



RELIABILITY

## Ultra High-Pressure Technology

# Air Driven Gas Booster

Max 10,000 psi(700 bar)



### ADVANTAGE OF LEZERO

- Intrinsically safe.
- Air drive line lubrication not required.
- Poppet type check valves for safety and high flow.
- Does not require an electrical.
- Easy installation and operation.
- Operating pressure max 700bar.
- Weatherproof.
- Portable size.

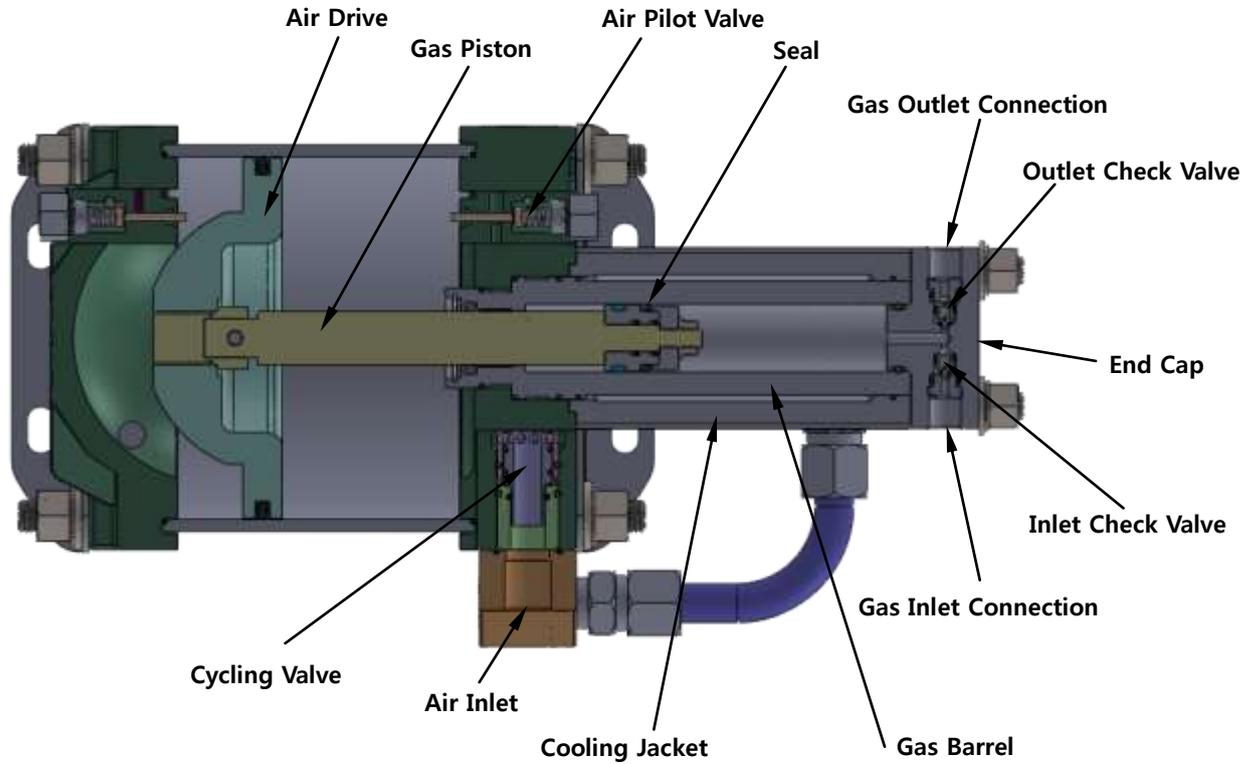


QUALITY



SAFETY

# Principle of Operation



Type: Single Acting, Single Drive

**LEZERO Gas Boosters** are suitable for the oil/electrical free compression of gases and air. For example, N<sub>2</sub> can be compressed to 700bar (10,000psi)

**LEZERO Air Driven Gas Booster** has reciprocating air drive piston directly connected to one or two gas pistons. The air driven section includes automatic air circulation valve and dual air pilot valves. The gas barrel end cap is consisted with high pressure inlet & outlet check valves, various applications require many different types of gas booster and compression ratio combinations. **LEZERO** has many types of compression ratio gas boosters. It will assist with any requirements.

### Gas Booster Operating Sequence

The gas booster will be driven automatically when a simple air pressure (1.5 to 10bar) is applied to the drive. (Normal using simple air pressure: 3 to 7bar). The principal of operation is very similar with reciprocating amplifier. The gas booster will be start cycling at its maximum speed thus producing maximum gas flow. The number of cycle will be slowdown when the pressure is built up. The gas booster stops automatically when out pressure balances with the incoming air drive pressure times the ratio. The gas booster will be automatically restart cycling when the outlet pressure is slight dropped or the air drive pressure will be increased.

## Accordance with the configuration

**LEZERO Gas Booster-** can be configured in various ways depending on the intended use.

1. Single acting, single stage boosters- Small and lightweight, with basic products are various models that can be boosted up to a gas 10,000 PSI.
2. Single acting, double stage boosters- single acting, so the booster than twice the rate of single stage booster. It can be reduced the boosting time.
3. Two Stage- Is used in the high gas compression ratio, can be configured in various ways for each stage.

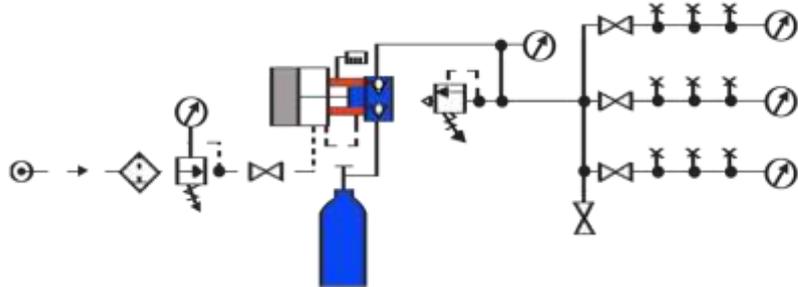
### Using model-specific examples

#### LZSG5-SERISE

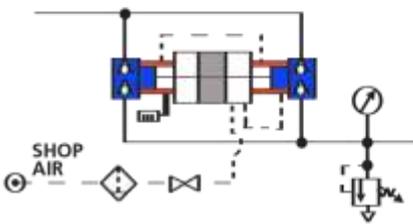
· This volume is used for primary or small parts booster test and similar application where volume is small and efficiency is not important. Most economical product

Control of the maximum outlet pressure is achieved by use of an air drive pressure regulator.

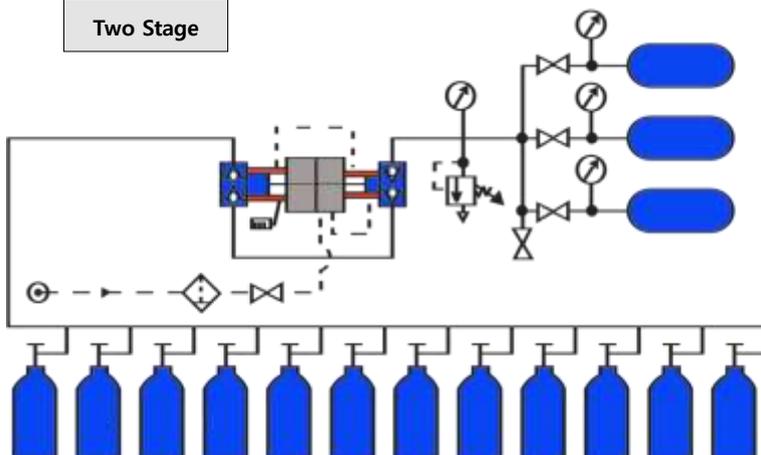
Maximum outlet pressure is multiplied by the product ratio and air pressure



#### Single Stage, Double Acting



#### Two Stage



#### LZDG5-SERISES

##### Single stage, double acting

LZDG5 Series can boost two times volume of the LZSG5's per cycle (a single stage, single acting gas booster).  
Also, LZDG5 Series require less air consumption than LZSG5 (a single stage, single acting gas booster)

#### LZTG5-SERISES

##### Two stage, double acting

- Gas boosters provide efficient means of boosting to a high gas compression ratio since the ratio per stage is low.
- Control of the maximum outlet pressure is achieved by use of a pressure regulator Air Drive.
- Maximum outlet pressure is multiplied by the product ratio and air pressure.

## Applications / Features

### Applications

- **Pressure Testing Piping and Hardware for Leakage:**

Oil field / Refinery / Aircraft / Automotive / Instrumentation using area.

- **Gas Injection:**

Chemical process / Plastic forming.

- **Gas Scavenging:**

Collecting costly gas in partially used cylinders and transferring it into high pressure receiver(s) for further use.

- **Life Support Gas Transfer and Charging:**

Oxygen, helium, breathing air, diving, fire fighting/hazmat, aircrew.

- **Compressed Natural Gas (CNG) Boosting:**

For vehicle refueling stations.

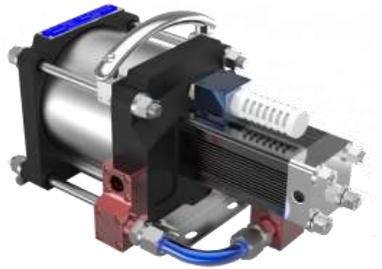
### FEATURES OF GAS BOOSTERS

- Separation between drive and gas section uses three dynamic seals with dual vents.
- Air drive line lubrication not required.
- Poppet type check valves for safety and high flow
- The cold air discharged from the cooling heat generated when driving the drive compressed gas through the barrel, so the cooling extends the life of the gas compression seal.
- Does not require an electrical.
- Outlet stall pressure pre-determined by the air drive regulator.
- Easy to install and operate.

## NOTE

# Air Driven Gas Boosters

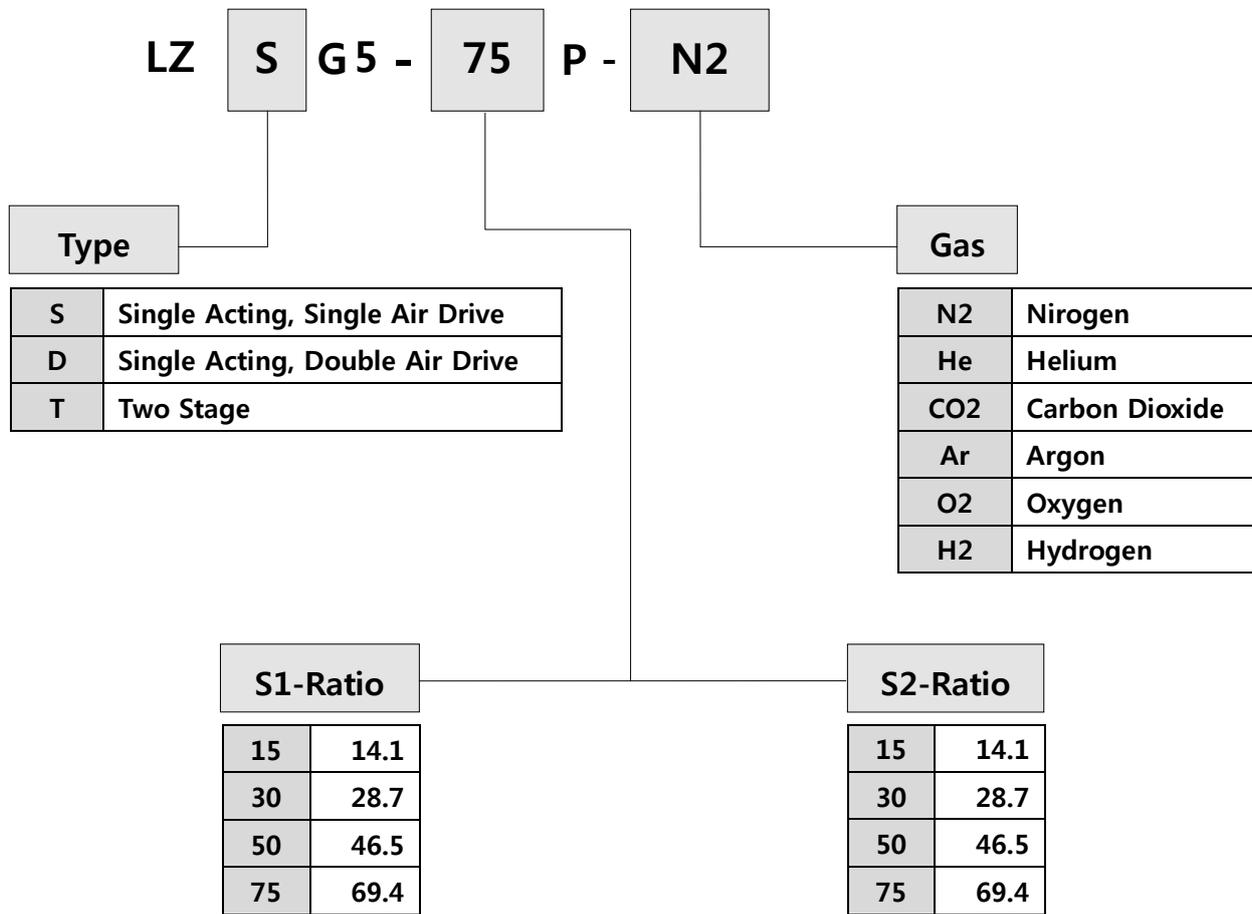
LZSG5



LZDG5/LZTG5



## How to Oder



※ "T" Type = 'S1' Type + "S2" Type

# Specification

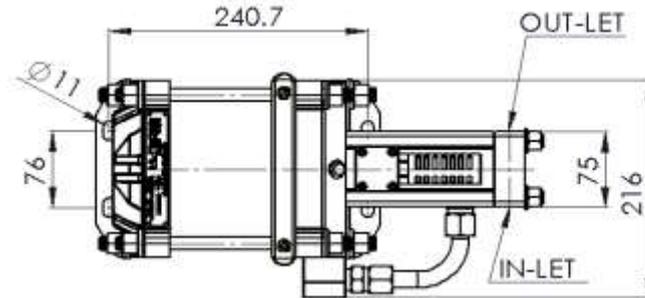
## LZSG5

Type	Model With Ratio	Maximum Rated Gas Supply Pressure (N2), psi		Max Rated Gas Outlet Pressure (N2), psi	Actual In <sup>3</sup> (cm <sup>3</sup> ) Per Cycle		Flow Rate Performance(SCFM)				Gas Port Detail	
		Max	Min		In <sup>3</sup>	cm <sup>3</sup>	Cycle(min)	Gas Supply(psi)	Outlet pressure(psi)	OutletFlow Rate(SCFM)	Inlet	Outlet
Single Acting, Single Air Drive	LZSG5-15P	2,250	50	2,250	7.76	125.6	30	300	1,200	3	9/16-18 UNF	9/16-18 UNF
	-30P	4,500	100	4,500	3.76	61.5	40	400	2,000	2.6	9/16-18 UNF	9/16-18 UNF
	-50P	7,500	100	7,500	2.32	38	35	500	4,000	1.7	9/16-18 UNF	9/16-18 UNF
	-75P	11,250	250	11,250	1.55	25.4	25	500	6,000	0.8	9/16-18 UNF	9/16-18 UNF

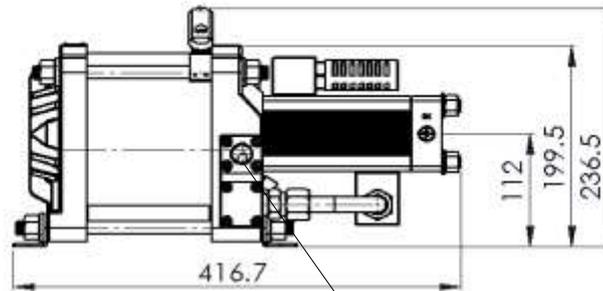
## LZDG5

Type	Model With Ratio	Maximum Rated Gas Supply Pressure (N2), psi		Max Rated Gas Outlet Pressure (N2), psi	Actual In <sup>3</sup> (cm <sup>3</sup> ) Per Cycle		Flow Rate Performance(SCFM)				Gas Port Detail	
		Max	Min		In <sup>3</sup>	cm <sup>3</sup>	Cycle(min)	Gas Supply(psi)	Outlet pressure(psi)	OutletFlow Rate(SCFM)	Inlet	Outlet
Double Acting, Single Air Drive	LZDG5-15P	5,000	340	5,000	15.52	251.2	40	300	1,200	6	9/16-18 UNF	9/16-18 UNF
	-30P	9,000	620	9,000	7.52	123	40	400	2,000	5.2	9/16-18 UNF	9/16-18 UNF
	-50P	12,000	820	12,000	4.64	76	50	500	4,000	3.4	9/16-18 UNF	9/16-18 UNF
	-75P	15,000	1,000	15,000	3.1	50.8	45	500	6,000	1.6	9/16-18 UNF	9/16-18 UNF

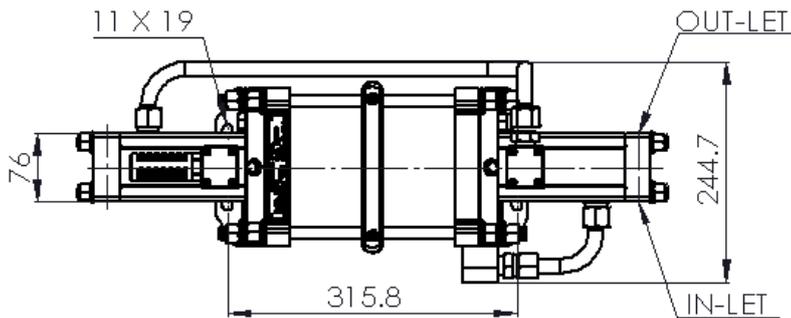
# Dimensions



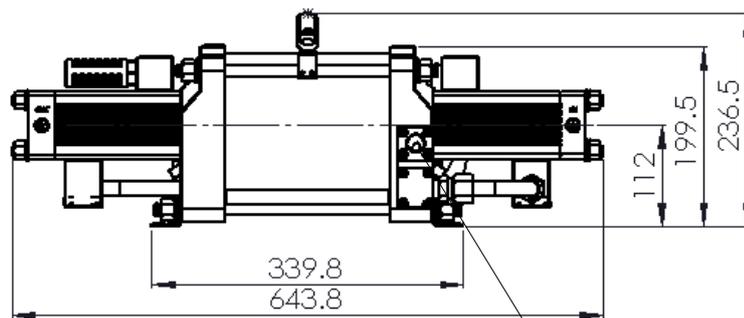
LZSG5-\*\*\*P



Air Inlet-1/2 NPT



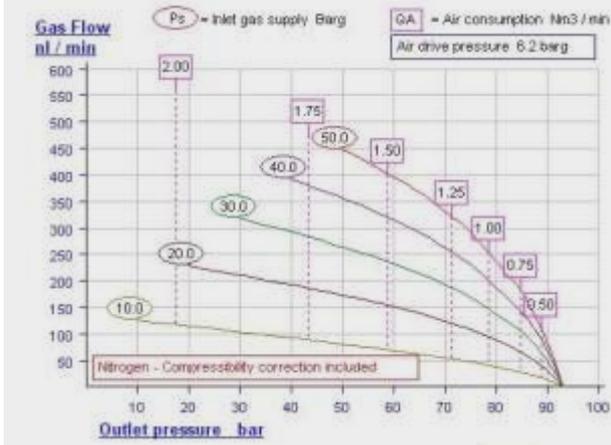
LZDG5-\*\*\*P



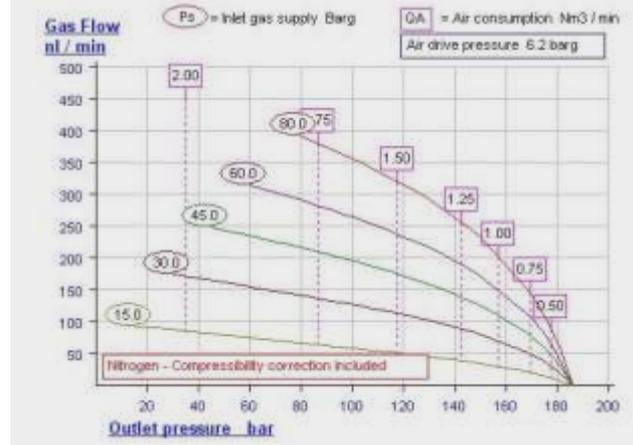
Air Inlet-1/2 NPT

## Flow Chart (LZSG5)

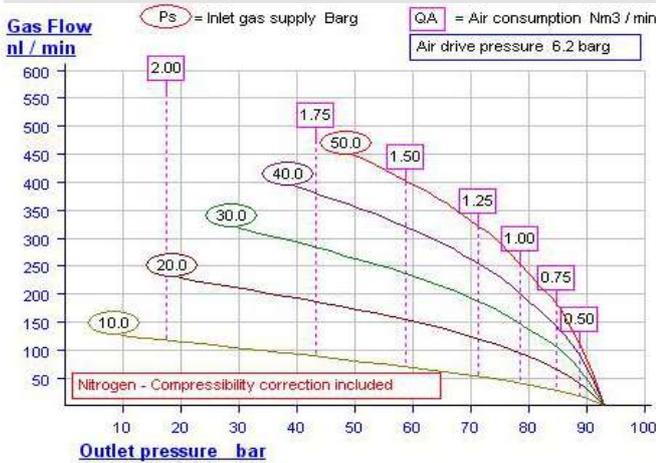
### LZSG5-15P



### LZSG5-30P



### LZSG5-50P

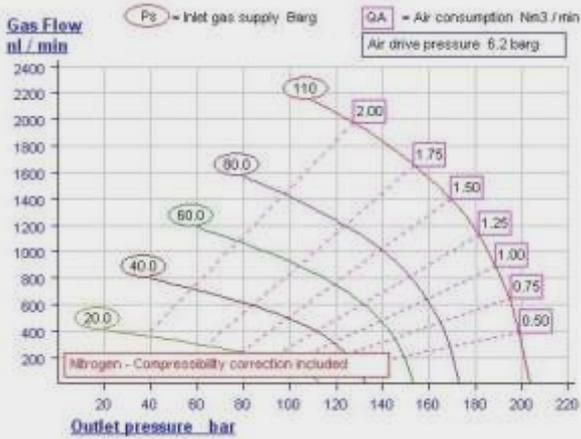


### LZSG5-75P

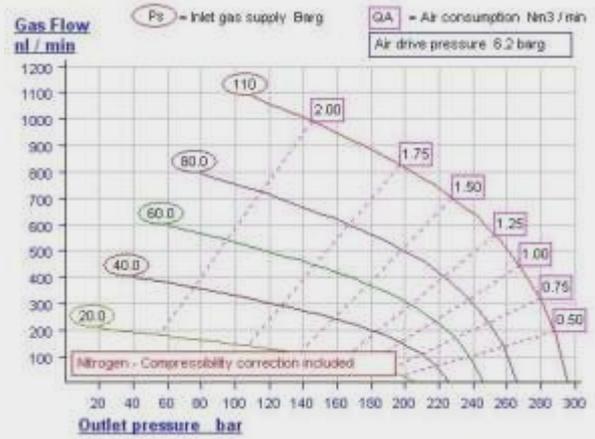


# Flow Chart (LZDG5)

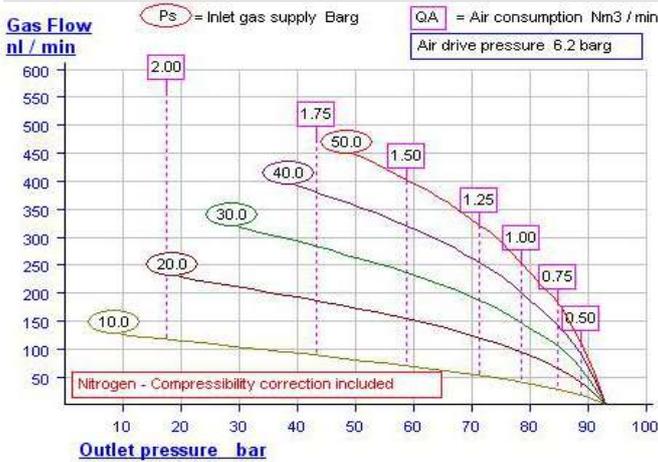
**LZDG5-15P**



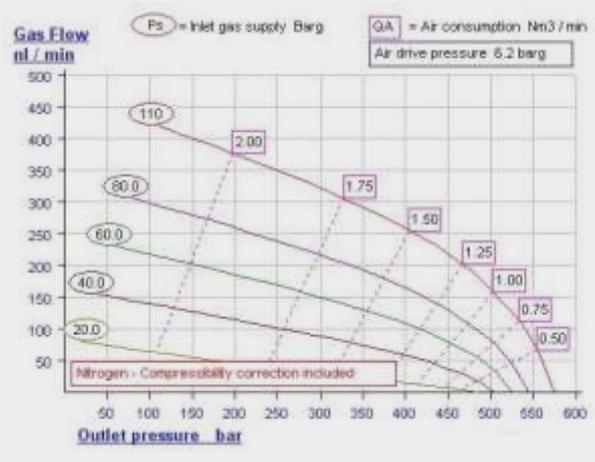
**LZDG5-30P**



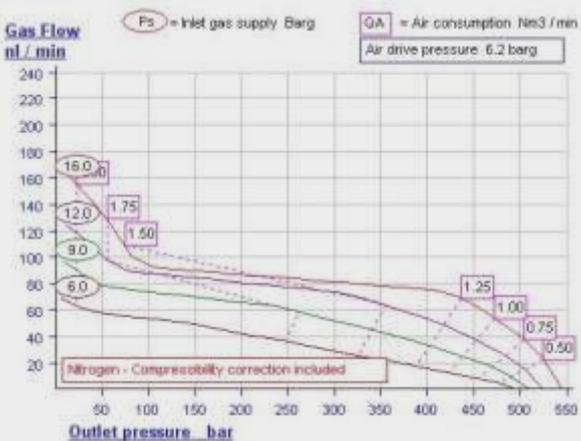
**LZDG5-50P**



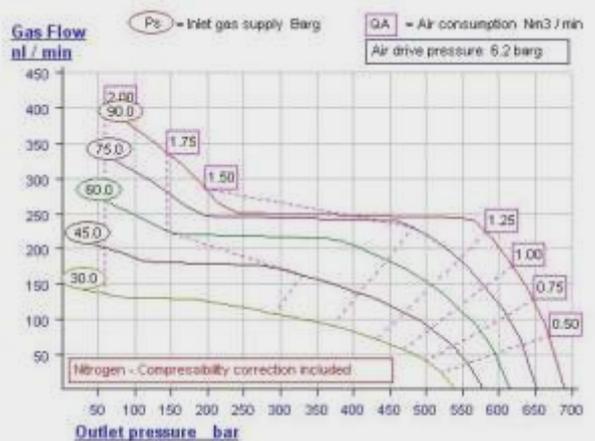
**LZDG5-75P**



**LZTG5-15-75P**



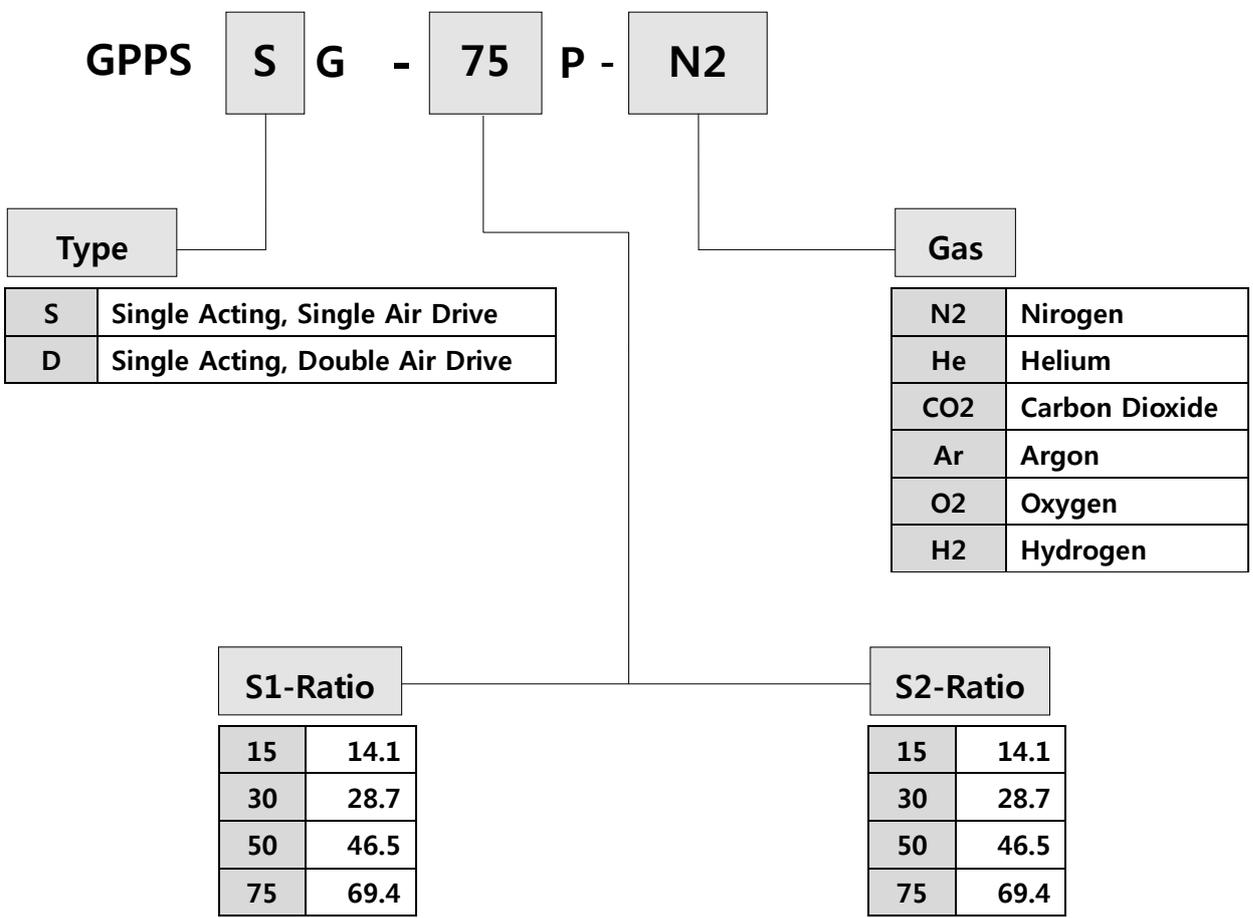
**LZTG5-30-75P**



# Gas Booster Power Packs



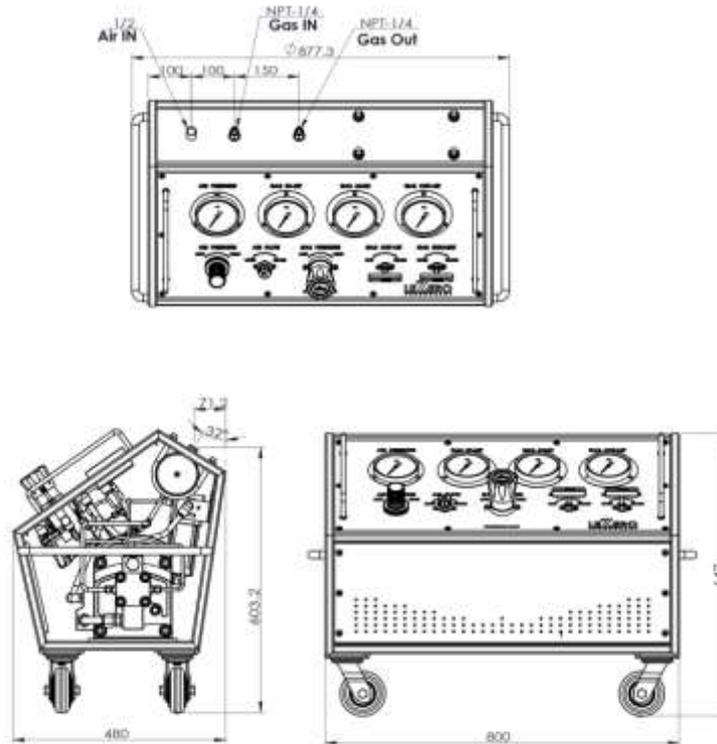
## How to Oder



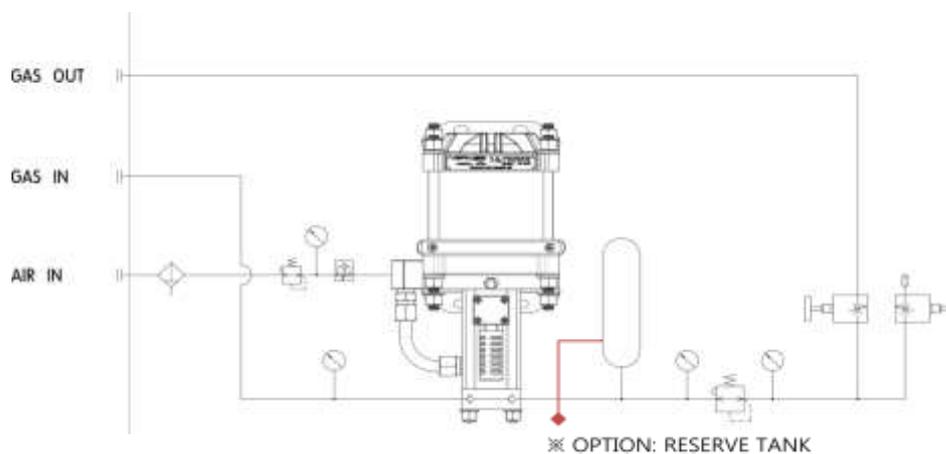
※ "D" Type - 'S1' Type + "S2" Type

## Dimension / Circuit

### Dimension



### Basic Circuit



\*\* The products' dimension could be changed by user requirements for improving the quality \*\*

**LEZERO**  
TECHNOLOGY

ТЕХНОЛОГИЯ  
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