

TriFlow<sup>®</sup> Industrial Series Blowers/Vacuum Pumps



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## TriFlow ... Dependable Design. Reliable Performance. A Natural









### **The Principle**

Compared to blowers with two-lobed impellers, three-lobed machines operate at very low pulsation levels. This working principle permits blower operation at up to 1000 mbar and exhauster operation at up to 500 mbar of negative pressure. Volumetric flow rates of up to 8500m<sup>3</sup>/h are achievable. Integrated damping channels eliminate pressure reversals such that hardly any pulsations are generated.

#### Efficiency

TriFlow is designed for continuous operation. It is low maintenance and rugged. TriFlow is simple to install and does not require costly foundation work.

TriFlow has high volumetric efficiency, so it is economic to run and makes the best use of power.

#### Quality

TriFlow's quality meets all requirements. The rotors are drop-forged and the casing is available in stainless steel as an option. The helical synchronizing gears are cemented, hardened and ground from carburized steel. The dynamically balanced rotors ensure maximum smoothness in operation. High quality acoustic enclosures are available to ensure the best working environment possible.

#### Air Output

The TriFlow blower delivers absolutely dry, oil-free and low-pulse air for every application, making it a versatile blower. TriFlow's optimum performance specification allows it to be applied to demanding roles such as wastewater aeration. It can also be applied to pneumatic conveying of clean materials and products in the chemicals and food industry.





## Competitor.



### **pV DIAGRAM**

Volume flow	Up to 8500 m <sup>3</sup> /h
Pressure	1000/900 mbar
Vacuum	500 mbar



The TriFlow blower range is designed for a wide variety of industrial applications.

### **APPLICATIONS**

- Pressure pneumatic conveying
- Vacuum pneumatic conveying
- Combination of pressure and vacuum pneumatic conveying
- Air separation
- Aeration
- Vacuum
- Water treatment facilities









## **TriFlow® Lobe Industrial Blowers/Exhausters**

- Maintenance-Free V-Belt Design
- Easy Access for Lubrication
- No Absorbate Material in Discharge Silencer
- Low Pulsations Reduce
  Piping Resonance
- Pipe Fouling Reduced

### Value and Quality; The Economical Alternative

The Gardner Denver positive displacement trilobe blower/vacuum pumps are designed especially to match the requirements of a wide range of commercial and industrial applications. These innovative machines offer operators significant benefits and advantages such as highest quality materials and construction, heavy-duty design throughout, flexible installation capability, reduced maintenance with extended durability and greater performance and efficiency in a compact platform.



### **Quiet Operation**

The three lobe impeller design creates lower pulsation levels than two lobe units resulting in quieter discharge noise levels. Noise due to vibration is also reduced through the use of heavy finned cylinder and unique headplate design. A unique internal feedback porting arrangement contributes to the further reduction of internal air chamber noise levels.

### **Oil-Free Air Delivery**

Piston ring air seals are incorporated on each impeller shaft with a lip seal on the drive shaft for superior sealing to prevent oil leakage into the air chamber.

### **Flexible Installation**

The unique integral mounting bosses are precision machined for ease of installation and drive system alignment. Critical mounting dimensions are similar to those of existing two lobe positive displacement vacuum pumps allowing for system upgrades. The inlet and outlet ports include both flange and FNPT connections for ease of plumbing.

### **Quality Construction**

Each model incorporates highly reliable splash oil lubrication at both the gear and drive ends for longer life and reduced service intervals. Independent oil sumps prevent cross contamination and allow TriFlow to be installed vertically or horizontally.

### **Quality Assurance**

Every TriFlow Series blower/vacuum pump is manufactured in Gardner Denver's world-class production facility under rigid ISO 9001 quality standards and tested to meet strict performance requirements before shipping to ensure unequaled service life under the most severe operating conditions.







# **TriFlow® Diagrams & Specifications**





	а	b	C	d	e	f	g	k	m (±5mm)	u	r	S	DN	Kg **	K ***
TF 50L/42	798	635	645	50	430	330	-	114	160	80	341	9	DN 65 / PN 10	77	K 42
TF 70S/42	811	648	845	50	430	330	-	114	160	80	341	9	DN 65 / PN 10	91	K 42
TF 70L/42	829	648	845	50	430	330	-	114	160	80	341	9	DN 65 / PN 10	95	K 42
TF 90S/42	823	673	961	50	430	330	-	114	160	80	341	9	DN 65 / PN 10	120	K 42
TF 90S/72	869	829	1065	45	655	420	-	40	246	130	313	13	DN 80 / PN 10	150	K 72
TF 90L/72	895	829	1065	45	655	420	-	40	246	130	313	13	DN 80 / PN 10	160	K 72
TF 110S/72	903	844	1186	45	655	420	-	40	246	130	313	13	DN 80 / PN 10	200	KN 72
TF 110S/102	1025	869	1240	70	680	500	-	40	246	130	385	13	DN 100 / PN 10	230	K 102
TF 110L/102	1049	869	1240	70	680	500	-	40	246	130	385	13	DN 100 / PN 10	245	K 102
TF 130S/102	1085	883	1247	70	680	500	-	40	246	130	385	13	DN 100 / PN 10	325	K 102
TF 140L/202	1227	1022	1336	188	940	600	-	40	250	130	444	13	DN 150 / PN 10	425	K 202
TF 140L/202 *	1227	1056	1388	188	940	600	-	40	250	130	444	13	DN 150 / PN 10	450	K 202
TF 170L/202	1324	1112	1518	188	940	600	-	40	250	130	444	13	DN 150 / PN 10	630	KN 202
TF 170L/302	1643	1320	1687	247	1200	700	-	60	413	144	727	13	DN 200 / PN 10	750	K 302
TF 200L/302	1717	1369	1816	247	1200	700	-	60	413	144	727	13	DN 200 / PN 10	975	KN 302
TF 200L/552	1829	1540	1932	300	1420	800	510	60	463	144	817	13	DN 250 / PN 10	1110	K 552
TF 270S/552	1866	1597	2082	300	1420	800	510	60	463	144	817	13	DN 250 / PN 10	1375	K 552
TF 270S/802	2063	1597	2082	300	1420	880	510	60	463	144	947	13	DN 300 / PN 10	1490	K 802
TF 270L/802	2126	1597	2082	300	1420	880	510	60	463	144	947	13	DN 300 / PN 10	1710	K 802
TF 270L/1002	2404	1600	2017	300	1420	880	510	60	463	144	1244,5	13	DN 300 / PN 10	1810	K 1002

\* TF 140L/202 with larger filter/silencer

\*\* Weight without electric motor

\*\*\* Acoustic enclosure

Acoustic enclosures K 42 to K 202



Acoustic enclosures K 302 to K 1002





	а	b	C	d	m (±5mm)	r	DN	Fan	[kg]
K 42	780	882	1061	236	160	71	DN 65 / PN 10	HXTR/2-250 (0,11 kW; 400 V; 0,23 A)	120
K 72	1065	920	1261	225	248	74	DN 80 / PN 10	HCFT/4-315H (0,15 kW; 400 V; 0,34 A)	160
KN 72	1150	1000	1433	275	248	64	DN 80 / PN 10	HCFT/4-315H (0,15 kW; 400 V; 0,34 A)	186
K 102	1150	1000	1433	275	248	52	DN 100 / PN 10	HCFT/4-315H (0,15 kW; 400 V; 0,34 A)	186
K 202	1300	1200	1636	310	253	59	DN 150 / PN 10	HCFT/4-315H (0,15 kW; 400 V; 0,34 A)	220
KN202	1300	1200	1636	330	253	59	DN 150 / PN 10	HCBT/2-315 (0,41 kW; 400 V; 1,2 A)	220
K 302	1500	1790	1872	590	413	190	DN 200 / PN 10	HCFT/4-400H (0,32 kW; 400 V; 1,00 A)	490
KN 302	1650	1990	2192	649	413	200	DN 200 / PN 10	HCFT/4-450H (0,50 kW; 400 V; 1,00 A)	540
K 552	1650	1990	2192	674	463	255	DN 250 / PN 10	HCFT/4-450H (0,50 kW; 400 V; 1,00 A)	540
K 802	1990	1990	2192	679	463	255	DN 300 / PN 10	HCFT/4-500H (0,66 kW; 400 V; 1,55 A)	580
K 1002	1990	1990	2192	679	463	552	DN 300 / PN 10	HCFT/4-500H (0,66 kW; 400 V; 1,55 A)	580

**Contact Your Gardner Denver Representative** 





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For additional information, contact your local representative or Gardner Denver Engineered Products Division

