ITEM **2022**

GAS BOOSTER
LIQUID PUMP
PRESSURE TESTING

PRODUCT
CATALOG

pumster
INDUSTRY LEADER IN PUMP & BOOSTER

CONTENTS:

COMPANY PROFILE

GAS BOOSTERS

LIQUID PUMPS

PRESSURE TESTING

APPLICATION

“TO BE COMMUNICATIVE AND BE CONSIDERABLE TO EACH OTHER

As a subsidiary of Ilshin Autoclave accumulating high tem perature and high pressure related technology and experience for 20 years Pumster is producing Liquid pump, Gas booster, Hydrolic and Pressure system through self drawing, manufac turing, Assembing and After sales service. Therefore, Pumster is Top-class EPC (Engineering, Procurement & Construction) company. Pumster which is providing liquid pump, gas booster and kinds of systems, has accumulated experience and knowhow in related field and take an effort to do initiative role in high pressure pump industry through incessant R&D.

Besides, our all staffs and workers will do our best to become a faithful company so that customers can feel self-confidence on possession of Pumster products.

Thank you!

2020

- Machinery Industrial Core Technology Development Project selected

2019

- Found Corp research institute
- Acquire the certificate of ISO 9001/14001
- Accredited CE certificate for Liquid pumps (LSS-150, LSD-300)
- Developed oxygen gas booster for scuba

2018

- Moved to new company building
- Developed multistage gas booster
- Launch rental pressure testing

2017

- Acquire CE (LSS-150, LSD-300)

2016

- Develop intensifier pump
- Start to launch pressure testing

2015

- Start to have business air driven gas boosters, liquid pumps, metering pumps and pressure testing

2014

- Found Pumster, which is specialized in high pressure pump

2013

- Registerd logo and company name

2010

- Found Hiflux

2001

- Incorporated as Ilshin Autoclave

1993

- Found Ilshin engineering

MAIN PRODUCTS

Pumster has **specialized in high pressure pumps,** which has manufactured air dirven gas boosters and liquid pumps, metering pumps and pressure testing.

Gas Boosters

It is for compressing or increasing gas such industrial gas
(Nitrogen, Carbon dioxde, Helium, Methane).

Liquid Pumps

It is for transferring or increasing liquid.

Pressure testing

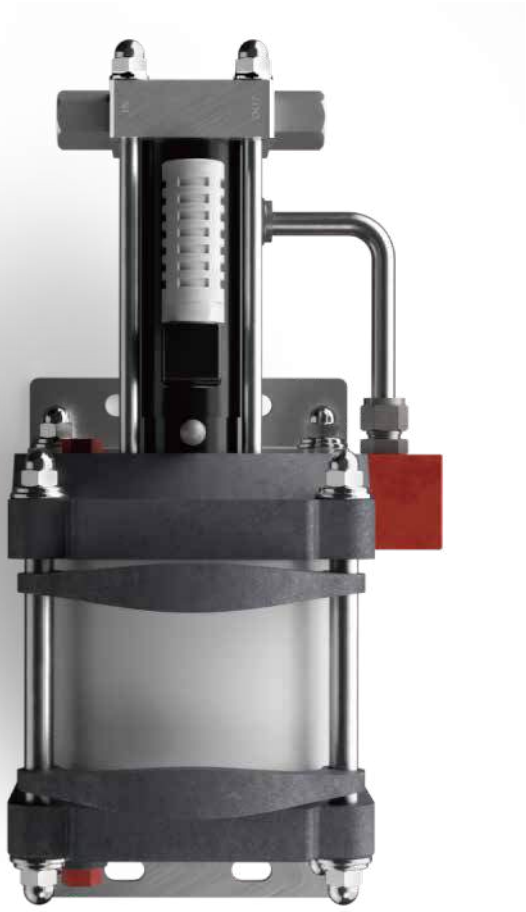
It is order-made products which is suitable for internal/external pressure, leakage, bursting and fatigue by controlling low and high pressure.

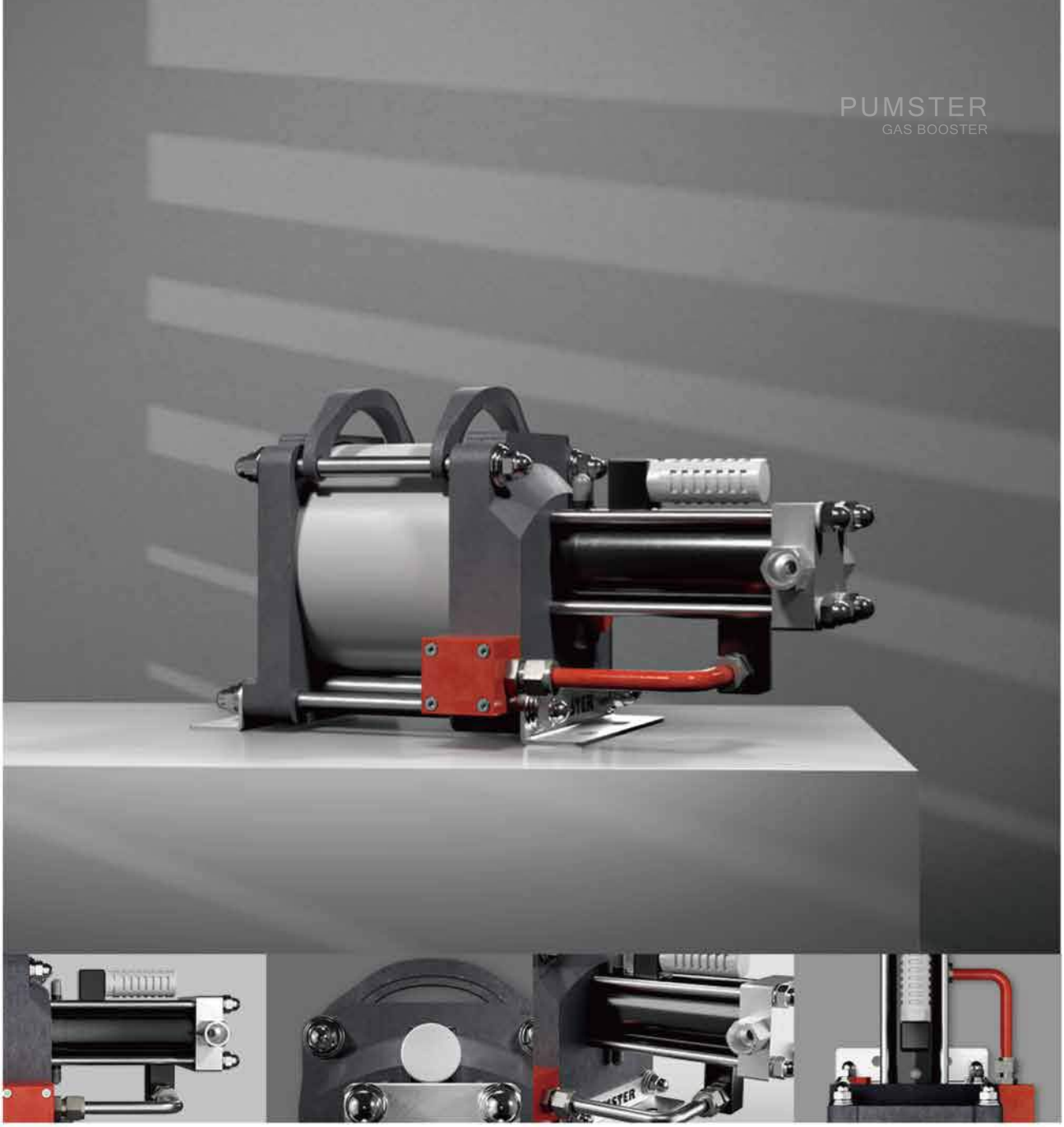
GAS BOOSTER

Pneumatic operation by applying Pascal's Law

Gas booster pressurizing through Cross-section ratio by Pascal's Law, create big energy by converting air pressure to straight reciprocal movement. In this point, **inflowed gas through IN Check valve is compressed and outflowed / pressurized to the Out Check valve.**

- Applied in industrial gas and special gas such as Argon, Helium, Nitrogen, Oxygen etc.,
- Stay cool when working hard due to a cooling jacket.
- No requirement for electricity.
- Oil free, no requirement for oil replacement, contamination.
- Suitable for explosion proof area.
- Diversely compatible for different models accoring to using pressure and flow rate.



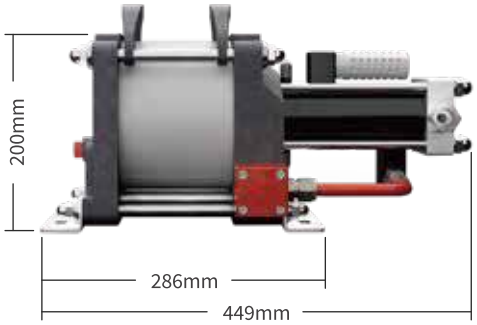


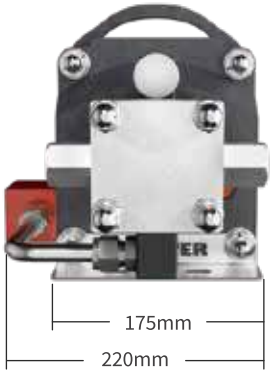
GB-SS SERIES

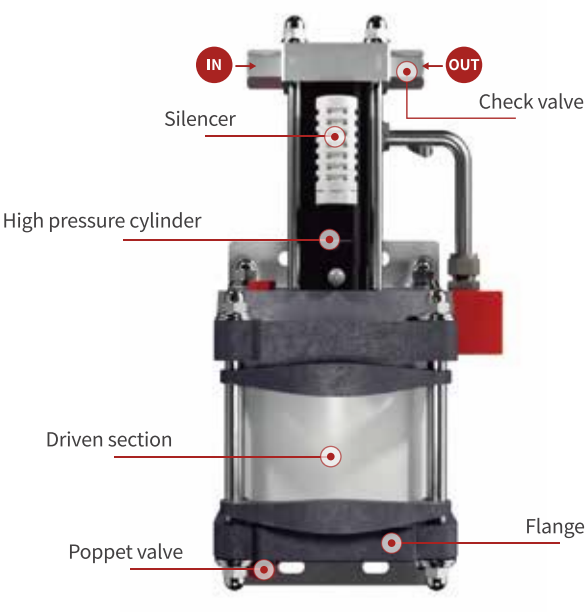
Single stage & Single driven

Gas Booster GB-SS consists of single stage and single driven part.
There are **5 types depending on compression ratio.**
(compression ratio: 1:7 / 14 / 30 / 50 / 75)

GB-SS
SPECIFICATION







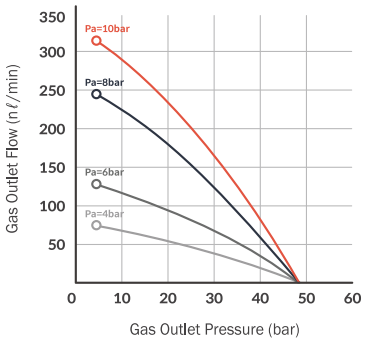
※ Please contact sales staff if you need further assistance.

Model	SS - 7	SS - 14	SS - 30	SS -50	SS - 75
Ratio	1 : 7	1 : 14	1 : 30	1 : 50	1 : 75
Air Drive Pressure (kg / ㎠)	5 ~ 10				
Max. Pressure (kg / ㎠)	49	98	210	350	525
Min.Suction Pressure (kg / ㎠)	4	7	14	21	35
Connections (inlet / outlet)	1/2" PT / 1/2" PT		9/16" 18 UNF / 9/16" 18 UNF		
Weight (kg)	16	16	17	18	18

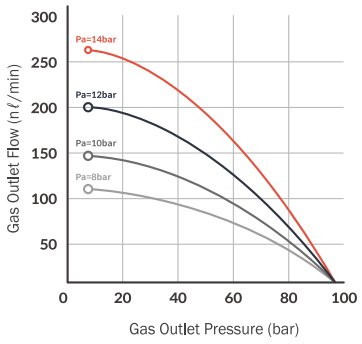
※ M.P(kg/㎠) = Ratio * Air Drive Pressure(kg/㎠) ※ M.P is calculated with 7 bar(standardized air pressure).
※ Weight is approximate value.

GB-SS
PERFORMANCE CURVES

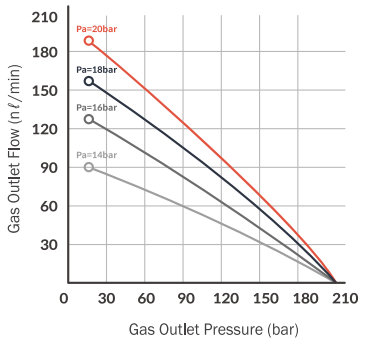
GB-SS-7



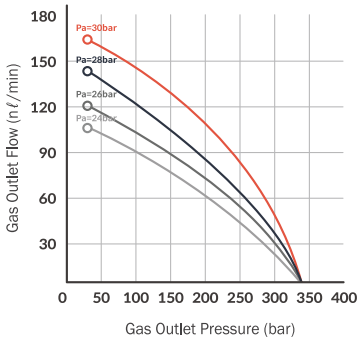
GB-SS-14



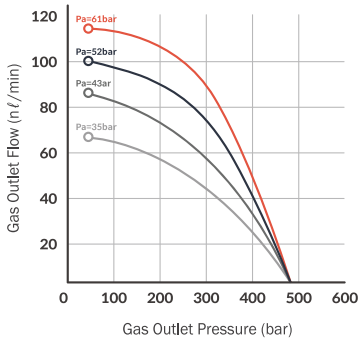
GB-SS-30



GB-SS-50



GB-SS-75



Theoretical charging time formula

Reservoir tank x atm = TAL

TAL /(Flow rate/sec) = total charging time

* Outlet pressure (Pb) = I-PI

(Outlet Pressure = Compression ratio · Air drive)

Precautions

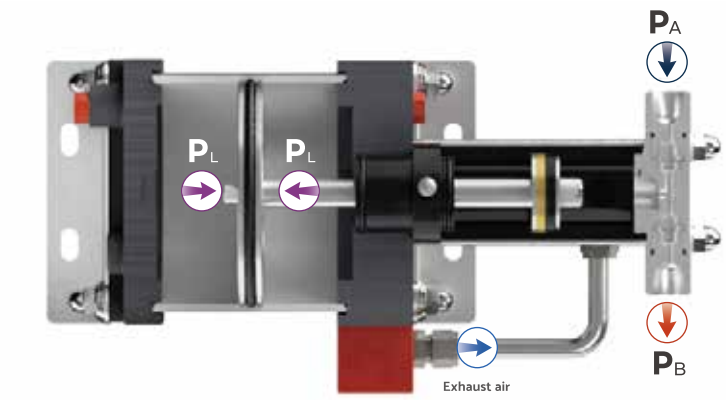
- There are lots of variables when increasing pressure under high pressure.
- Driven part: driven air pressure, flow rate
- High pressure part: inflow gas pressure, feed rate
- Actual flow rate will be different depending on utility.

GB-SS
OVERVIEW

P_A Suction gas

P_B Discharging gas

P_L Air drive

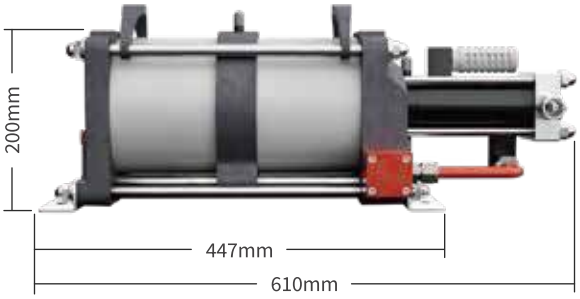


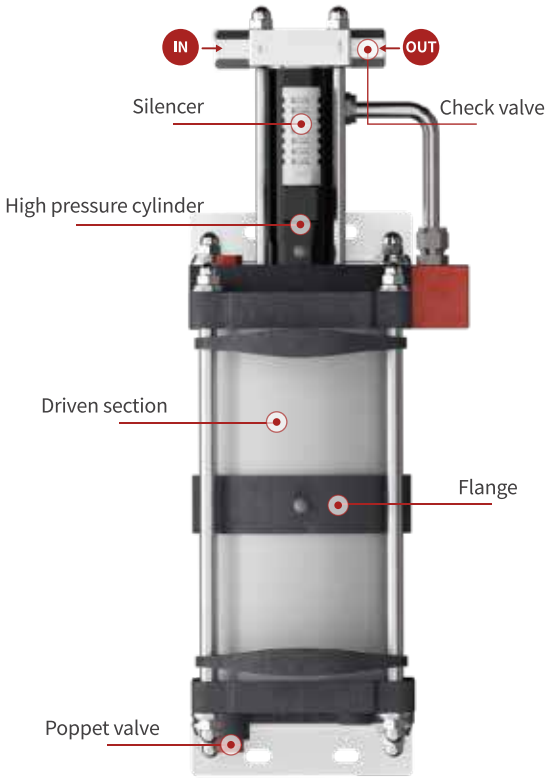
GB-SD SERIES

Single stage & Double driven

Gas Booster GB-SD consists of single stage and double driven part.
There are **3 types depending on compression ratio.**
(compression ratio: 1 : 60 / 100 / 150)

GB-SD
SPECIFICATION





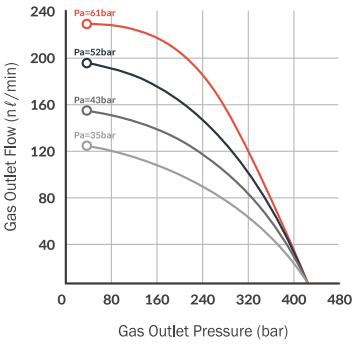
※ Please contact sales staff if you need further assistance.

Model	SD - 60	SD - 100	SD - 150
Ratio	1 : 60	1 : 100	1 : 150
Air Drive Pressure (kg / ㎠)	5 ~ 10		
Max. Pressure (kg / ㎠)	420	700	1,050
Min.Suction Pressure (kg / ㎠)	28	31	35
Connections (inlet / outlet)	9/16" 18 UNF / 9/16" 18 UNF		
Weight (kg)	20	20	21

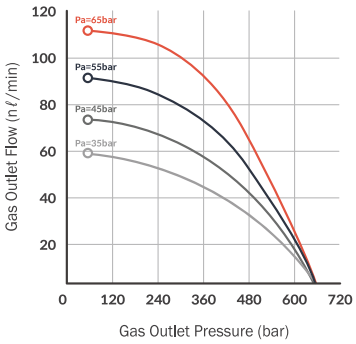
※ M.P(kg/㎠) = Ratio * Air Drive Pressure(kg/㎠) ※ M.P is calculated with 7 bar(standardized air pressure).
※ Weight is approximate value.

GB-SD
PERFORMANCE CURVES

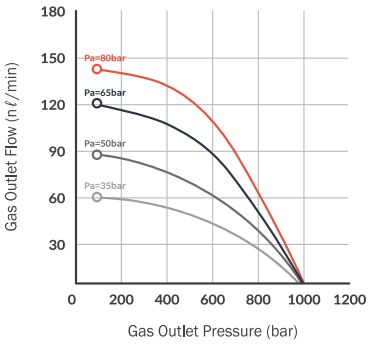
GB-SD-60



GB-SD-100



GB-SD-150



Theoretical charging time formula

Reservoir tank x atm = TAL

TAL /(Flow rate/sec) = total charging time

* Outlet pressure (Pb) = I·PI

(Outlet Pressure = Compression ratio · Air drive)

Precautions

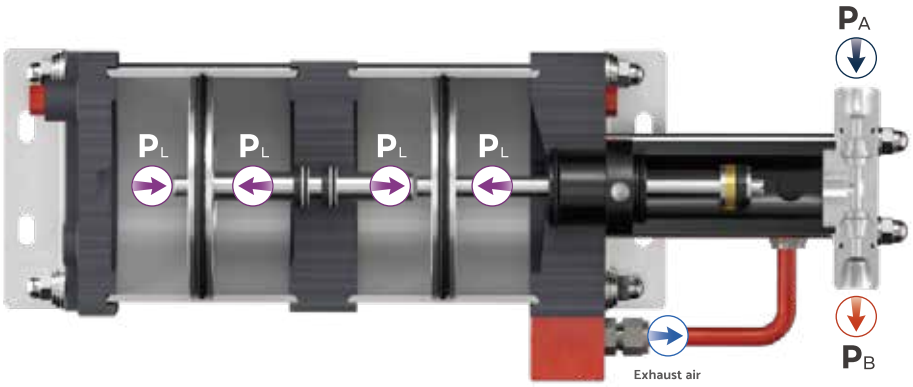
- There are lots of variables when increasing pressure under high pressure.
- Driven part: driven air pressure, flow rate
- High pressure part: inflow gas pressure, feed rate
- Actual flow rate will be different depending on utility.

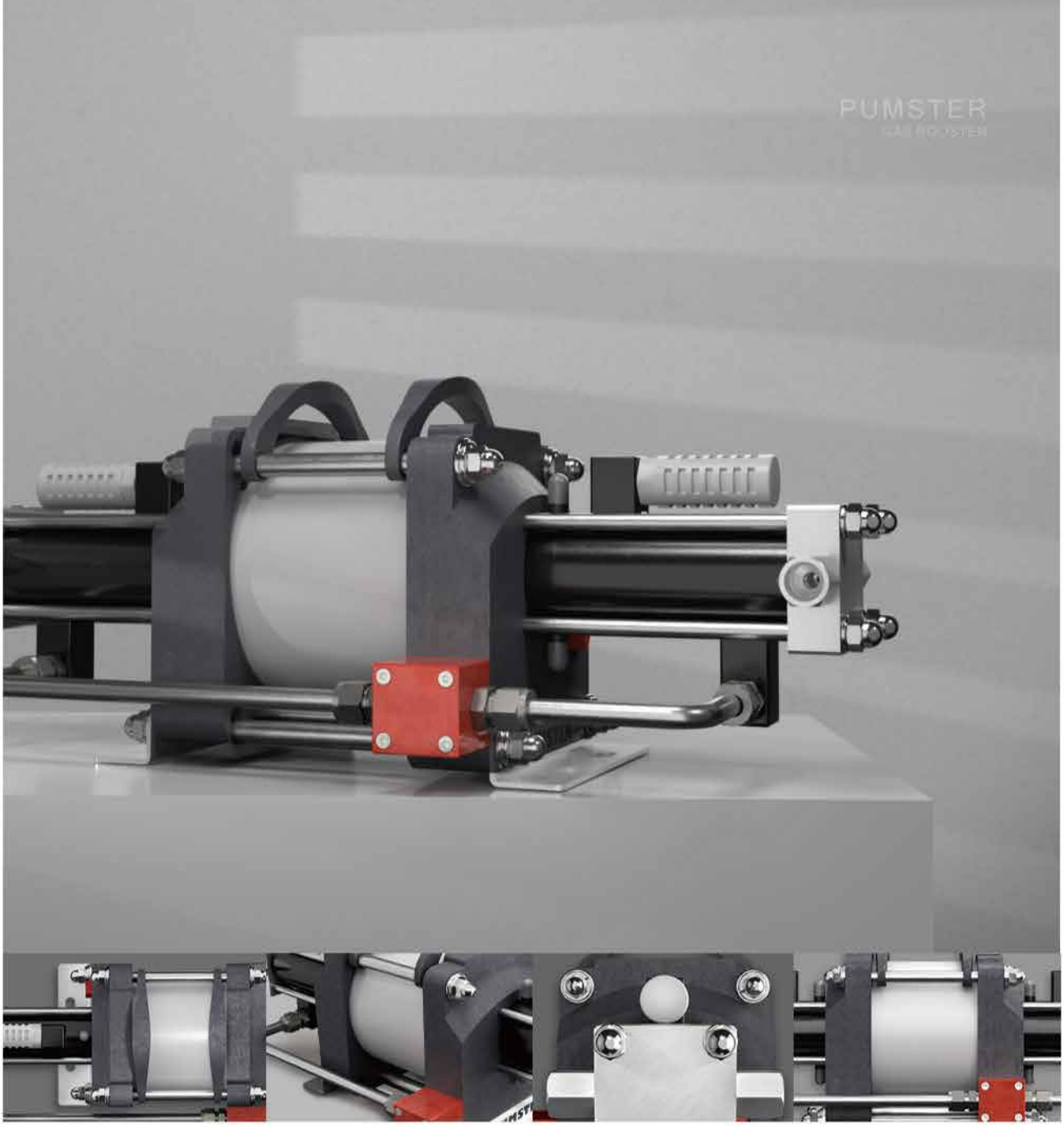
GB-SD
OVERVIEW

P_A Suction gas

P_B Discharging gas

P_L Air drive



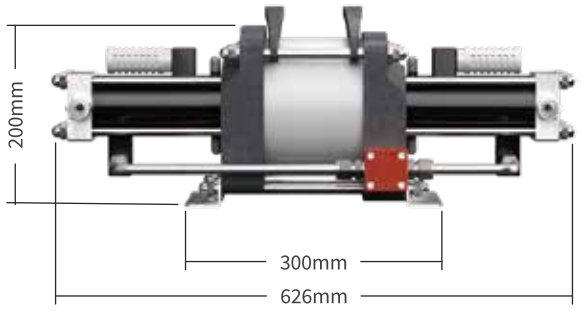


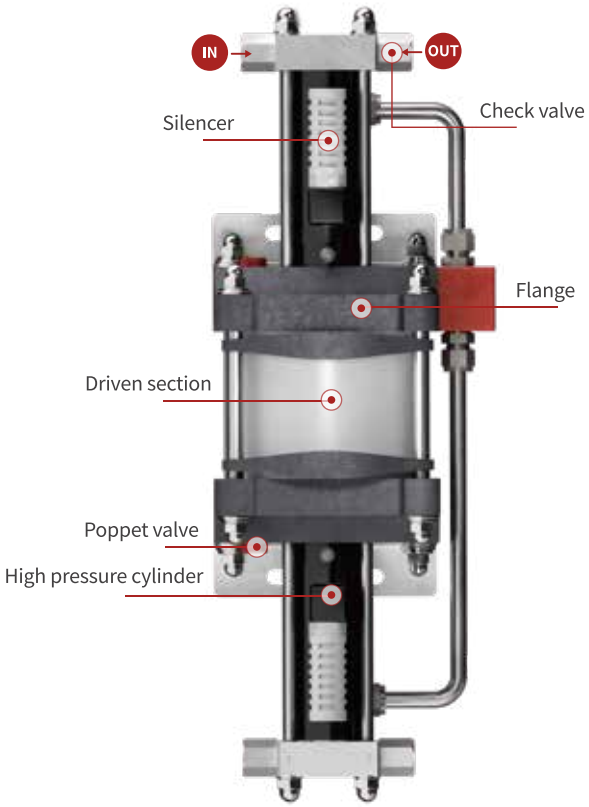
GB-DS SERIES

Double stage & Single driven

Gas Booster GB-DS consists of double stage and single driven part.
There are **5 types depending on compression ratio.**
(compression ratio: 1 : 7 / 14 / 30 / 50 / 75)

GB-DS
SPECIFICATION





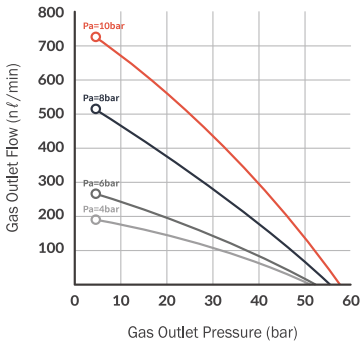
※ Please contact sales staff if you need further assistance.

Model	DS - 7	DS - 14	DS - 30	DS - 50	DS - 75
Ratio	1 : 7	1 : 14	1 : 30	1 : 50	1 : 75
Air Drive Pressure (kg / ㎠)	5 ~ 10				
Max. Pressure (kg / ㎠)	49	98	210	350	525
Min.Suction Pressure (kg / ㎠)	4	7	14	21	35
Connections (inlet / outlet)	1/2" PT / 1/2" PT		9/16" 18 UNF / 9/16" 18 UNF		
Weight (kg)	19	19	20	21	21

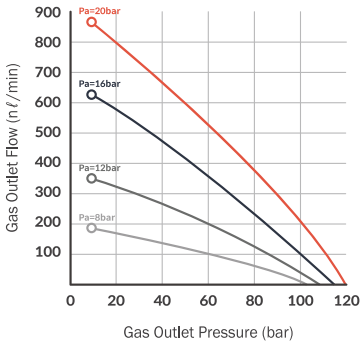
※ M.P(kg/㎠) = Ratio * Air Drive Pressure(kg/㎠) ※ M.P is calculated with 7 bar(standardized air pressure).
※ Weight is approximate value.

GB-DS
PERFORMANCE CURVES

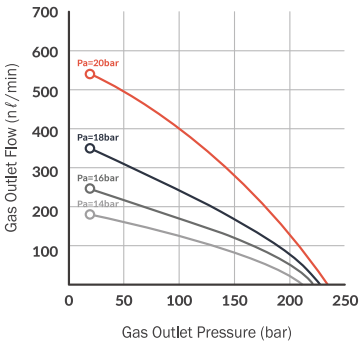
GB-DS-7



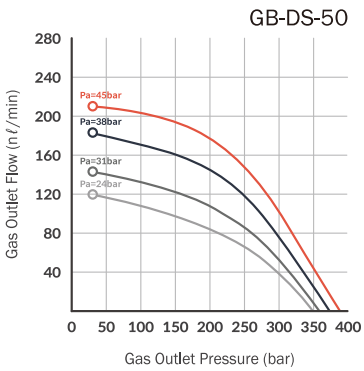
GB-DS-14



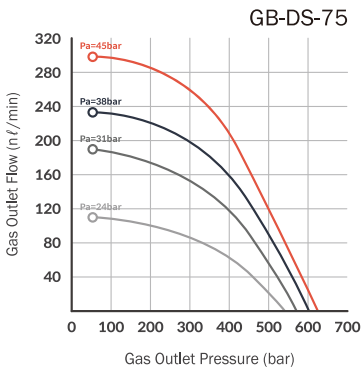
GB-DS-30



GB-DS-50



GB-DS-75



Theoretical charging time formula

Reservoir tank x atm = TAL

TAL /(Flow rate/sec) = total charging time

* Outlet pressure (Pb) = I-PI

(Outlet Pressure = Compression ratio · Air drive)

Precautions

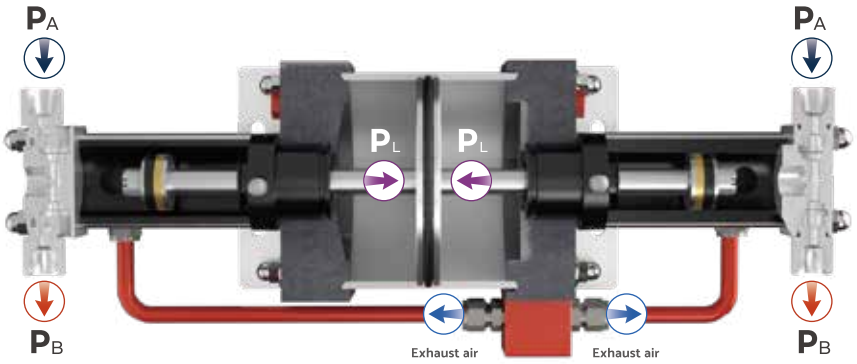
- There are lots of variables when increasing pressure under high pressure.
- Driven part: driven air pressure, flow rate
- High pressure part: inflow gas pressure, feed rate
- Actual flow rate will be different depending on utility.

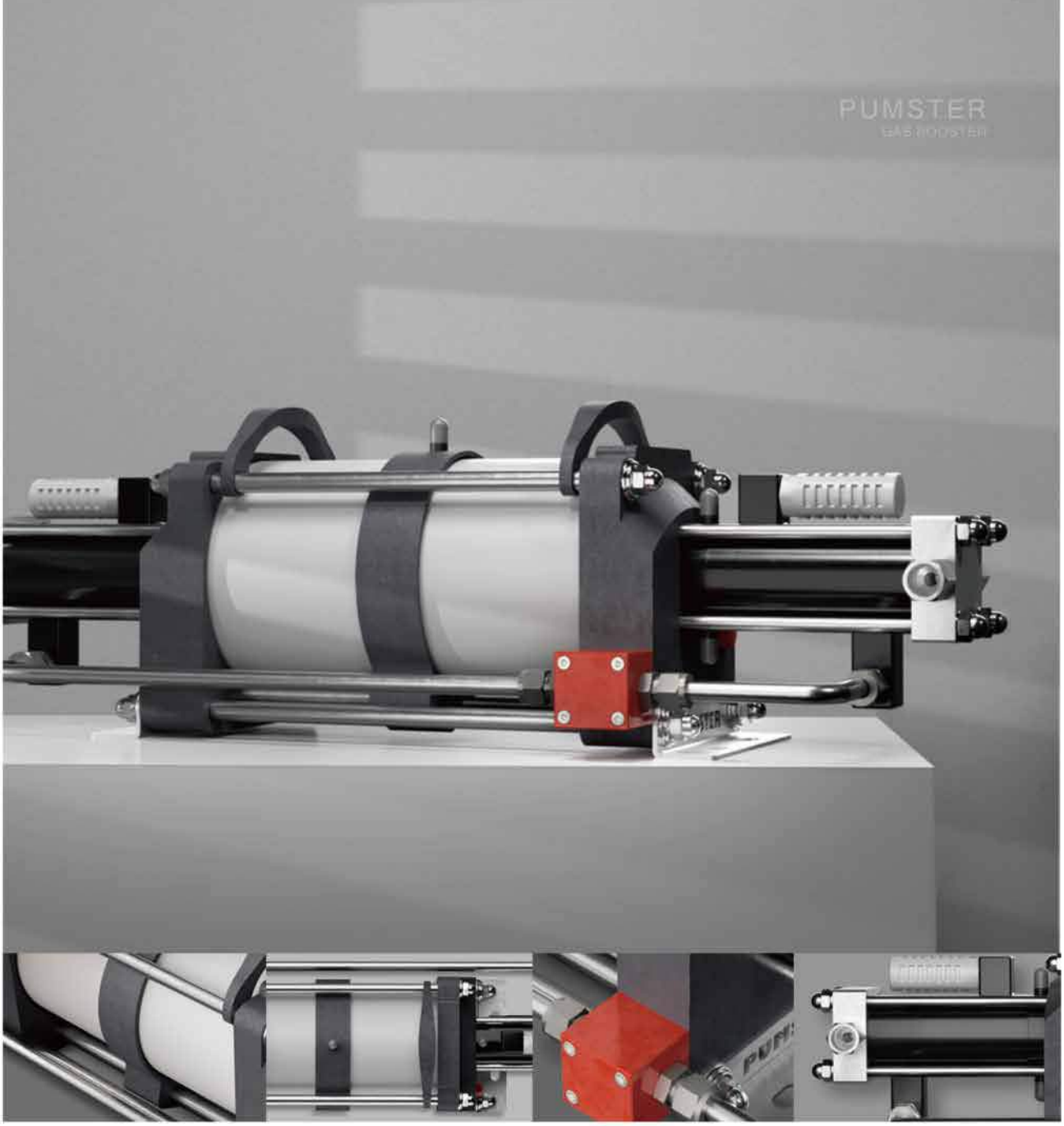
GB-DS
OVERVIEW

P_A Suction gas

P_B Discharging gas

P_L Air drive



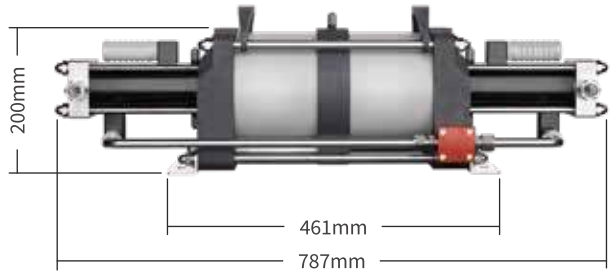


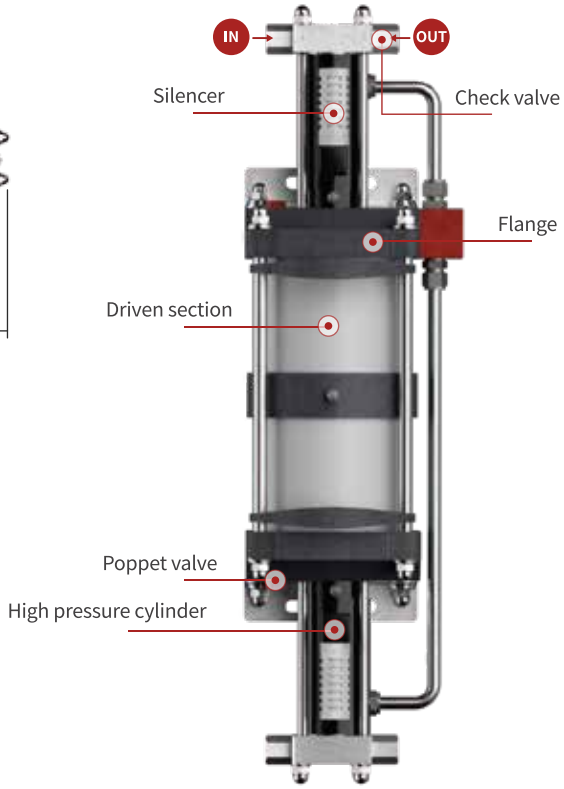
GB-DD SERIES

Double stage & Double driven

Gas Booster GB-DD consists of double stage and double driven part.
There are **5 types depending on compression ratio.**
(compression ratio: 1 : 14 / 28 / 60 / 100 / 150)

GB-DD
SPECIFICATION



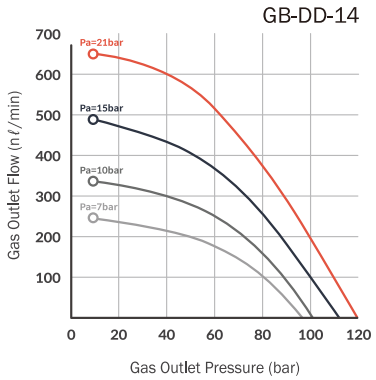


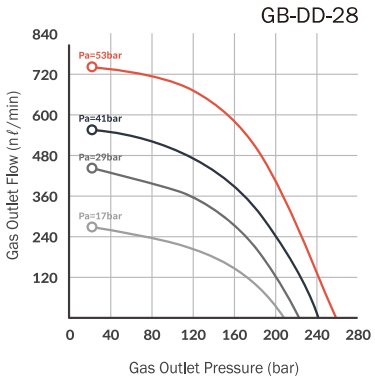
※ Please contact sales staff if you need further assistance.

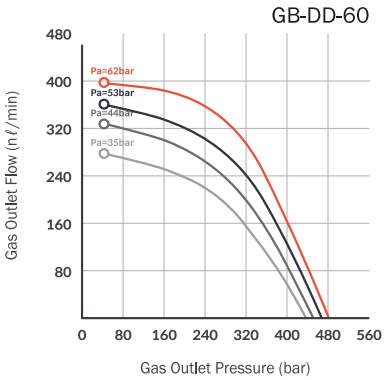
Model	DD - 14	DD - 28	DD - 60	DD - 100	DD - 150
Ratio	1 : 14	1 : 28	1 : 60	1 : 100	1 : 150
Air Drive Pressure (kg / ㎠)	5 ~ 10				
Max. Pressure (kg / ㎠)	98	196	420	700	1,050
Min.Suction Pressure (kg / ㎠)	7	13	28	31	35
Connections (inlet / outlet)	1/2" PT / 1/2" PT		9/16" 18 UNF / 9/16" 18 UNF		
Weight (kg)	23	23	24	25	25

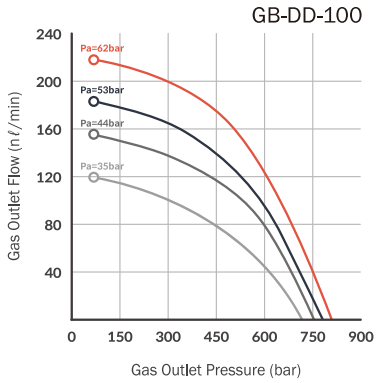
※ M.P(kg/㎠) = Ratio * Air Drive Pressure(kg/㎠) ※ M.P is calculated with 7 bar(standardized air pressure).
※ Weight is approximate value.

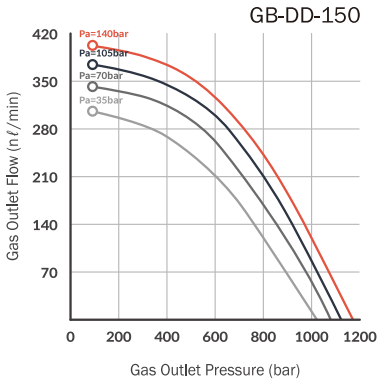
GB-DD
PERFORMANCE CURVES











Theoretical charging time formula

Reservoir tank x atm = TAL

TAL /(Flow rate/sec) = total charging time

* Outlet pressure (Pb) = I-PI

(Outlet Pressure = Compression ratio · Air drive)

Precautions

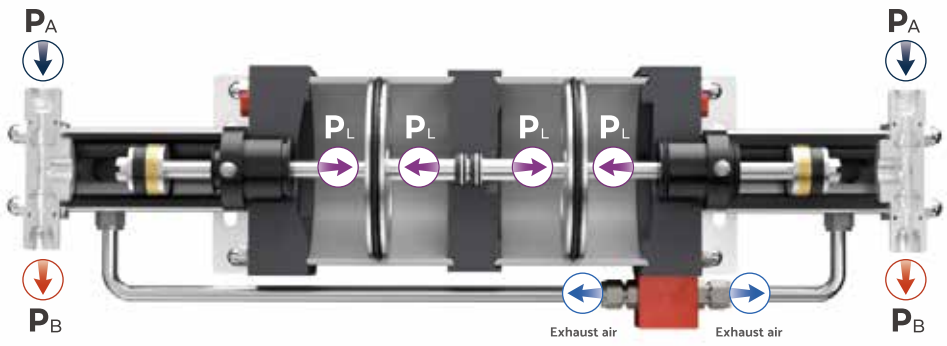
- There are lots of variables when increasing pressure under high pressure.
- Driven part: driven air pressure, flow rate
- High pressure part: inflow gas pressure, feed rate
- Actual flow rate will be different depending on utility.

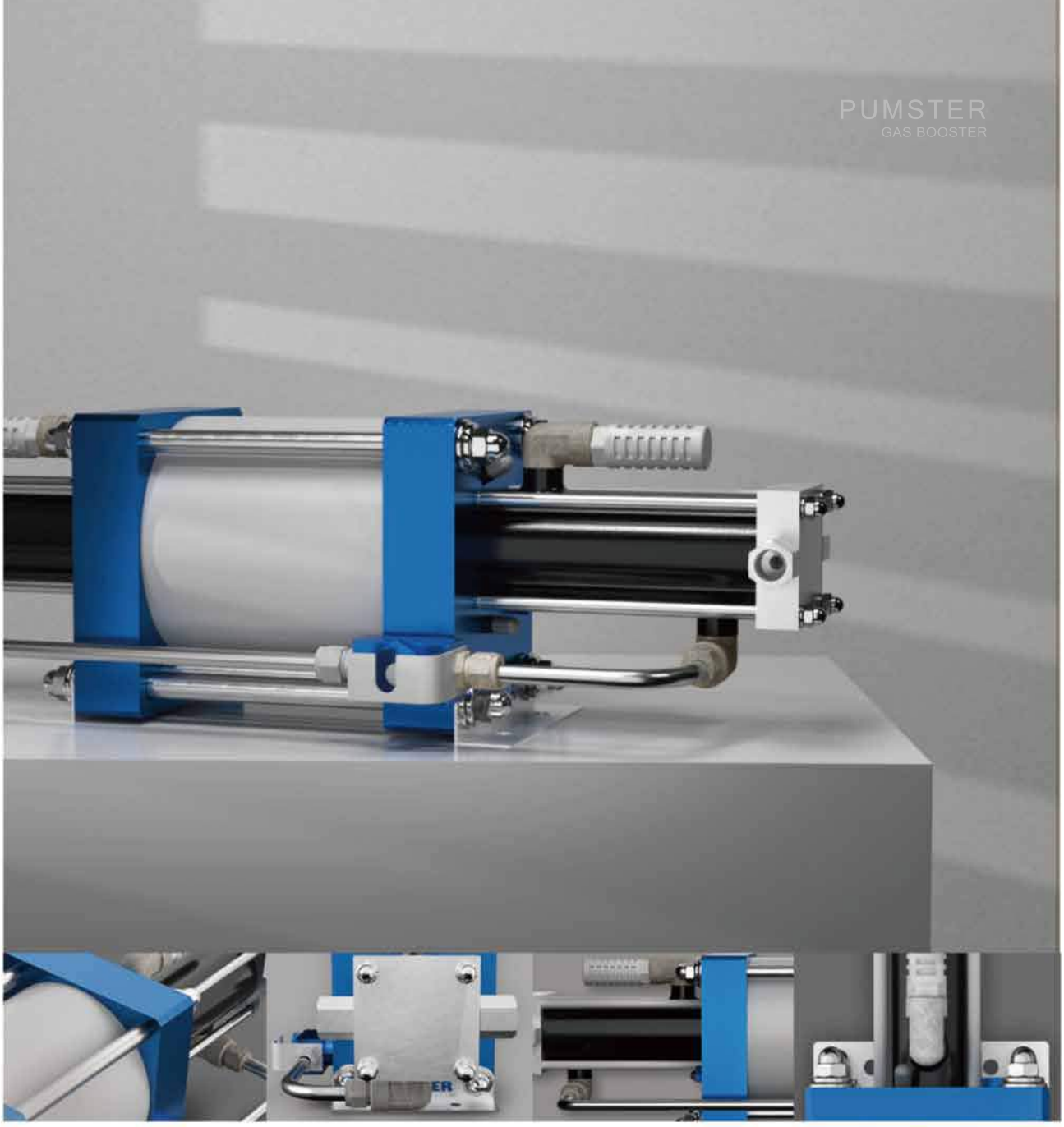
GB-DD
OVERVIEW

P_A Suction gas

P_B Discharging gas

P_L Air drive



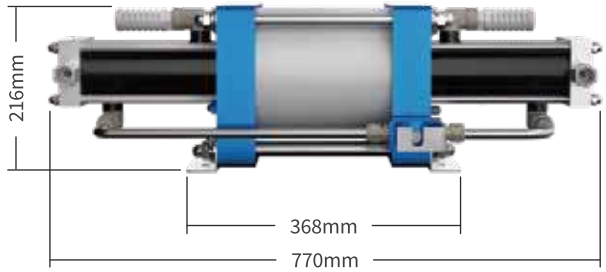


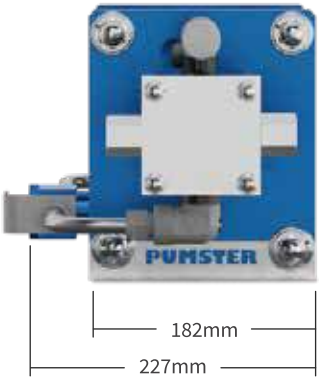
(160Φ)
GB-DS-7 SERIES

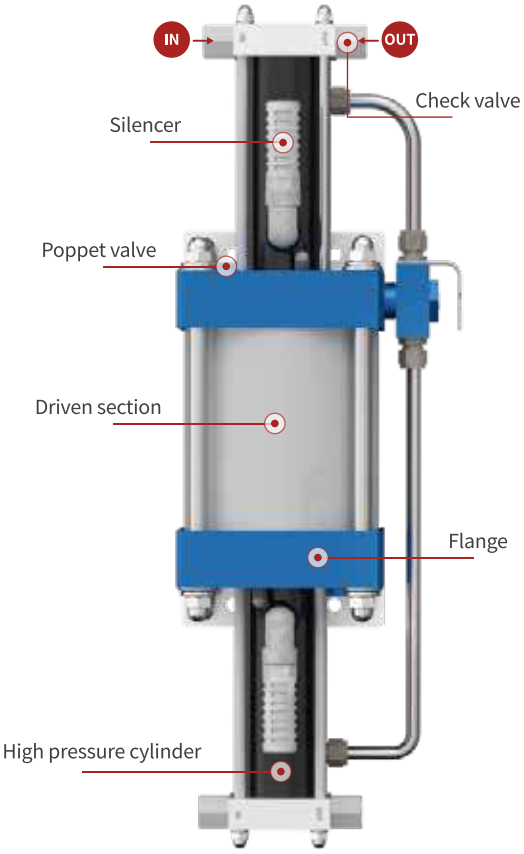
Double stage & Single driven

Gas Booster GB-DS(160Φ) is a **special model.**
It consists of **double stage and single driven part.**
(compression ratio: 1 : 7 [Driven part 160Φ])

GB-DS-7(160Φ)
SPECIFICATION





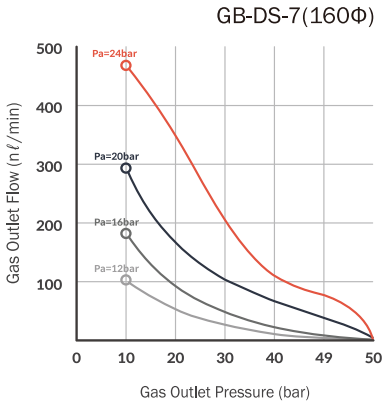


※ Please contact sales staff if you need further assistance.

Model	DS-7 (160Φ)
Ratio	1 : 7
Air Drive Pressure (kg / ㎠)	5 ~ 10
Max. Pressure (kg / ㎠)	49
Min.Suction Pressure (kg / ㎠)	4
Connections (inlet / outlet)	1/2" PT / 1/2" PT
Weight (kg)	21

※ M.P(kg/㎠) = Ratio * Air Drive Pressure(kg/㎠) ※ M.P is calculated with 7 bar(standardized air pressure).
※ Weight is approximate value.

GB-DS-7(160Φ)
PERFORMANCE CURVES



Theoretical charging time formula

Reservoir tank x atm = TAL

TAL /(Flow rate/sec) = total charging time

* Outlet pressure (Pb) = I·PI

(Outlet Pressure = Compression ratio · Air drive)

Precautions

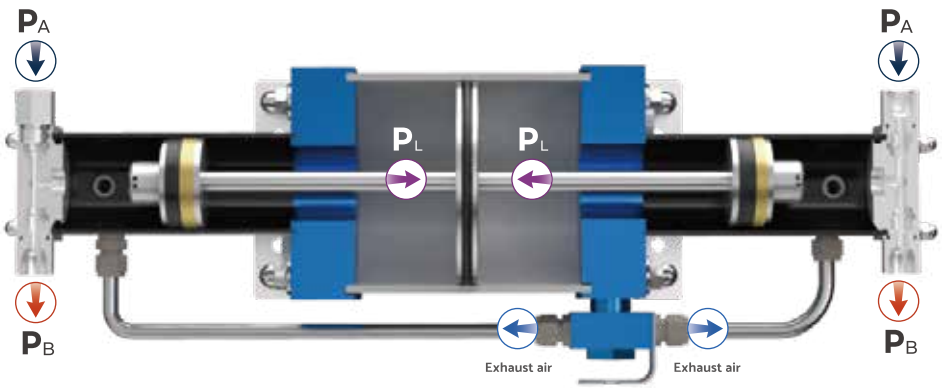
- There are lots of variables when increasing pressure under high pressure.
- Driven part: driven air pressure, flow rate
- High pressure part: inflow gas pressure, feed rate
- Actual flow rate will be different depending on utility.

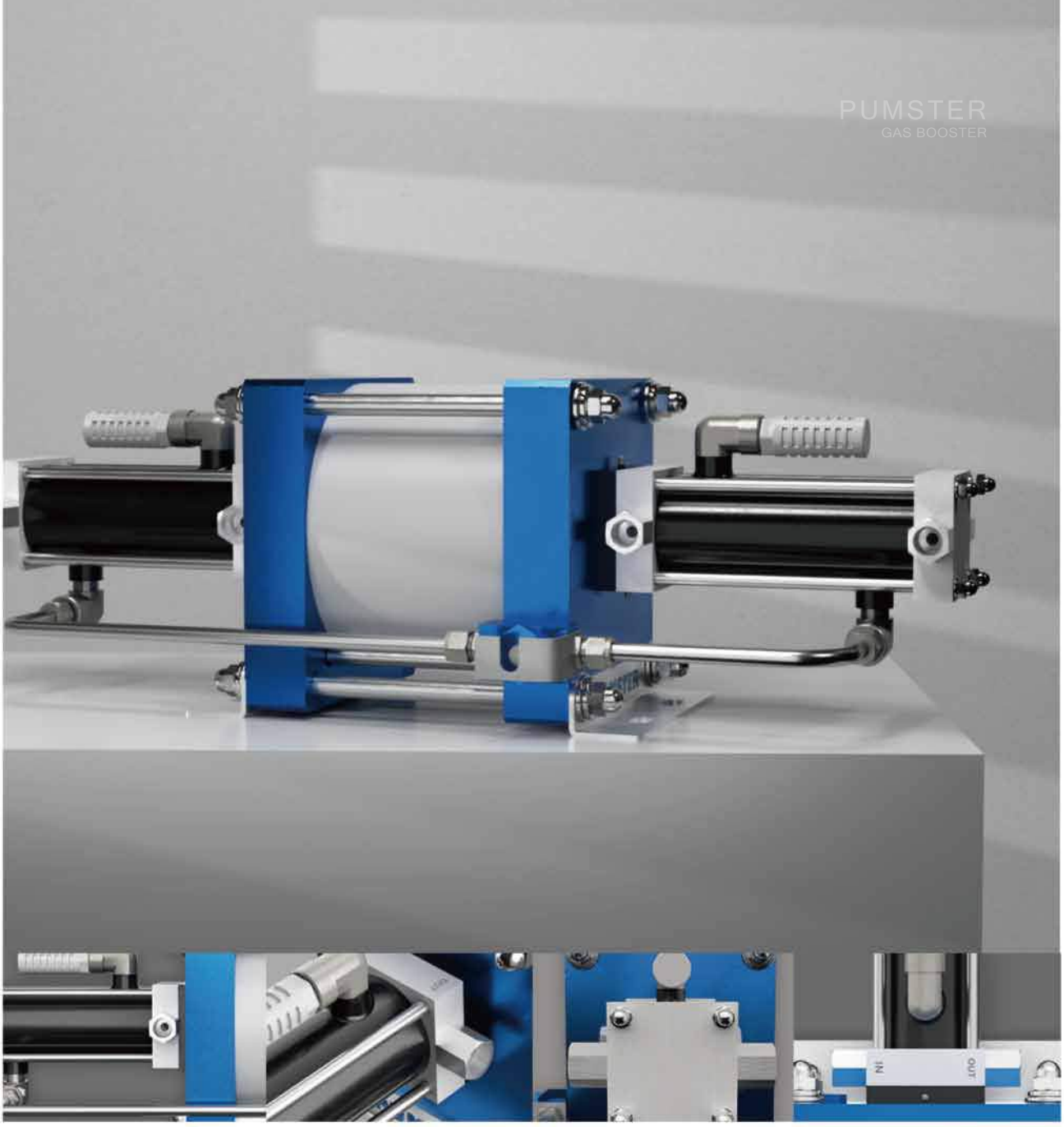
GB-DS-7(160Φ)
OVERVIEW

P_A Suction gas

P_B Discharging gas

P_L Air drive



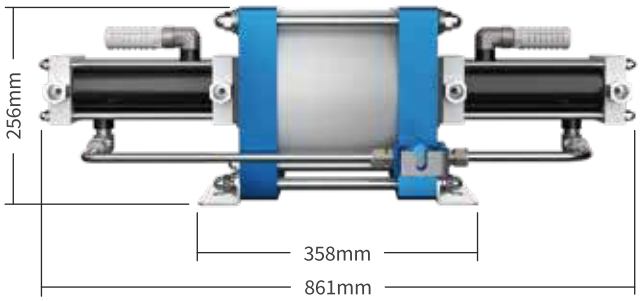


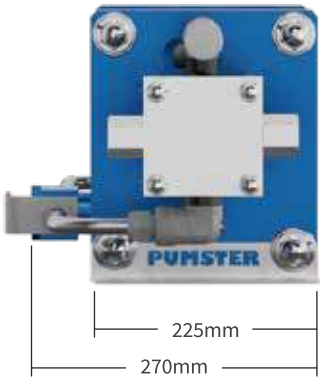
(200 Φ)
GB-QS-7 SERIES

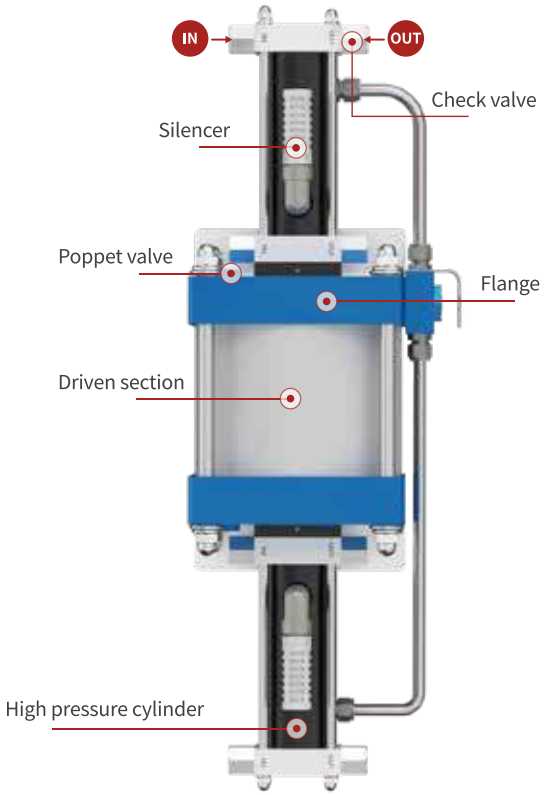
Four stage & Single driven

Gas Booster GB-QS(200Φ) is a **special model.**
It consists of **double stage (four displacement flow part) and single driven part.**
(compression ratio: 1 : 7 [Driven part 200Φ])

GB-QS-7(200Φ)
SPECIFICATION





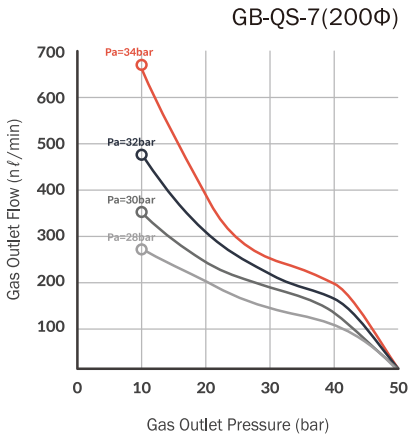


※ Please contact sales staff if you need further assistance.

Model	QS-7 (200Φ)
Ratio	1 : 7
Air Drive Pressure (kg / ㎠)	5 ~ 10
Max. Pressure (kg / ㎠)	49
Min.Suction Pressure (kg / ㎠)	4
Connections (inlet / outlet)	1/2" PT / 1/2" PT
Weight (kg)	40

※ M.P(kg/㎠) = Ratio * Air Drive Pressure(kg/㎠) ※ M.P is calculated with 7 bar(standardized air pressure).
※ Weight is approximate value.

GB-QS-7(200Φ)
PERFORMANCE CURVES



Theoretical charging time formula

Reservoir tank x atm = TAL
TAL /(Flow rate/sec) = total charging time

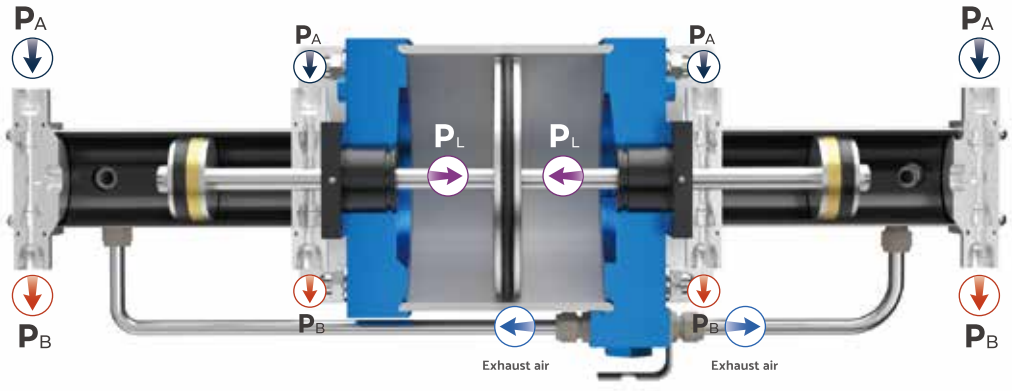
* Outlet pressure (Pb) = I·PI
(Outlet Pressure = Compression ratio · Air drive)

Precautions

- There are lots of variables when increasing pressure under high pressure.
- Driven part: driven air pressure, flow rate
- High pressure part: inflow gas pressure, feed rate
- Actual flow rate will be different depending on utility.

GB-QS-7(200Φ)
OVERVIEW

P_A Suction gas
P_B Discharging gas
P_L Air drive

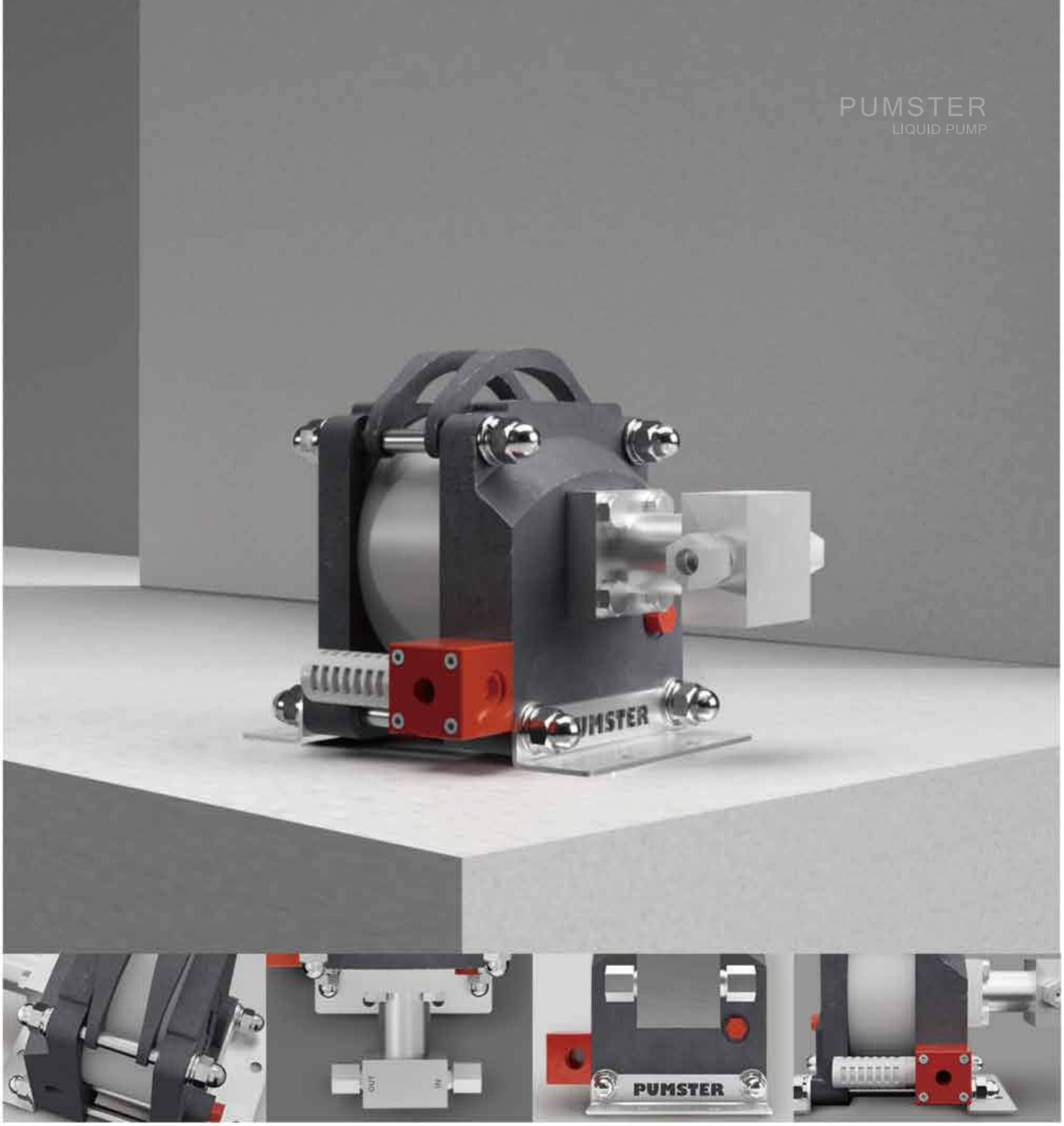


LIQUID PUMP

Pneumatic operation by applying Pascal's Law

Liquid pump pressurizing through Cross-section ratio by Pascal's Law, create big energy by converting air pressure to straight reciprocal movement. In this point, **inflowed liquid through IN Check valve is compressed and outflowed / pressurized to the Out Check valve.**

- For the compression of liquid substances such as water or oil.
- Gurantess more than 1M times of durability of main seal.
- No requirement for electricity.
- Oil free, no requirement for oil replacement, contamination.
- Suitable for explosion proof area.
- Diversely compatible for different models accoring to using pressure and flow rate.

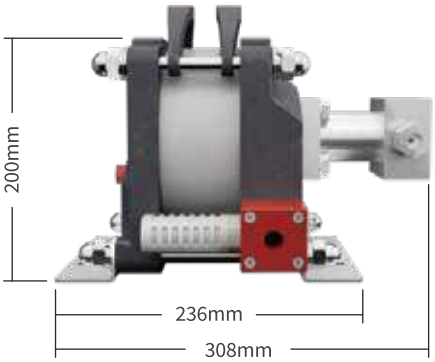


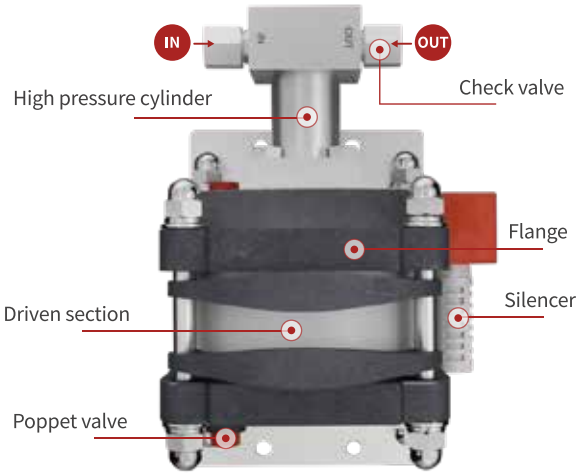
LSS SERIES

Single stage & Single driven

Liquid Pump LSS consists of single stage and single driven part.
There are **5 types depending on compression ratio.**
(compression ratio: 1 : 50 / 80 / 150 / 220 / 350)

LSS
SPECIFICATION



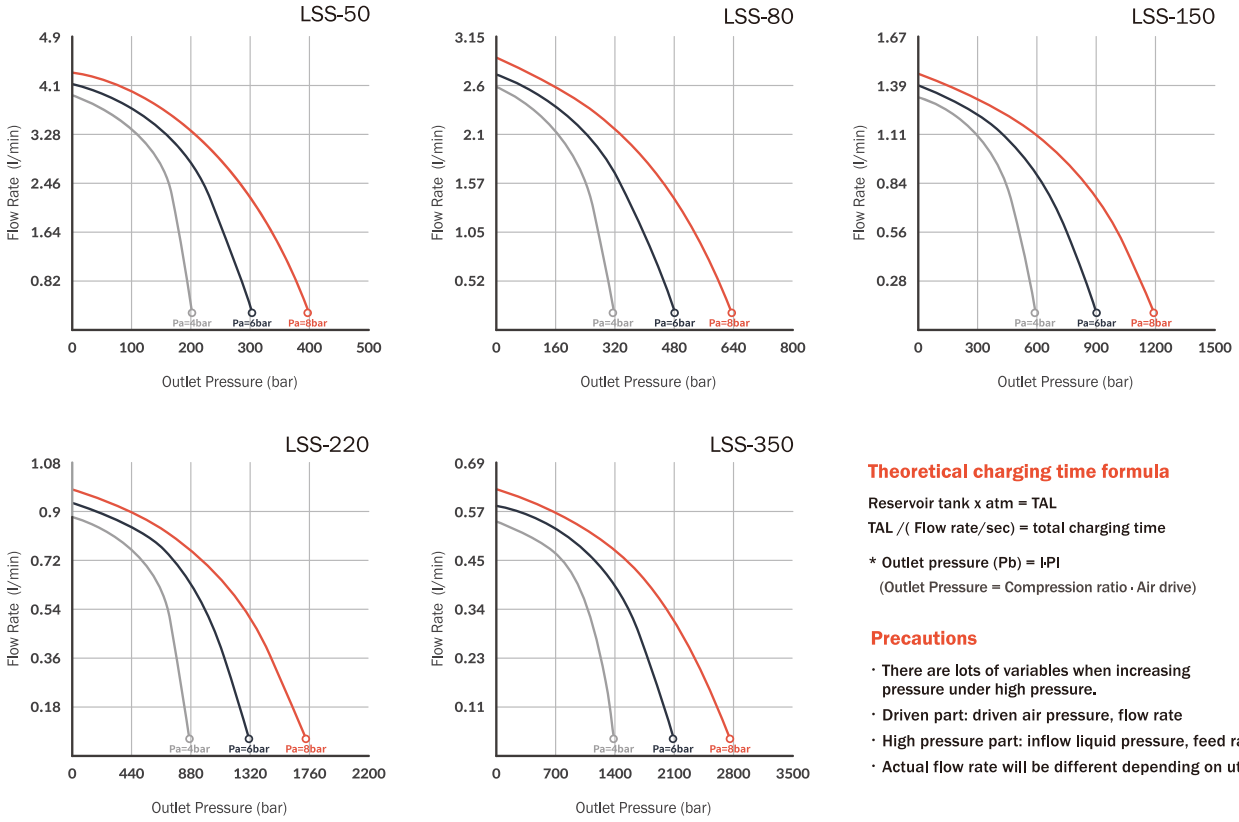


※ Please contact sales staff if you need further assistance.

Model	LSS - 50	LSS - 80	LSS - 150	LSS - 220	LSS - 350
Ratio	1 : 50	1 : 80	1 : 150	1 : 220	1 : 350
Air Drive Pressure (kg / ㎠)	5 ~ 10				
Max. Pressure (kg / ㎠)	350	560	1,050	1,540	2,450
Connections (inlet / outlet)	1/2" PT / 1/2" PT	1/2" PT / 9/16" 18 UNF			
Weight (kg)	12				

※ M.P(kg/㎠) = Ratio * Air Drive Pressure(kg/㎠) ※ M.P is calculated with 7 bar(standardized air pressure).
※ Weight is approximate value.

LSS
PERFORMANCE CURVES



Theoretical charging time formula

Reservoir tank x atm = TAL

TAL /(Flow rate/sec) = total charging time

* Outlet pressure (Pb) = I-PI

(Outlet Pressure = Compression ratio · Air drive)

Precautions

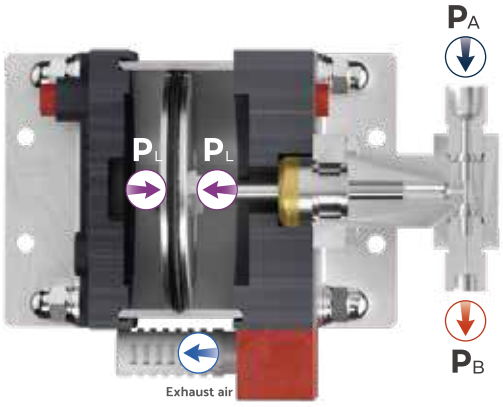
- There are lots of variables when increasing pressure under high pressure.
- Driven part: driven air pressure, flow rate
- High pressure part: inflow liquid pressure, feed rate
- Actual flow rate will be different depending on utility.

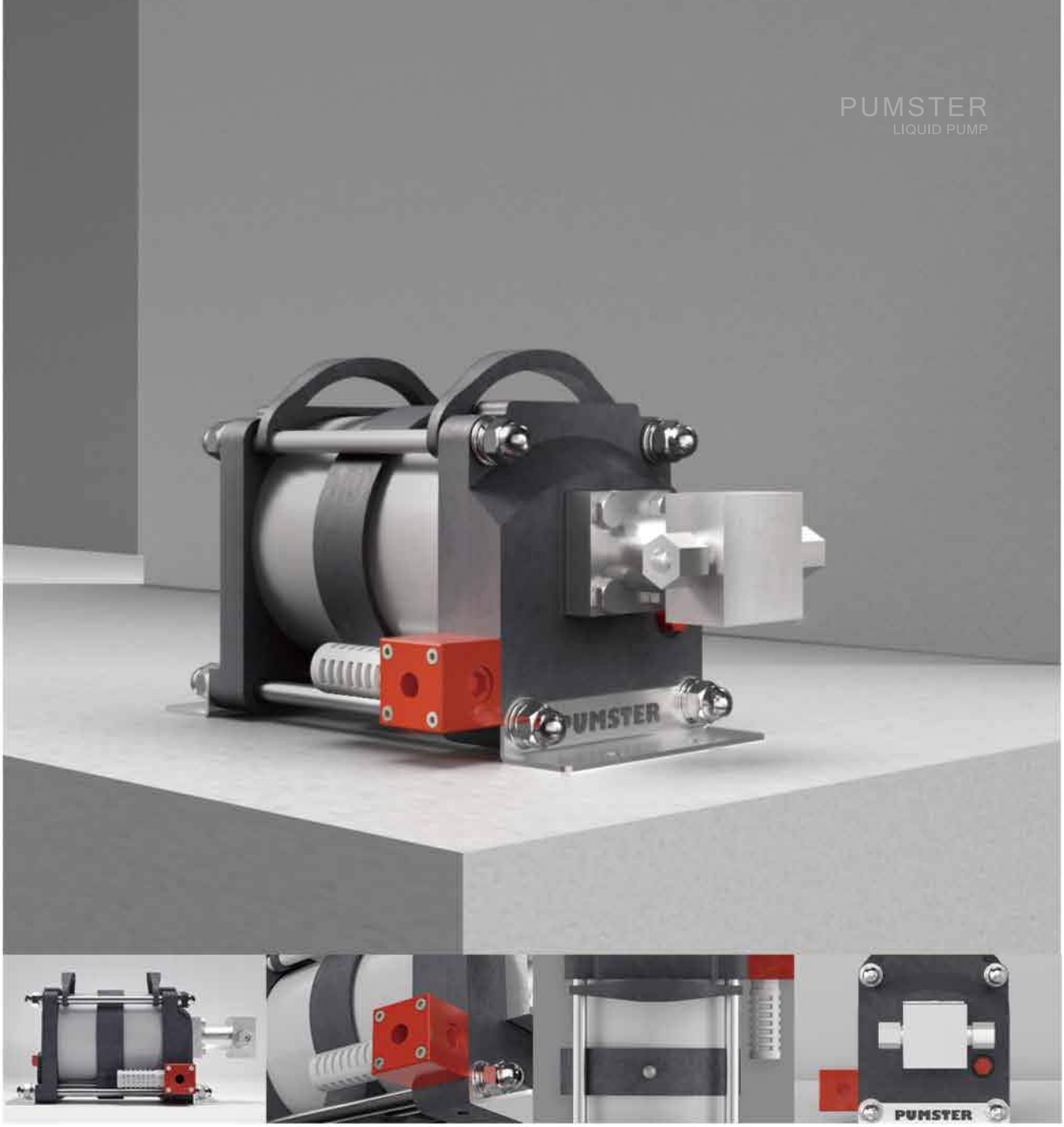
LSS
OVERVIEW

P_A Suction liquid

P_B Discharging liquid

P_L Air drive



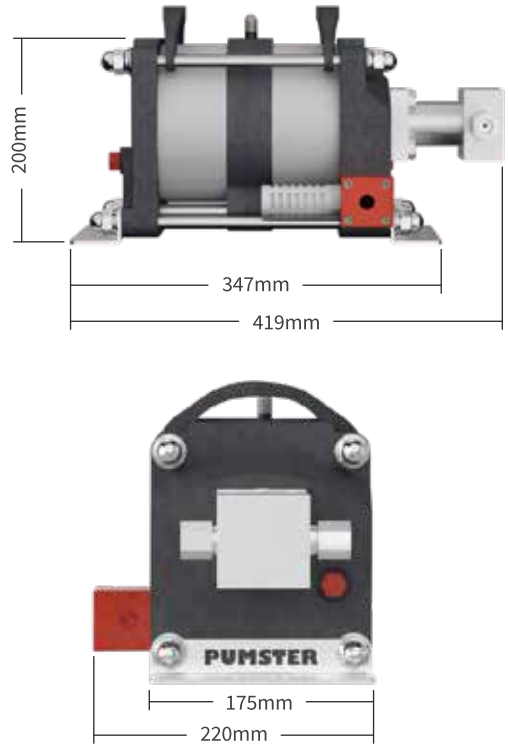


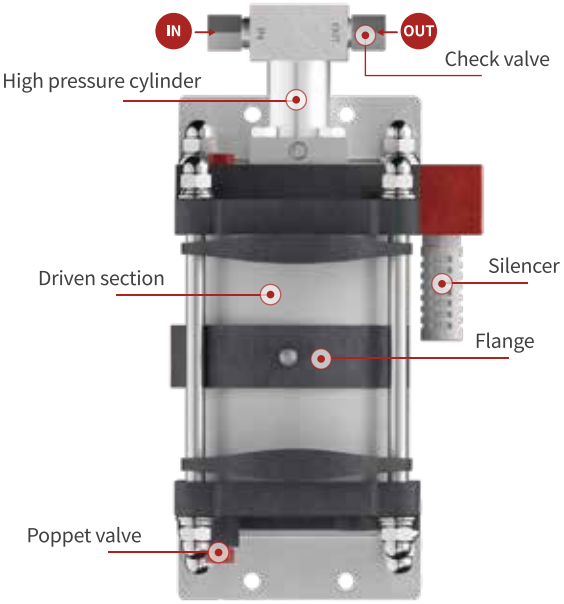
LSD SERIES

Single stage & Double driven

Liquid Pump LSD consists of single stage and double driven parts.
There is **5 types depending on compression ratio.**
(compression ratio: 1 : 100 / 160 / 300 / 440 / 700)

LSD
SPECIFICATION



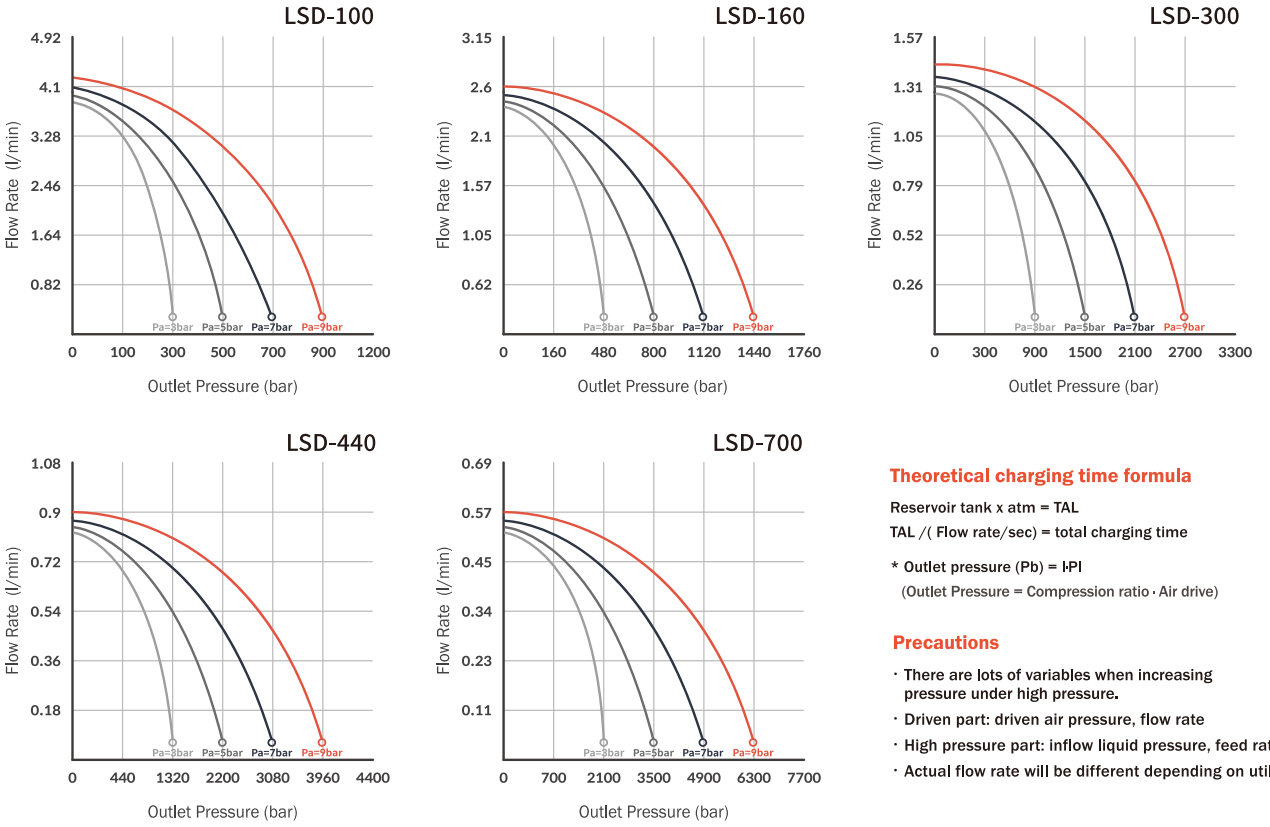


※ Please contact sales staff if you need further assistance.

Model	LSD - 100	LSD - 160	LSD - 300	LSD - 440	LSD - 700
Ratio	1 : 100	1 : 160	1 : 300	1 : 440	1 : 700
Air Drive Pressure (kg / ㎠)	5 ~ 10				
Max. Pressure (kg / ㎠)	700	1,120	2,100	3,080	4,900
Connections (inlet / outlet)	1/2"PT / 9/16" 18 UNF				
Weight (kg)	17				

※ M.P(kg/㎠) = Ratio * Air Drive Pressure(kg/㎠) ※ M.P is calculated with 7 bar(standardized air pressure).
※ Weight is approximate value.

LSD
PERFORMANCE CURVES



Theoretical charging time formula

Reservoir tank x atm = TAL

TAL /(Flow rate/sec) = total charging time

* Outlet pressure (Pb) = I-PI

(Outlet Pressure = Compression ratio · Air drive)

Precautions

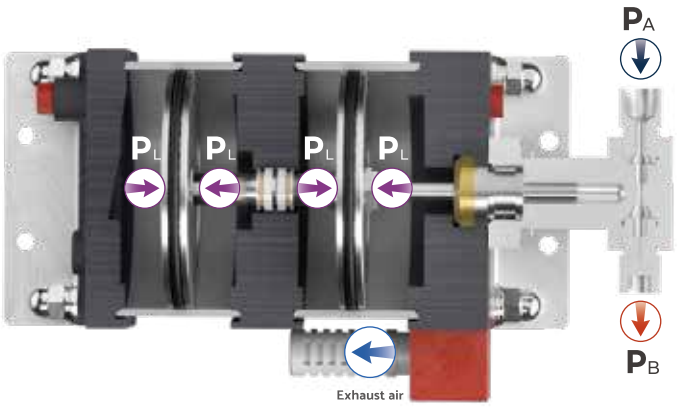
- There are lots of variables when increasing pressure under high pressure.
- Driven part: driven air pressure, flow rate
- High pressure part: inflow liquid pressure, feed rate
- Actual flow rate will be different depending on utility.

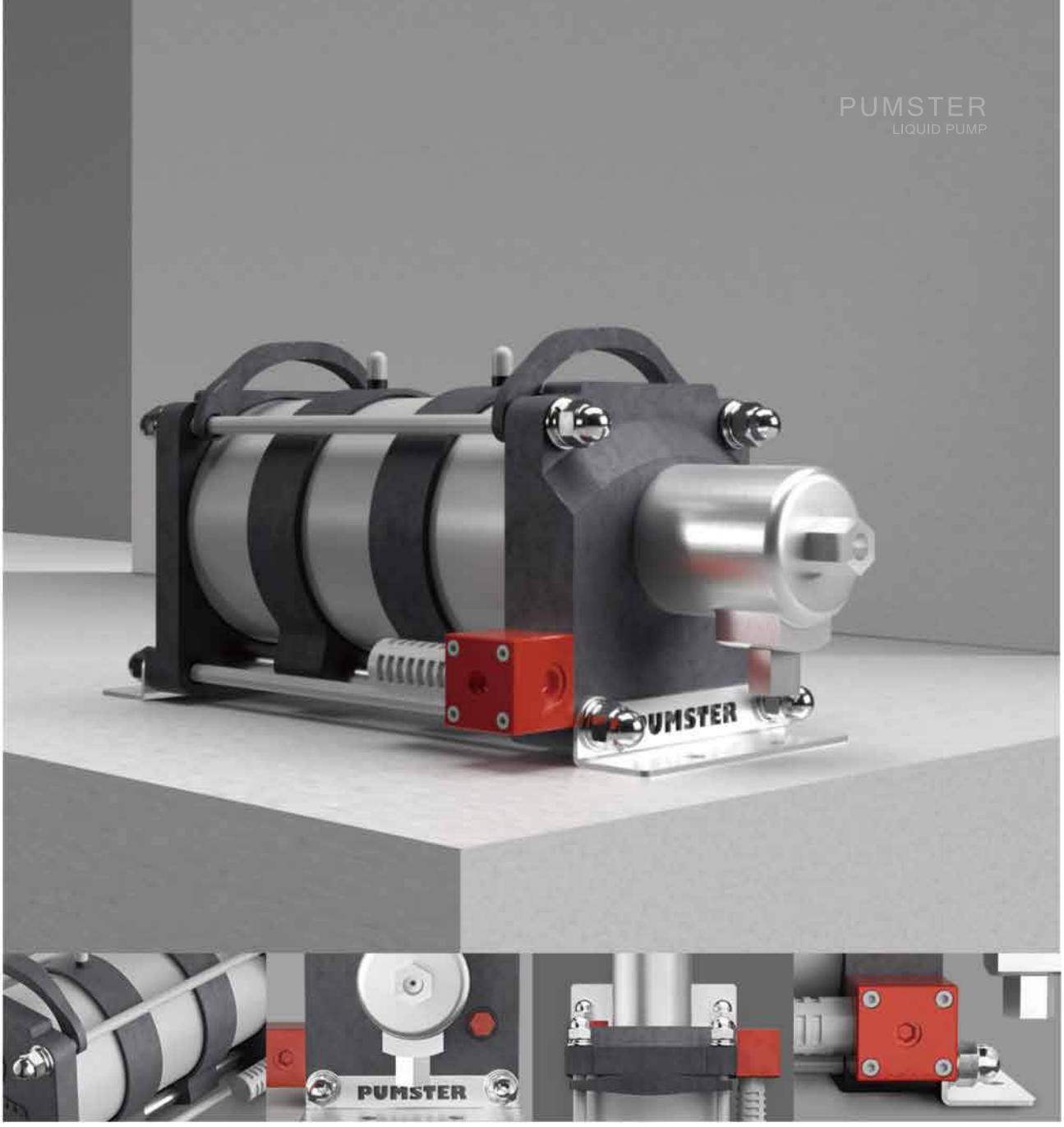
LSD
OVERVIEW

P_A Suction liquid

P_B Discharging liquid

P_L Air drive



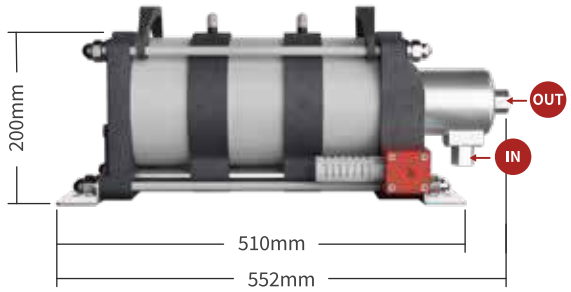


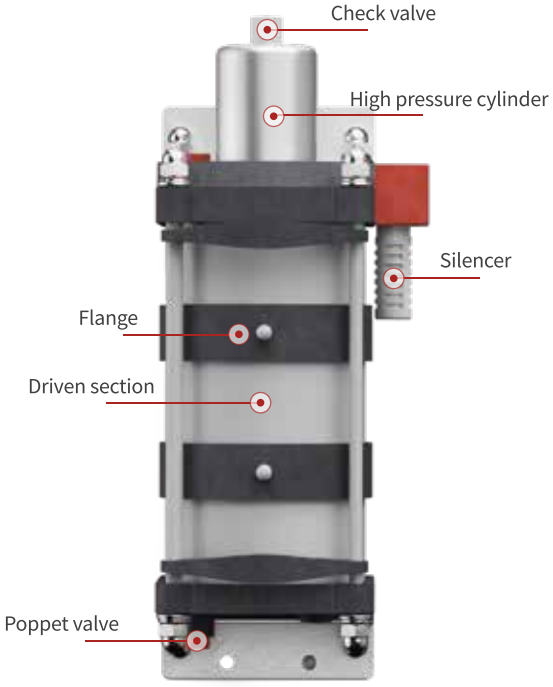
LST SERIES

Single stage & Triple driven

Liquid Pump LST consists of single stage and triple driven parts.
There is **1 type according to compression ratio.**
(compression ratio: 1 : 1050)

LST
SPECIFICATION



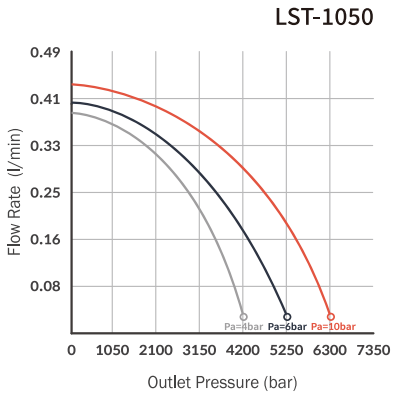


※ Please contact sales staff if you need further assistance.

Model	LST - 1050
Ratio	1 : 1,050
Air Drive Pressure (kg / ㎠)	5 ~ 10
Max. Pressure (kg / ㎠)	7,350
Connections (inlet / outlet)	1/2" PT / 9/16" 18 UNF
Weight (kg)	25

※ M.P(kg/㎠) = Ratio * Air Drive Pressure(kg/㎠) ※ M.P is calculated with 7 bar(standardized air pressure).
※ Weight is approximate value.

LST
PERFORMANCE CURVES



Theoretical charging time formula

Reservoir tank x atm = TAL

TAL /(Flow rate/sec) = total charging time

* Outlet pressure (Pb) = I·PI

(Outlet Pressure = Compression ratio · Air drive)

Precautions

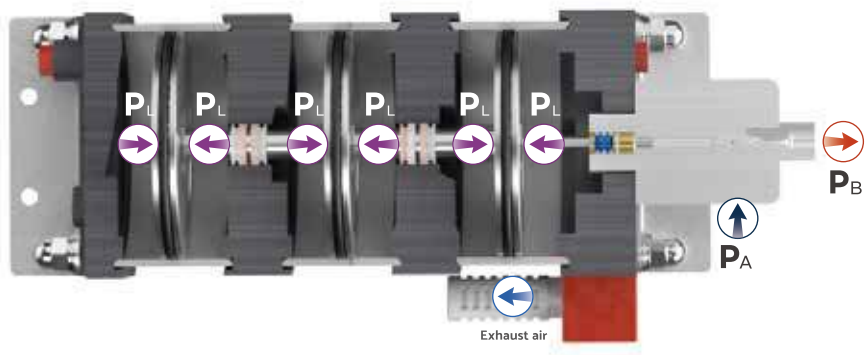
- There are lots of variables when increasing pressure under high pressure.
- Driven part: driven air pressure, flow rate
- High pressure part: inflow liquid pressure, feed rate
- Actual flow rate will be different depending on utility.

LST
OVERVIEW

P_A Suction liquid

P_B Discharging liquid

P_L Air drive



P

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M

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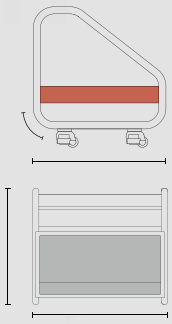

which is provided with order-made service.

PRESSURE TESTING

Except for basic specification, we can provide Custom-made facility suitable for customer's purpose and usage by adding various options for convenient usage.

Portable Pressure Testing

compact testing with compact operation.

- Available for gases or liquids.
- Applied in various application such as internal pressure, air tightness, leak, bursting.
- Operated safely due to the safety valve when over pressure occurs.
- Compact design with reasonable price.
- Control with easy operation.

Multipurpose Pressure Testing

testing where fluids are filled in separate vessels for use control at the desired pressure.

- Available for gases or liquids.
- Applied in various application such as internal pressure, air tightness, leak, bursting.
- Be discharged by constant pressure (options: pressure vessel).
- Operated safely due to the safety valve when over pressure occurs.
- Be movable with casters.
- Controlled with automatic or manual (option).

Burst, leakage for Valves Testing

pressure testing for leak and durability of valves and high pressure fitting.

- Limit measurement of fatigue&burst or leak testing.
- Less pulsation with separate pressure vessel.
- Increasing pressure of step by step and repeating test.
- Operated safely due to double safety fuction.
- Controlled with automatic or manual (option).

Propane Pressure Testing

propane pressure testing.

- For propane only.
- Cooling compression heat through the cooling coil.
- Be discharged by constant pressure (options : pressure vessel).
- Operated safely due to the safety valve when over pressure occurs.

Hydrostatic Testing

internal pressure and leakage testing.

- Hydrostatic (internal pressure and leak) testing.
- Alarm function when the leak occurs under setting.
- Increasing pressure of step by step and repeating test.
- Check real-time the sample with CCTV or a monitor (options).
- Operated safely due to double safety fuction when over pressure occurs.
- Controlled with automatic or manual
(in manual operation, it isn't available for leak alarm function and increasing pressure of step by step).

External Pressure Testing

testing by pressuring to sample after increasing gas or liquid to separate pressure vessel.

- Available for gas or liquid.
- Available for external testing or molding by pressuring to sample.
- Sensor/machinery of measure device, simulation like subsea, destructive testing.
- Operated safely due to double safety fuction when over pressure occurs.
- Controlled with automatic or manual
(options : touch screen, cover(open/close),vent, etc).

High Pressure Cleaning for Orifice Module

high pressure cleaning for solving nozzle blockage of orifice module.

- Whole material of stand : Stainless steel
- Easy detachment of orifice module.
- Recycle of liquid with reservoir tank.
- Control with easy operation.

Oxygen Gas Filling

- For oxygen only.
- Be economical by refilling oxygen.
- Gas will be recycled to gas suction by safety vavle when over pressure occurs.

Bolt Tensioner Pump

bolt tensioner pump to tight the bolt tensioners.

Lightweight pump with hydraulic pressure for easy and quick bolting operation and movement.

Compact design consisting of pressure gauge, valves, regulators.

Be applied in various industry such as oil&gas, subsea, wind turbin, etc.

Model	Max.pressure(bar)	Weight(kg)	Dimension(mm)		
			length	width	height
PBT-1500	1,500	27	488	337	378
PBT-2100	2,100				

Pressure Testing for Rental

available for rental.

Available for rent when users want period.

Available for gas or liquid.

Applied in various application such as internal pressure, air tightness, leak, bursting.

Operated safely due to the safety valve when over pressure occurs.

Liquid and Nitrogen Injection System

available for injecting, collecting and recycling of liquid and using the vacuum and nitrogen.

All-in-one for injecting, collecting and recycling of liquid.

Injection for liquid and the vacuum.

Precision test of undersea acoustic sensor.

Special Pressure Testing Equipment

testing for internal pressure and leak of liquid.

Produced with special purpose to meet customers' requirement.

APPLICATION

“Pumster products which was applied in various application

Leak testing in
explosion proof purpose

Bursting testing

Leak testing

- **Autoclave increasing**(N_2)
- **CIP**(Cold Isostatic Press)

Testing module for
torpedo maintenance

Testing module for
increasing pressure hydrogen(H_2)

Testing module for increasing pressure
and filling and spraying with
propane and butane

Testing module for increasing pressure
and re-filling ethylene with 500L

Testing module for secondary increasing pressure and filling
from low-pressure compressor

CATALOG

pumster
INDUSTRY LEADER IN PUMP & BOOSTER

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ILSHIN AUTOCLAVE HiFLUX® KACECO HiPPo High Pressure Processing