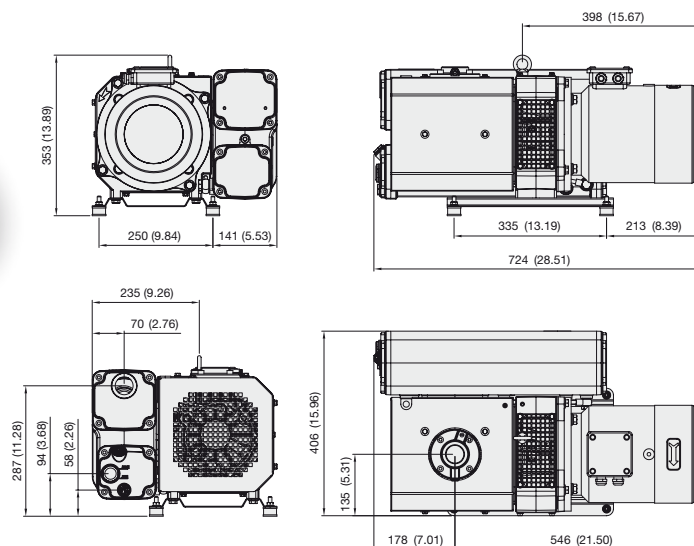




Dimensions: millimeters (inches)

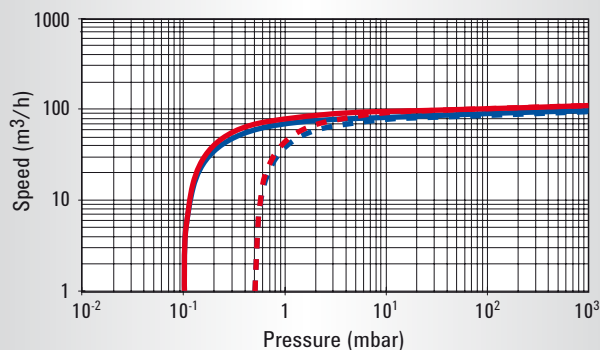
Technical Specifications

Free air displacement	60 Hz: 130 m ³ /hr, 76 cfm 50 Hz: 110 m ³ /hr, 65 cfm
Pumping speed*	60 Hz: 109 m ³ /hr, 64 cfm 50 Hz: 95 m ³ /hr, 56 cfm
Ultimate partial pressure (with gas ballast closed)	≤ 0.1 mbar (≤ 8 × 10 ⁻² Torr)
Ultimate total pressure (with gas ballast open)	≤ 0.5 mbar (≤ 0.4 Torr)
Power	60 Hz: 3.0 kW (4.0 HP) 50 Hz: 2.2 kW (3.0 HP)
Electrical motor characteristics	IM B5 Δ230/Y400 V at 50 Hz IM B5 YY230/Y460 V at 60 Hz IM B5 Δ220/Y380 V at 60 Hz
Revolutions number	60 Hz: 1800 RPM 50 Hz: 1500 RPM
Water vapor tolerance	60 Hz/50 Hz: 40/30 mbar (30/23 Torr)
Water vapor capacity	60 Hz/50 Hz: 3/2.2 kg/h (3.3/2.4 qt/hr)
Noise level**	60 Hz/50 Hz: 68/66 dB(A)
Inlet port	1¼" gas / 1¼" NPT/ DN40KF using adapter flanges
Exhaust port	1¼" gas / 1¼" NPT
Oil	type MS-01, charge 3 liter (3.1 qt)
Working ambient temperature range	+12 +40 °C (+54 +105 F)
Storage temperature	-15 +70 °C (+5 +158 F)
Dimensions	60 Hz: 750 x 405 x 349 mm (20.5 x 15.9 x 13.7 in.) 50 Hz: 718 x 405 x 349 mm (28.3 x 15.9 x 13.7 in.)
Weight	
with 2.2 kW motor	85 kg (187 lbs)
with 3.0 kW motor	89 kg (196 lbs)
without motor	62 kg (137 lbs)

* According to PNEUROP 6602

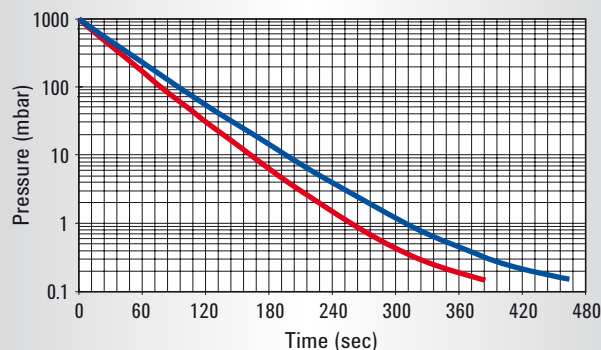
** According to EN ISO 2151 (50/60 Hz)

Single Stage Pump MS-101 - Pumping Speed



— 50 Hz w/o gasballast — 60 Hz w/o gasballast
- - 50 Hz with gasballast - - 60 Hz with gasballast

Single Stage Pump MS-101 - Pump Down



Volume 1000 liters

— MS-101 50 Hz
— MS-101 60 Hz

Ordering Information

High Capacity Rotary Vane Pumps *

	Part Number
MS-101 2.2 kW Δ230/Y400 V, 50 Hz; IE2; inlet 1¼" gas	X3751-60019
MS-101 3.0 kW Δ230/Y400 V, 50 Hz; 460 V, 60 Hz; inlet 1¼" gas	X3751-64008
MS-101 3.0 kW Δ230/Y380 V, 60 Hz; IE2; inlet 1¼" gas	X3751-60026
MS-101 3.0 kW YY230/Y460 V, 60 Hz; IE2; inlet 1¼" NPT (US version)	X3751-60021

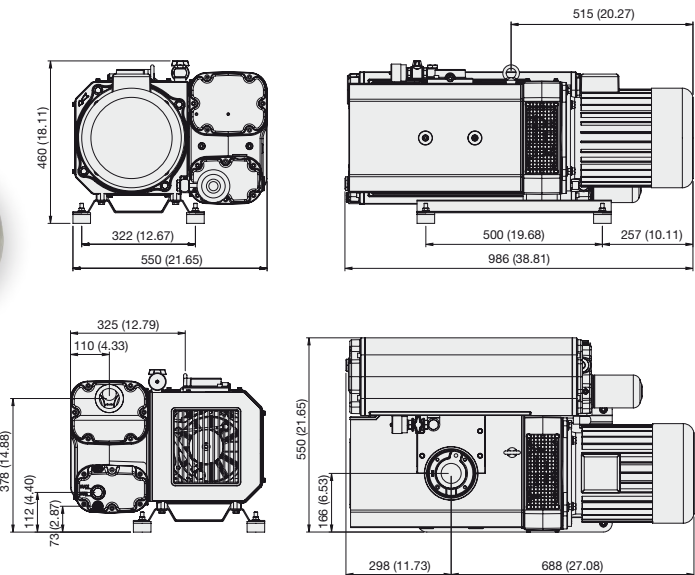
* Oil charge not included

Oil and Accessories

	Part Number
MS-01 Oil charge for MS-101 (3 liters)	X3760-64001
Inlet air filter with polyester cartridge, for DN40 KF	X3751-60014
Inlet air filter with polyester cartridge, for 1¼" gas	X3751-60013
Inlet air filter with polyester cartridge, for 1¼" NPT	X3751-60030
Connection fitting kit, for DN40 KF	X3751-60016
Connection fitting kit, for for 1¼" gas	X3751-60015
Connection fitting kit, for 1¼" NPT	X3751-60031
Exhaust filter control pressure switch	9495077
1¼" gas to DN40 KF adapter	X3751-64009
1¼" NPT to DN40 KF adapter	X3751-64010

Spare Parts

	Part Number
MS-101 minor spare part kit	X3751-60010
MS-101 major spare part kit	X3751-60011
MS-101 inlet air filter polyester cartridge	X3751-60017
MS-101 exhaust coalescent filter kit	X3751-60018



Dimensions: millimeters (inches)

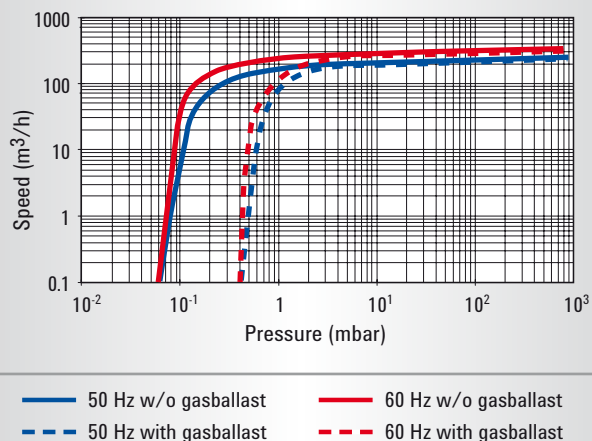
Technical Specifications

Free air displacement	60 Hz: 350 m ³ /hr, 210 cfm 50 Hz: 290 m ³ /hr, 170 cfm
Pumping speed*	60 Hz: 290 m ³ /hr, 170 cfm 50 Hz: 250 m ³ /hr, 150 cfm
Ultimate partial pressure (with gas ballast closed)	≤ 8 x 10 ⁻² mbar (≤ 6 x 10 ⁻² Torr)
Ultimate total pressure (with gas ballast open)	≤ 0.5 mbar (≤ 0.37 Torr)
Power	60 Hz: 7.5 kW (10.0 HP) 50 Hz: 5.5 kW (7.4 HP)
Electrical motor characteristics	IM B5 Δ230/Y400 V at 50 Hz, Y460 V at 60 Hz IM B5 Δ400/Y690 V at 50 Hz, Δ460 V at 60 Hz IM B5 Δ220/Y380 V at 60 Hz IM B5 YY230/Y460 V at 60 Hz
Revolutions number	60 Hz: 1750 RPM 50 Hz: 1450 RPM
Water vapor tolerance	60 Hz/50 Hz: 40/30 mbar (30/23 Torr)
Water vapor capacity	60 Hz/50 Hz: 7/5 kg/h (7.7/5.5 qt/hr)
Noise level**	60 Hz/50 Hz: 76/72 dB(A)
Inlet port	Flange DN 63 ISO-K / 2" gas / 2" NPT
Exhaust port	2" gas / 2" NPT
Oil	type MS-01, charge 7 liter (7.4 qt)
Working ambient temperature range	+12 +40 °C (+54 +105 F)
Storage temperature	-20 +70 °C (+4 +158 F)
Dimensions	60 Hz: 1015 x 550 x 460 mm (40.3 x 21.6 x 18.1 in.) 50 Hz: 986 x 550 x 460 mm (38.8 x 21.6 x 18.1 in.)
Weight	
with 5.5 kW motor	188 kg (414 lbs)
with 7.5 kW motor	192 kg (423 lbs)
without motor	141 kg (310 lbs)

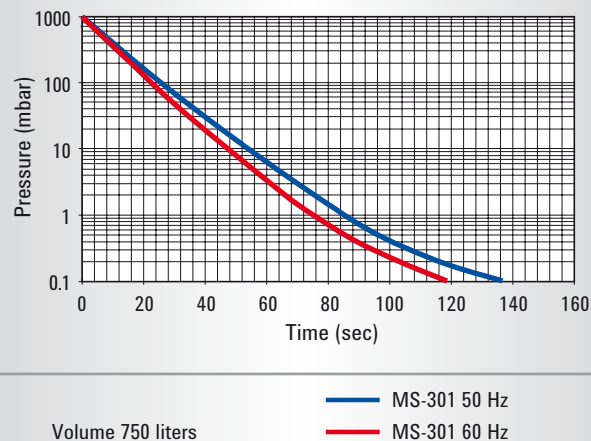
* According to PNEUROP 6602

** According to EN ISO 2151 (50/60 Hz)

Single Stage Pump MS-301 - Pumping Speed



Single Stage Pump MS-301 - Pump Down



Ordering Information

High Capacity Rotary Vane Pumps *

	Part Number
MS-301 5.5 kW, Δ230/Y400 V, 50 Hz; IE2; inlet 2" gas	X3752-64016
MS-301 5.5 kW, Δ230/Y400 V, 50 Hz; IE2; DN 63 ISO-K	X3752-64017
MS-301 5.5 kW, Δ400/Y690 V, 50 Hz; IE2; inlet 2" gas	X3752-64018
MS-301 5.5 kW, Δ400/Y690 V, 50 Hz; IE2; DN 63 ISO-K	X3752-64019
MS-301 7.5 kW, Δ230/Y400 V, 50 Hz - Y460 V 60 Hz; inlet 2" gas	X3752-64020
MS-301 7.5 kW, Δ230/Y400 V, 50 Hz - Y460 V 60 Hz; DN 63 ISO-K	X3752-64021
MS-301 7.5 kW, Δ230/Y380 V, 60 Hz; inlet 2" gas	X3752-64024
MS-301 7.5 kW, Δ230/Y380 V, 60 Hz; inlet DN 63 ISO-K	X3752-64025
MS-301 7.5 kW, YY230/Y460 V, 60Hz; inlet 2" NPT (US version)	X3752-64022
MS-301 7.5 kW, YY230/Y460 V, 60Hz; inlet DN 63 ISO-K (US version)	X3752-64023

* Oil charge not included

Oil and Accessories

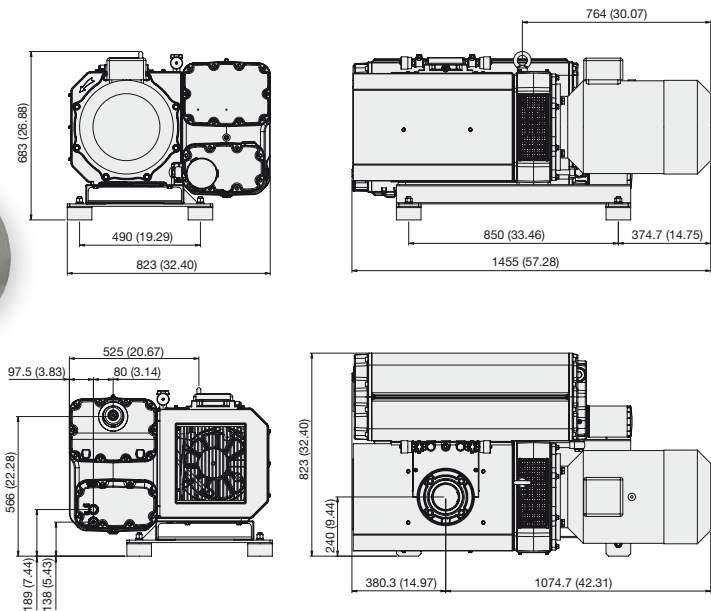
	Part Number
MS-01 Oil charge for MS-301 (7 liters)	X3760-64002
Inlet air filter with polyester cartridge, for 2" gas connection	9495059
Inlet air filter with polyester cartridge with DN 63 ISO-K flange	9495159
Connection fitting kit, for 2" gas connection	9495065
Connection fitting kit, for DN 63 ISO-K flange connection	9495165

Protective Accessories

	Part Number
Pump thermal protection switch (to be ordered together with the pump)	9495076
Oil separator control pressure switch (to be ordered together with the pump)	9495077
MS-301 oil level protection switch (to be ordered together with the pump)	9495078

Spare Parts

	Part Number
MS-301 minor spare part kit	9495020
MS-301 major spare part kit	9495021
Oil filter (type A)	9495070
MS-301 inlet air filter polyester cartridge	9495083
MS-301 exhaust coalescent filter kit	SR03706308



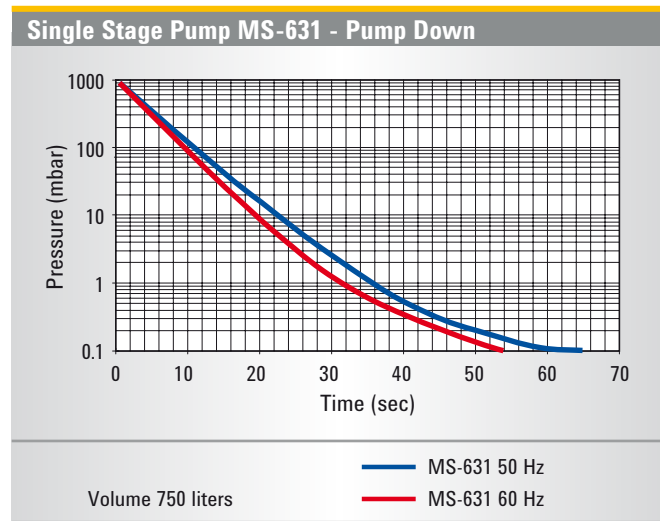
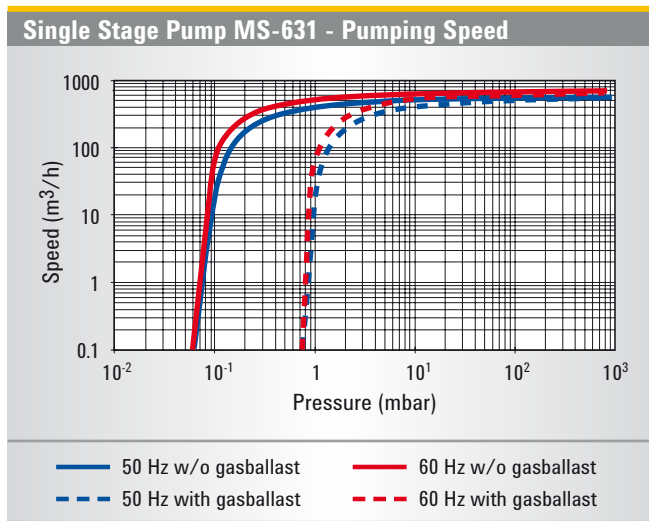
Dimensions: millimeters (inches)

Technical Specifications

Free air displacement	60 Hz: 790 m ³ /hr, 465 cfm 50 Hz: 660 m ³ /hr, 390 cfm
Pumping speed*	60 Hz: 680 m ³ /hr, 400 cfm 50 Hz: 590 m ³ /hr, 350 cfm
Ultimate partial pressure (with gas ballast closed)	≤ 8 x 10 ⁻² mbar (≤ 6 x 10 ⁻² Torr)
Ultimate total pressure (with gas ballast open)	≤ 0.5 mbar (≤ 0.37 Torr)
Power	60 Hz: 18.5 kW (24.8 HP) 50 Hz: 15 kW (20.1 HP)
Electrical motor characteristics	IM B5 Δ400/Y690 V at 50 Hz, Δ460 V at 60 Hz IM B5 Δ220/Y380 V at 60 Hz IM B5 YY230/Y460 V at 60 Hz
Revolutions number	60 Hz: 1200 RPM 50 Hz: 1000 RPM
Water vapor tolerance	60 Hz/50 Hz: 40/30 mbar (30/23 Torr)
Water vapor capacity	60 Hz/50 Hz: 30/20 kg/h (33.1/22.0 qt/hr)
Noise level**	60 Hz/50 Hz: 73/71 dB(A)
Inlet port	Flange DN 100 ISO-K / 4" gas / 4" NPT
Exhaust port	3" gas / 3" NPT
Oil	type MS-01, charge 22 liter (23.2 qt)
Working ambient temperature range	+12 +40 °C (+54 +105 F)
Storage temperature	-20 +70 °C (+4 +158 F)
Dimensions	60 Hz: 1480 x 823 x 683 mm (58.2 x 32.4 x 26.9 in.) 50 Hz: 1455 x 823 x 683 mm (57.3 x 32.4 x 26.9 in.)
Weight	
with 15.0 kW motor	582 kg (1283 lbs)
with 18.5 kW motor	612 kg (1349 lbs)
without motor	392 kg (864 lbs)

* According to PNEUROP 6602

** According to EN ISO 2151 (50/60 Hz)



Ordering Information

High Capacity Rotary Vane Pumps *

	Part Number
MS-631 15.0 kW, Δ400/Y690 V, 50 Hz; IE2; inlet 4" gas	X3753-64073
MS-631 15.0 kW, Δ400/Y690 V, 50 Hz; IE2 DN 100 ISO-K	X3753-64074
MS-631 15.0 kW, Δ400/Y690 V, 50 Hz - Δ460 V, 60 Hz; inlet 4" gas	X3753-64075
MS-631 18.5 kW, Δ400/Y690 V, 50 Hz - Δ460 V, 60 Hz; DN 100 ISO-K	X3753-64076
MS-631 18.5 kW, Δ220/Y380 V, 60 Hz; IE2; inlet 4" gas	X3753-64079
MS-631 18.5 kW, Δ220/Y380 V, 60 Hz; IE2; DN 100 ISO-K	X3753-64080
MS-631 18.5 kW, YY230/Y460 V, 60 Hz; IE2; inlet 4" gas	X3753-64077
MS-631 18.5 kW, YY230/Y460 V, 60 Hz; IE2; DN 100 ISO-K	X3753-64078

* Oil charge not included

Oil and Accessories

	Part Number
MS-01 Oil charge for MS-631 (22 liters)	X3760-64003
Inlet air filter with polyester cartridge, for 4" gas connection	9495062
Inlet air filter with polyester cartridge with DN 100 ISO-K flange	9495162
Connection fitting kit, for 4" gas connection	9495066
Connection fitting kit, for DN 100 ISO-K flange connection	9495166

Protective Accessories

	Part Number
Pump thermal protection switch (to be ordered together with the pump)	9495076
Oil separator control pressure switch (to be ordered together with the pump)	9495077
MS-631 oil level protection switch (to be ordered together with the pump)	9495079

Spare Parts

	Part Number
MS-631 minor spare part kit	9495087
MS-631 major spare part kit	9495088
Oil filter (type B)	9495090
MS-631 inlet air filter polyester cartridge	9495089
MS-631 exhaust coalescent filter kit	SR03706207



The Agilent MS-631 Frameless (FL) is a high capacity, single stage, oil lubricated rotary vane pump, that can be directly coupled to an Agilent Roots Pump (up to RP-3001 size) without the need of a frame.

The Roots Pump can be mounted directly on the MS-631 FL,

through an appropriate flange that can sustain the weight of the Roots Pump. The Roots Pump can be ordered separately. Please contact Agilent for technical specifications and ordering information.

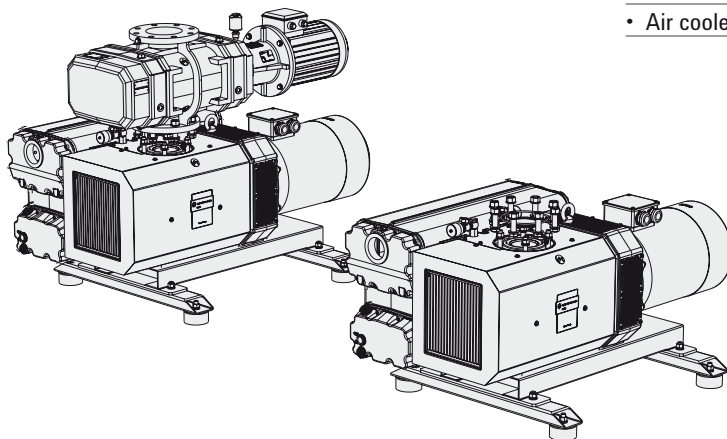
The two pumps are shipped separately.

Applications

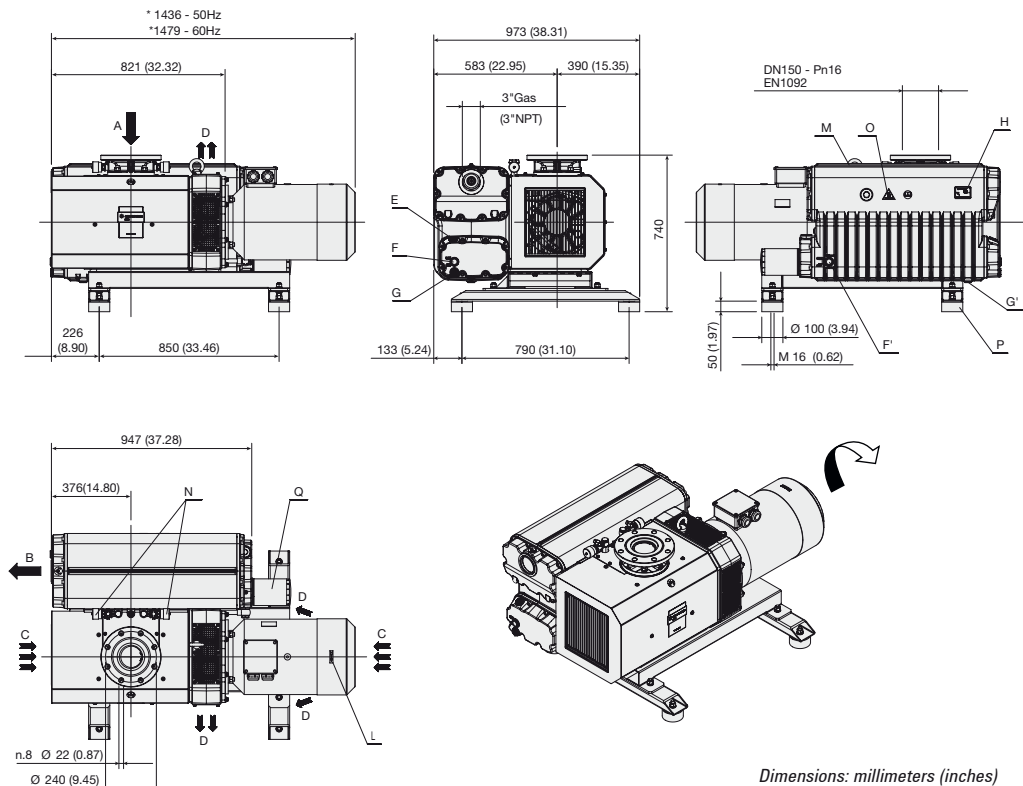
The rugged design, high performance and reliability, and compact size make the MS-631 FL ideal for demanding industrial applications such as thin film coatings, vacuum metallurgy, helium leak detection, and electron beam welding.

Key pump features

- Minimum footprint
- Easy to service
- Oil recirculation system
- Anti-suckback valve prevents system contamination
- Floating oil recovery valve
- Oil-level sight-glass allows quick visual check of pump status
- Carbon composite vanes extend pump life
- Air cooled



HIGH CAPACITY MS-RPS SERIES



Dimensions: millimeters (inches)

Technical Specifications

MS631FL can be directly coupled with RP-1401, RP-2001 and RP-3001.

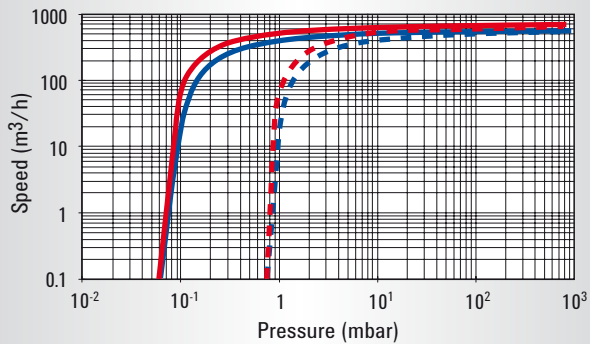
Nominal speed*	660 m ³ (at 50 Hz) 790 m ³ (at 60 Hz)
Ultimate partial pressure (with gas ballast valve closed)*	≤ 8 x 10 ⁻² mbar (≤ 8 x 10 ⁻² Torr)
Ultimate total pressure (with gas ballast valve open)*	≤ 0.5 mbar (≤ 0.37 Torr)
Motor power/rotational speed** (3ph)	15 (1000 min-1) kW (rpm) at 50 Hz 18.5 (1200 min-1) kW (rpm) at 60 Hz
Electrical motor characteristics	IM B5 Δ400/Y690 V at 50 Hz, Δ460 V at 60Hz IM B5 Δ220/Y380 V at 60 Hz IM B5 YY230/Y460 V at 60 Hz
Noise pressure level (without gas ballast valve)***	71 dB(A) at 50 Hz 73 dB(A) at 60 Hz
Water vapor tolerance	60 Hz / 50 Hz: 40/30 mbar (30/23 Torr)
Water vapor capacity	60 Hz / 50 Hz: 30/20 kg/h (33.1/22.0 qt/hr)
Oil capacity	min 19 l max 25 l nominal 22 l
Weight	
with 15.0 kW motor	591 kg (1301.79 lbs)
with 18.5 kW motor	643 kg (1416.33 lbs)
without motor	419 kg (922.93 lbs)
Operating temperature range	12 – 40 °C

* According to PNEUROP standard 6602

** Valid for temperatures up to 40 °C and altitudes lower than 1000 m

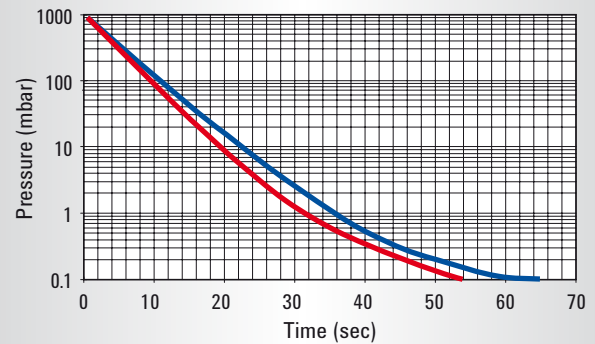
*** According to UNI EN ISO 2151 standard

Single Stage Pump MS-631 FL - Pumping Speed



— 50 Hz w/o gasballast — 60 Hz w/o gasballast
- - - 50 Hz with gasballast - - - 60 Hz with gasballast

Single Stage Pump MS-631 FL - Pump Down



— MS-631 FL 50 Hz
— MS-631 FL 60 Hz
 Volume 750 liters

Ordering Information

High Capacity Rotary Vane Pumps *

	Part Number
MS-631FL 15.0 kW, Δ400/Y690 V, 50 Hz; IE2; DN150 DIN2533	X3753-64000
MS-631FL 18.5 kW, Δ400/Y690 V, 50 Hz - Δ460 V, 60 Hz; DN150 DIN2533	X3753-64002
MS-631FL 18.5 kW, Δ220/Y380 V, 60 Hz; IE2; DN150 DIN2533	X3753-64006
MS-631FL 18.5 kW, YY230/Y460 V, 60 Hz; IE2; DN150 DIN2533	X3753-64004

Full Optional **

	Part Number
MS-631FL 15.0 kW, Δ400/Y690 V, 50 Hz; IE2; DN150 DIN2533	X3753-64091
MS-631FL 18.5 kW, Δ400/Y690 V, 50 Hz - Δ460 V, 60 Hz; DN150 DIN2533	X3753-64092
MS-631FL 18.5 kW, Δ220/Y380 V, 60 Hz; IE2; DN150 DIN2533	X3753-64094
MS-631FL 18.5 kW, YY230/Y460 V, 60 Hz; IE2; DN150 DIN2533	X3753-64093

Oil and Spare Parts

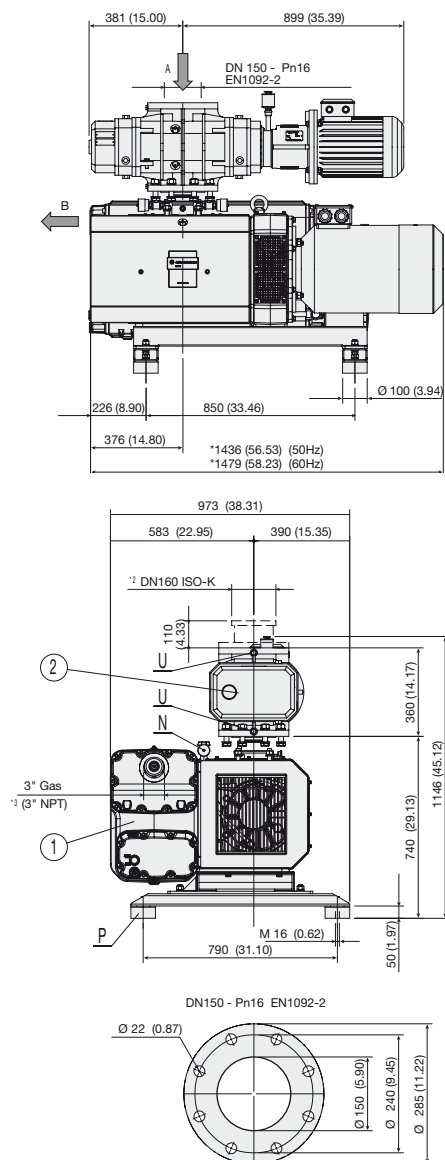
	Part Number
MS-01 oil 22 lt	X3760-64003
MS-631 minor spare part kit	9495087
MS-631 major spare part kit	9495088
Oil filter (Type B)	9495090
Frameless upgrade kit for standard MS-631	X3753-64089

* Oil charge not included

** Full optional version include:

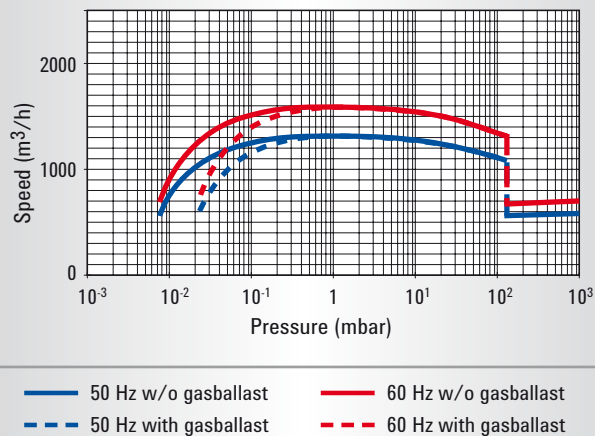
- Pump thermal protection switch
- Exhaust filter control pressure switch
- Oil level protection switch

► RPS-1401 / MS-631 FL System



Dimensions: millimeters (inches)

RPS-1401 / MS-631 FL - Pumping Speed



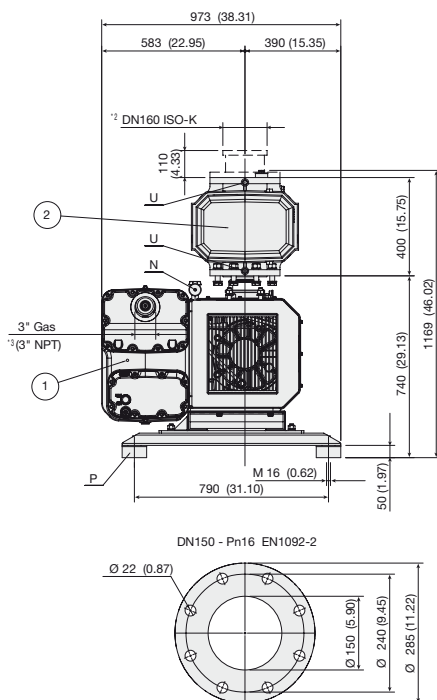
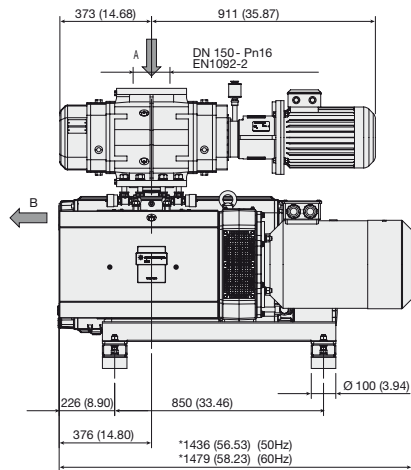
Technical Specifications

Nominal speed*	1430 m³/h (at 50 Hz) 1720 m³/h (at 60 Hz)
Ultimate partial pressure (with gas ballast valve closed)* (absolute)	≤ 0.007 mbar (≤ 0.005 Torr)
Ultimate total pressure (with gas ballast valve open)* (absolute)	≤ 0.02 mbar (≤ 0.015 Torr)
Start up pressure RP1401 (absolute)	≤ 130 mbar (≤ 97 Torr)
Fitted motor power** (MS + RP)	15 + 5.5 (400 V) kW at 50 Hz 18.5 + 5.5 (460 V) kW at 50 Hz
Noise pressure level***	75 dB(A) at 50 Hz 76.5 dB(A) at 60 Hz
Oil capacity (MS + RP) nominal	22 + 1.5 l
Weight	
with 3 ph 50 Hz motor	868 (1911.94) kg (lb)
with 3 ph 60 Hz motor	937 (2063.92) kg (lb)

* According to PNEUROP standard 6602

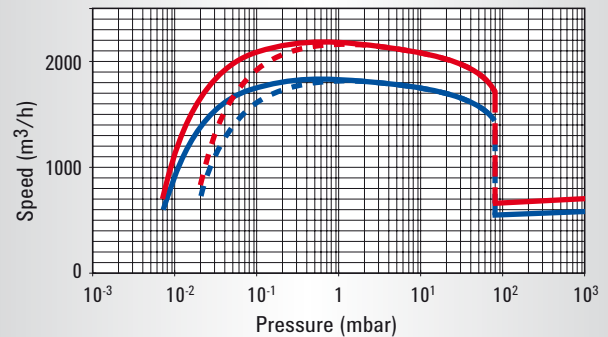
** Valid for temperatures up to 40 °C and altitudes lower than 1000 m

*** According to UNI EN ISO 2151 standard



Dimensions: millimeters (inches)

RPS-2001 / MS-631 FL - Pumping Speed



— 50 Hz w/o gasballast — 60 Hz w/o gasballast
- - 50 Hz with gasballast - - 60 Hz with gasballast

Technical Specifications

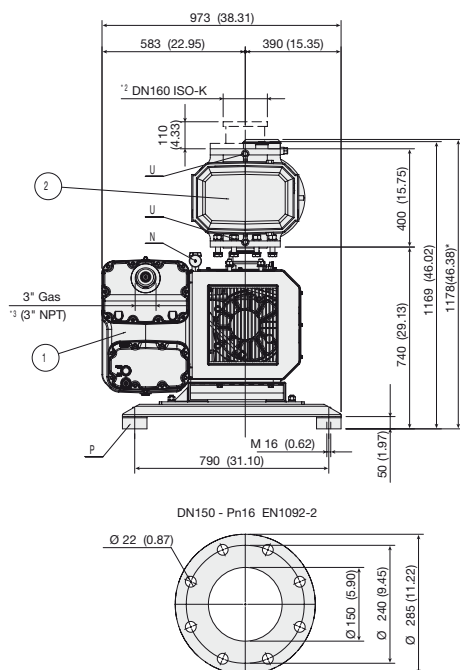
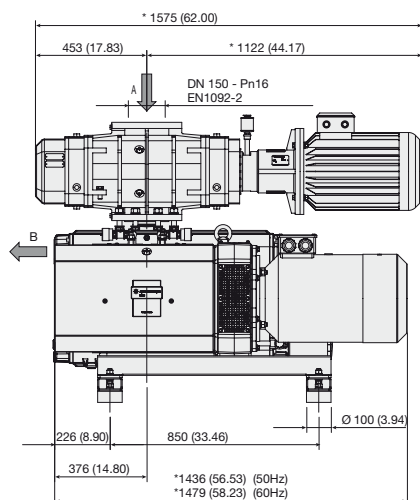
Nominal speed*	2045 m³/h (at 50 Hz) 2444 m³/h (at 60 Hz)
Ultimate total pressure (with gas ballast valve closed)* (absolute)	≤ 7 x 10 ⁻³ mbar (≤ 7 x 10 ⁻¹ Pascal)
Ultimate total pressure (with gas ballast valve open)* (absolute)	≤ 2 x 10 ⁻² mbar (≤ 2 Pascal)
Start up pressure RP2001 (absolute)	≤ 80 mbar (≤ 60 Torr)
Fitted motor power** (MS + RP)	15 + 7.5 (400 V) kW at 50 Hz 18.5 + 7.5 (460 V) kW at 50 Hz
Noise pressure level***	77 dB(A) at 50 Hz 78 dB(A) at 60 Hz
Oil capacity (MS + RP) nominal	22 + 2.5 l
Weight	
with 3 ph 50 Hz motor	920 (2026.48) kg (lb)
with 3 ph 60 Hz motor	986 (2171.85) kg (lb)

* According to PNEUROP standard 6602

** Valid for temperatures up to 40 °C and altitudes lower than 1000 m

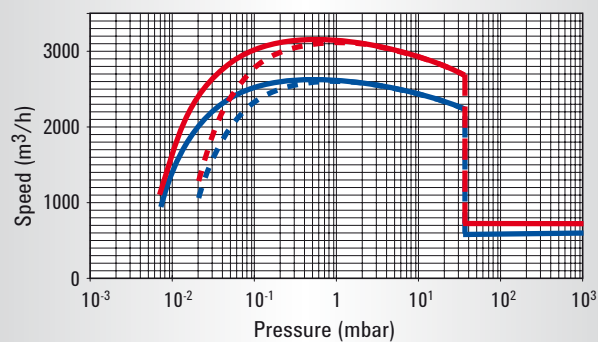
*** According to UNI EN ISO 2151 standard

▶ RPS-3001 / MS-631 FL System



Dimensions: millimeters (inches)

RPS-3001 / MS-631 FL - Pumping Speed



— 50 Hz w/o gasballast — 60 Hz w/o gasballast
- - - 50 Hz with gasballast - - - 60 Hz with gasballast

High Capacity MS-RPS Pumps

Technical Specifications

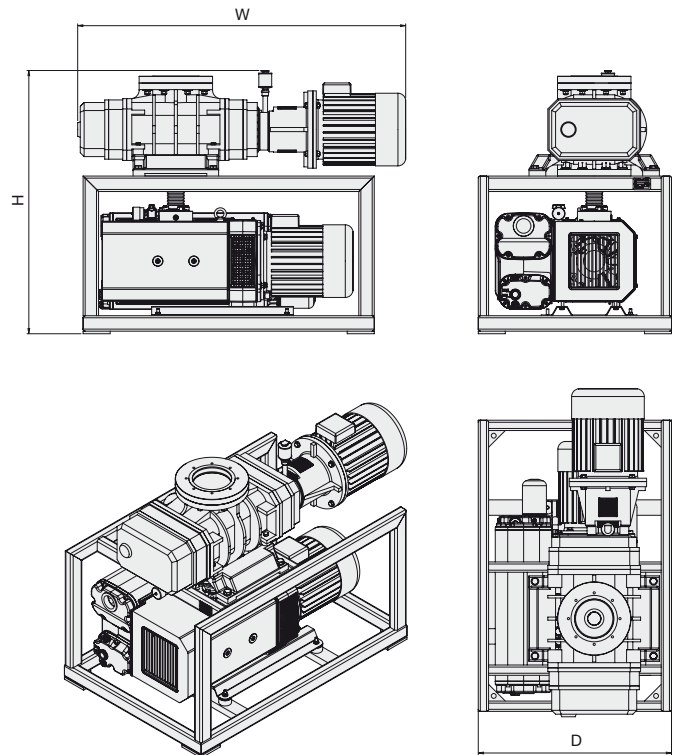
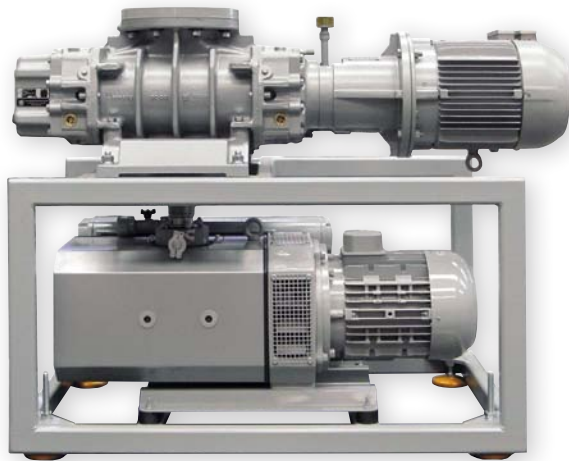
Nominal speed*	2890 m ³ /h (at 50 Hz) 3465 m ³ /h (at 60 Hz)
Ultimate total pressure (with gas ballast valve closed)* (absolute)	≤ 7 x 10 ⁻³ mbar (≤ 7 x 10 ⁻¹ Pascal)
Ultimate total pressure (with gas ballast valve open)* (absolute)	≤ 2 x 10 ⁻² mbar (≤ 2 Pascal)
Start up pressure RP3001 (absolute)	< 36 mbar (< 27 Torr)
Fitted motor power** (MS + RP)	15 + 11 (400 V) kW at 50 Hz 18.5 + 11 (460 V) kW at 50 Hz
Noise pressure level***	77.5 dB(A) at 50 Hz 78.5 dB(A) at 60 Hz
Oil capacity (MS + RP) nominal	22 + 2.5 l
Weight	
with 3 ph 50 Hz motor	1052 (2317.23) kg (lb)
with 3 ph 60 Hz motor	1140 (2511.07) kg (lb)

* According to PNEUROP standard 6602

****** Valid for temperatures up to 40 °C and altitudes lower than 1000 m

*** According to UNI EN ISO 2151 standard

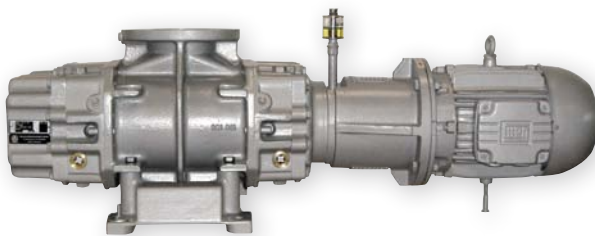
► **Agilent RPS-Series
Roots Pumping Systems**



Roots Pumping Systems (RPS) consist of one MS Rotary Vane Pump and one RP Roots Pump, assembled on a dedicated frame, and connected in series with a flexible hose. This assembly is shipped with the pumps mounted on the frame and leak checked. Both pumps are equipped with motor.

Photo and Outline Drawing: RPS-1401/301

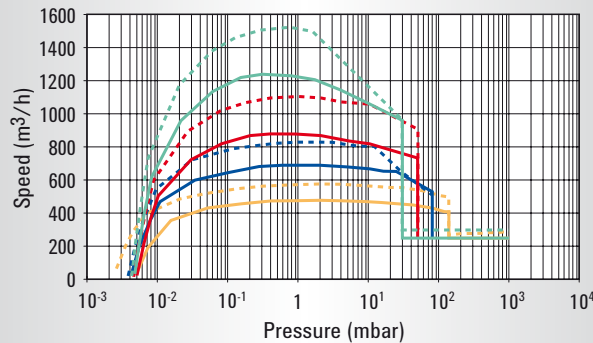
► **Agilent RP-Series Roots Pumps**



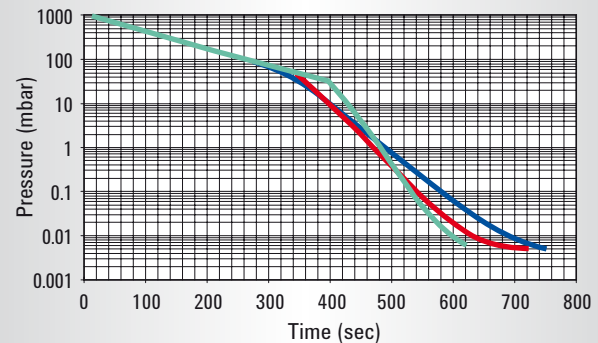
State-of-the-art, high performance Agilent Roots Pumps are ideal for use in demanding industrial applications:

- Highest compression ratio
- Agilent Roots Pumps can withstand high mechanical loads reducing pumpdown cycles
- Lowest base pressure: 5×10^{-3} mbar (4×10^{-3} Torr)

RPS Systems / MS-301 - Pumping Speed



RPS Systems / MS-301 - Pump Down

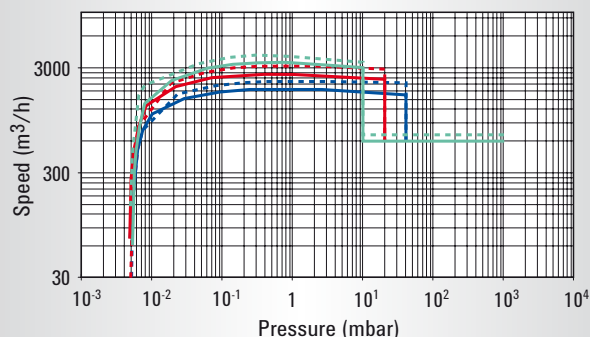


Technical Specifications

		RPS-501/301	RPS-751/301
Nominal pumping speed	60 Hz	600 m³/h (350 cfm)	900 m³/h (530 cfm)
	50 Hz	500 m³/h (300 cfm)	750 m³/h (440 cfm)
Ultimate total pressure (gas ballast closed)		≤ 7 × 10 ⁻³ mbar (≤ 5 × 10 ⁻³ Torr)	≤ 5 × 10 ⁻³ mbar (≤ 4 × 10 ⁻³ Torr)
Roots pump start up pressure		≤ 200 mbar (≤ 152 Torr)	≤ 80 mbar (≤ 60 Torr)
Power	60 Hz	2.6 + 7.5 kW (3.5 + 10.0 HP)	3.6 + 7.5 kW (4.8 + 10.0 HP)
	50 Hz	2.2 + 5.5 kW (2.9 + 7.3 HP)	3.0 + 5.5 kW (4.0 + 7.3 HP)
Power supply voltage		Δ230/Y400 V at 50 Hz Δ460 V at 60 Hz YY230/Y460 V at 60 Hz Δ220/Y380 V at 60 Hz	Δ230/Y400 V at 50 Hz Δ460 V at 60 Hz YY230/Y460 V at 60 Hz Δ220/Y380 V at 60 Hz
Noise level*		74 / 76 dB(A)	74 / 76 dB(A)
Oil charge		1.1 + 7.0 liter (1.16 + 7.4 qt)	1.5 + 7.0 liter (1.6 + 7.4 qt)
Working ambient temperature range		+12 +40 °C (+54 +105 F)	+12 +40 °C (+54 +105 F)
Storage temperature		-15 +50 °C (+5 +122 F)	-20 +70 °C (-4 +158 F)
Dimensions D x W x H		750 x 1048 x 1086 / 750 x 1088 x 1086 mm (29.5 x 41.3 x 42.8 / 29.5 x 42.8 x 42.8 in.)	750 x 1130 x 1175 mm (29.5 x 44.5 x 46.3 in.)
Total weight	60 Hz	445 kg (981 lbs)	470 kg (1040 lbs)
	50 Hz	430 kg (948 lbs)	450 kg (1000 lbs)
		RPS-1001/301	RPS-1401/301
Nominal pumping speed	60 Hz	1200 m³/h (710 cfm)	1700 m³/h (1000 cfm)
	50 Hz	1000 m³/h (590 cfm)	1430 m³/h (840 cfm)
Ultimate total pressure (gas ballast closed)		≤ 5 × 10 ⁻³ mbar (≤ 4 × 10 ⁻³ Torr)	≤ 5 × 10 ⁻³ mbar (≤ 4 × 10 ⁻³ Torr)
Roots pump start up pressure		≤ 50 mbar (≤ 38 Torr)	≤ 30 mbar (≤ 23 Torr)
Power	60 Hz	4.8 + 7.5 kW (6.4 + 10.0 HP)	6.3 + 7.5 kW (8.4 + 10.0 HP)
	50 Hz	4.0 + 5.5 kW (5.3 + 7.3 HP)	5.5 + 5.5 kW (7.3 + 7.3 HP)
Power supply voltage		Δ230/Y400 V at 50 Hz Δ400/Y690 V at 50 Hz Δ460 V at 60 Hz YY230/Y460 V at 60 Hz Δ220/Y380 V at 60 Hz	Δ230/Y400 V at 50 Hz Δ400/Y690 V at 50 Hz Δ460 V at 60 Hz YY230/Y460 V at 60 Hz Δ220/Y380 V at 60 Hz
Noise level*		74 / 76 dB(A)	74 / 76 dB(A)
Oil charge		1.5 + 7.0 liter (1.6 + 7.4 qt)	1.5 + 7.0 liter (1.6 + 7.4 qt)
Working ambient temperature range		+12 +40 °C (+54 +105 F)	+12 +40 °C (+54 +105 F)
Storage temperature		-20 +70 °C (-4 +158 F)	-20 +70 °C (-4 +158 F)
Dimensions D x W x H		750 x 1153 x 1195 mm (29.5 x 45.4 x 47 in.)	750 x 1289 x 1195 mm (29.5 x 50.7 x 47 in.)
Total weight	60 Hz	530 kg (1170 lbs)	590 kg (1300 lbs)
	50 Hz	510 kg (1130 lbs)	570 kg (1260 lbs)

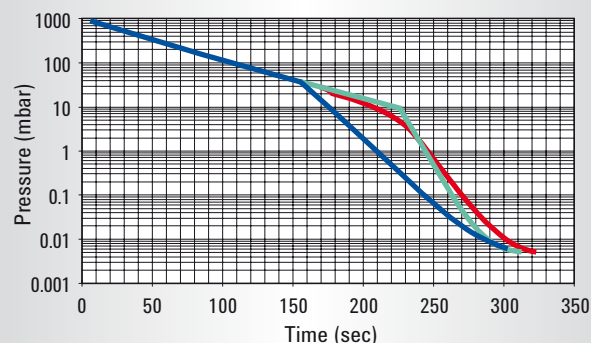
* Measured according to EN ISO 2151 (50/60 Hz)

RPS Systems / MS-631 - Pumping Speed



— RPS-2001/631 60 Hz — RPS-3001/631 60 Hz — RPS-4001/631 60 Hz
 — RPS-2001/631 50 Hz — RPS-3001/631 50 Hz — RPS-4001/631 50 Hz

RPS Systems / MS-631 - Pump Down



— RPS-2001/631 — RPS-3001/631 — RPS-4001/631

Technical Specifications

		RPS-2001/631		RPS-3001/631	
Nominal pumping speed	60 Hz	2400 m³/h (1415 cfm)		3450 m³/h (2030 cfm)	
	50 Hz	2000 m³/h (1180 cfm)		2900 m³/h (1710 cfm)	
Ultimate total pressure (gas ballast closed)		≤ 5 x 10 ⁻³ mbar (≤ 4 x 10 ⁻³ Torr)		≤ 5 x 10 ⁻³ mbar (≤ 4 x 10 ⁻³ Torr)	
Roots pump start up pressure		≤ 55 mbar (≤ 42 Torr)		≤ 30 mbar (≤ 23 Torr)	
Power	60 Hz	8.8 + 18.5 kW (11.8 + 24.8 HP)		12.5 + 18.5 kW (16.7 + 24.8 HP)	
	50 Hz	7.5 + 15.0 kW (10.0 + 20.1 HP)		11.0 + 15.0 kW (14.7 + 20.1 HP)	
Power supply voltage		Δ400/Y690 V at 50 Hz Δ460 V at 60 Hz YY230/Y460 V at 60 Hz Δ220/Y380 V at 60 Hz		Δ400/Y690 V at 50 Hz Δ460 V at 60 Hz YY230/Y460 V at 60 Hz Δ220/Y380 V at 60 Hz	
Noise level*		78 / 80 dB(A)		78 / 80 dB(A)	
Oil charge		2.5 + 22.0 liter (2.6 + 23.2 qt)		2.5 + 22.0 liter (2.6 + 23.2 qt)	
Working ambient temperature range		+12 +40 °C (+54 +105 F)		+12 +40 °C (+54 +105 F)	
Storage temperature		-20 +70 °C (-4 +158 F)		-20 +70 °C (-4 +158 F)	
Dimensions D x W x H		1050 x 1575 [1605 version 60 Hz] x 1516 mm (41.3 x 62 [63.2 version 60 Hz] x 59.7 in.)		1050 x 1615 x 1516 mm (41.3 x 63.6 x 59.7 in.)	
Total weight	60 Hz	1115 kg (2460 lbs)		1255 kg (2770 lbs)	
	50 Hz	1085 kg (2400 lbs)		1225 kg (2700 lbs)	
		RPS-4001/631			
Nominal pumping speed	60 Hz	4700 m³/h (2770 cfm)			
	50 Hz	3900 m³/h (2300 cfm)			
Ultimate total pressure (gas ballast closed)		≤ 5 x 10 ⁻³ mbar (≤ 4 x 10 ⁻³ Torr)			
Roots pump start up pressure		≤ 16 mbar (≤ 12 Torr)			
Power	60 Hz	12.5 + 18.5 kW (16.7 + 24.8 HP)			
	50 Hz	11.0 + 15.0 kW (14.7 + 20.1 HP)			
Power supply voltage		Δ400/Y690 V at 50 Hz Δ460 V at 60 Hz YY230/Y460 V at 60 Hz Δ220/Y380 V at 60 Hz			
Noise level*		79 / 81 dB(A)			
Oil charge		7.0 + 22.0 liter (7.4 + 23.2 qt)			
Working ambient temperature range		+12 +40 °C (+54 +105 F)			
Storage temperature		-20 +70 °C (-4 +158 F)			
Dimensions D x W x H		1050 x 1636 x 1576 mm (41.3 x 64.4 x 62 in.)			
Total weight	60 Hz	1380 kg (3050 lbs)			
	50 Hz	1340 kg (2960 lbs)			

* measured according to EN ISO 2151 (50/60 Hz)