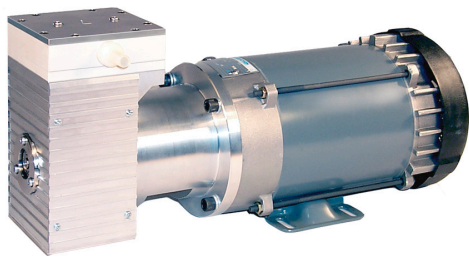


Diaphragm Vacuum Pumps and Compressors with Group C & D Explosion-Proof Motors

Types: UN026, UN726, UN035, UN860



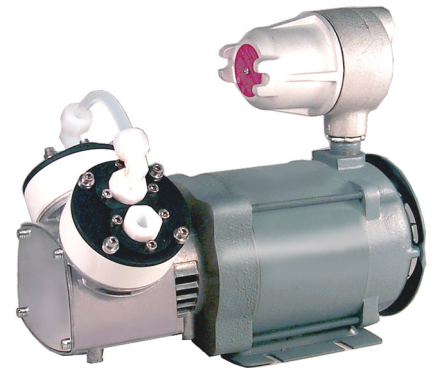
Single & Twin-Head Designs
OEM Installation Models



UN860FTI EX



UN726.3STI EX



UN726.3FTI EX

Features

- **Variety of wetted materials** - KNF's extensive experience in custom pump design provides many material combinations to choose from for head/diaphragm wetted parts, ranging from AL/NBR for neutral medium to solid PTFE resins for the toughest resistance to harsh corrosives. Always consult corrosion-resistance charts for compatibility.
- **High pressure capability** - Select models are rated to 60 psig continuous, and are designed for those applications requiring higher output pressure and flow.
- **Deep end vacuum** - KNF's model UN726 series molded diaphragm is flat and smooth, without the traditional clamping disk. Dead space in the pump head is greatly reduced, providing superior vacuum performance for applications requiring a deeper vacuum.
- **Medium transfer is contamination-free** - Pumped medium stays clean because the pumps are oil-free and have no sliding seals to wear away. Diaphragms Coated with PTFE resin are available on FT, ST and TT models.
- **A variety of accessories are available** including shock mounts, mufflers, noise & dust filters and hose connectors.

Pump Selection Chart (see individual pump sections inside for detailed data)

Pump Type	Page #	Free Flow Rate LPM (SCFM)	Max. Vacuum in. Hg	Max. Pressure psig Continuous	Hazardous Location (Surface Temp. Rating)	Certification
Solid PTFE resin models:						
UN726FTI EX	3	17 (0.6)	27.95	20	C & D, (T3C)	UL, CUL
UN726.1.2FTI EX	3	30 (1.1)	27.95	20	C & D, (T3C)	UL, CUL
UN726.3FTI EX	3	17 (0.6)	29.7	Vacuum only	C & D, (T3C)	UL, CUL
UN860FTI EX	8	60 (2.1)	27.6	20	C & D, (T3B)	UL, CSA
UN860.1.2FTI EX	8	110 (3.9)	27	15	C & D, (T3B)	UL, CSA
UN860.3FTI EX	8	60 (2.1)	29.86	15	C & D, (T3B)	UL, CSA
316 Stainless/PTFE models:						
UN026STI EX	3	17 (0.6)	26.9	36	C & D, (T3C)	UL, CUL
UN726STI EX	3	17 (0.6)	28.55	Vacuum only	C & D, (T3C)	UL, CUL
UN026.2STI EX	4	31 (1.1)	26.8	29	C & D, (T3C)	UL, CUL
UN726.3STI EX	4	17 (0.6)	29.74	Vacuum only	C & D, (T3C)	UL, CUL
UN035STI EX	5	29.2 (1.0)	27	50	C & D, (T3B)	UL, CSA
UN035.1.2STI EX	5	56.1 (2.0)	27	60	C & D, (T3B)	UL, CSA
UN035.3STI EX	5	29.2 (1.0)	29.5	Vacuum only	C & D, (T3B)	UL, CSA
PVDF-Coated Aluminum/PTFE models:						
UN035TTI EX	6	29.3(1.0)	27	50	C & D, (T3B)	UL, CSA
UN035.1.2TTI EX	6	56.1 (2.0)	27	60	C & D, (T3B)	UL, CSA
UN035.3TTI EX	6	29.3 (1.0)	29.5	Vacuum only	C & D, (T3B)	UL, CSA
Aluminum/NBR models:						
UN026ANI EX	7	25 (0.9)	26.9	36	C & D, (T3C)	UL, CUL
UN726ANI EX	7	20 (0.7)	28.55	Vacuum only	C & D, (T3C)	UL, CUL
UN026.2ANI EX	7	46 (1.6)	27	29	C & D, (T3C)	UL, CUL
UN726.3ANI EX	7	20 (0.7)	29.74	Vacuum only	C & D, (T3C)	UL, CUL

Description

KNF diaphragm pumps are fitted with Class I, Division 1, Groups C & D explosion-proof motors. Designed for continuous, heavy-duty use, 100% ball-bearings are used throughout to provide exceptional reliability in the industrial environment. Most models are fitted with a pre-wired connection box and are tested and ready to install into your system.

Contact KNF applications engineers for assistance with selecting the proper pump for your requirement.

Material Selection Guide

Solid PTFE - KNF pump heads and valves are constructed of solid PTFE resin. A thick, PTFE resin coating is tightly bonded to the smooth, molded diaphragm to provide the best resistance available against the toughest corrosive vapors.

316 Stainless Steel - Unlike heads made of *cast* stainless where pores and imperfections might retain contaminants, KNF heads are machined from *wrought* 316 stainless steel. The resulting surfaces are smooth, leaktight and free of occlusions. The valves are constructed of solid PTFE resin, with a bonded PTFE resin coating protecting the diaphragm.

These pumps are a good choice for applications requiring high pressure, high flow ratings.

Aluminum Coated with PVDF - A tough, PVDF resin coating is applied to KNF's aluminum heads for additional protection where economical corrosion resistance is desired. 316 stainless steel clamping disks are used with valves of solid PTFE resin. A PTFE resin coating is bonded to the diaphragm. For more corrosive requirements, we suggest our premium PTFE resin or 316 stainless models.

Aluminum - Designed for handling neutral gases or air and constructed of durable aluminum heads, neoprene diaphragms

and stainless reed valves, these pumps provide an economical solution for most non-corrosive requirements.

Always consult corrosion-resistance charts for compatibility of wetted materials with your pumped medium.

Head Configurations

Single Head - Provides moderate flow and vacuum or pressure performance.

Twin Heads in Series (.3 models) - KNF's UN726 series delivers the deepest vacuum available in a two-stage pump.

Twin Heads in Parallel (.1.2 models) - These models provide higher flow for sampling requirements.

Twin Heads, no Connections (.0 models) - When requested, units may be supplied without head connections for independent operation. Most KNF two-stage pumps may be reconfigured in the field at any time.

Hazardous Location Motor Ratings

All explosion-proof motors for KNF's pumps are UL listed in the USA for Class I, Division 1, Groups C & D locations, with a surface temperature rating of T3C 320°F (160°C), or T3B 329°F (165°C). See table on front page for individual pump certifications.

If your application calls for a Group A or B environment, a motorless version may be available for use with an air-driven or other customer-supplied motor.

Other performance ratings, materials and motor types are available for the OEM under KNF's Project Pump program.

Pump Accessories

A variety of accessories are available, including mufflers, hose connectors and shock mounts. Contact KNF's applications engineers if you have any special requirements.

UN726FTI EX

Type	UN726FTI EX
Head Configuration	Single Stage
Max. Flow	17 LPM (0.6 SCFM)
Max. Vacuum	27.95 in. Hg
Max. Continuous Pressure	20 psig

Motor Specifications

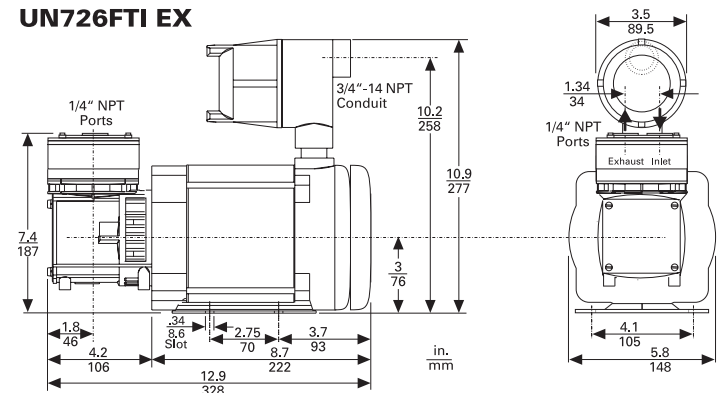
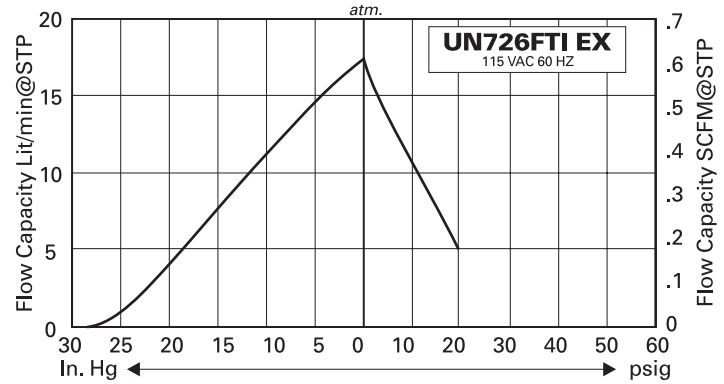
Motor Voltage (Hz)	115/230 VAC, 50-60 Hz
Max. Operating Current @ 115V 60Hz	1.9 Amps
Hazardous Location Rating	Class I, Division 1, Groups C & D
Max. Surface Temp.	T3C 320°F (160°C)
Motor Protection	Thermal Reset

Environmental

Max. Ambient Temperature	40°C (105°F)
Max. Medium Temperature	40°C (105°F)
Net Weight	16.6 kg/37 lb.

Materials of Construction

Model Number	Head	Diaphragm	Valves
UN726FTI EX	Solid PTFE	PTFE	PTFE



UN726.1.2FTI EX, UN726.3FTI EX

Type	UN726.1.2FTI EX	UN726.3FTI EX
Head Configuration	Parallel Head	Two-Stage
Max. Flow	30 LPM (1.1 SCFM)	17 LPM (0.6 SCFM)
Max. Vacuum	27.95 in. Hg	29.5 in. Hg
Max. Continuous Pressure	20 psig	Vacuum Only

Motor Specifications

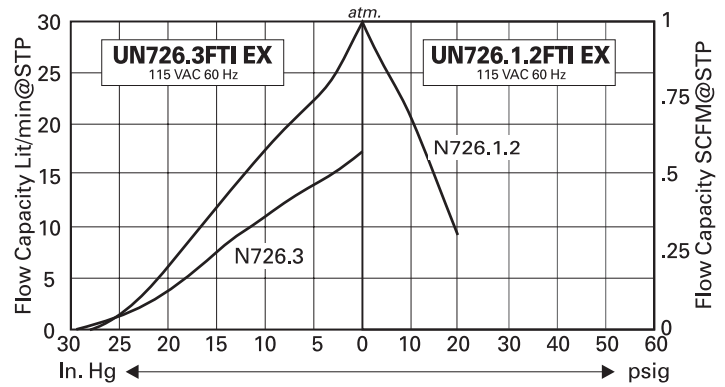
Motor Voltage (Hz)	115/230 VAC (50/60 Hz)	
Max. Oper. Current @ 115V 60Hz	2 Amps	1.9 Amps
Hazardous Location Rating	Class I, Division 1, Groups C & D	
Max. Surface Temp. Rating	T3C 320°F (160°C)	
Motor Protection	Thermal Reset	

Environmental

Max. Ambient Temperature	40°C (105°F)	
Max. Medium Temperature	40°C (105°F)	
Net Weight	18 kg/40 lb.	

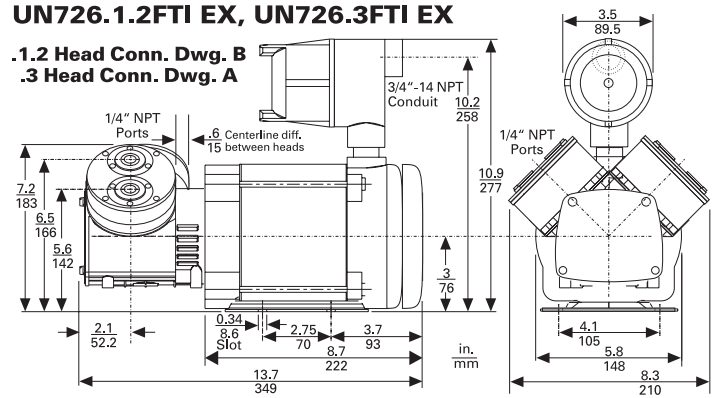
Materials of Construction

Model Number	Head	Diaphragm	Valves
UN726.1.2FTI EX	Solid PTFE	PTFE	PTFE
UN726.3FTI EX	Solid PTFE	PTFE	PTFE



UN726.1.2FTI EX, UN726.3FTI EX

.1.2 Head Conn. Dwg. B
.3 Head Conn. Dwg. A



UN026STI EX, UN726STI EX

Type	UN026STI EX	UN726STI EX
Head Configuration	Single Stage	
Max. Flow	17 LPM (0.6 SCFM)	
Max. Vacuum	26.9 in. Hg	28.55 in. Hg
Max. Continuous Pressure	36 psig	Vacuum Only

Motor Specifications

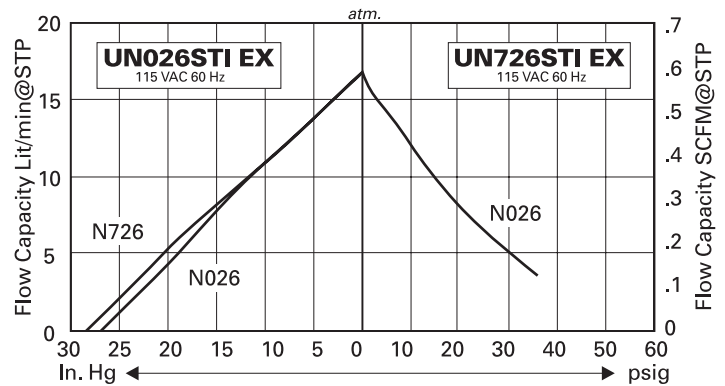
Motor Voltage (Hz)	115/230 VAC, 50/60 Hz	
Max. Oper. Current @ 115V 60Hz	2.1 Amps	2 Amps
Hazardous Location Rating	Class I, Division 1 Groups C & D	
Max. Surface Temp. Rating	T3C 320°F (160°C)	
Motor Protection	Thermal Reset	

Environmental

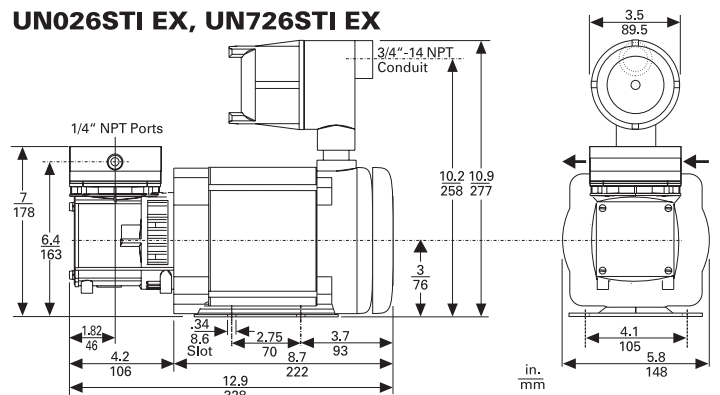
Max. Ambient Temperature	40°C (105°F)	
Max. Medium Temperature	40°C (105°F)	
Net Weight	18 kg/40 lb.	

Materials of Construction

Model Number	Head	Diaphragm	Valves
UN026STI EX	316 Stainless	PTFE	PTFE
UN726STI EX	316 Stainless	PTFE	PTFE



UN026STI EX, UN726STI EX



UN026.2STI EX, UN726.3STI EX

Type	UN026.2STI EX	UN726.3STI EX
Head Configuration	Parallel Head	Two-Stage
Max. Flow	31 LPM (1.1 SCFM)	17 LPM (0.6 SCFM)
Max. Vacuum	26.8 in. Hg	29.74 in. Hg
Max. Continuous Pressure	29 psig	Vacuum Only

Motor Specifications

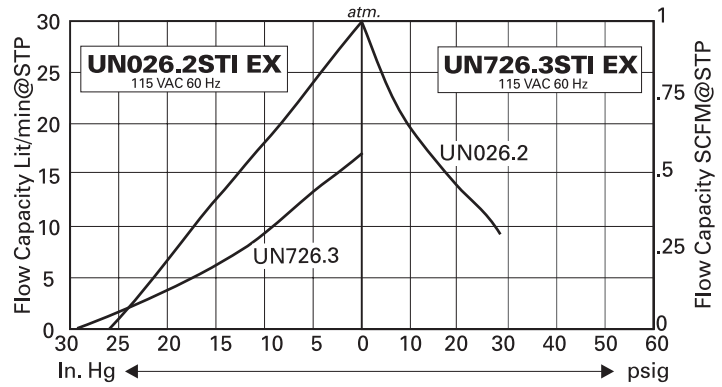
Motor Voltage (Hz)	115/230 VAC, 50/60 Hz	
Max. Oper. Current @ 115V 60Hz	2.1 Amps	2.3 Amps
Hazardous Location Rating	Class I, Division 1 Groups C & D	
Max. Surface Temp. Rating	T3C 320°F (160°C)	
Motor Protection	Thermal Reset	

Environmental

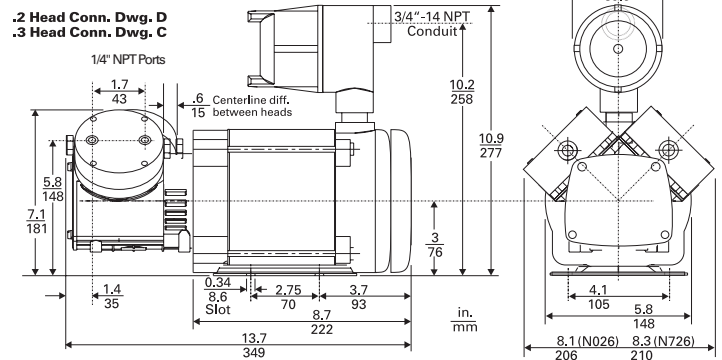
Max. Ambient Temperature	40°C (105°F)	
Max. Medium Temperature	40°C (105°F)	
Net Weight	20.2 kg/45 lbs.	

Materials of Construction

Model Number	Head	Diaphragm	Valves
UN026.2STI EX	316 Stainless	PTFE	PTFE
UN726.3STI EX	316 Stainless	PTFE	PTFE



UN026.2STI/UN726.3STI (EXPR)



UN035STI EX

Type	UN035STI EX
Head Configuration	Single Head
Max. Flow	29.2 LPM (1.0 SCFM)
Max. Vacuum	27 in. Hg
Max. Continuous Pressure	50 psig

Motor Specifications

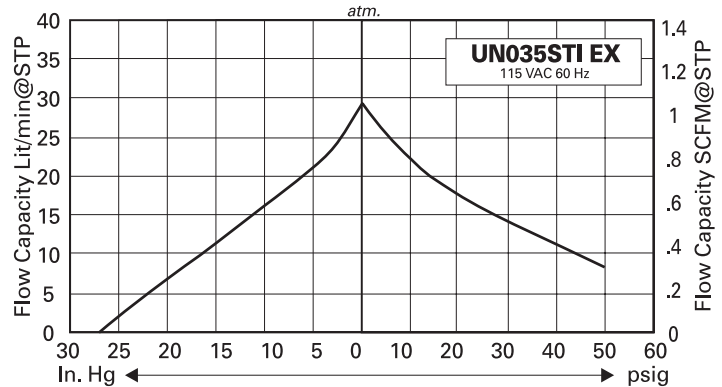
Motor Voltage (Hz)	115/230 VAC, 60 Hz
Max. Operating Current @ 115V 60Hz	6.0 Amps
Hazardous Location Rating	Class I, Division 1 Groups C & D
Max. Surface Temp. Rating	T3B 329°F (165°C)
Motor Protection	Thermal Reset

Environmental

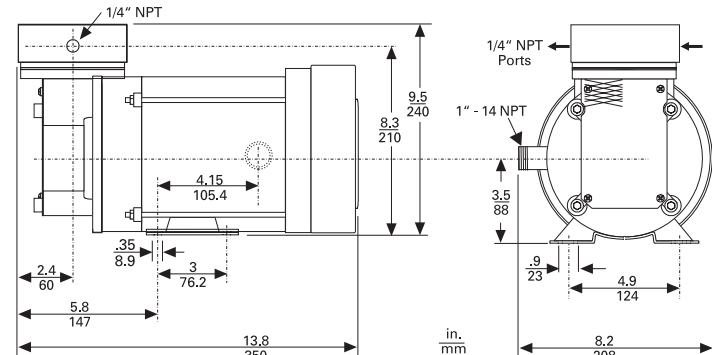
Max. Ambient Temperature	40°C (105°F)
Max. Medium Temperature	40°C (105°F)
Net Weight	22 kg/48 lbs.

Materials of Construction

Model Number	Head	Diaphragm	Valves
UN035STI EX	316 Stainless	PTFE	PTFE



UN035STI EX



UN035.1.2STI EX, UN035.3STI EX

Type	UN035.1.2STI EX	UN035.3STI EX
Head Configuration	Parallel Head	Two Stage
Max. Flow	56.1 LPM (2.0 SCFM)	29.2 LPM (1.0 SCFM)
Max. Vacuum	27 in. Hg	29.5 in. Hg
Max. Continuous Pressure	60 psig	Vacuum Only

Motor Specifications

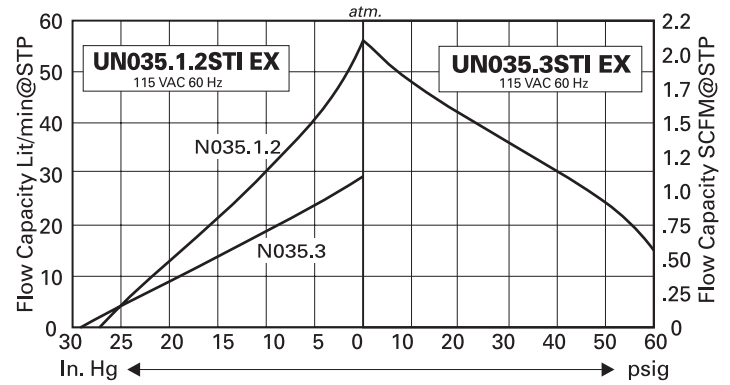
Motor Voltage (Hz)	115/230VAC, 60 Hz
Max. Operating Current @ 115V 60Hz	6.0 Amps
Hazardous Location Rating	Class I, Division 1 Groups C & D
Max. Surface Temp. Rating	T3B 329°F (165°C)
Motor Protection	Thermal Reset

Environmental

Max. Ambient Temperature	40°C (105°F)
Max. Medium Temperature	40°C (105°F)
Net Weight	27 kg/60 lbs.

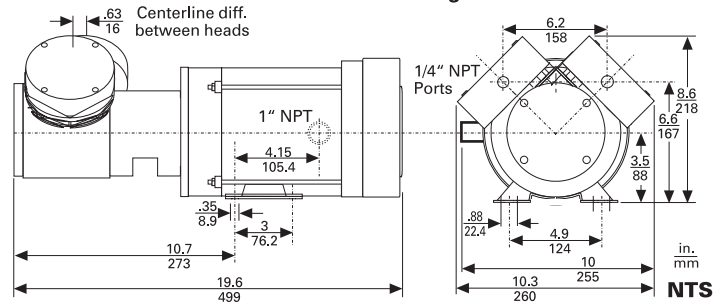
Materials of Construction

Model Number	Head	Diaphragm	Valves
UN035.1.2STI EX	316 Stainless	PTFE	PTFE
UN035.3STI EX	316 Stainless	PTFE	PTFE



UN035.1.2STI EX, UN035.3STI EX

.1.2 Head Conn. Dwg. F
.3 Head Conn. Dwg. E



UN035TTI EX

Type	UN035TTI EX
Head Configuration	Single Head
Max. Flow	29.2LPM (1.0 SCFM)
Max. Vacuum	27 in. Hg
Max. Continuous Pressure	50 psig

Motor Specifications

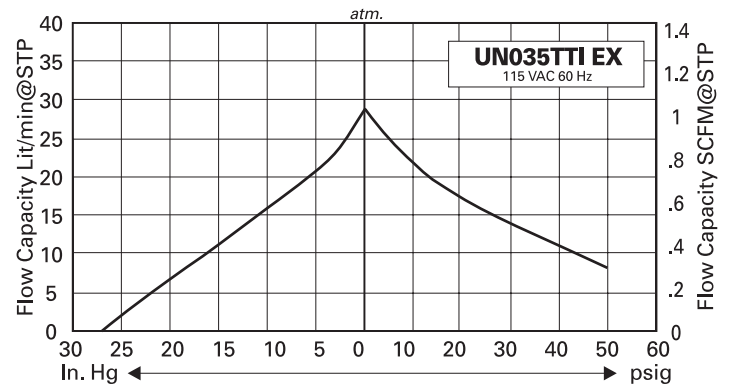
Motor Voltage (Hz)	115/230VAC, 60 Hz
Max. Operating Current @ 115V 60Hz	6.0 Amps
Hazardous Location Rating	Class I, Division 1 Groups C & D
Max. Surface Temp. Rating	T3B 329°F (165°C)
Motor Protection	Thermal Reset

Environmental

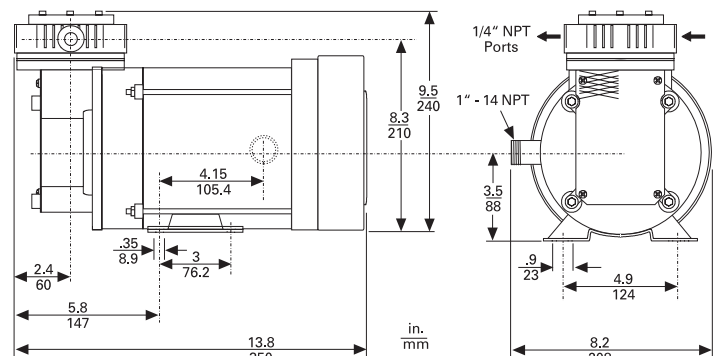
Max. Ambient Temperature	40°C (105°F)
Max. Medium Temperature	40°C (105°F)
Net Weight	19.5 kg/43 lb.

Materials of Construction

Model Number	Head	Diaphragm	Valves
UN035ANI EX	Aluminum	Neoprene	Stainless
UN035TTI EX	PVDF-Coated	PTFE	Stainless



UN035TTI EX



UN035.1.2TTI EX, UN035.3TTI EX

Type	UN035.1.2TTI EX	UN035.3TTI EX
Head Configuration	Parallel Head	Two Stage
Max. Flow	56.1 LPM (2.0 SCFM)	29.2 LPM (1.0 SCFM)
Max. Vacuum	27 in. Hg	29.5 in. Hg
Max. Continuous Pressure	60 psig	Vacuum Only

Motor Specifications

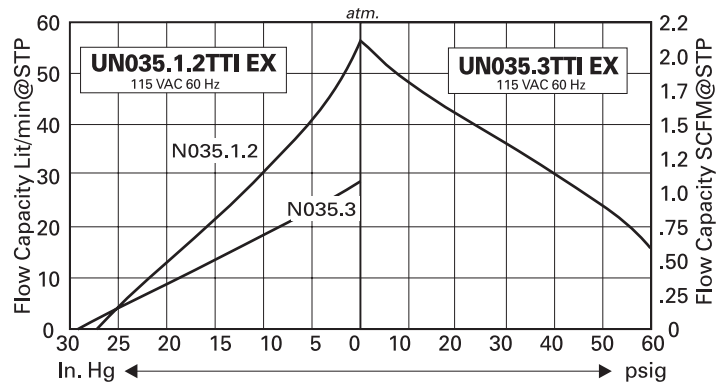
Motor Voltage (Hz)	115/230 VAC, 60 Hz
Max. Operating Current @ 115V 60Hz	6.0 Amps
Hazardous Location Rating	Class I, Division 1 Groups C & D
Max. Surface Temp. Rating	T3B 329°F (165°C)
Motor Protection	Thermal Reset

Environmental

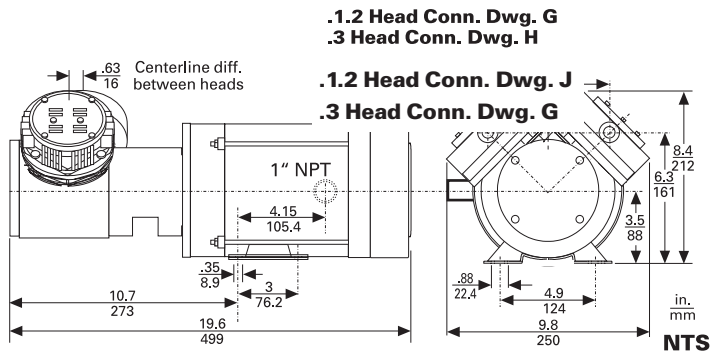
Max. Ambient Temperature	40°C (105°F)
Max. Medium Temperature	40°C (105°F)
Net Weight	23 kg/50 lb.

Materials of Construction

Model Number	Head	Diaphragm	Valves
UN035.1.2TTI EX	PVDF-coated	PTFE	Stainless
UN035.3TTI EX	PVDF-coated	PTFE	Stainless
UN035.1.2ANI EX	Aluminum	Neoprene	Stainless
UN035.3ANI EX	Aluminum	Neoprene	Stainless



UN035.1.2TTI EX, UN035.3TTI EX



UN026ANI EX, UN726ANI EX

Type	UN026ANI EX	UN726ANI EX
Head Configuration	Single Stage	Single Stage
Max. Flow	25 LPM (0.9 SCFM)	20 LPM (0.7 SCFM)
Max. Vacuum	26.9 in. Hg	28.55 in. Hg
Max. Continuous Pressure	36 psig	Vacuum Only

Motor Specifications

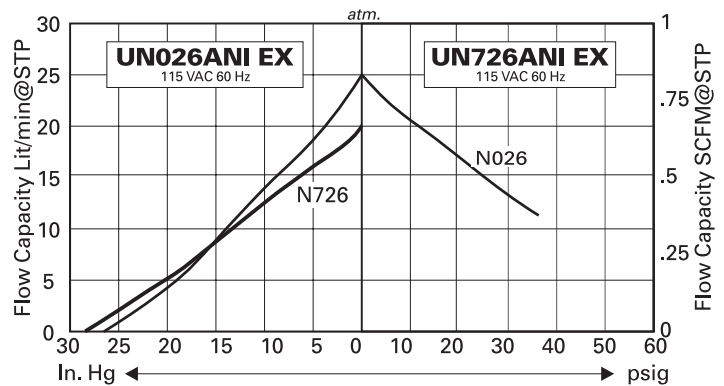
Motor Voltage (Hz)	115/230 VAC, 50/60 Hz
Max. Oper. Current @ 115V 60Hz	2.2 Amps / 1.9 Amps
Hazardous Location Rating	Class I, Division 1 Groups C & D
Max. Surface Temp. Rating	T3C 320°F (160°C)
Motor Protection	Thermal Reset

Environmental

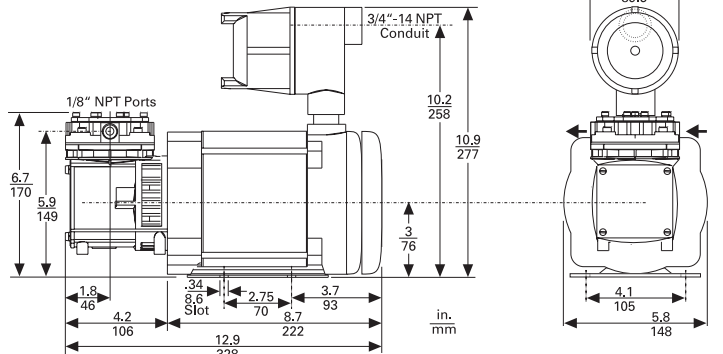
Max. Ambient Temperature	40°C (105°F)
Max. Medium Temperature	40°C (105°F)
Net Weight	16 kg/36 lb.

Materials of Construction

Model Number	Head	Diaphragm	Valves
UN026ANI EX	Aluminum	Neoprene	Stainless
UN726ANI EX	Aluminum	Neoprene	Stainless



UN026ANI EX, UN726ANI EX



UN026.2ANI EX, UN726.3ANI EX

Type	UN026.2ANI EX	UN726.3ANI EX
Head Configuration	Parallel Head	Two-Stage
Max. Flow	46 LPM (1.6 SCFM)	20 LPM (0.7 SCFM)
Max. Vacuum	27 in. Hg	29.74 in. Hg
Max. Continuous Pressure	29 psig	Vacuum Only

Motor Specifications

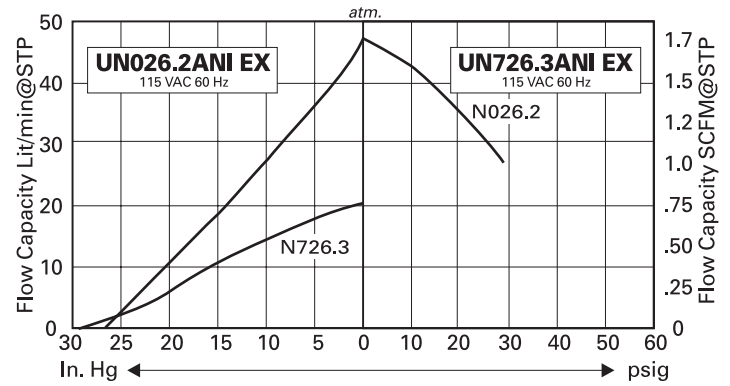
Motor Voltage (Hz)	115/230VAC, 50/60 Hz	
Max. Oper. Current @ 115V 60Hz	2.5 Amps	2.1 Amps
Hazardous Location Rating	Class I, Division 1 Groups C & D	
Max. Surface Temp. Rating	T3C 320°F (160°C)	
Motor Protection	Thermal Reset	

Environmental

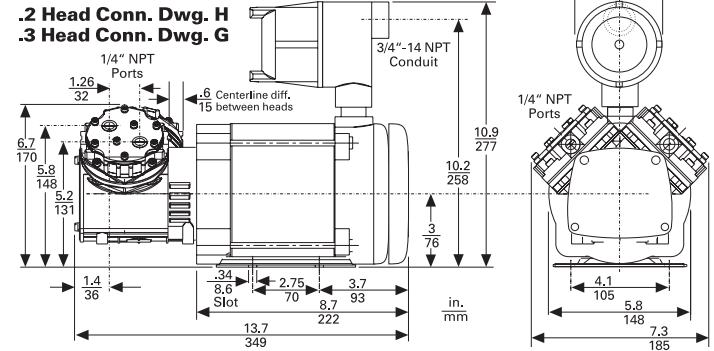
Max. Ambient Temperature	40°C (105°F)	
Max. Medium Temperature	40°C (105°F)	
Net Weight	17 kg/38 lb.	

Materials of Construction

Model Number	Head	Diaphragm	Valves
UN026.2ANI EX	Aluminum	Neoprene	Stainless
UN726.3ANI EX	Aluminum	PTFE	Stainless



UN026.2ANI EX, UN726.3ANI EX



UN860FTI EX

Type	UN860FTI EX
Head Configuration	Single Stage
Max. Flow	60 LPM (2.1 SCFM)
Max. Vacuum	27.6 in. Hg
Max. Continuous Pressure	20 psig

Motor Specifications

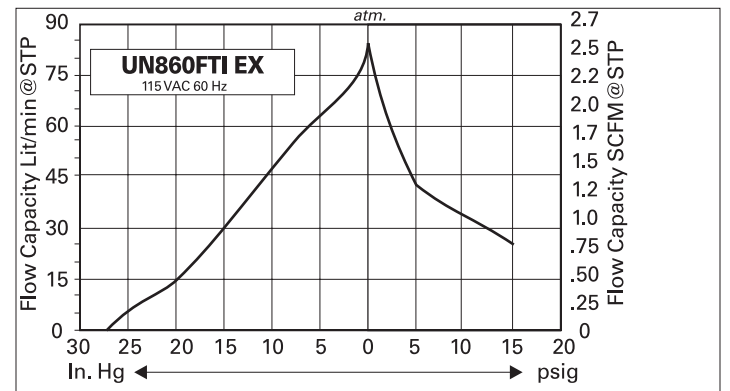
Motor Voltage (Hz)	115/230VAC, 60 Hz
Rated Current	6.6 A @ 115VAC, 3.3 A @ 230VAC
Protection Type	Class I, Division 1 Groups C & D
Max. Surface Temp.	T3B 329°F (165°C)
Power	1/3 hp

Environmental

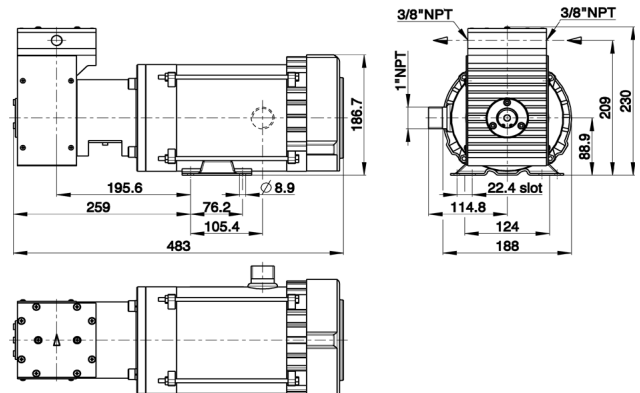
Max. Ambient Temperature	40°C (105°F)	
Max. Medium Temperature	40°C (105°F)	
Net Weight	17.1 kg/38.1 lb.	

Materials of Construction

Model Number	Head	Diaphragm	Valves
UN860FTI EX	Solid PTFE	PTFE	FFKM



UN860FTI EX



UN860.1.2FTI EX, UN860.3FTI EX

Type	UN860.1.2FTI EX	UN860.3FTI EX
Head Configuration	Parallel Head	Two Stage
Max. Flow	110 LPM (3.9 SCFM)	60 LPM (2.1 SCFM)
Max. Vacuum	27 in. Hg	29.86 in. Hg
Max. Continuous Pressure	15 psig	15 psig

Motor Specifications

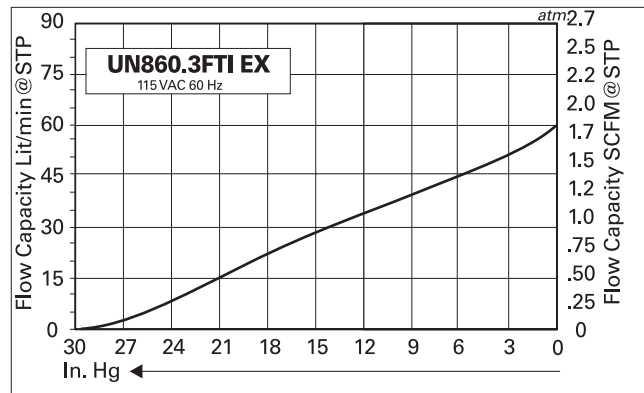
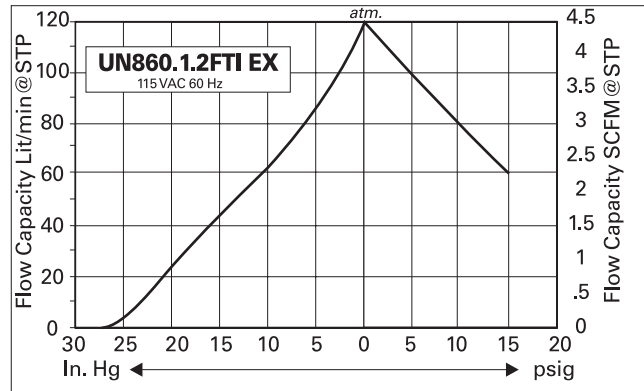
Motor Voltage (Hz)	115/230 VAC, 60 Hz
Rated Current	6.6 A @ 115 VAC, 3.3 A @ 230 VAC
Protection Type	Class I, Division 1 Groups C & D
Max. Surface Temp.	T3B 329°F (165°C)
Motor	1/3 hp Thermal Reset

Environmental

Max. Ambient Temperature	40°C (105°F)
Max. Medium Temperature	40°C (105°F)
Net Weight	18.9 kg/42 lb.

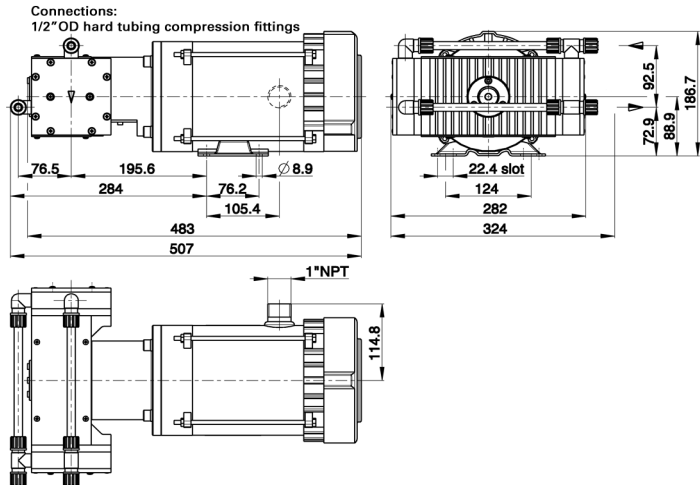
Materials of Construction

Model Number	Head	Diaphragm	Valves
UN860.1.2FTI EX	Solid PTFE	PTFE	FFKM
UN860.3FTI EX	Solid PTFE	PTFE	FFKM



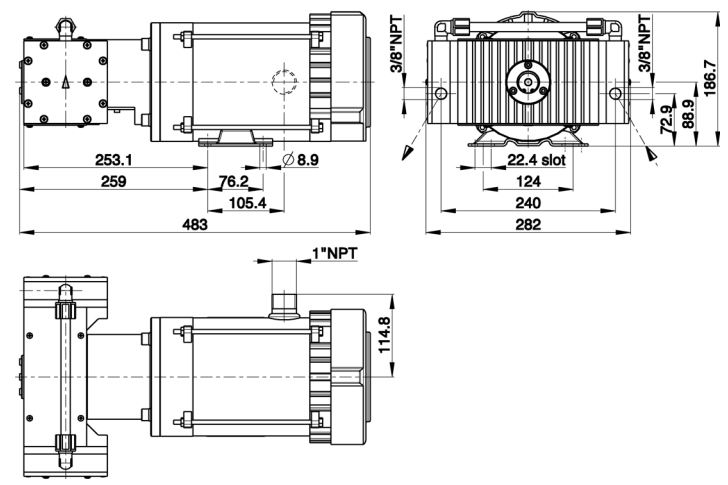
UN860.1.2FTI EX

Head Conn. Dwg. B



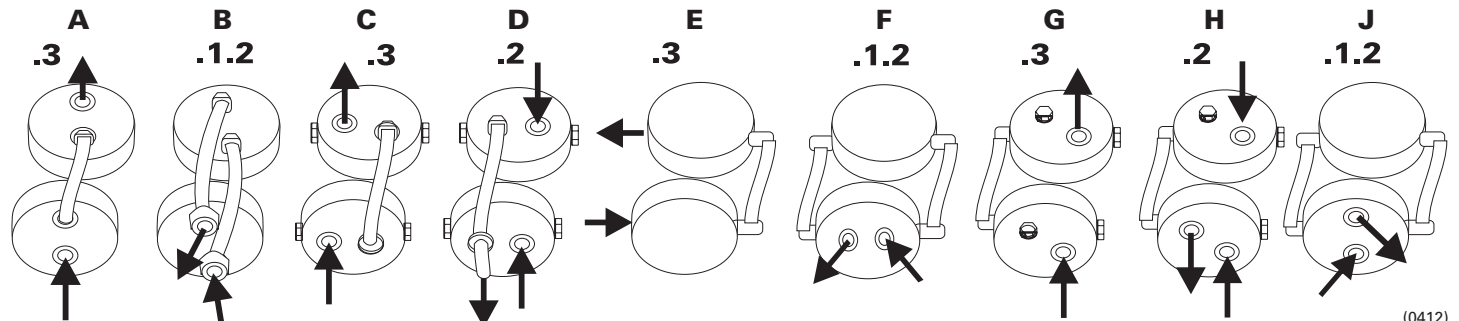
UN860.3FTI EX

Head Conn. Dwg. A



Standard continuous performance ratings are based on technical data and test results of nominal units at sea level with an ambient temperature of 70°F (21°C) and nominal 115VAC (60 Hz) electrical supply as listed. Higher performance models, cost efficient OEM modifications, and different materials of construction may be available. Ryton® is a registered trademark of Phillips 66. Viton® is a registered trademark of DuPont Dow Elastomers. Kynar® is a registered trademark of Elf Atochem. Dimensions and performance characteristics are given for reference only, and are subject to change without notice. Customer is ultimately responsible for choosing the correct motor for their application.

Head Connection Diagrams



(0412)



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