXPLOSION PROOF MOTORS**





FPZ has been manufacturing regenerative blowers for the movement of air and technical gases since 1975 and has earned a worldwide reputation for quality and service. FPZ's standard line of regenerative blowers with explosion proof motors are built to withstand extremely harsh environments.

All blowers with explosion proof motors are assembled in our Saukville, WI USA facility.

Standard XP features include:

#### Corrosion Protection

All aluminum components in the wetted areas are anodized for corrosion resistance. In addition, all internal bolts are stainless steel. The anodizing process is in conformity to UNI EN ISO 7599. Anodizing is a highly effective treatment that allows our blowers to operate in harsh conditions.



#### Sealing

To minimize leakage into or out of the blower, FPZ applies our TMS process. The TMS process begins with impregnating aluminum components in the wetted areas with a polyester resin. The resin is a specially formulated, 100% solids, styrene-free polyester resin and provides a virtually indestructible seal. This polyester resin seals the casting porosity and prevents leakage through the casting.

All mating surfaces and bolts that are in the wetted areas have a gasket or seal to minimize leakage. Leakage is estimated at <math><15 \text{ cm}^3/\text{min}</math>. After assembly, each blower is leak tested.





# FPZ CUSTOMER APPROACH



TECHNICAL FEASIBILITY  
ASSESSMENT



BLOWER  
SELECTION



CUSTOMER  
SERVICE



AFTER SALES  
ASSISTANCE

## Explosion Proof Motors

XP motors are UL listed for Class 1, Division I, Group D, Class II Groups F & G environments.

XP motors on GOR motor blowers are UL listed for Class 1, Division 1, Group D, Class II Groups E, F and G

All standard explosion proof motors are equipped with normally closed thermal protectors and are suitable for use with a VFD\*.

## Other features

1/8" gauge ports are included on the inlet and outlet silencers.

3-Year Warranty.

Mountable in any plane.

Bearings are isolated from gas stream



**NEMA  
Premium**

\*Pneumatic performance will change with speed. Make sure that the blower is operated in safe pneumatic and electrical limits. Contact FPZ for variable speed tables.



**MS Series**

Model	Max. Flow (60 Hz) cfm	Power (60 Hz) Hp	Voltage (60 Hz) V	Amperage (60 Hz) A	ΔP max Pressure (60 Hz) In. WG	ΔP max Vacuum (60 Hz) In. HG	Noise <sup>1</sup> (60 Hz) dB(A)	Weight Lbs.
SCL K07-MS-7.5-3 XP-1	294	7.5	208-230/460	18.9-17.8 / 8.9	116	8.8	79.3	238
SCL K07-MS-10-3 XP-1		10	208-230/460	24.3-22.4 / 11.2	160	-	79.6	262
SCL K08-MS-7.5-3 XP-1	381	7.5	208-230/460	18.9-17.8 / 8.9	68	5.0	80	243
SCL K08-MS-10-3 XP-1		10	208-230/460	24.3-22.4 / 11.2	105	8.5	80.3	267
SCL K08-MS-GOR-15-3 XP-1		15	230/460	36 / 18	170	9.6	78	497
SCL K09-MS-10-3 XP-1	471	10	208-230/460	24.3-22.4 / 11.2	60	4.4	80.5	289
SCL K09-MS-GOR-15-3 XP-1		15	230/460	36 / 18	130	9.6	81	503
SCL K09-MS-GOR-20-3 XP-1		20	230/460	48 / 24	160	-	81	516
SCL K10-MS-10-3 XP-1	556	10	208-230/460	24.3-22.4 / 11.2	50	3.7	80.5	293
SCL K10-MS-GOR-15-3 XP-1		15	230/460	36 / 18	110	8.1	81	517
SCL K10-MS-GOR-20-3 XP-1		20	230/460	48 / 24	160	9.6	81.4	527
SCL K10-MS-GOR-25-3 XP-1		25	230/460	58 / 29	200	-	81.6	708
SCL K11-MS-GOR-15-3 XP-1	650	15	230/460	36 / 18	70	5.9	82.4	543
SCL K11-MS-GOR-20-3 XP-1		20	230/460	48 / 24	121	10.3	82.7	556
SCL K11-MS-GOR-25-3 XP-1		25	230/460	58 / 29	151	-	85.6	737
SCL K11-MS-GOR-30-3 XP-1		30	230/460	70 / 35	200	-	86	768
SCL K12-MS-GOR-15-3 XP-1	726	15	230/460	36 / 18	50	3.0	82.9	551
SCL K12-MS-GOR-20-3 XP-1		20	230/460	48 / 24	85	6.2	83.2	564
SCL K12-MS-GOR-25-3 XP-1		25	230/460	58 / 29	120	8.9	83.2	745
SCL K12-MS-GOR-30-3 XP-1		30	230/460	70 / 35	150	10.3	83.2	776
SCL K12-MS-GOR-40-3 XP-1		40	230/460	94 / 47	180	-	83.2	948

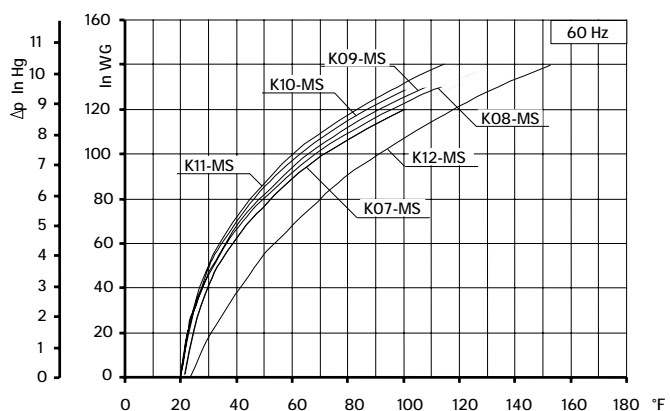
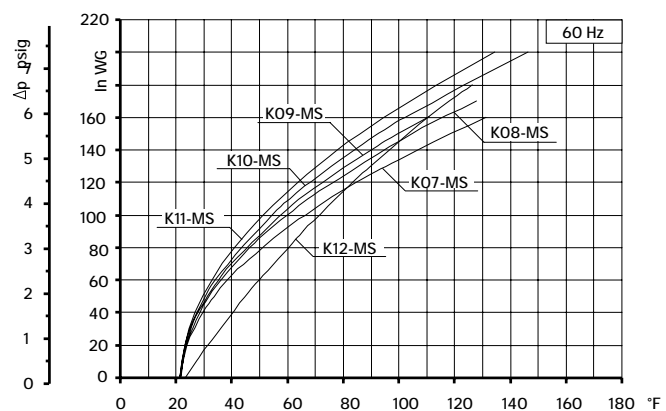
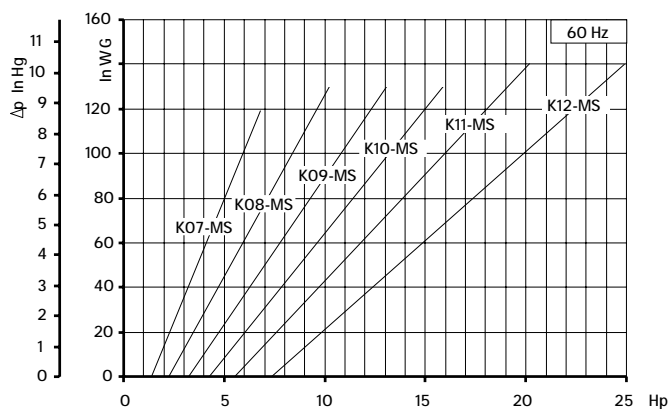
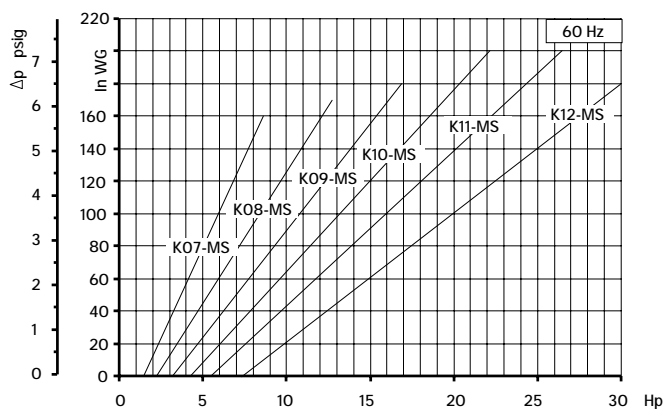
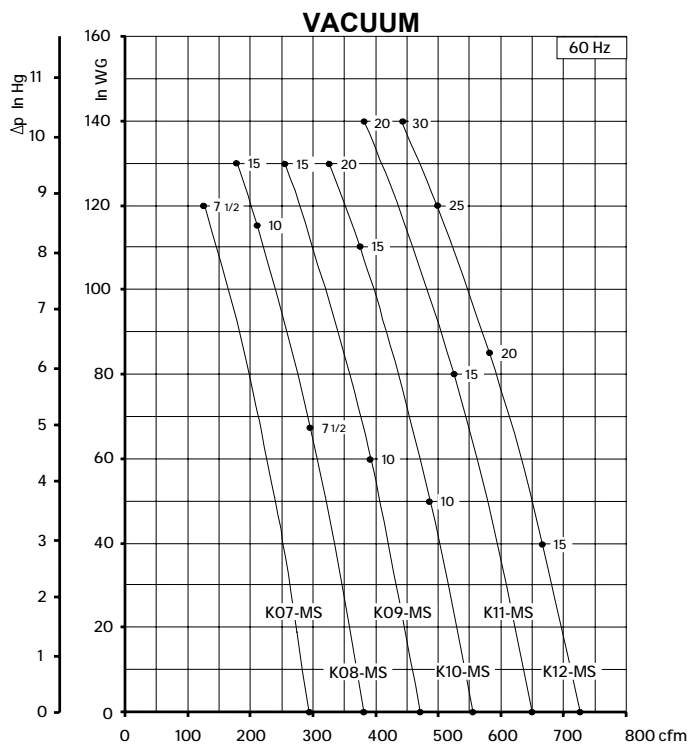
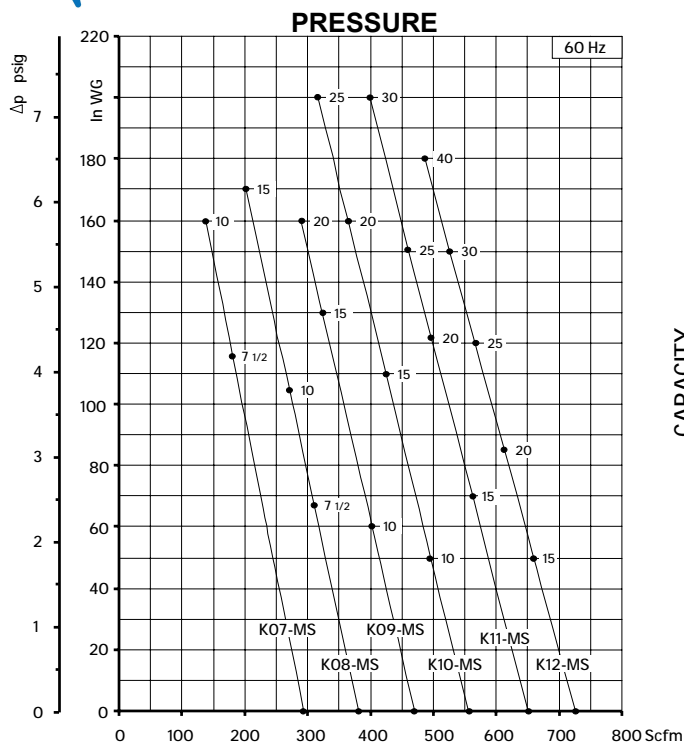
**INSTALLATION**

- For proper use, the blower should be equipped with Inlet FILTER and Safety Relief VALVE; other accessories available on request
- Ambient temperature from -15° to +40°C (+5° to +104° F).
- Specifications subject to change without notice.
- Before installation read carefully all instructions

<sup>1</sup> Noise measured at 1 m distance with inlet and outlet ports piped, in accordance to ISO 3744.



# MS SERIES XP VERSION



Curves refer to air at 68°F temperature and 29.92 In Hg atmospheric pressure (abs) measured at inlet port. Values for flow, power consumption and temperature rise: +/-10% tolerance. Data subject to change without notice.



**MD Series**

Model	Max. Flow (60 Hz) cfm	Power (60 Hz) Hp	Voltage (60 Hz) V	Amperage (60 Hz) A	ΔP max (60 Hz) In. WG	ΔP max (60 Hz) In. Hg	Noise <sup>1</sup> (60 Hz) dB(A)	Weight Lbs.
SCL K07R-MD-7.5-3 XP-1	128	7.5	208-230/460	18.9-17.8 / 8.9	240	11.9	75	232.6
SCL K08R-MD-7.5-3 XP-1	167	7.5	208-230/460	18.9-17.8 / 8.9	150	11.0	76.6	242.5
SCL K08R-MD-10-3 XP-1		10	208-230/460	24.3-22.4 / 11.2	220	13.2	77	266.8
SCL K09-MD-7.5-3 XP-1	220	7.5	208-230/460	18.9-17.8 / 8.9	110	8.1	78	280.4
SCL K09-MD-10-3 XP-1		10	208-230/460	24.3-22.4 / 11.2	165	12.1	79.5	304.7
SCL K10-MD-10-3 XP-1	274	10	208-230/460	24.3-22.4 / 11.2	115	8.5	80.3	310.2
SCL K11-MD-10-3 XP-1	306	10	208-230/460	24.3-22.4 / 11.2	75	5.5	81.1	321.2
SCL K11-MD-GOR-15-3 XP-1		15	230/460	36 / 18	180	13.2	81.4	549
SCL K11-MD-GOR-20-3 XP-1		20	230/460	48 / 24	280	-	81.7	562
SCL K12-MD-GOR-15-3 XP-1	335	15	230/460	36 / 18	100	7.4	82.3	556
SCL K12-MD-GOR-20-3 XP-1		20	230/460	48 / 24	180	13.2	82.6	569
SCL K12-MD-GOR-25-3 XP-1		25	230/460	48 / 24	240	-	82.9	750

**INSTALLATION**

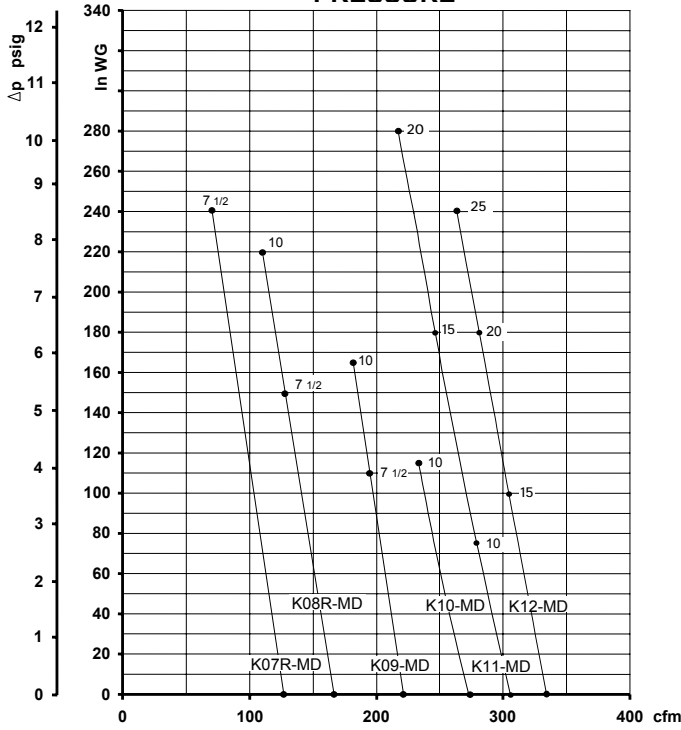
- For proper use, the blower should be equipped with Inlet FILTER and Safety Relief VALVE; other accessories available on request
- Ambient temperature from -15° to +40°C (+5° to +104° F).
- Specifications subject to change without notice.
- Before installation read carefully all instructions.

<sup>1</sup> Noise measured at 1 m distance with inlet and outlet ports piped, in accordance to ISO 3744.

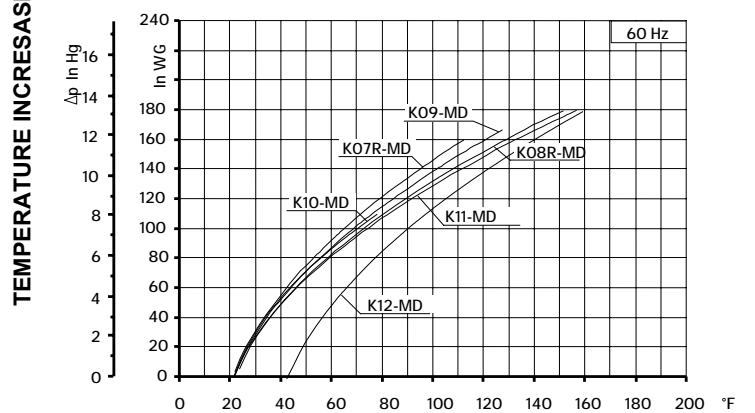
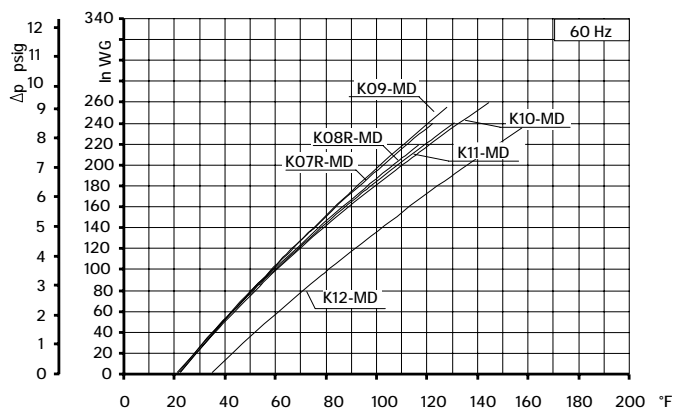
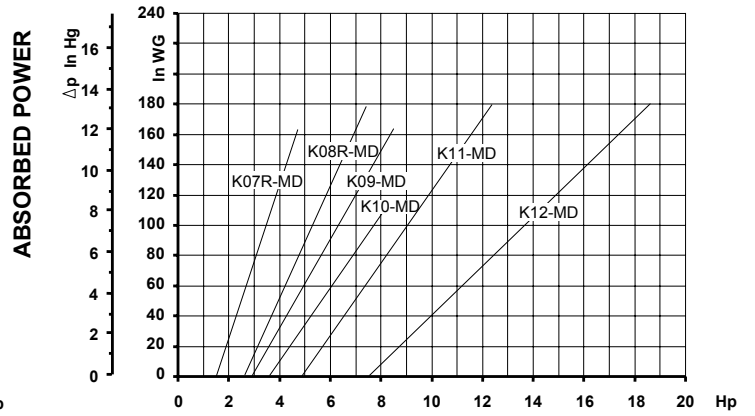
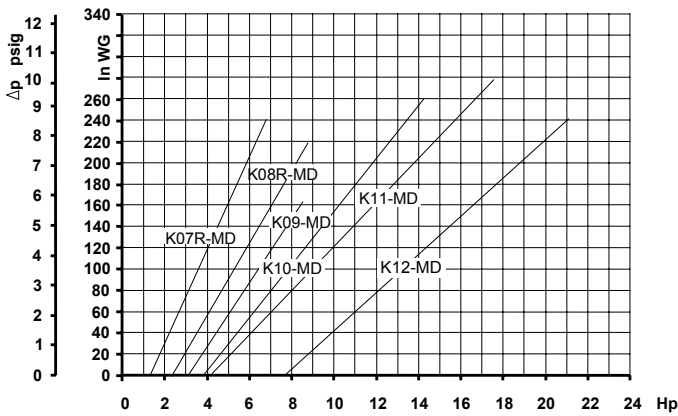
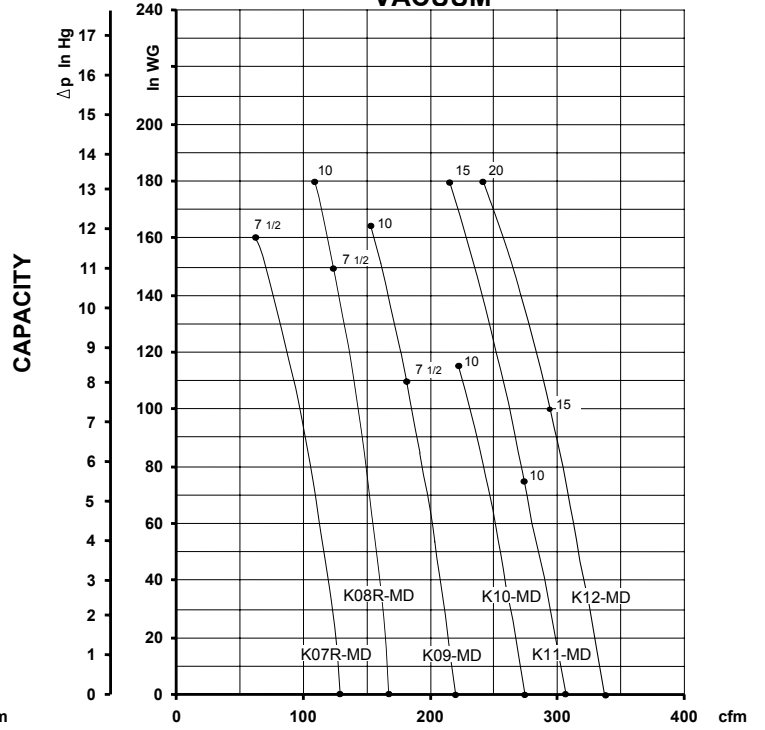


# MD SERIES XP VERSION

## PRESSURE



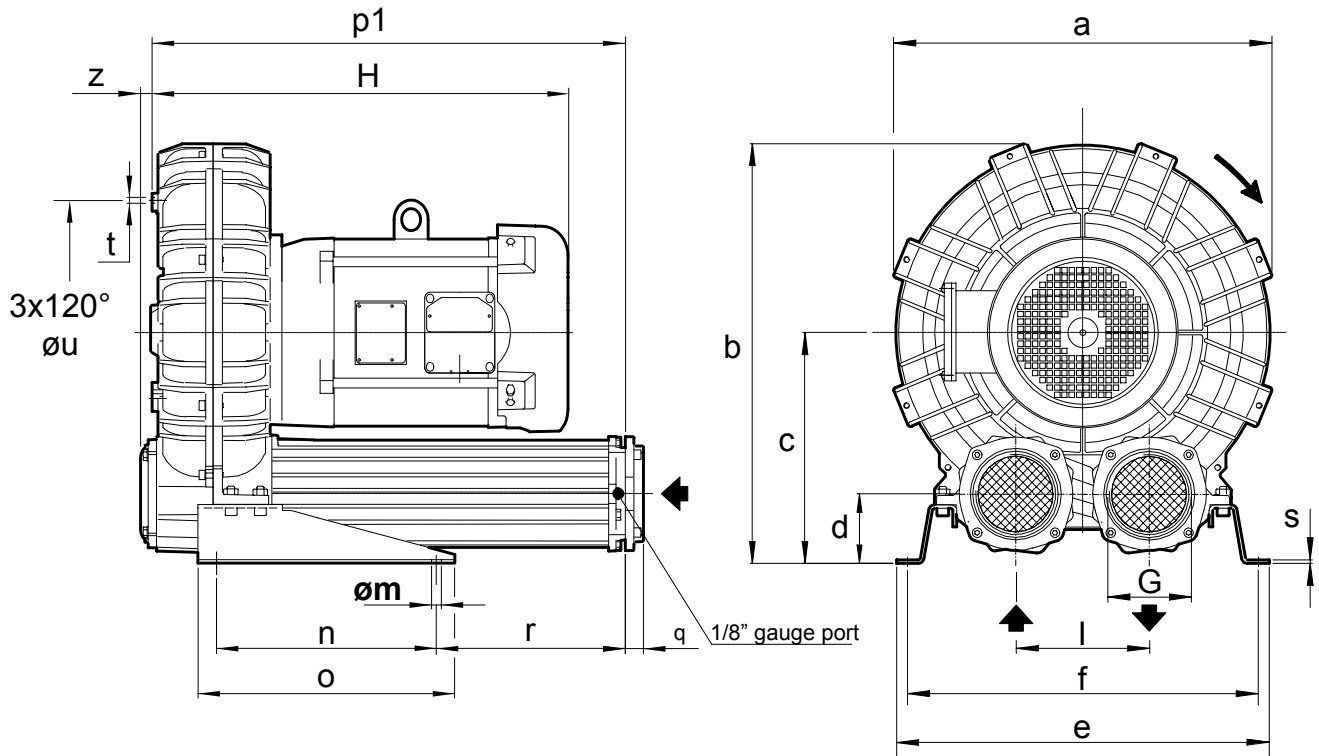
## VACUUM



Curves refer to air at 68°F temperature and 29.92 In Hg atmospheric pressure (abs) measured at inlet port. Values for flow, power consumption and temperature rise: +/-10% tolerance. Data subject to change without notice.



**MS / MD SERIES**  
**XP VERSION**  
**DIMENSIONS (7.5 & 10 HP)**



Dimensions in Inches - For reference only

Model	HP	G	a	b	c	d	e	f	H	i
SCL K07-MS	7.5 & 10	3" NPT	16.69	18.94	10.59	3.23	18.43	17.24	22.52	6.10
SCL K07R-MD	7.5 & 10	2" NPT	16.69	18.94	10.59	3.23	18.43	17.24	22.52	6.10
SCL K08-MS	7.5 & 10	3" NPT	17.99	19.61	10.59	3.23	18.82	17.64	22.52	6.10
SCL K08R-MD	7.5 & 10	2" NPT	17.99	19.61	10.59	3.23	18.82	17.64	22.52	6.10
SCL K09-MS	7.5 & 10	4" NPT	19.37	22.09	12.40	3.78	20	18.82	27.93	7.17
SCL K09-MD	10	4" NPT	19.37	22.09	12.40	3.78	20	18.82	22.9	7.17
SCL K10-MD	10	4" NPT	20.31	22.56	12.40	3.78	20	18.82	22.9	7.17

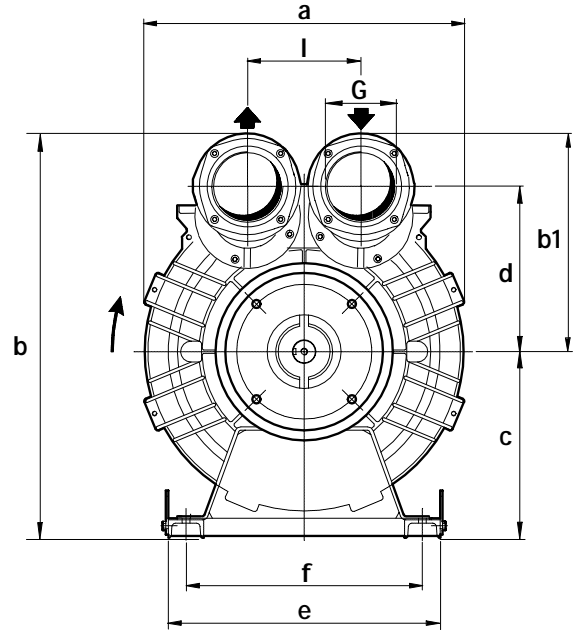
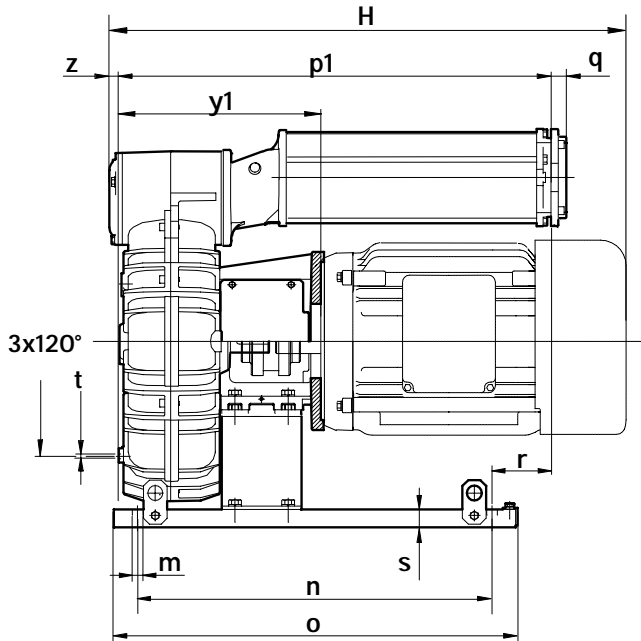
Model	m	n	o	p1	q	r	s	t	u	z
SCL K07-MS	0.51	11.81	13.78	20.16	0.98	5.39	0.20	M8	11.61	0.63
SCL K07R-MD	0.51	11.81	13.78	16.46	0.71	1.69	0.20	M8	11.61	0.63
SCL K08-MS	0.51	11.81	13.78	20.16	0.98	5.39	0.20	M8	12.20	0.63
SCL K08R-MD	0.51	11.81	13.78	16.46	0.71	1.69	0.20	M8	12.20	0.63
SCL K09-MS	0.51	11.81	13.78	23.07	0.98	7.83	0.20	M8	14.17	0.63
SCL K09-MD	0.51	11.81	13.78	25.35	0.98	10.12	0.20	M8	14.17	0.63
SCL K10-MD	0.51	11.81	13.78	25.35	0.98	10.12	0.20	M8	14.17	0.63





# MS / MD GOR SERIES XP VERSION

## DIMENSIONS (15 - 40 HP)



Dimensions in Inches - For reference only

Model	HP	Size	G	a	b	c	d	e	f	H	m
SCL K08-MS-GOR	15	254-6TC	3" NPT	17.99	23.23	10.63	9.73	15.35	13.39	35.24	0.70
SCL K09-MS-GOR	15 & 20	254-6TC	4" NPT	19.37	26.54	12.40	10.82	18.44	15.75	35.71	0.70
SCL K10-MS-GOR	15 & 20	254-6TC	4" NPT	20.31	26.54	12.40	10.82	18.11	15.75	35.71	0.70
	25	284-6TSC	4" NPT	20.31	26.54	12.40	10.82	18.11	15.75	38.78	0.70
SCL K11-MS-GOR	15 & 20	254-6TC	4" NPT	21.35	24.40	12.40	11.67	18.11	15.75	35.34	0.70
	25 & 30	284-6TSC	4" NPT	21.35	24.40	12.40	11.67	18.11	15.75	38.98	0.70
SCL K11-MD-GOR	15 & 20	254-6TC	4" NPT	21.35	25.20	12.40	9.49	18.11	15.75	35.34	0.70
SCL K12-MS-GOR	15 & 20	254-6TC	4" NPT	21.35	24.40	12.40	11.67	18.11	15.75	35.46	0.70
	25 & 30	284-6TSC	4" NPT	21.35	24.40	12.40	11.67	18.11	15.75	39.10	0.70
	40	324TSC	4" NPT	21.35	24.40	12.40	11.67	18.11	15.75	42.08	0.70
SCL K12-MD-GOR	15 & 20	254-6TC	4" NPT	21.57	27.36	12.40	9.48	18.11	15.75	35.46	0.70
	25	284-6TSC	4" NPT	21.57	27.36	12.40	9.48	18.11	15.75	39.10	0.70

Model	HP	n	o	p1	q	r	s	t	u	y1	z
SCL K08-MS-GOR	15	20.47	23.62	24.1	0.98	2.5	0.98	M8	12.2	13.35	0.63
SCL K09-MS-GOR	15 & 20	23.62	26.77	27.60	0.98	2.95	1.18	M8	14.17	13.82	0.63
SCL K10-MS-GOR	15 & 20	23.62	26.77	27.60	0.98	2.95	1.18	M8	14.17	13.82	0.63
	25	23.62	26.77	27.60	0.98	2.95	1.18	M8	14.17	13.25	0.63
SCL K11-MS-GOR	15 & 20	23.62	26.77	28.00	0.98	3.15	1.18	M8	15.35	13.45	0.63
	25 & 30	23.62	26.77	28.00	0.98	3.15	1.18	M8	15.35	13.45	0.63
SCL K11-MD-GOR	15 & 20	23.62	26.77	25.75	0.98	0.90	1.18	M8	15.35	13.45	0.63
SCL K12-MS-GOR	15 & 20	23.62	26.77	28.11	0.98	3.15	1.18	M8	15.35	13.57	0.63
	25 & 30	23.62	26.77	28.11	0.98	3.15	1.18	M8	15.35	13.57	0.63
	40	23.62	26.77	28.11	0.98	3.15	1.18	M8	15.35	14.55	0.63
SCL K12-MD-GOR	15 & 20	23.62	26.77	30.31	0.98	5.43	1.18	M8	15.35	13.57	0.63
	25	23.62	26.77	30.31	0.98	5.43	1.18	M8	15.35	13.57	0.63



*Electric motor temperature codes for standard FPZ blowers with explosion proof motors*

Motor HP	Temperature code	Maximum Motor Surface Temperature		Service Factor*	Insulation Class
		Deg C	Deg F		
7.5	T2B	260	500	1.15	F
10	T2B	260	500	1.15	F
15	T3C	160	320	1.15	F
20	T3C	160	320	1.15	F
25	T3C	160	320	1.15	F
30	T3C	160	320	1.15	F
40	T3C	160	320	1.15	F

\* NOTE: if used with a Variable Frequency Drive, reduce service factor to 1.0.

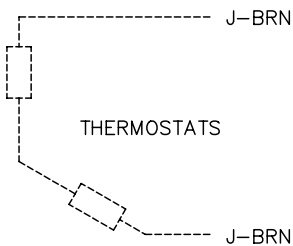
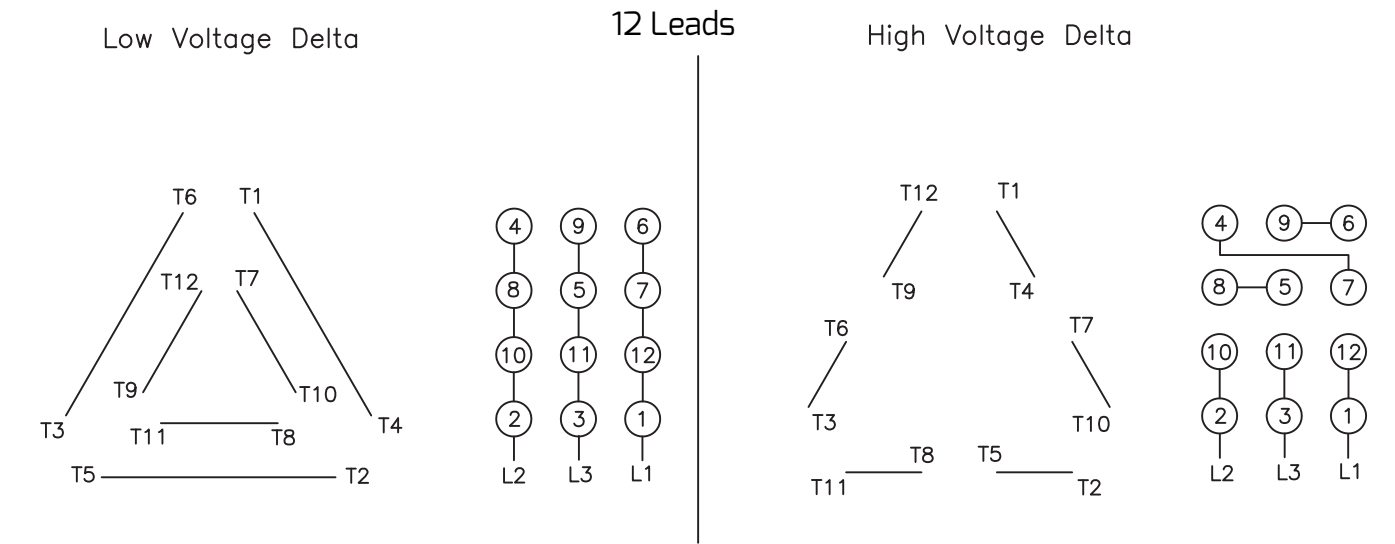
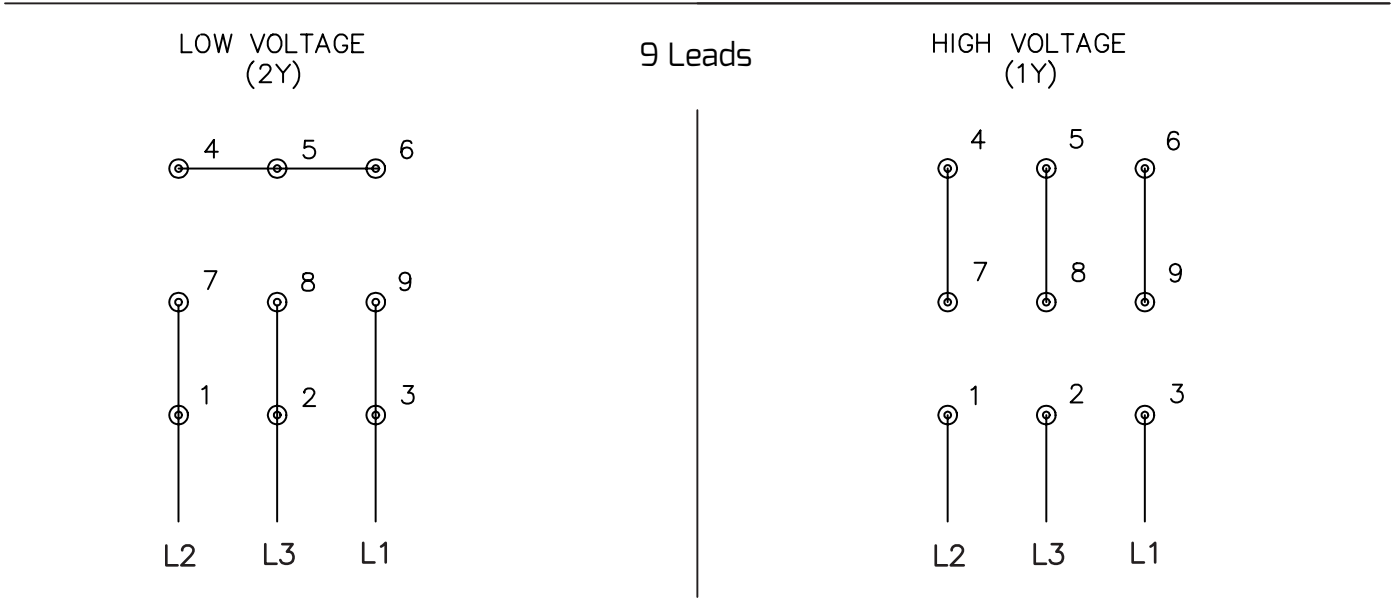
Class I Substances and atmospheres

Substance or atmosphere	Minimum Ignition Temperature	Substance or atmosphere	Minimum Ignition Temperature
Group A		Group D (continued)	
acetylene	305° C (581° F)	ethyl acetate	426° C (800° F)
Group B		ethylene dichloride	413° C (775° F)
butadiene	420° C (788° F)	gasoline	280° C (536° F)
ethylene oxide	570° C (1058° F)	heptane	204° C (399° F)
hydrogen	500° C (932° F)	hexane	225° C (437° F)
Group C		methane (natural gas)	537° C (999° F)
acetaldehyde	175° C (347° F)	methanol (methyl alcohol)	464° C (867° F)
cyclopropane	498° C (928° F)	3-methyl-1-butanol (isoamyl alcohol)	350° C (662° F)
diethyl ether	180° C (356° F)	methyl ethyl ketone	404° C (759° F)
ethylene	450° C (842° F)	methyl isobutyl ketone	448° C (840° F)
isoprene	395° C (743° F)	2-methyl-1-propanol (isobutyl alcohol)	415° C (780° F)
unsymmetrical dimethyl hydrazine (UDMH) 1, 1-dimethyl hydrazine	249° C (480° F)	2-methyl-2-propanol (tertiary butyl alcohol)	478° C (892° F)
Group D		octane	206° C (403° F)
acetone	465° C (869° F)	petroleum naphtha	288° C (550° F)
acrylonitrile	481° C (898° F)	1-pentanol (amyl alcohol)	300° C (572° F)
ammonia	651° C (1204° F)	propane	450° C (842° F)
benzene	498° C (928° F)	1-propanol (propyl alcohol)	412° C (775° F)
butane	287° C (550° F)	2-propanol (isopropyl alcohol)	399° C (750° F)
1-butanol (butyl alcohol)	343° C (650° F)	propylene	455° C (851° F)
2-butanol (secondary butyl alcohol)	405° C (761° F)	styrene	490° C (914° F)
n-butyl acetate	425° C (797° F)	vinyl acetate	402° C (756° F)
isobutyl acetate	421° C (790° F)	vinyl Chloride	472° C (882° F)
ethane	472° C (882° F)	p-xylene	528° C (984° F)
ethanol (ethyl alcohol)	363° C (685° F)		

FOR REFERENCE ONLY



Motor Connection Diagrams



Blower rotation is clockwise when viewed from electric motor cooling fan. Check rotation prior to making blower pipe connections. To change rotation, interchange any two line leads.

Specifications subject to change without notice. Alternate motors may be used - always use the wiring diagram that is supplied with the motor.



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