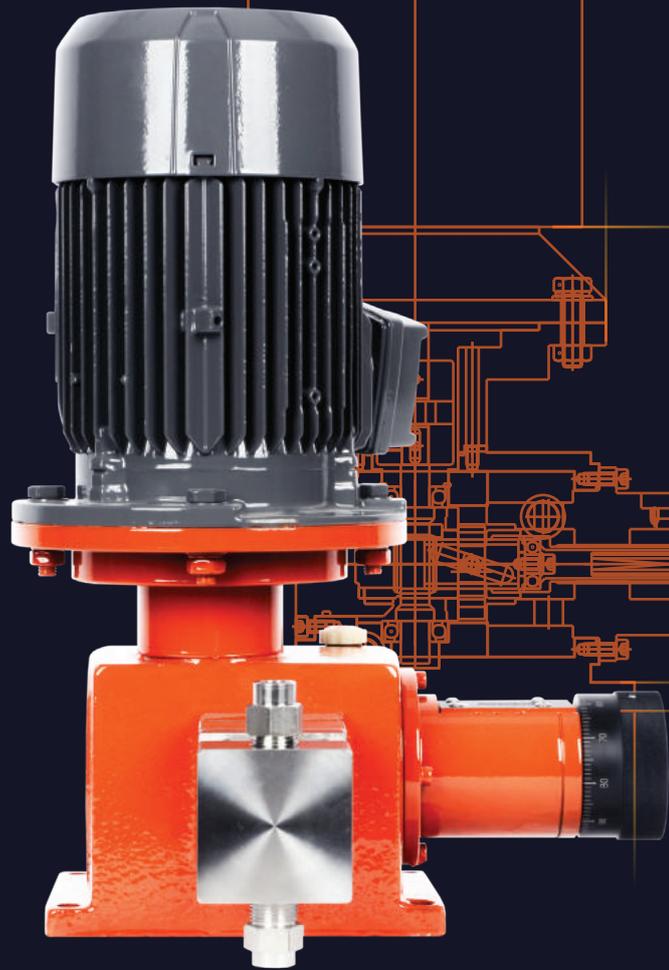


- GAS BOOSTERS
- LIQUID PUMPS
- METERING PUMPS
- PACKAGED SYSTEMS



The leading manufacturer in High pressure pump

PUMSTER

INDUSTRY LEADER IN PUMP & BOOSTER



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METERING PUMPS

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- METERING PUMP / PSMV
 - METERING PUMP / PSMH
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PACKAGED SYSTEMS

P.17-19

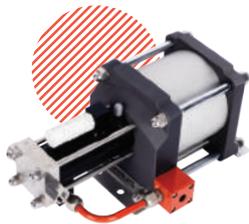
- LIQUID PUMP SYSTEM - LPS
- GAS BOOSTER SYSTEM - GBS

The leading manufacturer in High pressure pump

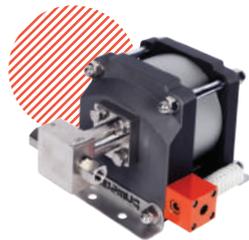
The specialized company in Air driven gas boosters, Air driven liquid pumps, Metering pumps and Packaged systems, etc.,

We will be your reliable partner based on Pumster's technical expertise in Gas & Liquid pump industry. We are continually developing customer oriented products and will continue to meet more demanding requirements.

PUMSTER PRODUCT



GAS BOOSTER



LIQUID PUMP



METERING PUMP



PACKAGED SYSTEM

PUMSTER FEATURE



Easy access to maintain



Longer durability



Technical support



Dynamic Design

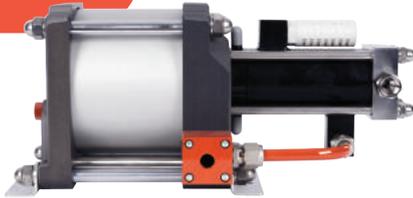


Pumster is the subsidiary of  **ILSHIN AUTOCLAVE**

Ilshin autoclave is the specialized company for high pressure & temperature application equipment.

Gas boosters

GB-SS



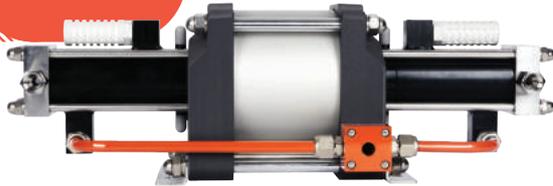
Single stage & Single driven

GB-SD



Single stage & Double driven

GB-DS



Double stage & Single driven

GB-DD



Double stage & Double driven

● DRIVEN PRINCIPLES



Pumster Air driven Gas Boosters are more efficient in energy and are suitable for explosion proof area.

They are worked by principle of Pascal's law.

Large surfaces are charged with a low pressure (Air piston) and generate high pressure (High pressure piston) over the small surfaces. The transmission ratio is based on the piston area of the large air piston in relation to that of the smaller high pressure piston.

● FEATURES OF PRODUCTS



Applied in industrial and special gas; Argon, Helium, Nitrogen, Oxygen, etc.,



Stay cool when working hard due to a cooling jacket



No requirement for electricity



Oil free; no oil replacement & contamination



Suitable for explosion proof area



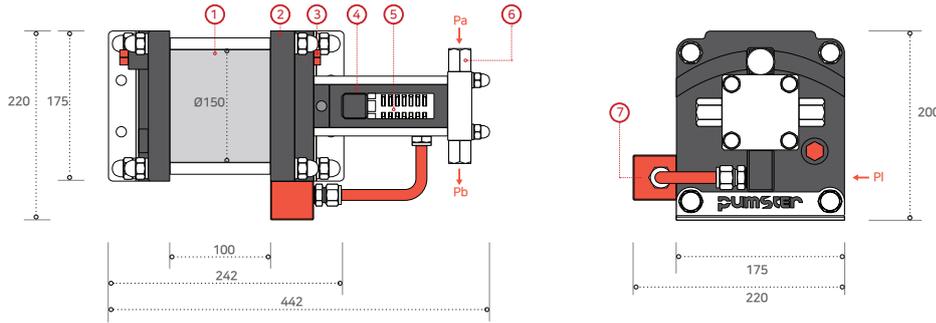
Available as a complete packaged system

Gas boosters

GB-SS series

Single stage & Single driven

Specification



Type : GB-SS type
 PI – Air driven Inlet
 Pa – Inlet
 Pb – Outlet

- Part name
- ① Driven section
 - ② Flange
 - ③ Poppet valve
 - ④ High pressure cylinder
 - ⑤ Silencer
 - ⑥ Check valve
 - ⑦ Spool valve

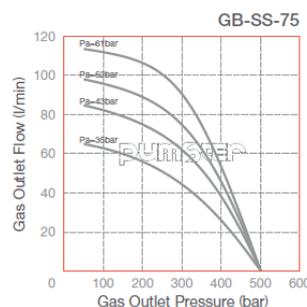
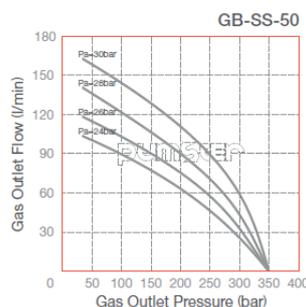
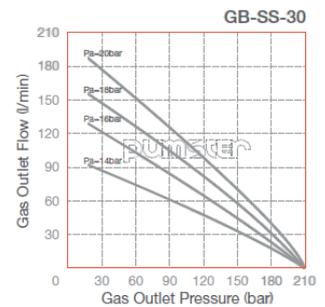
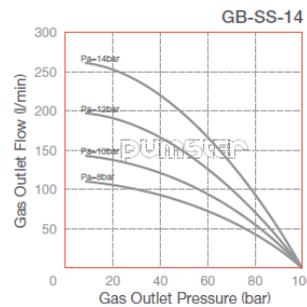
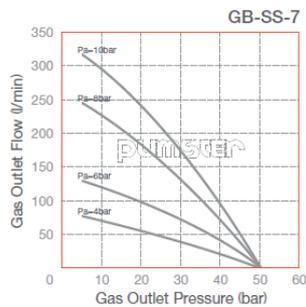
*Product specification below is standard information and it may different depending on purpose.

Model	GB-SS-7	GB-SS-14	GB-SS-30	GB-SS-50	GB-SS-75
Pressure Ratio	1 : 7	1 : 14	1 : 30	1 : 50	1 : 75
Min. Operating Pressure (kg/cm ²)	5	5	5	5	5
Std. operating pressure (kg/cm ²)	7	7	7	7	7
Max. pressure (kg/cm ²)	49	98	210	350	525
Inlet pressure (kg/cm ²)	4	7	14	21	35
Inlet Port (inch)	1/2"PT	1/2"PT	9/16"18UNF	9/16"18UNF	9/16"18UNF
Outlet Port (inch)	1/2"PT	1/2"PT	9/16"18UNF	9/16"18UNF	9/16"18UNF
Flow rate (nl/min)	555	600	564	494	370
Weight (kg)	16	16	17	18	18



SS series

Performance Graph



Theoretical charging time formula

Reservoir tank x atm = TAL
 TAL x Flow rate/sec=Sec

* Outlet pressure (Pb) = I-PI
 (Outlet Pressure = Compression ratio · Air drive)

Precautions for inlet liquids pressure

- Many variables when increasing pressure under high pressure
- Driven part - driven air pressure, flow rate
- High pressure part - inflow air pressure, feed rate
- Charging flow rate means average flow rate, which could be different on purpose.

Gas boosters

GB-SD series

Single stage & Double driven

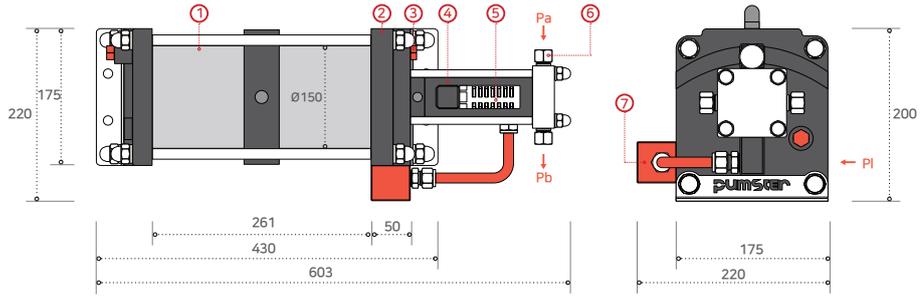
Specification



Type : GB-SD type
 PI – Air driven Inlet
 Pa – Inlet
 Pb – Outlet

Part name

- ① Driven section
- ② Flange
- ③ Poppet valve
- ④ High pressure cylinder
- ⑤ Silencer
- ⑥ Check valve
- ⑦ Spool valve



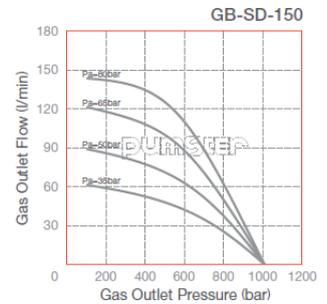
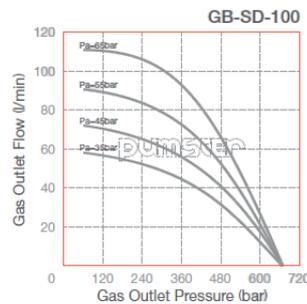
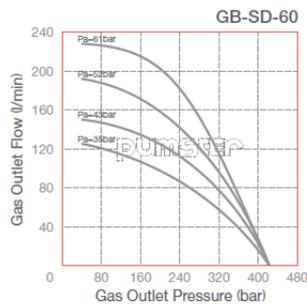
*Product specification below is standard information and it may differ depending on purpose.

Model	GB-SD-60	GB-SD-100	GB-SD-160
Pressure Ratio	1 : 60	1 : 100	1 : 150
Min. Operating Pressure (kg/cm ²)	5	5	5
Std. operating pressure (kg/cm ²)	7	7	7
Max. pressure (kg/cm ²)	420	700	1,050
Inlet pressure (kg/cm ²)	28	31	35
Inlet Port (inch)	9/16"18UNF	9/16"18UNF	9/16"18UNF
Outlet Port (inch)	9/16"18UNF	9/16"18UNF	9/16"18UNF
Flow rate (nl/min)	635	370	530
Weight (kg)	20	20	21



SD series

Performance Graph



Theoretical charging time formula

Reservoir tank x atm = TAL
 TAL x Flow rate/sec=Sec

* Outlet pressure (Pb) = I-PI
 (Outlet Pressure = Compression ratio · Air drive)

Precautions for inlet liquids pressure

- Many variables when increasing pressure under high pressure
- Driven part – driven air pressure, flow rate
- High pressure part – inflow air pressure, feed rate
- Charging flow rate means average flow rate, which could be different on purpose.

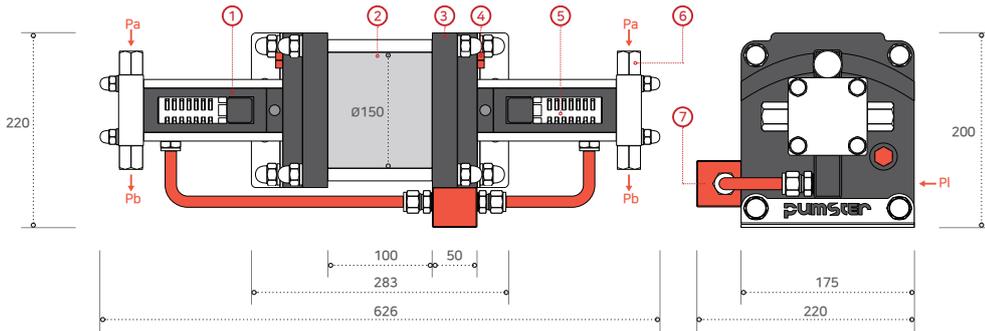


Gas boosters

GB-DS series

Double stage & Single driven

Specification



Type : GB-DS type
 PI – Air driven Inlet
 Pa – Inlet
 Pb – Outlet

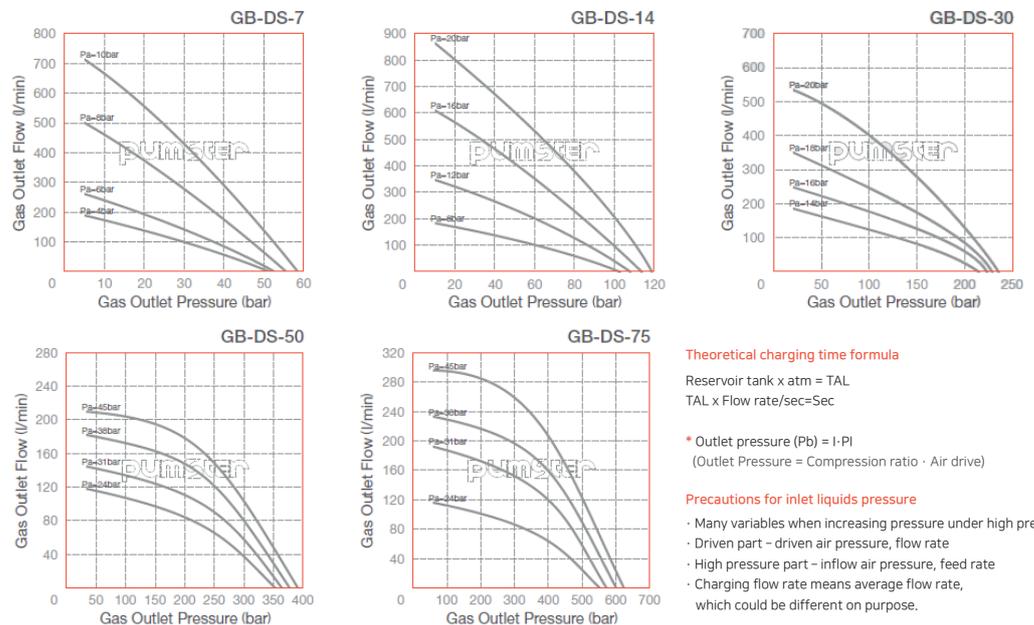
- Part name
- ① High pressure cylinder
 - ② Driven section
 - ③ Flange
 - ④ Poppet valve
 - ⑤ Silencer
 - ⑥ Check valve
 - ⑦ Spool valve

*Product specification below is standard information and it may different depending on purpose.

Model	GB-DS-7	GB-DS-14	GB-DS-30	GB-DS-50	GB-DS-75
Pressure Ratio	1 : 7	1 : 14	1 : 30	1 : 50	1 : 75
Min. Operating Pressure (kg/cm ²)	5	5	5	5	5
Std. operating pressure (kg/cm ²)	7	7	7	7	7
Max. pressure (kg/cm ²)	49	98	210	350	525
Inlet pressure (kg/cm ²)	4	7	14	21	35
Inlet Port (inch)	1/2"PT	1/2"PT	9/16"18UNF	9/16"18UNF	9/16"18UNF
Outlet Port (inch)	1/2"PT	1/2"PT	9/16"18UNF	9/16"18UNF	9/16"18UNF
Flow rate (nl/min)	3,180	4,230	2,470	1,130	1,300
Weight (kg)	19	19	20	21	21



DS series
 Performance
 Graph



Theoretical charging time formula

Reservoir tank x atm = TAL
 TAL x Flow rate/sec=Sec

* Outlet pressure (Pb) = I-PI
 (Outlet Pressure = Compression ratio · Air drive)

Precautions for inlet liquids pressure

- Many variables when increasing pressure under high pressure
- Driven part - driven air pressure, flow rate
- High pressure part - inflow air pressure, feed rate
- Charging flow rate means average flow rate, which could be different on purpose.

Gas boosters

GB-DD series

Double stage & Double driven

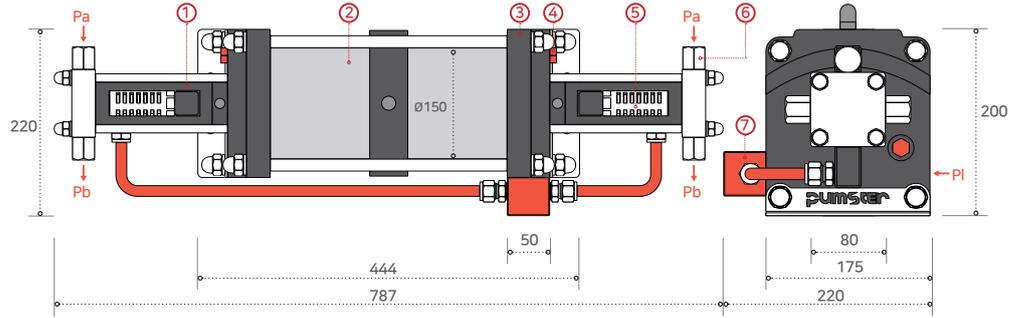
Specification



Type : GB-DD type
 PI – Air driven Inlet
 Pa – Inlet
 Pb – Outlet

Part name

- ① High pressure cylinder
- ② Driven section
- ③ Flange
- ④ Poppet valve
- ⑤ Silencer
- ⑥ Check valve
- ⑦ Spool valve



*Product specification below is standard information and it may different depending on purpose.

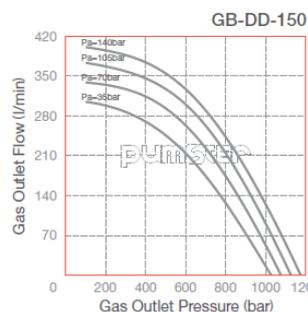
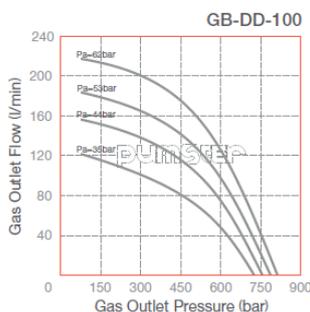
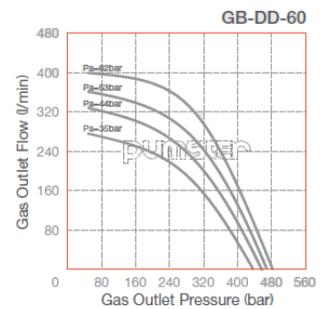
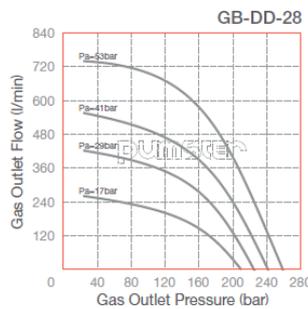
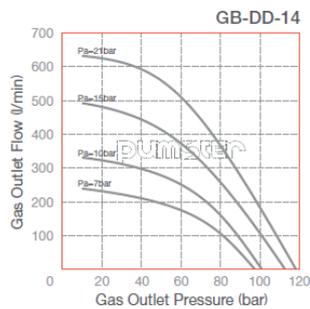
Model	GB-DD-14	GB-DD-28	GB-DD-60	GB-DD-100	GB-DD-150
Pressure Ratio	1 : 14	1 : 28	1 : 60	1 : 100	1 : 150
Min. Operating Pressure (kg/cm ²)	5	5	5	5	5
Std. operating pressure (kg/cm ²)	7	7	7	7	7
Max. pressure (kg/cm ²)	98	196	420	700	1,050
Inlet pressure (kg/cm ²)	7	13	28	31	35
Inlet Port (inch)	1/2"PT	1/2"PT	9/16"18UNF	9/16"18UNF	9/16"18UNF
Outlet Port (inch)	1/2"PT	1/2"PT	9/16"18UNF	9/16"18UNF	9/16"18UNF
Flow rate (nl/min)	6,000	2,790	2,050	1,130	1,410
Weight (kg)	23	23	24	25	25



Gas booster

DD series

Performance Graph



Theoretical charging time formula

Reservoir tank x atm = TAL
 TAL x Flow rate/sec=Sec

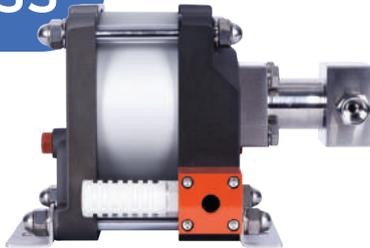
* Outlet pressure (Pb) = I-PI
 (Outlet Pressure = Compression ratio · Air drive)

Precautions for inlet liquids pressure

- Many variables when increasing pressure under high pressure
- Driven part - driven air pressure, flow rate
- High pressure part - inflow air pressure, feed rate
- Charging flow rate means average flow rate, which could be different on purpose.

Liquid pumps

LSS



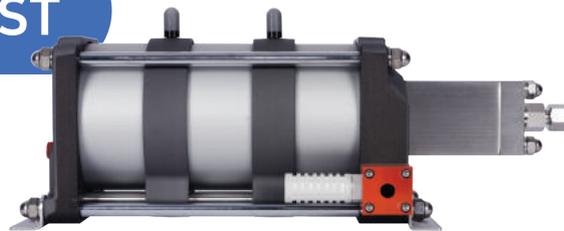
Single stage & Single driven

LSD



Single stage & Double driven

LST



Single stage & Triple driven

• DRIVEN PRINCIPLES

Pumster Air Driven Liquid Pumps are more efficient in energy and are suitable for explosion proof area.

They are worked by principle of Pascal's law.

Large surfaces are charged with a low pressure (Air piston) and generate high pressure (High pressure piston) over the small surfaces. The transmission ratio is based on the piston area of the large air piston in relation to that of the smaller high pressure piston.

• FEATURES OF PRODUCTS



No requirement for electricity



Oil free; no oil replacement & contamination



Suitable for explosion proof area



Available as a complete packaged system



Stay cool when working hard due to a cooling jacket

Liquid pumps

LSS series

Single stage & Single driven

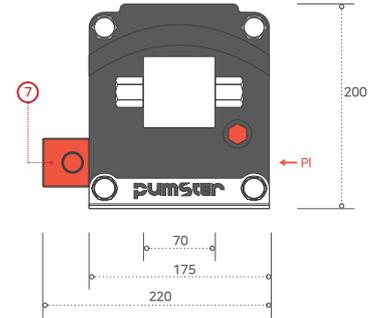
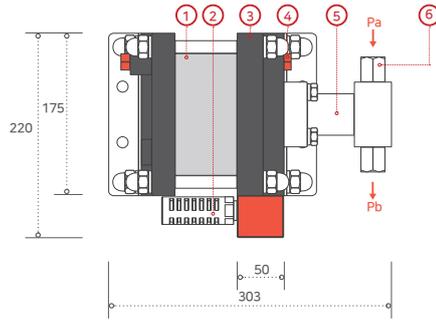
Specification



Type : LSS type
 PI – Air driven Inlet
 Pa – Inlet
 Pb – Outlet

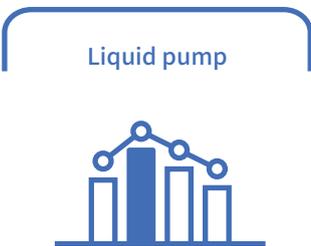
Part name

- ① Driven section
- ② Silencer
- ③ Flange
- ④ Poppet valve
- ⑤ High pressure cylinder
- ⑥ Check valve
- ⑦ Spool valve



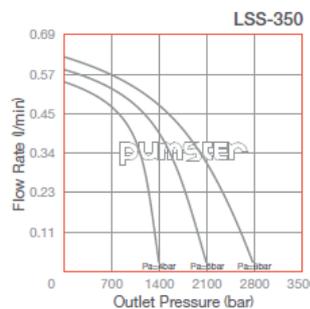
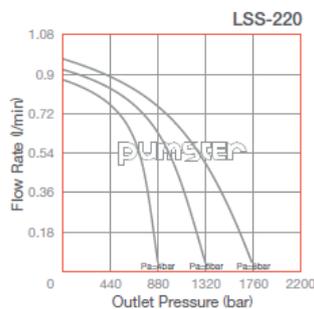
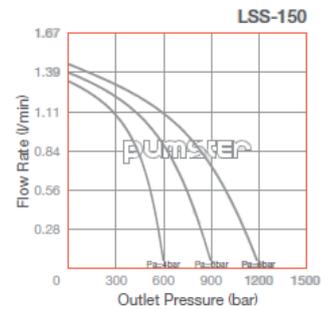
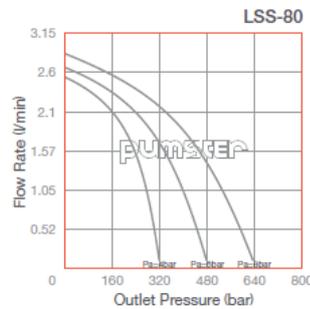
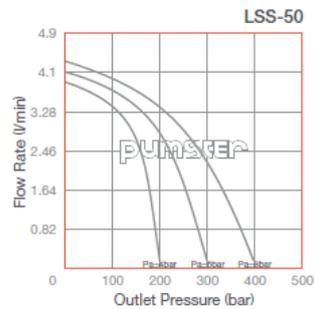
*Product specification below is standard information and it may differ depending on purpose.

Model	LSS-50	LSS-80	LSS-150	LSS-220	LSS-350
Pressure Ratio	1 : 50	1 : 80	1 : 150	1 : 220	1 : 350
Min. Operating Pressure (kg/cm ²)	5	5	5	5	5
Std. operating pressure (kg/cm ²)	7	7	7	7	7
Max. pressure (kg/cm ²)	350	560	1,050	1,540	2,450
Inlet port (inch)	1/2"PT	1/2"PT	1/2"PT	1/2"PT	1/2"PT
Outlet Port (inch)	1/2"PT	9/16"18UNF	9/16"18UNF	9/16"18UNF	9/16"18UNF
Flow rate (nl/min)	1.1	0.7	0.4	0.27	0.18
Weight (kg)	12	12	12	12	12



LSS series

Performance Graph



Theoretical charging time formula

Reservoir tank x atm = TAL
 TAL x Flow rate/sec=Sec

* Outlet pressure (Pb) = I-PI
 (Outlet Pressure = Compression ratio · Air drive)

Precautions for inlet liquids pressure

- Many variables when increasing pressure under high pressure
- Driven part – driven air pressure, flow rate
- High pressure part – inflow air pressure, feed rate
- Charging flow rate means average flow rate, which could be different on purpose.

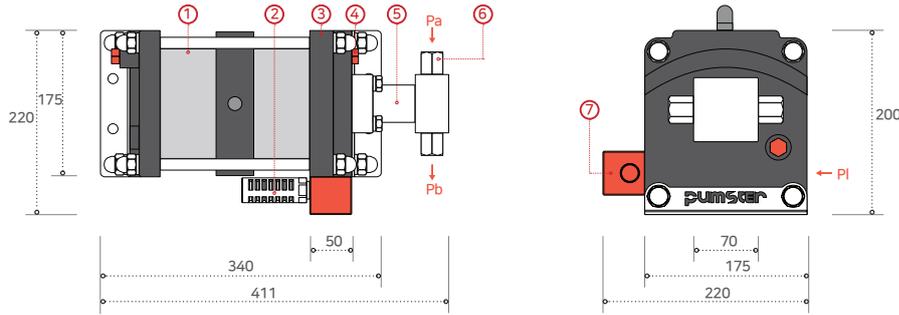
Liquid pumps



LSD series

Single stage & Double driven

Specification

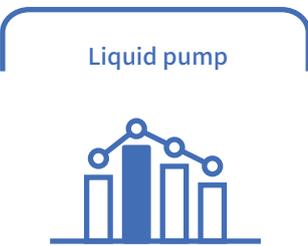


Type : LSD type
 PI – Air driven Inlet
 Pa – Inlet
 Pb – Outlet

- Part name
- ① Driven section
 - ② Silencer
 - ③ Flange
 - ④ Poppet valve
 - ⑤ High pressure cylinder
 - ⑥ Check valve
 - ⑦ Spool valve

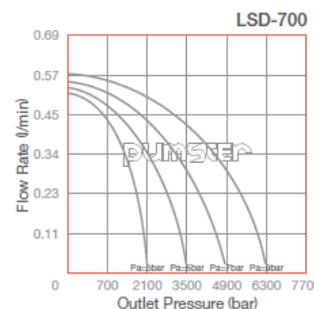
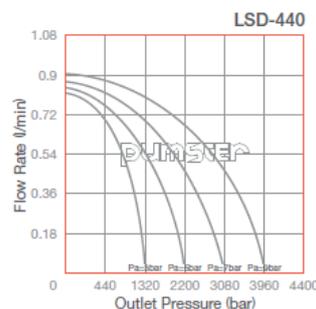
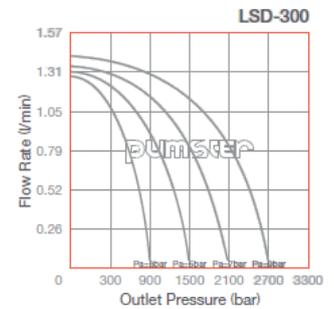
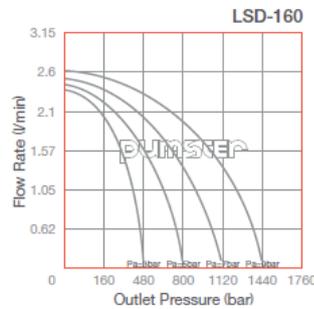
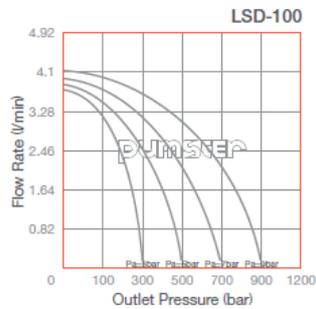
*Product specification below is standard information and it may different depending on purpose.

Model	LSD-100	LSD-160	LSD-300	LSD-440	LSD-700
Pressure Ratio	1 : 100	1 : 160	1 : 300	1 : 440	1 : 700
Min. Operating Pressure (kg/cm ²)	5	5	5	5	5
Std. operating pressure (kg/cm ²)	7	7	7	7	7
Max. pressure (kg/cm ²)	700	1,120	2,100	3,080	4,900
Inlet port (inch)	1/2"PT	1/2"PT	1/2"PT	1/2"PT	1/2"PT
Outlet Port (inch)	1/2"PT	9/16"18UNF	9/16"18UNF	9/16"18UNF	9/16"18UNF
Flow rate (nl/min)	0.9	0.6	0.3	0.22	0.15
Weight (kg)	17	17	17	17	17



LSD series

Performance Graph



Theoretical charging time formula
 Reservoir tank x atm = TAL
 TAL x Flow rate/sec=Sec

* Outlet pressure (Pb) = I-PI
 (Outlet Pressure = Compression ratio · Air drive)

Precautions for inlet liquids pressure

- Many variables when increasing pressure under high pressure
- Driven part – driven air pressure, flow rate
- High pressure part – inflow air pressure, feed rate
- Charging flow rate means average flow rate, which could be different on purpose.

Liquid pumps

LST series

Single stage & Triple driven

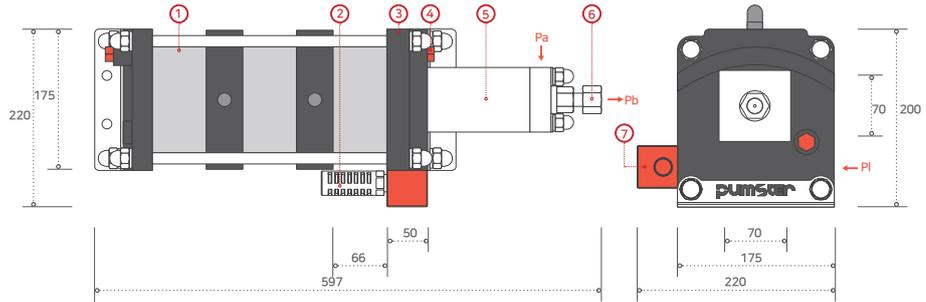
Specification



Type : LST type
 PI - Air driven Inlet
 Pa - Inlet
 Pb - Outlet

Part name

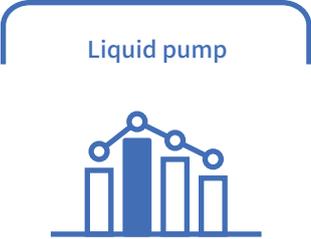
- ① Driven section
- ② Silencer
- ③ Flange
- ④ Poppet valve
- ⑤ High pressure cylinder
- ⑥ Check valve
- ⑦ Spool valve



*Product specification below is standard information and it may different depending on purpose.

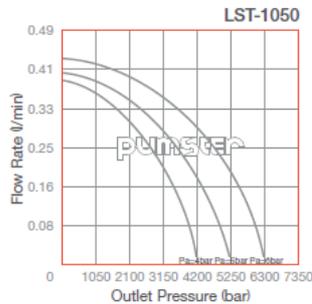
Model
Pressure Ratio
Min. Operating Pressure (kg/cm ²)
Std. operating pressure (kg/cm ²)
Max. pressure (kg/cm ²)
Inlet port (inch)
Outlet Port (inch)
Flow rate (nl/min)
Weight (kg)

LST-1050
1 : 1,050
5
7
7,350
1/2"PT
9/16"18UNF
0.12
25



LST series

Performance Graph



Theoretical charging time formula

Reservoir tank x atm = TAL
 TAL x Flow rate/sec=Sec

* Outlet pressure (Pb) = I-PI
 (Outlet Pressure = Compression ratio · Air drive)

Precautions for inlet liquids pressure

- Many variables when increasing pressure under high pressure
- Driven part - driven air pressure, flow rate
- High pressure part - inflow air pressure, feed rate
- Charging flow rate means average flow rate, which could be different on purpose.

Metering pumps

PSMV



Pumster Metering
Verticality Pump

PSMH



Pumster Metering
Horizontality Pump

PSMVT



Pumster Metering
Verticality with Two head Pump

● DRIVEN PRINCIPLES

Pumster Metering Pumps discharge liquids as users set consistently by each stroke. Additionally, by changing rev of a motor, displacement could be changed by controlling the speed of plunger widely. Flow rate stays constant in spite of resistance pressure of discharge part.

● FEATURES OF PRODUCTS



High pressure volumetric pump with reciprocating action



Provide $\pm 1\%$ accuracy range 30-100% of max. flow rate



Control flow rate during operating or being hold



Longer durability of main seal



Easy to operate & maintain



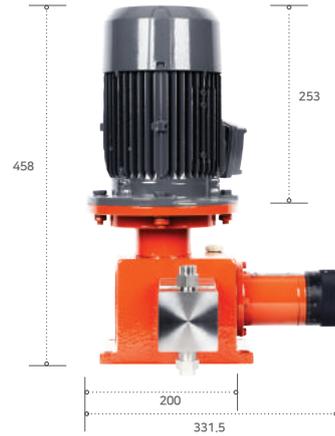
Simply control flow rate with changeable speed of motor

Metering pumps

PSMV series

Pumster Metering Verticality Pump

Specification



※ Product specification below is standard information and it may different depending on purpose.

Model	PSMV-25	PSMV-70	PSMV-110	PSMV-165
Max. discharge pressure (kg/㎠)	1,000	500	350	220
Max. flow rate (cc/min)	25	70	110	165
Inlet port (inch)	1/4" NPT	1/4" NPT	1/4" NPT	1/4" NPT
Outlet port (inch)	1/4" NPT	1/4" NPT	1/4" NPT	1/4" NPT
Motor	Rating	IP55	IP55	IP55
	Temperature (°C)	-20~+40	-20~+40	-20~+40
	Power(kW)	0.75~15	0.75~15	0.75~15
	Voltage(V)	220/380	220/380	220/380

Metering pumps

PSMH series

Pumster Metering Horizontality Pump

Specification



※ Product specification below is standard information and it may different depending on purpose.

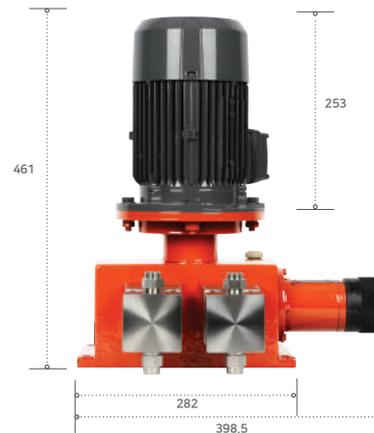
Model	PSMH-25	PSMH-70	PSMH-110	PSMH-165
Max. discharge pressure (kg/㎠)	1,000	500	350	220
Max. flow rate (cc/min)	25	70	110	165
Inlet port (inch)	1/4" NPT	1/4" NPT	1/4" NPT	1/4" NPT
Outlet port (inch)	1/4" NPT	1/4" NPT	1/4" NPT	1/4" NPT
Motor	Rating	IP55	IP55	IP55
	Temperature (°C)	-20~+40	-20~+40	-20~+40
	Power(kW)	0.75~15	0.75~15	0.75~15
	Voltage(V)	220/380	220/380	220/380

Metering pumps

PSMVT series

Pumster Metering Verticality
with Two head Pump

Specification



※ Product specification below is standard information and it may differ depending on purpose.

Model	PSMVT-25	PSMVT-70	PSMVT-110	PSMVT-165
Max. discharge pressure (kg/cm ²)	1,000	500	350	220
Max. flow rate (cc/min)	25	70	110	165
Inlet port (inch)	1/4" NPT	1/4" NPT	1/4" NPT	1/4" NPT
Outlet port (inch)	1/4" NPT	1/4" NPT	1/4" NPT	1/4" NPT
Motor	Rating	IP55	IP55	IP55
	Temperature (°C)	-20~+40	-20~+40	-20~+40
	Power(kW)	0.75~15	0.75~15	0.75~15
	Voltage(V)	220/380	220/380	220/380

Metering pump Detail view



Packaged Systems

LPS



Liquid pump system

GBS



Gas booster system

● DRIVEN PRINCIPLES

Pumster Packaged systems are suitable for pressurizing or maintaining the pressure various industry fields. It is the customer oriented product for testing such as sealing, leaking, repeating, fatigue, external and internal pressure depending on users' purpose.

● FEATURES OF PRODUCTS



Enhanced safety of pressure vessel



Double safety function in case of over pressure



Easy access to operate



Available in various options with gas booster & liquid pump



Available as a custom - made order



Longer durability of main seal



Oil free; no oil replacement & contamination

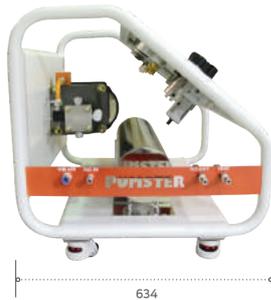


Packaged Systems

LPS

Liquid pump system

Specification



Product type
Pump model
Pressure ratio
Operating pressure (kg/cm ²)
Inlet pressure (kg/cm ²)
Flow rate (nl/min)
Option

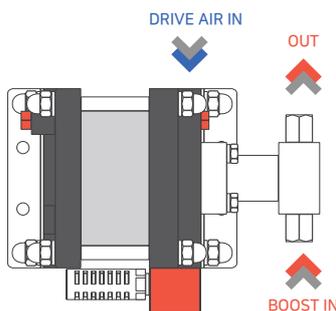
LPS-350
LSS-50 (Single stage & Single driven)
1:50
350
-
1.1
Available in damper, calibration, etc.,

LPS-560
LSS-80 (Single stage & Single driven)
1:80
560
-
0.7
Available in damper, calibration, etc.,

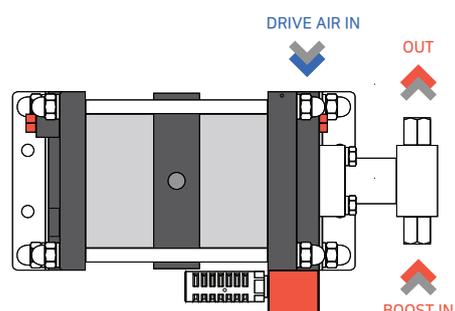
Product type
Pump model
Pressure ratio
Operating pressure (kg/cm ²)
Inlet pressure (kg/cm ²)
Flow rate (nl/min)
Option

LPS-700
LSD100 (Single stage & Double driven)
1:100
1:700
-
0.9
Available in damper, calibration, etc.,

SINGLE STAGE & SINGLE DRIVEN



SINGLE STAGE & DOUBLE DRIVEN



Packaged Systems

GBS

Gas booster system

Specification



Product type
Pump model
Pressure ratio
Operating pressure (kg/cm ²)
Inlet pressure (kg/cm ²)
Flow rate (nl/min)
Option

GBS-SS210
GB-SS-30 (Single stage & Single driven)
1:30
210
14
564
Available in damper, calibration, etc.,

GBS-SS350
GB-SS-50 (Single stage & Single driven)
1:50
350
21
494
Available in damper, calibration, etc.,

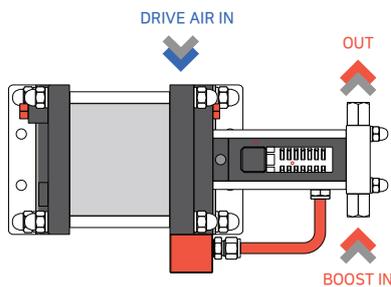
Product type
Pump model
Pressure ratio
Operating pressure (kg/cm ²)
Inlet pressure (kg/cm ²)
Flow rate (nl/min)
Option

GBS-DS210
GB-DS-30 (Double stage & Single driven)
1:30
210
14
2,470
Available in damper, calibration, etc.,

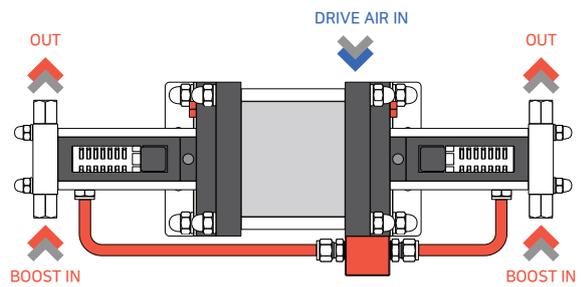
GBS-DS350
GB-DS-50 (Double stage & Single driven)
1:50
350
21
1,130
Available in damper, calibration, etc.,

※ We provide a custom-made order as you requested.

SINGLE STAGE & SINGLE DRIVEN



DOUBLE STAGE & SINGLE DRIVEN



Application

Gas booster



- Pressure testing
(internal & external pressure, leaking, sealing, stress-rupture)
- Control valve actuator
- Operate hydraulic cylinder
- Transfer liquefied gas
- Conjugate film and glass fiber
- Main pump for removing bubble
- Autoclave pressure generator
- Charging oxygen tank for diving

Liquid pump



- Pressure test
(internal & external pressure testing, leaking testing, sealing testing, stress-rupture testing)
- Control valve actuator
- Operate hydraulic cylinder
- Transfer liquid

Metering (Volumetric) pumps



- Inject viscosity liquid quantitatively under high pressure
- Inject chemicals Volumetrically
- Fog system
- Water treatment system

Packaged systems



- Pressure testing
(hydrostatic, leak, air tightness and rupture test)
- Control valve actuator
- Operate hydraulic cylinder
- Transfer liquefied gas
- Conjugate film and glass fiber
- Main pump for removing bubble
- Autoclave pressure generator
- External pressure testing for military & defense
- Charging oxygen tank for diving

A leading company in High pressure pump



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