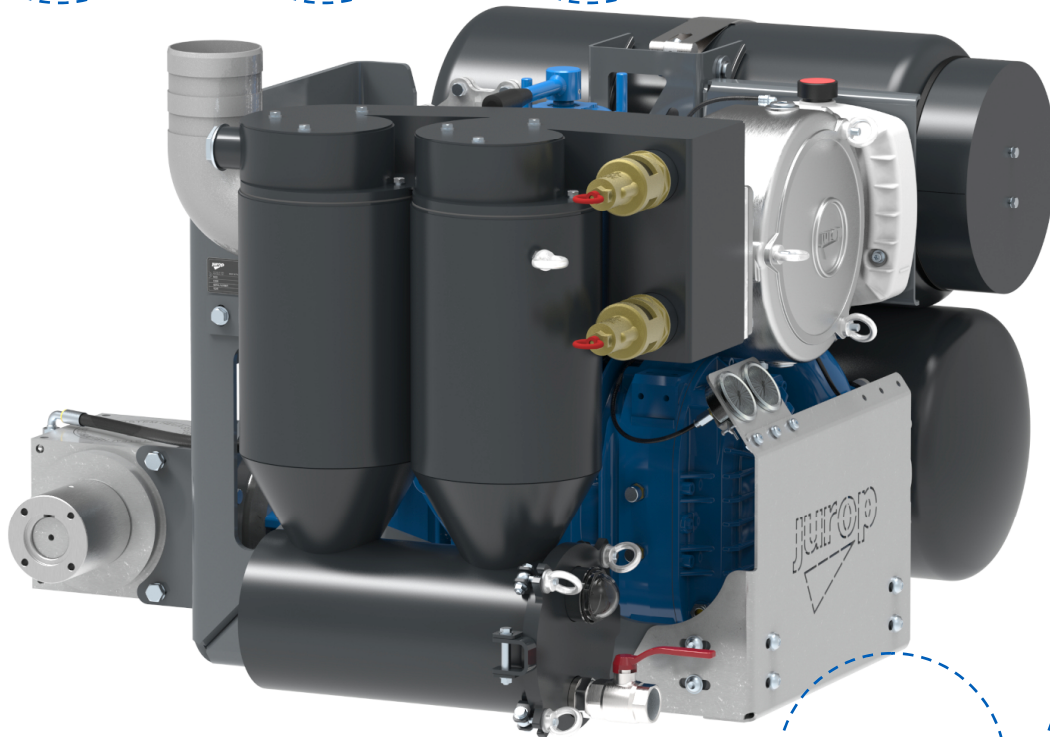


**INPUT**  
**1800 RPM**  
HELIX SYSTEM 140-180-220  
**1400 RPM**  
HELIX SYSTEM 300

**AIR FLOW**  
from 500 cfm  
up to 1090 cfm

**DIRECT  
DRIVE - NO  
COUPLING**

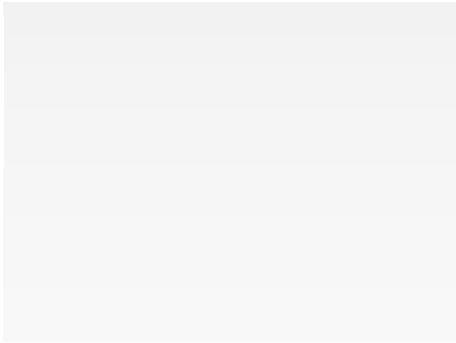


**Max. Vacuum**  
up to 28 Hg

**Max. Pressure**  
15 psig

**HELIX SYSTEM**

**High Vacuum Blower**  
WITH HELICAL TRI-LOBE ROTORS



COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV  
ISO 9001

COMPANY WITH  
ENVIRONMENTAL SYSTEM  
CERTIFIED BY DNV  
ISO 14001

COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV  
ISO 3834-2

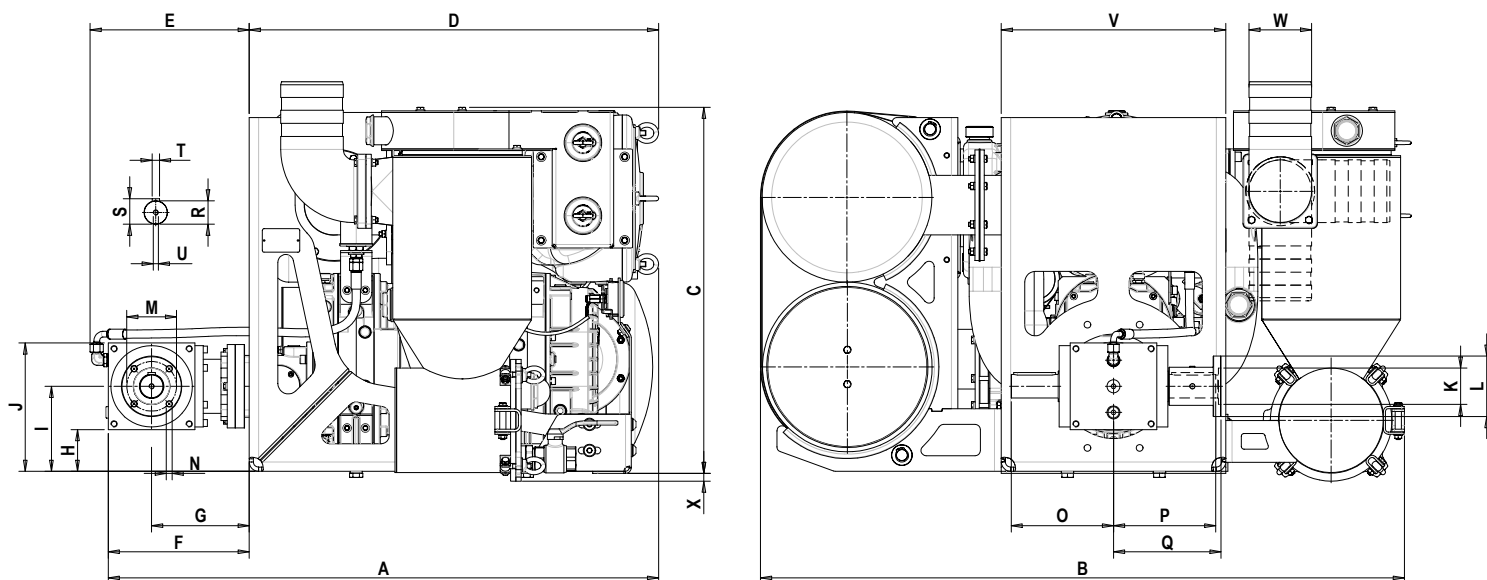
**ARRANGEMENT AND DIMENSIONS**

HELIX SYSTEM is a module consisting of a vacuum pump/blower with a three-axis gearbox to be connected to the power transmission of the equipment on which it is mounted. The version with hydraulic motor has no gearbox.

HELIX SYSTEM is equipped with:

- 3 shaft gearbox drive or hydraulic motor
- Direct drive - NO coupling
- Pressure gauges and remote thermometer
- Cyclone shut-off
- Injection / discharge silencers
- Air filter
- Flushing kit
- Swiveling conveyor
- 2 way valve set-up
- Optical level switch

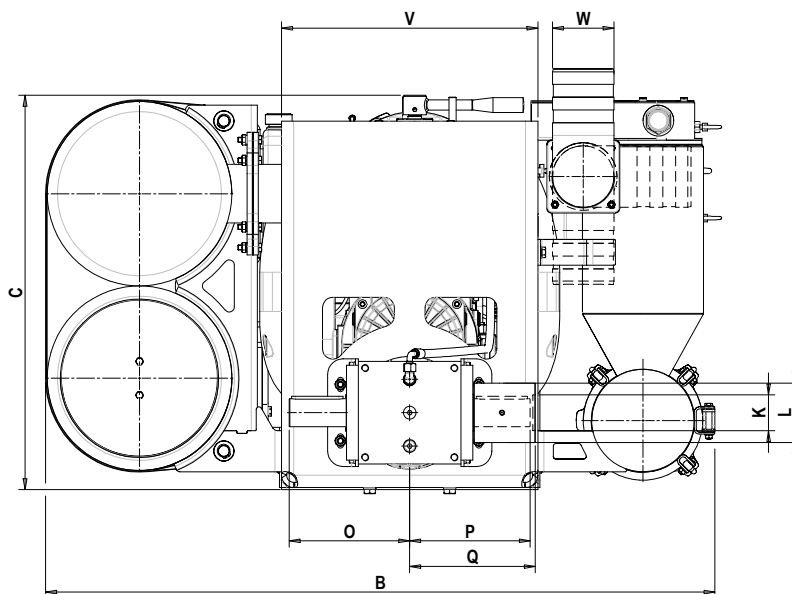
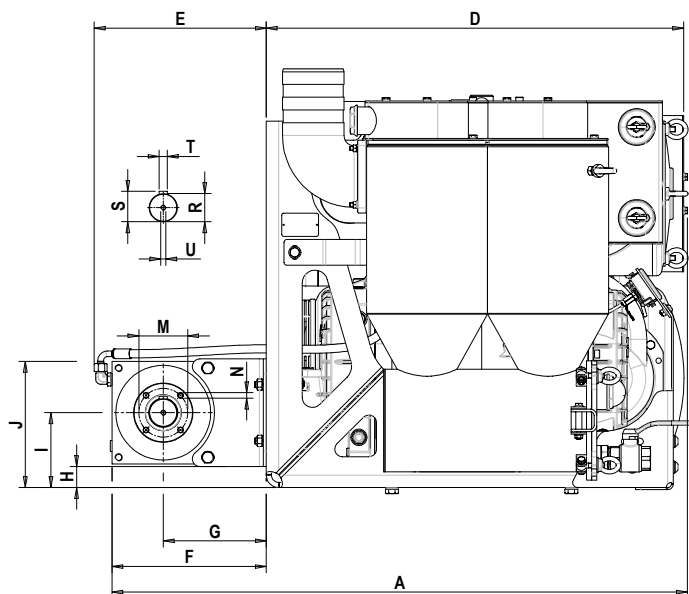
**Dimensions HELIX 140-180-220 SYSTEMS**



		A	B	C	D	E	F	G	H	I	J	K	L
HELIX140 SYSTEM	in	39.5	49	28	31	10	8.7	5.4	3.1	6.4	9.7	Ø 2.8	Ø 5
	mm	1004	1234	702	784	255	220	137	80	163	246	Ø 69.8	Ø 116
HELIX180 SYSTEM	in	40.5	49	28	31	11	9.6	6.4	3.1	6.4	9.7	Ø 2.8	Ø 5
	mm	1029	1234	702	784	280	245	162	80	163	246	Ø 69.8	Ø 116
HELIX220 SYSTEM	in	42	49	28	31	12	10.6	7.4	3.1	6.4	9.7	Ø 2.8	Ø 5
	mm	1054	1234	702	784	305	270	187	80	163	246	Ø 69.8	Ø 116

		M	N	O	P	Q	R	S	T	U	V	W	X
HELIX140 SYSTEM	in	Ø 3.8	Ø 0.4	7.7	7.7	8.1	Ø 1.8	1.9	0.6	0.4	16.9	Ø 4.7	1
	mm	Ø 95.2	Ø 11.2	196	196	206	Ø 45	48.8	14	M10	430	Ø 120	15
HELIX180 SYSTEM	in	Ø 3.8	Ø 0.4	7.7	7.7	8.1	Ø 1.8	1.9	0.6	0.4	16.9	Ø 4.7	1
	mm	Ø 95.2	Ø 11.2	196	196	206	Ø 45	48.8	14	M10	430	Ø 120	15
HELIX220 SYSTEM	in	Ø 3.8	Ø 0.4	7.7	7.7	8.1	Ø 1.8	1.9	0.6	0.4	16.9	Ø 4.7	1
	mm	Ø 95.2	Ø 11.2	196	196	206	Ø 45	48.8	14	M10	430	Ø 120	15

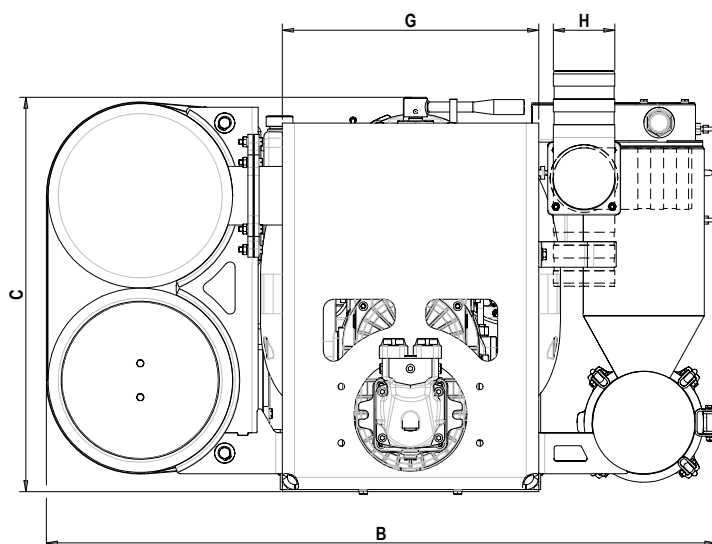
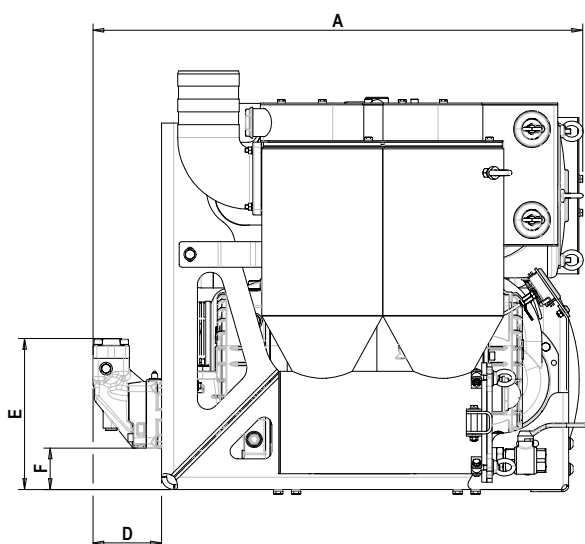
**Dimensions HELIX 300 SYSTEM**



		A	B	C	D	E	F	G	H	I	J	K	L
HELIX300 SYSTEM	in	44	51	30	32	13.2	11.9	7.9	1.6	5.7	9.7	Ø 3	Ø 5
	mm	1122	1306	769	814	336	301	201	41	146	246	Ø 70	Ø 116

		M	N	O	P	Q	R	S	T	U	V	W
HELIX300 SYSTEM	in	Ø 4	7/16-20 UNF	9.3	9.3	9.6	Ø 2.2	2.3	0.6	0.4	19.7	Ø 4.7
	mm	Ø 95	7/16-20 UNF	235	235	245	Ø 55	59.3	16	M10	500	Ø 120

**Dimensions HELIX 300 SYSTEM with hydraulic motor**



		A	B	C	D	E	F	G	H
HELIX300 SYSTEM	in	37.6	51	30	5	11.6	3.2	19.7	4.7
	mm	955	1306	769	134	295	81	500	120

## PERFORMANCE

The unit can be equipped with gearbox. The gearbox reduction ratio is 1:2. This means that the speed required at the gearbox input is half the speed required by the vacuum pump.

The rotation speed values, found in the following table, are those of the required speed at the gearbox input. This does not apply to units with hydraulic motor.

HELIX SYSTEM	140	180	220	300
AIR FLOW AT FREE PORTS (AT RPM MAX)	500 cfm (14200 l/min)	642 cfm (18200 l/min)	755 cfm (21350 l/min)	1090 cfm (30800 l/min)
MAX. SPEED (HELIX SYSTEM WITH GEARBOX)	2000 rpm	2000 rpm	2000 rpm	1500 rpm
SUGGESTED SPEED (HELIX SYSTEM WITH GEARBOX)	1800 rpm	1800 rpm	1800 rpm	1400 rpm
SUGGESTED SPEED (HELIX SYSTEM WITH HYD MOTOR)	-	-	-	2900 rpm
MAX. VACUUM	27,3 Hg (91 %)	27,3 Hg (91 %)	27,8 Hg (93 %)	27,8 Hg (93 %)
POWER REQUIRED AT MAX. VACUUM	32 HP (24 kW)	43,5 HP (32 kW)	47 HP (35 kW)	75 HP (56 kW)
MAX. PRESSURE	15 psig (1 bar)	15 psig (1 bar)	15 psig (1 bar)	15 psig (1 bar)
POWER REQUIRED AT MAX. PRESSURE	37,5 HP (28 kW)	48 HP (36 kW)	58 HP (43 kW)	79 HP (59 kW)
WEIGHT (HELIX SYSTEM WITH GEARBOX)	888 lbs (403 kg)	915 lbs (415 kg)	944 lbs (428 kg)	1197 lbs (543 kg)
WEIGHT (HELIX SYSTEM WITH HYDRAULIC MOTOR)	-	-	-	1127 lbs (511 kg)

REFERENCE CONDITIONS – Actual performance may vary of +/- 5%.

Conveyed gas: air	Ambient reference temperature: 20°C (68°F)	Vacuum condition: atmospheric discharge
	Absolute reference pressure: 1013mbar (14.7psi)	Pressure condition: atmospheric suction

The performance data of the hydraulic motor are given in the following table.

DISPLACEMENT	40 cc/rev	FILTRATION CLASS	20/18/13 (ISO 4406)	<sup>1</sup> Continuous duty. When the blower runs within set operational limits, actual working pressure is always lower. <sup>2</sup> Temperature of oil in the main circuit.
MAX CONTINUOUS PRESSURE <sup>1</sup>	420 bar	OPTIMUM VISCOSITY	15-30 cSt	
MAX PRESSURE DRAINING LINE	1 bar	MAX. VISCOSITY	1000 cSt	
FLUID	HLP	MAX. OIL TEMPERATURE <sup>2</sup>	80 °C	

## SYSTEM COMPONENTS

