

Pneumatic Driven Liquid Pumps

关注公众号

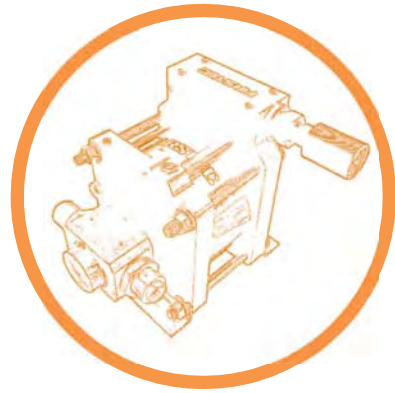


气动液压泵



CATALOG

关于我们 About Us



上海兆帕流体动力有限公司（MPAPOWER®）成立于2004年，深耕流体控制领域20年，在流体（气/水/油及特殊介质）精密控制方面积累了丰富的经验。

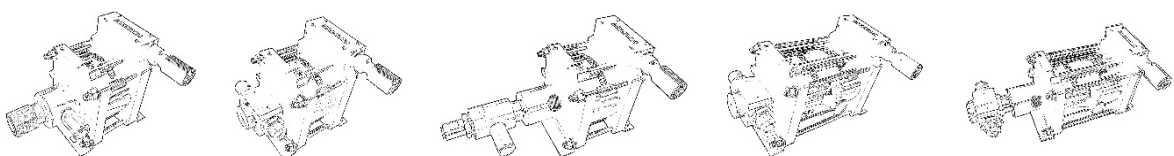
我们作为中国工业控制测量和控制标准化技术委员，参与国家标准建设，做出了应有的贡献。

我们专注于压力和流量的精密控制，通过持续的应用创新，提供真空到700MPa超高压的系统集成解决方案，覆盖气、液（水、油）及冷媒、NMP、二氧化碳、氢气、氧气等各类特殊介质，满足静压、爆破及脉冲试验、冷媒集中供料、高洁净度晶圆清洗、高压液相色谱装柱、气体注射成型高压气体精密注入、灭火剂充瓶回收、加氢、充氧等多方位需求，集研发、生产、安装、维保服务于一体，实现客户需求的“端到端”闭环服务。在售后服务方面，凭借充足的库存和零件级的维修能力，确保快速响应的售后服务。

产品定位中高端市场，坚持“技术+质量”双驱动，不为追求低价而牺牲品质。我们的核心元件供应商均来自于国际一线品牌，包括美国Haskel、AE、HIP、Parker、TESCOM、Swagelok，德国WIKA、AB、FESTO，意大利CAMOZZI，日本SMC，法国Legris、Schneider，瑞典Alleima、CEJN等，确保产品可靠性。经过多年项目积累，我们与全球一线品牌供应链建立了良好的商业关系，可为客户提供一流的元器件及专业的系统解决方案。

区别于常规集成商，我们深耕基础研发，拒绝简单的硬件堆砌，坚持回归基本原理，依托多年积累的国际先进技术经验，掌握从增压泵、高压阀等关键部件到整机系统从 Know-Why 到 Know-How 的全链路开发能力。在坚守国际品质标准的同时，实现核心技术的自主可控与国产化替代。凭借性能对标一流、供应本地化的差异化优势，MPAPOWER® 致力于为行业客户提供更高性价比、响应更快速的控制系统解决方案。

我们的优势在于技术领先的基础元件和多年行业深耕的经验积累，灵活的非标定制能力和快速的交付能力，广泛服务航空航天、石油化工、核能核电、船舶重工、煤炭矿山、化工电力、家电、汽车零部件、生物医药、半导体和新能源等高端领域。



Pneumatic Driven Liquid Pumps 气动液压泵

PRINCIPLE OF OPERATION

MPAPOWER Pneumatic driven liquid pumps operate on the principle of differential working areas. An air piston drives a smaller-diameter plunger or piston to provide a pressure ratio. This pressure ratio is the method used to determine the maximum available outlet pressure. Accordingly, MPAPOWER model numbers reflect the nominal pressure ratio of the pumps.

MPAPOWER liquid pumps will cycle automatically when compressed air is first applied to the drive. The pump will start cycling at its maximum speed, thereby producing maximum fluid flow. At this stage, the pump acts as a transfer pump, filling the pressure system with fluid. As resistance increases in the system (creating backpressure to the pump), the pump will decrease its reciprocating action. Backpressure in the system finally balances with the incoming air drive pressure multiplied by the ratio. At this point, the pump will stall and maintain pressure without consuming any energy. If there is further demand for flow within the system, the pump will automatically start cycling again.

FEATURES

The MPAPOWER Pneumatic driven liquid pumps, are a tried and tested series of units designed to deliver a wide range of fluids at pressures up to 75,000psi (5,172bar).

The range features :

- 53 models ranging from 150~75,000psi output pressure.
- Air Drive line lubrication not required.
- Alternative gases that can drive the pump include nitrogen, vapor from liquefied gas, pipeline natural gas and sour natural gas with proper modifications.
- Minimum air pressure required to start pump will be up to 15psi (1bar).
- Powered by any fixed or portable compressed air source to 150psi.
- Stainless steel wetted parts.
- Suitable for pumping all hydraulic fluids, plain water, distilled & deionized water, solvents, mild chemicals and most liquefied aerosol type gases. .
- Automatic stall against closed outlet with no air consumption, automatic restart.
- Suitable for hazardous environments.
- Infinitely variable capacity and discharge pressure through simple regulation of air supply.
- Self-priming for immediate operation.



APPLICATIONS

应用

These air-operated pumps are widely utilized in all types of applications requiring high pressure.

APPLICATIONS INCLUDE:

- **PRESSURE TESTING:** Static and burst testing of hoses, valves, and tubing; testing of fire extinguishers, gas bottles, pressure vessels, hydraulic circuits and components, aircraft and automobile braking systems, pipelines, and wellheads.
- **GENERAL HYDRAULICS:** Power source for hydraulic rams and cylinders, scissor lifts, jacks, hydraulic presses, clamping systems, bolt cutters, bolt tensioners, axle lifts, ramps, and mobile power supplies..
- **PROCESS INDUSTRY:** Isostatic presses, component life tests, chemical injection, etching machines, spraying equipment, lamination processes, and impregnation machines.
- **CONSTRUCTION AND MINING:** Grit blasting equipment, rock breakers, pressure cutters/washers, rock drills, and injection equipment.

WHY USE Pneumatic Driven LIQUID PUMPS

These air operated pumps are to be found in all types of applications which require high pressures.

- Hydraulic pressure is held without energy consumption.
- Explosion proof ... requires no electrical power or connections.
- Intrinsically safe.
- Compact, lightweight and weatherproof.
- Easy to adapt automatic controls.
- Contamination tolerant.
- Outlet stall pressure pre-determined by the air drive regulator.
- High pressure capability - up to 75,000 psi.
- Ideal for stop-start applications under full load.
- Easy to install and operate.

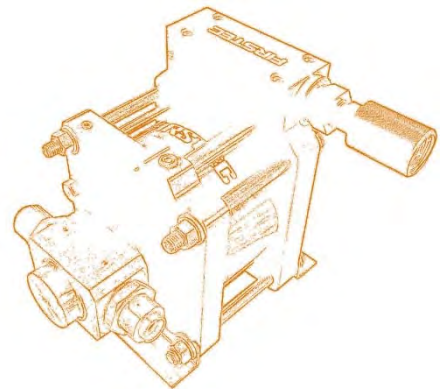
TYPE CODING CONFIGURATION

DE32 - P - NMP

The standard seal materials are for water or hydraulic oil service, for special Medium consult factory.

Pilot control

Model No.
Liquid pump series



	Description	Model	Actual Areal Ratio	Volume per Stroke		MAX OUTPUT PRESSURE		Inlet Port	Outlet Port	Net Weight (KG)	Product Images	
				Cu. In	ml	psi	bar					
01	ONE AIR CYLINDER TWO WAY ACTION DISTANCE CONNECTION	DC15DL	18	1.76	28.9	1800	130	NPT1/2	NPT1/4	6.5		
02		DC35DL	37.5	0.76	12.5	3750	258	NPT1/2	NPT1/4	6.5		
03	ONE AIR CYLINDER ONE WAY ACTION	E4	4.6	20	327.7	1200	83	NPT1/2	NPT1/2	12		
04		E10	11.5	4.05	66.4	1600	110	NPT1		NPT1/2		11
05		E15	17	2.70	44.2	2400	165	NPT1/2	1/4HP	1/4HP		
06		E25	29	1.62	26.5	4000	276					
07		E35	40	1.16	19	5700	393					
08		E60	69	0.67	11	9800	676					
09		E100	115	0.41	6.7	16500	1138					
10		E150	173	0.27	4.4	25000	1724					
11		E225	260	0.18	2.9	37000	2552					
12		E300	346	0.14	2.3	50000	3448					
13	TWO AIR CYLINDER ONE WAY ACTION	E22	23	4.05	66.4	3200	221	NPT1	NPT1/2	14		
14		E32	34	2.70	44.2	4800	331	NPT1/2				1/4HP
15		E52	57	1.62	26.5	8000	552					
16		E72	80	1.16	19	11000	759					
17		E122	138	0.67	11	19000	1310					
18		E202	230	0.41	6.7	33000	2276					
19		E302	346	0.27	4.4	50000	3448					
20		E452	520	0.18	2.9	70000	4828					
21		E602	690	0.14	2.3	75000	5172					
22		ONE AIR CYLINDER ONE WAY ACTION DISTANCE CONNECTION	DE4	4.6	20	327.7	1200	83	NPT1/2			NPT1/2
23	ONE AIR CYLINDER ONE WAY ACTION DISTANCE CONNECTION	DE10	11.5	4.05	66.4	1600	110	NPT1	NPT1/2	11		
24		DE15	17	2.70	44.2	2400	165					

	Description	Model	Actual Areal Ratio	Volume per Stroke		MAX OUTPUT PRESSURE		Inlet Port	Outlet Port	Net Weight (KG)	Product Images
				Cu. In	ml	psi	bar				
25	ONE AIR CYLINDER ONE WAY ACTION DISTANCE CONNECTION	DE25	29	1.62	26.5	4000	276	NPT1/2		11	
26		DE35	40	1.16	19	5700	393				
27		DE60	69	0.67	11	9800	676		NPT1/2		
28		DE100	115	0.41	6.7	16500	1138	NPT1/2			
29		DE150	173	0.27	4.4	25000	1724		1/4HP		
30		DE225	260	0.18	2.9	37000	2552				
31		DE300	346	0.14	2.3	50000	3448				
32	TWO AIR CYLINDER ONE WAY ACTION DISTANCE CONNECTION	DE22	23	4.05	66.4	3200	221	NPT1		15	 
33		DE32	34	2.70	44.2	4800	331		NPT1/2		
34		DE52	57	1.62	26.5	8000	552				
35		DE72	80	1.16	19	11000	759	NPT1/2			
36		DE122	138	0.67	11	19000	1310				
37		DE202	230	0.41	6.7	33000	2276		1/4HP		
38		DE302	346	0.27	4.4	50000	3448				
39	ONE AIR CYLINDER TWO WAY ACTION DISTANCE CONNECTION	DE452	520	0.18	2.9	70000	4828			19	
40		DE602	690	0.14	2.3	75000	5172				
41		DE35D	40	2.32	38	5700	393		NPT1/2		
42		DE60D	69	1.34	22	9800	676				
43		DE100D	115	0.82	13.4	16500	1138				
44		DE150D	173	0.54	8.8	25000	1724		1/4HP		
45		DE225D	260	0.36	5.8	37000	2552	NPT1/2			
46		DE300D	346	0.28	4.6	50000	3448				
47		DE50DL	48	1.90	31	5000	345		NPT3/8	11	
48	TWO AIR CYLINDER TWO WAY ACTION DISTANCE CONNECTION	DE72D	80	2.32	38	11000	759		NPT1/2	23	
49		DE122D	138	1.34	22	19000	1310				
50		DE202D	230	0.82	13.4	33000	2276				
51		DE302D	346	0.54	8.8	50000	3448	NPT1/2			
52		DE452D	520	0.36	5.8	70000	4828		1/4HP		
53		DE602D	690	0.28	4.6	75000	5172				

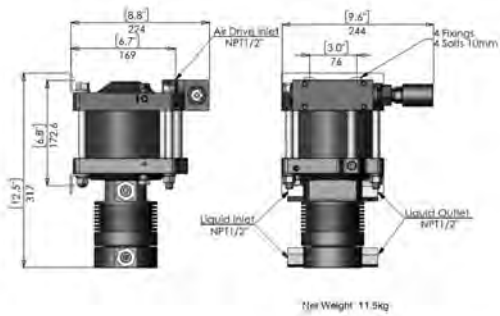
► Air section temperature rating: 0°F to 140°F (60°C).

► All technical and dimensional information subject to change.

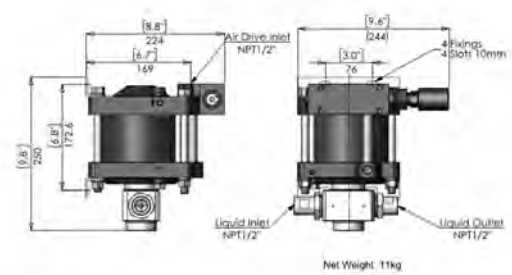
► Viton is a registered trademark of E.I. DuPont de Nemours & Co., Inc.

► For special medium, consult factory.

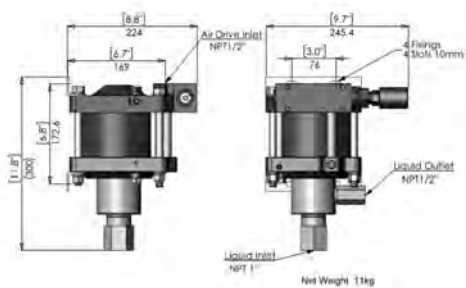
DIMENSIONS



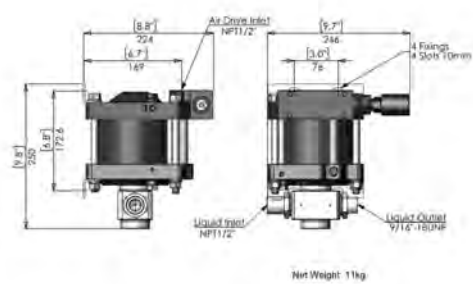
E 4



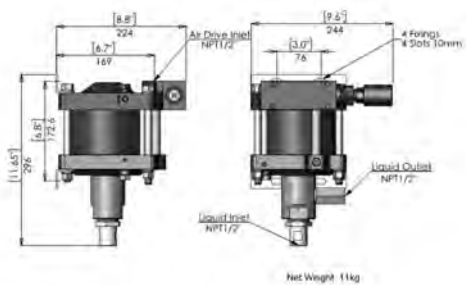
E 35/60/100



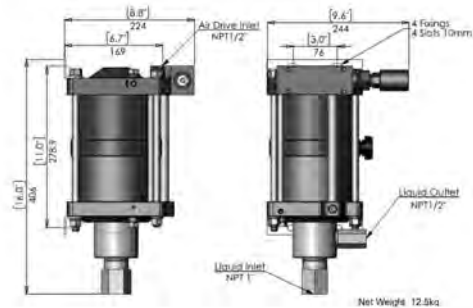
E 10/15



E 150/225/300

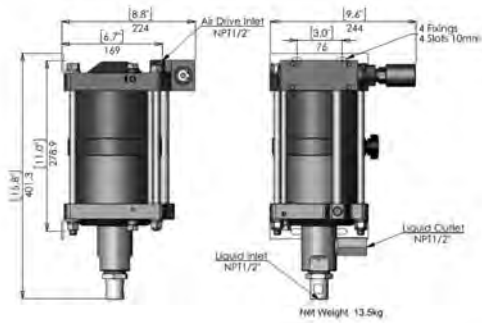


E 25

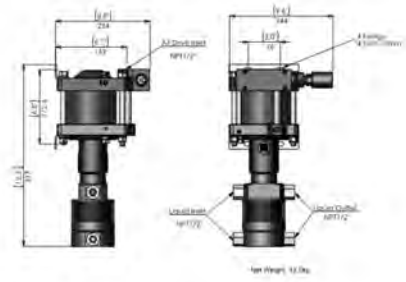


E 22/32

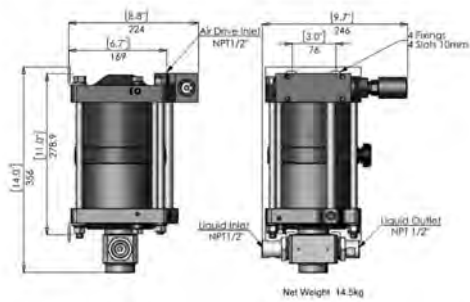
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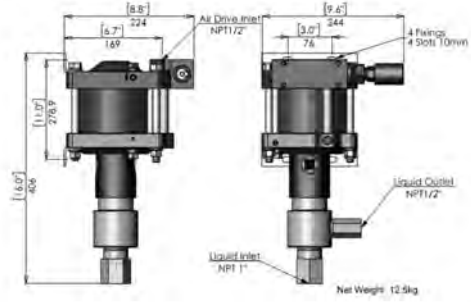
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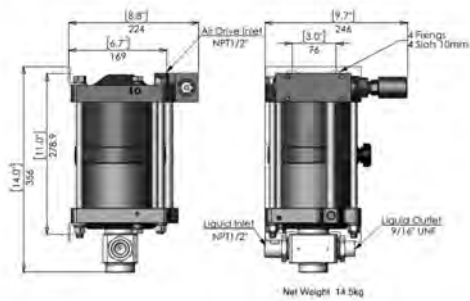
DE 4



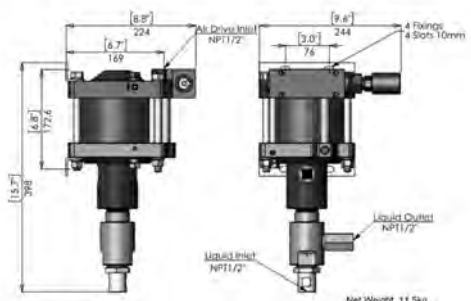
E 72/122



DE 10

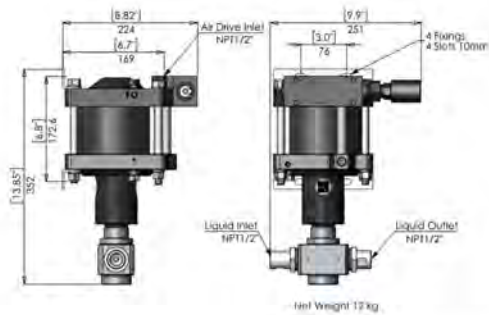


E 202/302/452/602

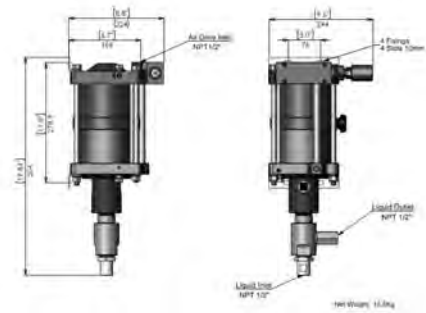


DE25

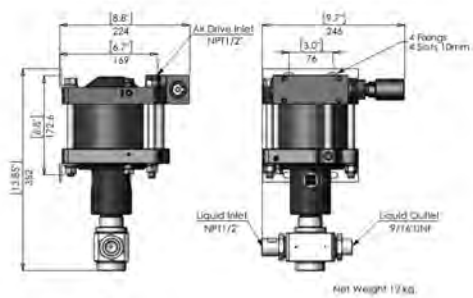
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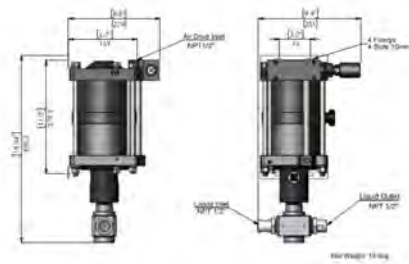
DE 35/60/100



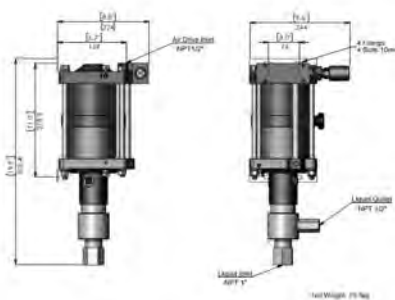
DE 52



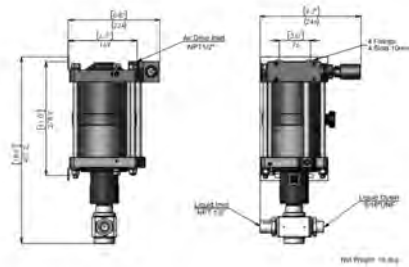
DE150/225/300



DE72/122

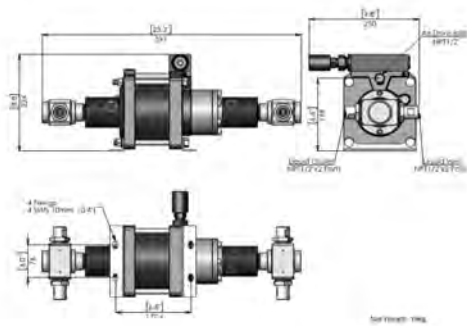


DE22/32

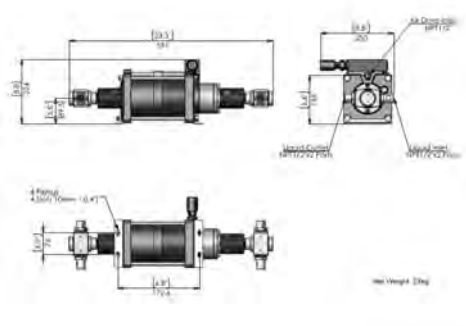


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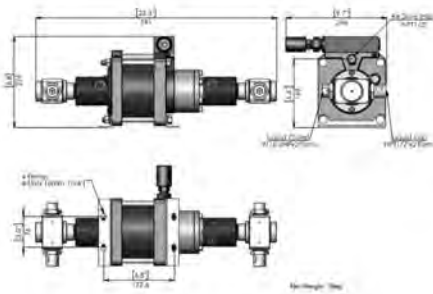
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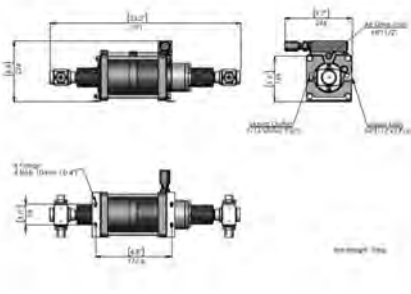
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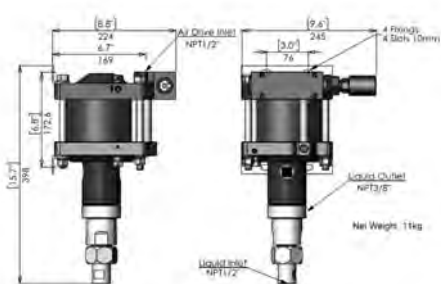
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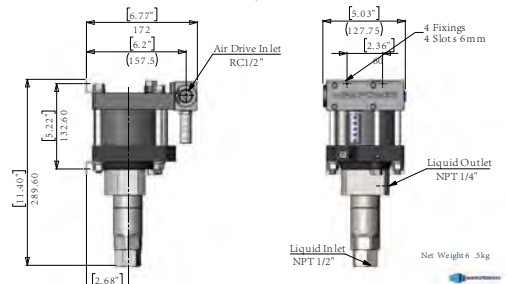
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DE202D/302D/452D/602D



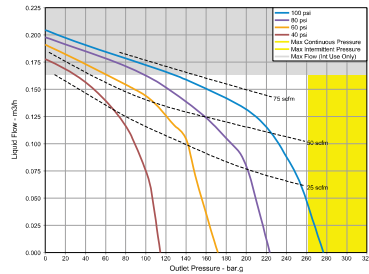
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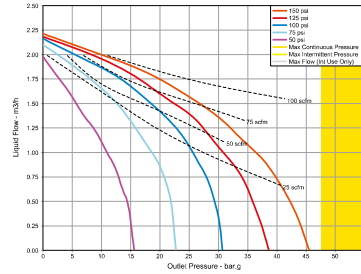
DC35DL

Light horizontal shaded area indicates an excessively high cycle rate. This should be Allowed only for intermittent duty to prevent possibly excessive noise and maintenance.

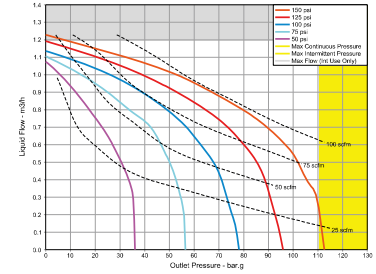
Flow Curve DC37.5



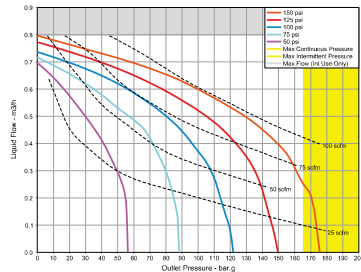
Flow Curve E4 / DE4



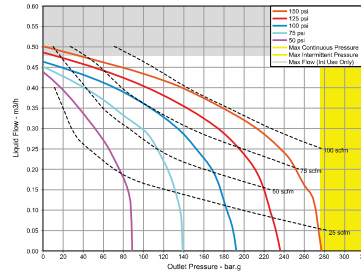
Flow Curve E10 / DE10



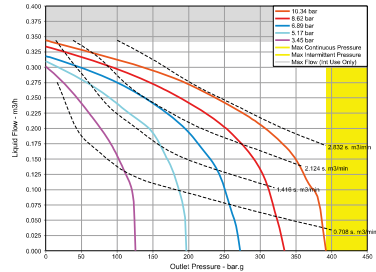
Flow Curve E15 / DE15



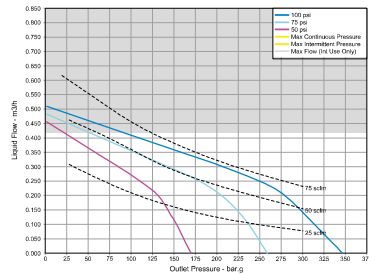
Flow Curve E25 / DE25



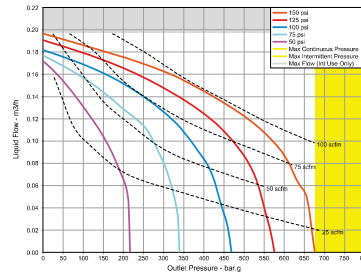
Flow Curve E35 / DE35



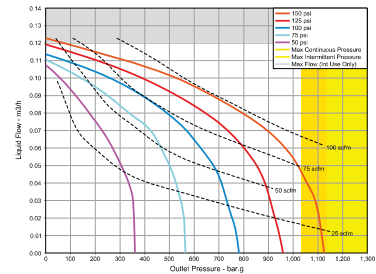
Flow Curve DE50DL



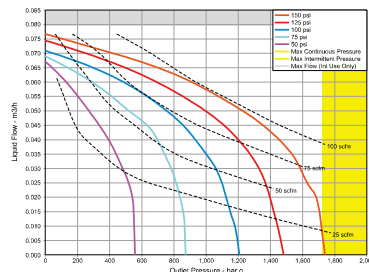
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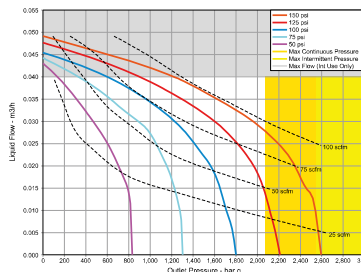
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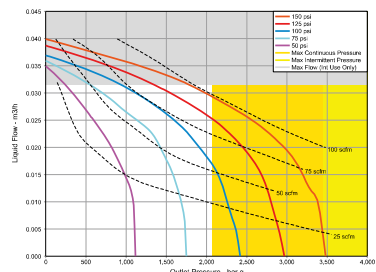
Flow Curve E150 / DE150



Flow Curve E225 / DE225

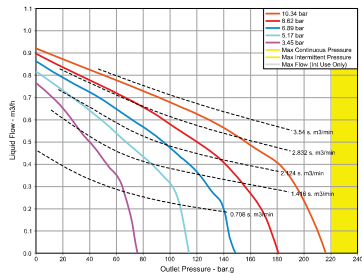


Flow Curve E300 / DE300

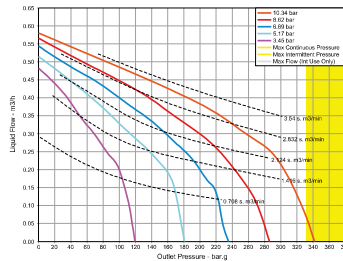


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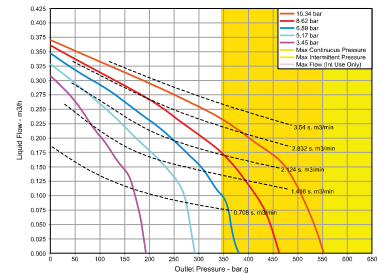
Flow Curve E22 / DE22



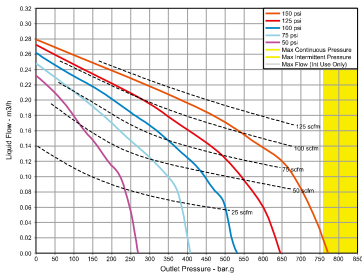
Flow Curve E32 / DE32



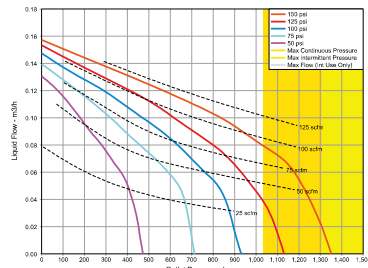
Flow Curve E52 / DE52



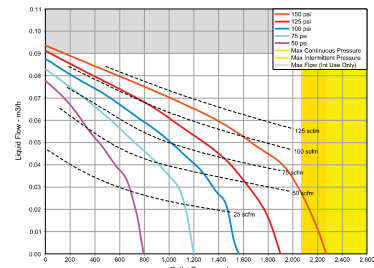
Flow Curve E72 / DE72



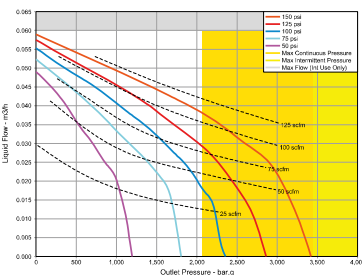
Flow Curve E122 / DE122



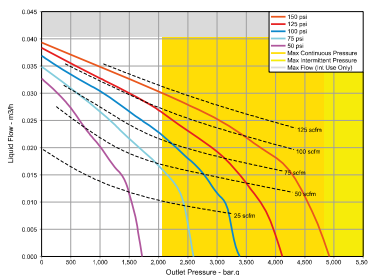
Flow Curve E202 / DE202



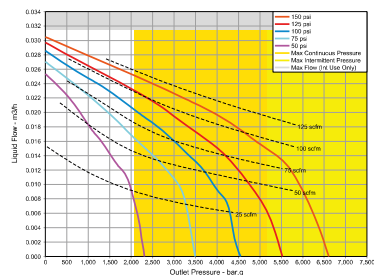
Flow Curve E302 / DE302



Flow Curve E452 / DE452

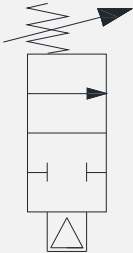


Flow Curve E602 / DE602



Guidelines for 24/7 Continuous Duty Applications for Maximizing Seal Life Performance

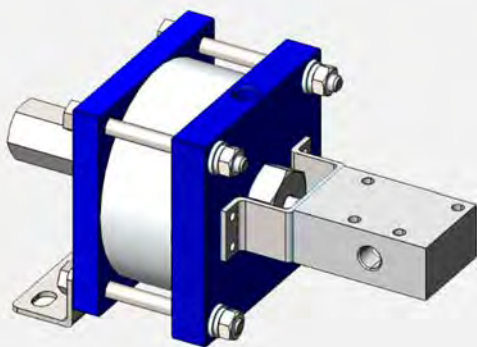
Pump Series	Maximum Cycles per Minute
DC	80cpm
E/DE	60cpm



压力开关-弹簧调节

型号 Model	压力范围 psi	外形尺寸 mm	压力接口 (Port)	控制接口 (port)
2APV41-0	100-400	192x45x35	FNPT1/4	RC1/8
2APV41-1	300-800	192x45x35	FNPT1/4	RC1/8
2APV41-2	600-2,000	192x45x35	FNPT1/4	RC1/8
10APV41-0	1,800-4,000	192x45x35	FNPT1/4	RC1/8
10APV41-1	3,500-6,500	192x45x35	FNPT1/4	RC1/8
10APV41-2	6,000-1,1500	192x45x35	FNPT1/4	RC1/8

- 1、弹簧调节
- 2、工作温度：-10~60℃
- 3、控制气压：<0.8MPa
- 4、开关回差：约最高压力值的10%



压力开关-气控

型号 Model	压力范围 psi	比例 (Ratio)	压力接口 (Port)	控制接口 (port)
15APV-150	2,200-15,000	150:1	9/16-18UNF (1/4HP)	RC1/8
25APV-250	3,500-25,000	255:1	9/16-18UNF (1/4HP)	RC1/8

- 1、气压比例控制
- 2、工作温度：-10~60℃
- 3、控制气压：<0.8MPa
- 4、开关回差：约最高压力值的5~10%



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