Air Operated Double Diaphragm Pumps

– D401 Metallic

1 ½" Metallic Diaphragm Pump Data Sheet

Max Flow Rate: 600 L/min. (Rubber)
Liquid Connections: 1½" Female / Flanged Centre Ports.
Max Slurry Size: 8.0mm.
Max Suction Lift: PTFE Dry: 3.0m Rubber Dry: 5.5m. Wet (Primed): 8.0m.
Max Discharge Pressure: 0.85 MPa (Rubber)
Check Valve Configuration: Ball Valves.
Pump Wetted Material Options: Aluminium, Stainless Steel & Cast Iron.
Diaphragm Options: PTFE, CR, NBR, TPEE, TPO, EDPM & FKM.
Air Motor Material: Aluminium.
Description: 1½" Metallic AODD Pumps available in Al, SUS & Cast Iron. Looped C® Spring Air Spool. Aluminium Air Motor. Choice of Threaded & Flanged Centre Port Connections. Ball Check Valves. External Plastic Silencer.

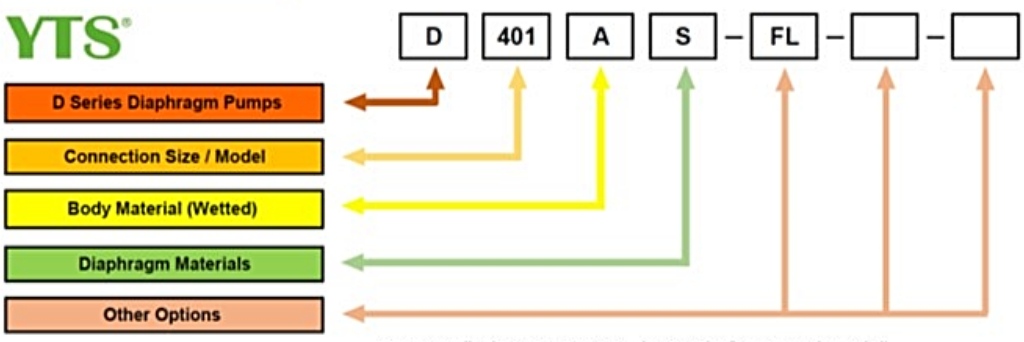
D401S□-FL
1 ½" SUS Pump
600 L/min.

Pump Features: *New high performance 1½" metallic AODD Pumps fitted with the Looped C® Air Spool, Ekonol® Seal Rings & independent Pilot Valves for increased performance, reliability & extended life cycle. Very high flow rates. Large solids size. Large range of standard & special diaphragm options. Compact size, drop-in dimensions & footprint. Fully bolted body, heavy-duty construction & wide sturdy base. 100% oil or grease lubrication free, offering clean, emissions free, environmentally friendly operation. Easily maintainable with modular replaceable wear parts, outside accessible Air Spool & manual Spool Reset Switch. Fully torqued, leak and operation tested prior to shipment. Patented design with patents pending. Designed and manufactured in Japan.*

401 Metallic Pump Specifications		
Pump Model / Material	**A□ S□ F□**	**AT ST FT**
Max Flow Rate	600 L/min [158.5 GPM]	450 L/min [118.9 GPM]
Max Solids Size	8.0 mm or Less	
Max Discharge Pressure	0.85 MPa [125 PSI]	
Supply Air Pressure Range	0.2 – 0.85 MPa [30 - 125 PSI]	
Max Suction Lift	PTFE Dry: 3.0 meters. Rubber Dry: 5.5 meters. Wet (Primed): 8.0 meters.	
Max Air Consumption	5000 L/min (ANR) [117.3 SCFM]	4500 L/min (ANR) [159.6 SCFM]
Max Discharge Volume Per Cycle	2800 mL	1400 mL
Ambient Temperature Range	0 – 70°C [32 – 158°F]	
Liquid Temperature Range	NBR/CR 0–70°C [32–158°F] TPEE/EDPM 0–80°C [32–176°F] FKM/TPO/PTFE 0–100°C [32–212°F]	
Connections: Suction & Discharge	1 ½" Female Threaded / Flanged Centre Ports	

Note: *Factors affecting a pumps stated liquid flow rate, suction lift & solids handling capabilities include but are not limited to; pump size, diaphragm, ball valve & ball seat, type & materials of construction, air inlet pressure & air flow capability, liquid viscosity, specific gravity, slurry content, ambient & liquid temperature, liquid inlet & liquid outlet width, piping type, piping length & overall piping configuration. A minimum supply air pressure of 30 PSI (0.2 MPa) is required to operate the pump. If the supply pressure is less than 30PSI (0.2 MPa), the pump may not operate properly. Oil & Grease Lubrication is not required under normal operating conditions. All 401 Series Diaphragm Pumps are shipped complete with a Heavy Duty Steel Base, Rubber Feet, SUS Air Inlet Shutoff Valve & Plastic External Exhaust as Standard Accessories.*

Nomenclature



401A: *1½" Aluminium Pump. (Looped C® Air Spool Model).*
S: *TPO (Santoprene®) Diaphragms & EDPM Check Valves.*
FL: *Flanged Centre Port Connections.*

D401AS-FL
1 ½" AODD Pump.

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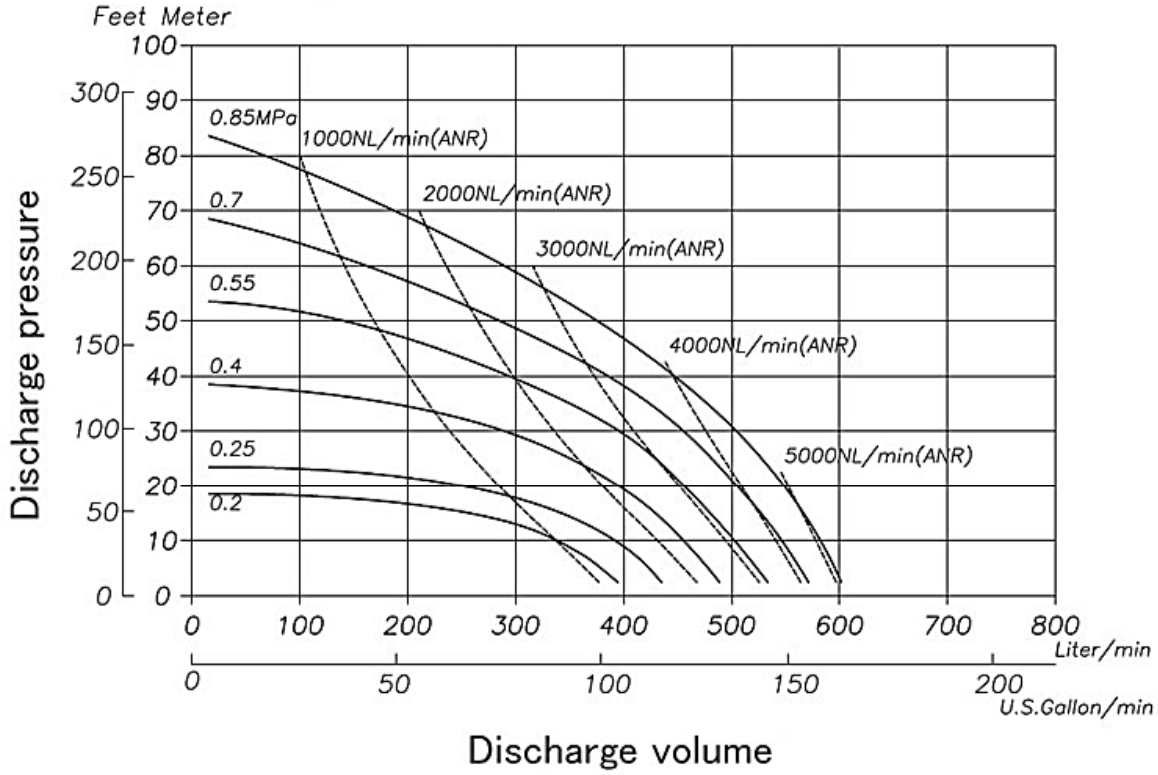
Made In Japan

Pump Performance Curves

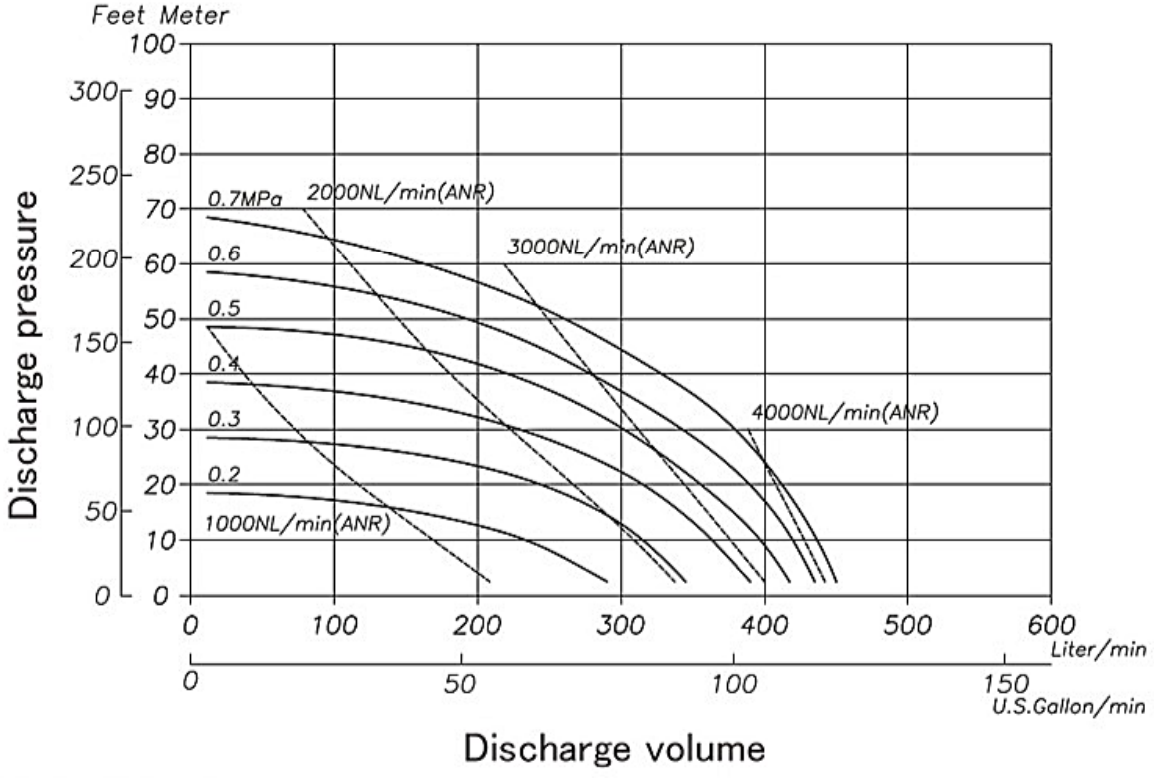
Rubber Diaphragm Curves

401A □ ・S □ ・F □



PTFE Diaphragm Curves

401AT ・ST ・FT



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Made In Japan

Wetted Materials Of Construction

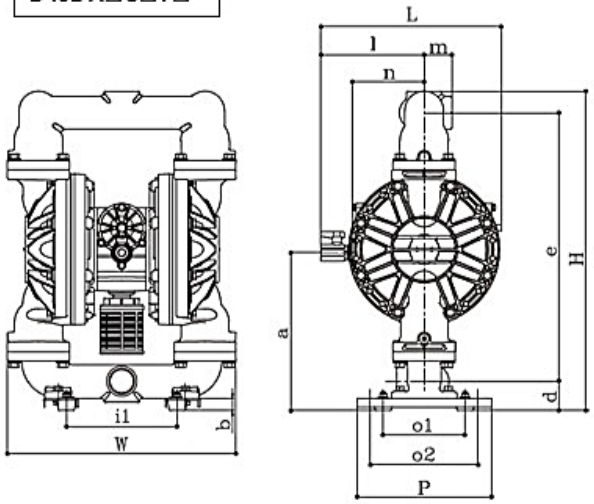
MODEL	401AC	401AN	401AE	401AV	401AT	401AH	401AS	401SC	401SN	401SE	401SV	401ST	401SH	401SS
Pump Wetted Parts	ADC12・AC4C							SCS14						
Diaphragm	CR	NBR	EPDM	FKM	PTFE	TPEE	TPO	CR	NBR	EPDM	FKM	PTFE	TPEE	TPO
Ball Valve	CR	NBR	EPDM	FKM	PTFE	NBR	EPDM	CR	NBR	EPDM	FKM	PTFE	NBR	EPDM
Valve Seat	CR	NBR	EPDM	FKM	PTFE	NBR	EPDM	CR	NBR	EPDM	FKM	PTFE	NBR	EPDM
Center Disk	A5056							SUS316						
Weight	A □ : 28.5 kg [62.8 lbs] A □ -FL : 30.0 kg [66.1 lbs]							S □ : 51.0 kg [112.4 lbs] S □ -FL : 55.0 kg [121.3 lbs]						

MODEL	401FC	401FN	401FE	401FV	401FT	401FH	401FS
Pump Wetted Parts	S45C						
Diaphragm	CR	NBR	EPDM	FKM	PTFE	TPEE	TPO
Ball Valve	CR	NBR	EPDM	FKM	PTFE	NBR	EPDM
Valve Seat	CR	NBR	EPDM	FKM	PTFE	NBR	EPDM
Center Disk	SS400						
Weight	S □ : 51.0 kg [112.4 lbs] S □ -FL : 55.0 kg [121.3 lbs]						

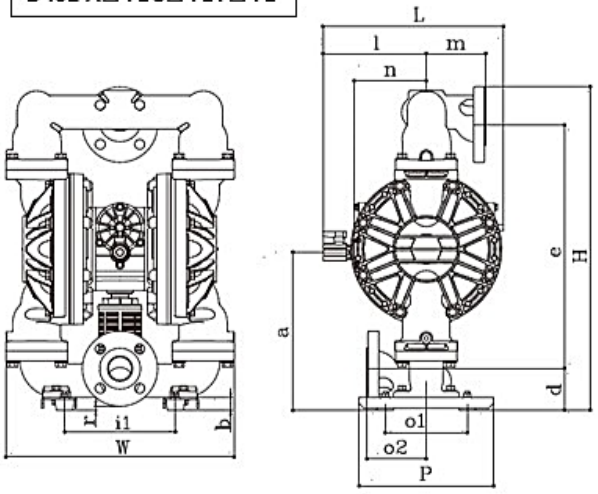
Dimensional Drawings

MODEL	H	W	L	a	b	d	e	i (i1)	i2	l	m	n	o1	o2	p	r	AIR INLET	AIR EXH	LIQUID IN/OUT
401A □	594 [23.39]	424 [16.69]	335 [13.19]	294 [11.57]	23 [0.91]	55 [2.17]	499 [19.65]	206 [8.11]		191 [7.52]	51 [2.01]	134 [5.28]	152 [5.98]	200 [7.87]	250 [9.84]				Rc1 1/2 [NPT1 1/2]
401S □ 401F □	594 [23.39]	424 [16.69]	335 [13.19]	294 [11.57]	23 [0.91]	55 [2.17]	499 [19.65]	206 [8.11]		191 [7.52]	51 [2.01]	134 [5.28]	152 [5.98]	200 [7.87]	250 [9.84]				
401A □ -FL	601 [23.66]	424 [16.69]	335 [13.19]	294 [11.57]	23 [0.91]	77 [3.03]	453 [17.83]	206 [8.11]		191 [7.52]	110 [4.33]	134 [5.28]	152 [5.98]	110 [4.33]	250 [9.84]	7 [0.28]	Rc3/4 [NPT3/4]	Rc1 [NPT1]	Equivalent to JIS Flange 10K40A
401S □ -FL 401F □ -FL	601 [23.66]	424 [16.69]	335 [13.19]	294 [11.57]	23 [0.91]	77 [3.03]	453 [17.83]	206 [8.11]		191 [7.52]	110 [4.33]	134 [5.28]	152 [5.98]	110 [4.33]	250 [9.84]	7 [0.28]			

D401 A□S□F□



D401 A□-FL S□-FL F□-FL



YTS®

AODD Pump Capabilities.

Self Priming.	Variable Discharge Pressures.	Inherently Safe Design.
Run Dry.	Transfer Liquid Slurries.	Portable & Easy to Use.
Run up to Dead Head.	Transfer Large Sized Solids.	Transfer Viscous Fluids.
Variable Flow Rates.	Handle Abrasives.	Frequent Start Stop Operation.
Shear Sensitivity.	Transfer Chemicals.	Powered by Compressed Air.

Looped

ATEX Compliant II 2GD c T5

JQA-QMA14279

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For more information about YTS Pumps please contact: sales@yts-pump.com

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