



东莞赛森特流体控制设备有限公司

Dongguan Suncenter Fluid Control Equipment Co., Ltd

Pneumatic (Air driven) gas booster pumps/system



Dongguan Suncenter Fluid Control Equipment Co., Ltd is the member company of Suncenter Group, which is located in Dongguan city of Guangdong province in China. With more than 15 years experiences in fluid pressure exchange and controlling field, we provide various kinds of pneumatic and hydraulic booster pumps, systems and solutions to the customers all over the world. Due to our best product quality, competitive price as well as excellent after-sales service, we have win a great reputation in the field.

Our main products including:

High Pressure Booster Pumps (Gas Booster Pump, Air Driven Liquid Pump, Air Amplifiers)

High Pressure Systems (Gas/Liquid Booster System,Hydro test bench,Chemical injection system,CO2/FM200 filling machine, Tube Expanding Machine)

High Pressure Test Equipment(Hydraulic/Burst/Hydrostatic test machine,Cylinder test machine, Valve test bench,Impulse Testing Machine, etc.)

Product Application

Oil Industry, Gas Industry, Chemical Industry, Fire Fighting, Research Institutions etc.

Our service

13 months' free warranty since the purchasing date and free technical support during lifetime



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Compressed Air Driven Gas Booster Pump- DGA/DGD/DGT Series

Suncenter Air Driven Gas Boosters provide for pressures up to **80Mpa (11,600 psi)**. Used for virtually all known gases, these boosters are ideal for increasing gas pressure, transferring high pressure gas, charging cylinders and scavenging. Key features include:

- Compressed Air driven - no electricity required (connect to normal air compressor)
- In order to extend the lifetime of the pump, the driving air pressure should not be higher than **8 bar**
- No airline lubricator required
- Hydrocarbon free - separation between air and gas sections
- Pressures to 80Mpa (11,600 psi)
- Wide range of models with different ratios
- Built-in-cooling on most models
- Easy to install, operate and maintain
- Best price / performance ratio
- No heat, flame or spark risk and explosion proof
- Automatic pressure holding, whatever the cause of the pressure drop, the Suncenter pump will automatically start, keep the loop pressure constant
- **Applicable gas: Air/Ar(Argon)/He(Helium)/H₂(Hydrogen)/O₂(Oxygen)N₂(Nitrogen) CO₂/NO₂/CH₄/C₂H₂/LNG/LPG/CNG/FM200/SF₆/H₂S etc**

Applications for Air Driven Gas Boosters

SUNCENTER Air Driven Gas Boosters provide for pressures up to 80Mpa. Used for oil free compression not only of air or Nitrogen, but also flammable and risk gases like hydrogen, oxygen and natural gas. These boosters are ideal for increasing gas pressure, transferring high pressure gas, charging cylinders and scavenging.

Air driven boosters are an efficient alternative instead of electrically driven products and can be used in explosion- proof areas.

As a result of the wide range of models it is possible to select the optimum booster for each application. Single stage, double acting or two stage boosters or a combination of these models can be used to achieve different operating pressures and flow capacities.

SUNCENTER Air Driven Gas Boosters are ideal and widely used for hydrostatic and burst testing for valves, pipes, tubing and pressure vessels; Calibration for safety valves; Automobile regulator detecting and telecommunication cable inflatable appliances.



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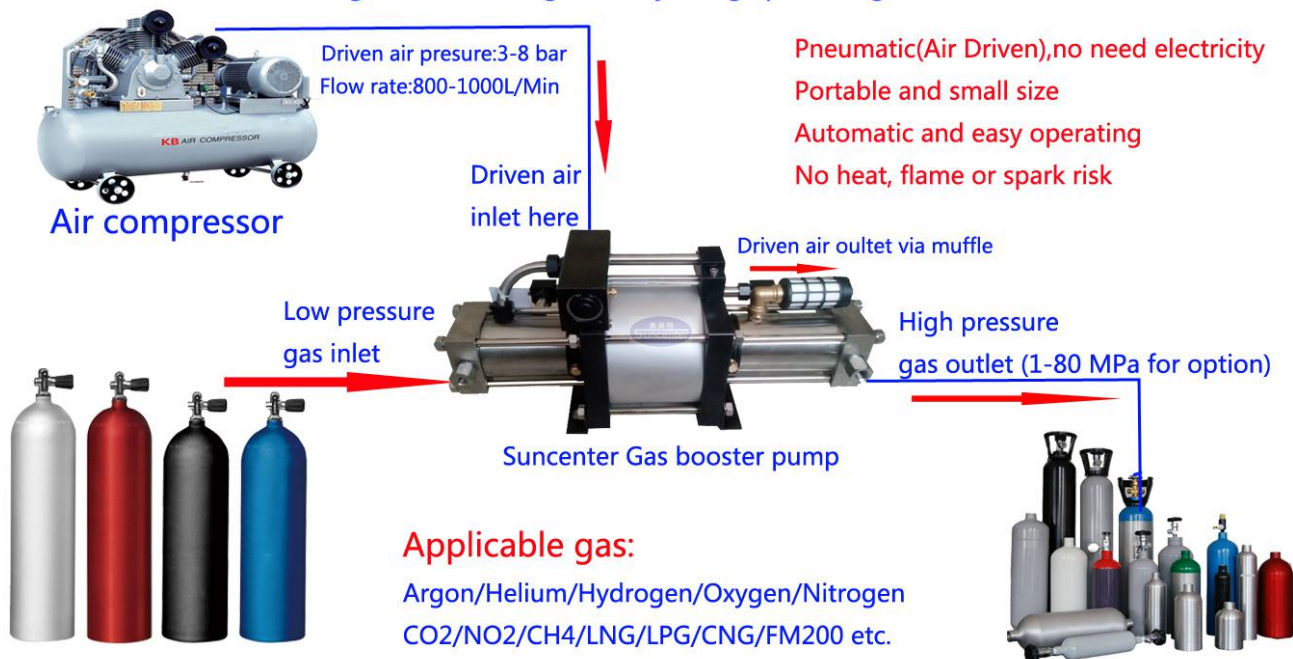
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Applications

- Pressure test with gas/air
- Gas transfer and filling
(Air/Argon/Helium/Hydrogen/Oxygen/Nitrogen/CO₂/NO₂/CH₄/LNG/LPG/CNG/FM200 etc.)
- Charging of gas cylinder and accumulator with nitrogen
- Nitrogen gas spring charging
- Supply for isolating gas systems
- Gas assisted injection molding
- Transfer of oxygen cylinders
- Charging of breathing air bottles
- Leak test
- Hydrostatic Testing for valves, tanks, pressure vessels, pressure switches, hoses, pipes and tubing, pressure gauges, cylinders, transducers, well casings, BOPs, gas bottles and air craft components
- Safety valve adjusting

Suncenter gas booster pump working circuit

For gas transfer/filling/recovery or high pressure gas test





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DGA series gas booster pumps(Single acting, single air drive head):

DGA pumps are available with high quality seals, which provide significantly better service life as well. Pump head fitted with exhaust cooling devices. All parts in contact with the gas are made of stainless steel.



Technical specification for DGA Series:

(Note: P_L : driven air pressure P_A : gas inlet pressure P_B : gas outlet pressure)

Model	Pressure boost ratio	Min. gas Inlet pressure P_A (bar)	Max.gas Inlet pressure P_A (bar)	Max. gas outlet pressure P_B (bar)	Driven air pressure P_L	Formula to calculate gas outlet pressure P_B	Connection: Gas Inlet / Gas outlet (NPT thread)	Max. flow at driven air pressure of 6bar (L/min)
DGA02	2: 1	1.0	16	16	2bar-8 bar	$2 \times P_L$	1/2 / 1/2	960 (at P_A of 6 bar)
DGA05	5: 1	0	40	40	2bar-8 bar	$5 \times P_L$	1/2 / 1/2	680(at P_A of 6 bar)
DGA06	6: 1	2.0	48	48	2bar-8 bar	$6 \times P_L$	1/2 / 1/2	360(at P_A of 10 bar)
DGA10	10: 1	3.5	80	80	2bar-8 bar	$10 \times P_L$	3/8/ 3/8	210(at P_A of 10 bar)
DGA15	15: 1	3.5	120	120	2bar-8 bar	$15 \times P_L$	3/8/ 3/8	190(at P_A of 10 bar)
DGA25	25: 1	7.0	200	200	2bar-8 bar	$25 \times P_L$	1/4/ 1/4	120(at P_A of 20 bar)
DGA40	40: 1	10	320	320	2bar-8 bar	$40 \times P_L$	1/4/ 1/4	200(at P_A of 40 bar)
DGA60	60: 1	20	480	480	2bar-8 bar	$60 \times P_L$	1/4/ 1/4	180(at P_A of 40 bar)
DGA100	100: 1	25	800	800	2bar-8 bar	$100 \times P_L$	1/4/ M14X1.5	136(at P_A of 40 bar)



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DGD series gas booster pumps(Double acting):

DGD series pumps are double acting, with single air driven heads type.

- DGD pumps are available with high quality seals, which provide significantly better service life
- Double pump heads with exhaust cooling devices.
- All components in contact with the gas are made of stainless steel.
- Pipes mounting way are available as customized.



Technical specification for DGD Series:

(Note: P_L : driven air pressure P_A : gas inlet pressure P_B : gas outlet pressure)

Model	Pressure boost ratio	Min. gas Inlet pressure P_A (bar)	Max.gas Inlet pressure P_A (bar)	Max. gas outlet pressure P_B (bar)	Driven air pressure P_L	Formula to calculate gas outlet pressure P_B	Connection: Gas Inlet / Gas outlet (NPT thread)	Max. flow at driven air pressure of 6bar (L/min)
DGD10	10:1	3.5	80	80	2bar-8 bar	10XPL+ P_A	3/8/3/8	410(at P_A of 6 bar)
DGD15	15:1	5	120	120	2bar-8 bar	15XPL+ P_A	3/8/3/8	350 (at P_A of 6 bar)
DGD25	25:1	10	200	200	2bar-8 bar	25XPL+ P_A	1/4/1/4	396(at P_A of 20 bar)
DGD40	40:1	15	320	320	2bar-8 bar	40XPL+ P_A	1/4/1/4	320(at P_A of 40 bar)
DGD60	60:1	25	480	480	2bar-8 bar	60XPL+ P_A	1/4/1/4	215(at P_A of 40 bar)
DGD100	100:1	35	800	800	2bar-8 bar	100XPL+ P_A	1/4/M14*1.5	300(at P_A of 60 bar)
DGD120	120:1	50	960	960	2bar-8 bar	120XPL+ P_A	1/4/M14*1.5	180(at P_A of 60 bar)



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2DGD series gas booster pumps(Double acting, double air driven heads):



Technical specification for 2DGD Series:

(Note: P_L : driven air pressure P_A : gas inlet pressure P_B : gas outlet pressure)

Model	Pressure boost ratio	Min. gas Inlet pressure P_A (bar)	Max.gas Inlet pressure P_A (bar)	Max. gas outlet pressure P_B (bar)	Driven air pressure P_L	Formula to calculate gas outlet pressure P_B	Connection: Gas Inlet / Gas outlet (NPT thread)	Max. flow at driven air pressure of 6bar (L/min)
2DGD10	10:1	3	80	80	2bar-8 bar	$10XPL + P_A$	1/2 / 1/2	980(at P_A of 6 bar)
2DGD25	25:1	6	200	200	2bar-8 bar	$25XPL + P_A$	3/8 / 3/8	560(at P_A of 10 bar)
2DGD40	40:1	25	320	320	2bar-8 bar	$40XPL + P_A$	3/8 / 3/8	480(at P_A of 40 bar)
2DGD60	60:1	30	480	480	2bar-8 bar	$60XPL + P_A$	3/8 / 3/8	320(at P_A of 40 bar)



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DGT series gas booster pumps(Double acting, double stage, single air drive head):

DGT pumps are double acting, double stage with single air drive head pumps. They can provide for super high pressure with very low inlet pressure.

- DGT pumps are available with high quality seals, which provide significantly better service life
- All parts in contact with the gas are made of stainless steel.



Technical specification for DGT Series:

(Note: P_L : driven air pressure P_A : gas inlet pressure P_B : gas outlet pressure)

Model	Pressure boost ratio	Min. gas Inlet pressure P_A (bar)	Max.gas Inlet pressure P_A (bar)	Max. gas outlet pressure P_B (bar)	Driven air pressure P_L	Formula to calculate gas outlet pressure P_B	Connection: Gas Inlet / Gas outlet (NPT thread)	Max. flow at driven air pressure of 6bar (L/min)
DGT15	15:1	0.1	56	120	2-8 bar	15XPL	3/8/ 1/4	230(at P_A of 8 bar)
DGT25	25:1	0.1	10	200	2-8 bar	25XPL	3/8/ 1/4	156(at P_A of 8 bar)
DGT7/25	25:1	5	56	200	2-8 bar	25XPL	3/8/ 1/4	156(at P_A of 8 bar)
DGT40	40:1	0.1	10	320	2-8 bar	40XPL	3/8/ 1/4	124(at P_A of 8 bar)
DGT15/40	40:1	5	120	320	2-8 bar	40XPL	3/8/ 1/4	124(at P_A of 8 bar)
DGT60	60:1	0.1	10	480	2-8 bar	60XPL	3/8/ 1/4	80(at P_A of 15 bar)
DGT15/60	60:1	6	120	480	2-8 bar	60XPL	3/8/ 1/4	80(at P_A of 15 bar)
DGT100	100:1	0.1	10	800	2-8 bar	100XPL	3/8/ 1/4	63(at P_A of 8 bar)



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2DGT series gas booster pumps(Double acting, double stage,double air driven heads):



Technical specification for 2DGT series:

Model	Pressure boost ratio	Min. gas Inlet pressure P_A (bar)	Max.gas Inlet pressure P_A (bar)	Max. gas outlet pressure P_B (bar)	Driven air pressure P_L	Formula to calculate gas outlet pressure P_B	Connection: Gas Inlet / Gas outlet (NPT thread)	Max. flow at driven air pressure of 6bar (L/min)
2DGT7/15	15:1	4	56	120	2bar-8 bar	15XPL	3/8 / 3/8	430(at P_A of 10 bar)
2DGT7/25	25:1	5	56	200	2bar-8 bar	25XPL	3/8 / 3/8	300(at P_A of 10 bar)
2DGT15/40	40:1	7	120	320	2bar-8 bar	40XPL	3/8 / 3/8	180(at P_A of 10 bar)
2DGT15/60	60:1	7	120	480	2bar-8 bar	60XPL	3/8 / 3/8	120(at P_A of 10 bar)

Note: P_L : driven air pressure P_A : gas inlet pressure P_B : gas outlet pressure

In order to extend the lifetime of the pump, the driven air pressure should not be higher than 8 bar



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Suncenter DGS Series Pneumatic (Air driven) Gas Booster Pump System

For the gas booster filling/test station,
we have three different cabinet design for choosing



Model A
closed type with
carbon steel material



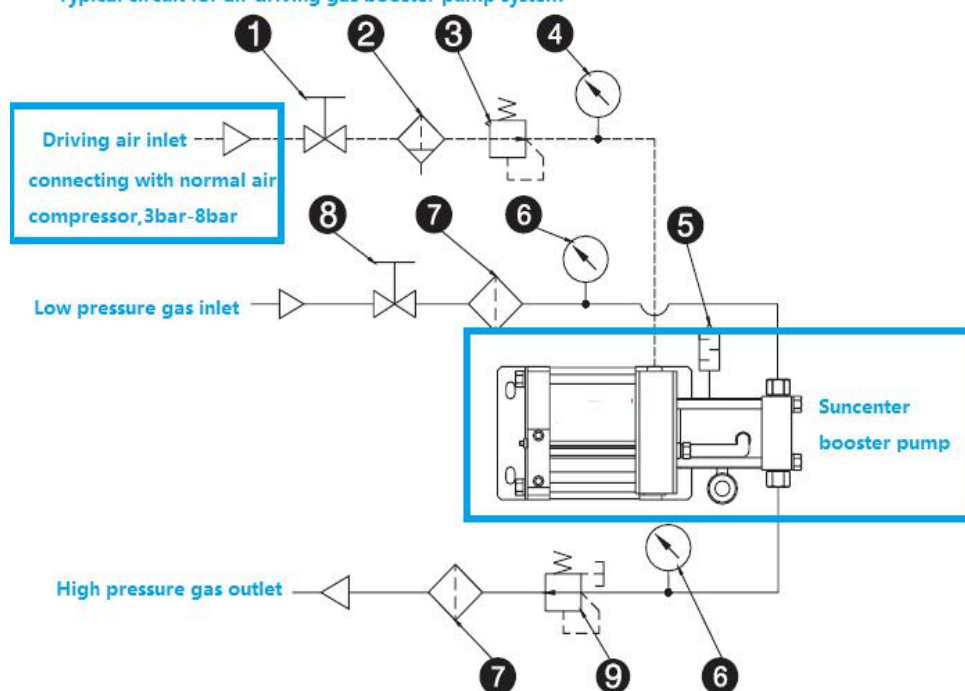
Model B
closed type with
stainless steel material



Model C
frame type with
stainless steel material

DGS gas booster system = gas booster pump+ following valves, gauges, and parts

Typical circuit for air driving gas booster pump system



Number Explanation

- ① driving air switch
- ② air filter
- ③ air pressure adjusting valve
- ④ pressure gage
- ⑤ muffler
- ⑥ pressure gage
- ⑦ gas filter
- ⑧ needle valve
- ⑨ safety relief valve



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Suncenter - Pneumatic gas booster system are compact and delicacy solution tailored to customer specific requirements with gas boosters as well as all accessories to be fitted and installed in the frame or a closed cabinet.

To operate this system, the pressure gauges, valves and pressure regulators have to be fitted on panels. The outlet pressure is easily to be set through a simple air regulator.

The pump stops automatically when this end pressure is reached and restarts with a slight drop in the outlet pressure or an increase in the air drive pressure.

Suncenter - Pneumatic booster system are used for oil free compression of clean shop air as well as industrial gases like Argon, Helium, Oxygen, Hydrogen and Nitrogen, CO₂, etc.. Driven air from 3 bar to 8 bar (from air compressor).

Operating pressure up to 80 MPa, for higher pressure, pump with double driven heads is an ideal option.

Applications

- Pressure test with gas
- Gas transfer and filling
(Argon/Helium/Hydrogen/Oxygen/Nitrogen/CO₂/NO₂/CH₄/LNG/LPG/CNG/FM200 etc.)
- Charging of gas cylinder and accumulator with nitrogen
- Supply for isolating gas systems
- Gas assisted injection molding
- Transfer of oxygen cylinders
- Charging of breathing air bottles
- Leak test
- Hydrostatic Testing for valves, tanks, pressure vessels, pressure switches, hoses, pipes and tubing, pressure gauges, cylinders, transducers, well casings, BOPs, gas bottles and air craft components
- Safety valve adjusting



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The hottest selling- model A and model C cabinet picture



The standard gas booster pumps system including following parts:

Air –driven gas booster pump (DGA/DGD/DGT three series for choosing)

Stainless steel (carbon steel) material cabinet (Three models for choosing)

F.R.L combination for driven air (adjusts air pressure, add lubricating oil and water filter)

Driven air switch (Pump starting switch), driven air pressure gauge

Gas inlet switch, Gas inlet pressure gauge

Gas outlet switch, Gas outlet pressure gauge, unloading valve, interconnecting pipes etc.

And we could also customize it according to clients' special requirement.

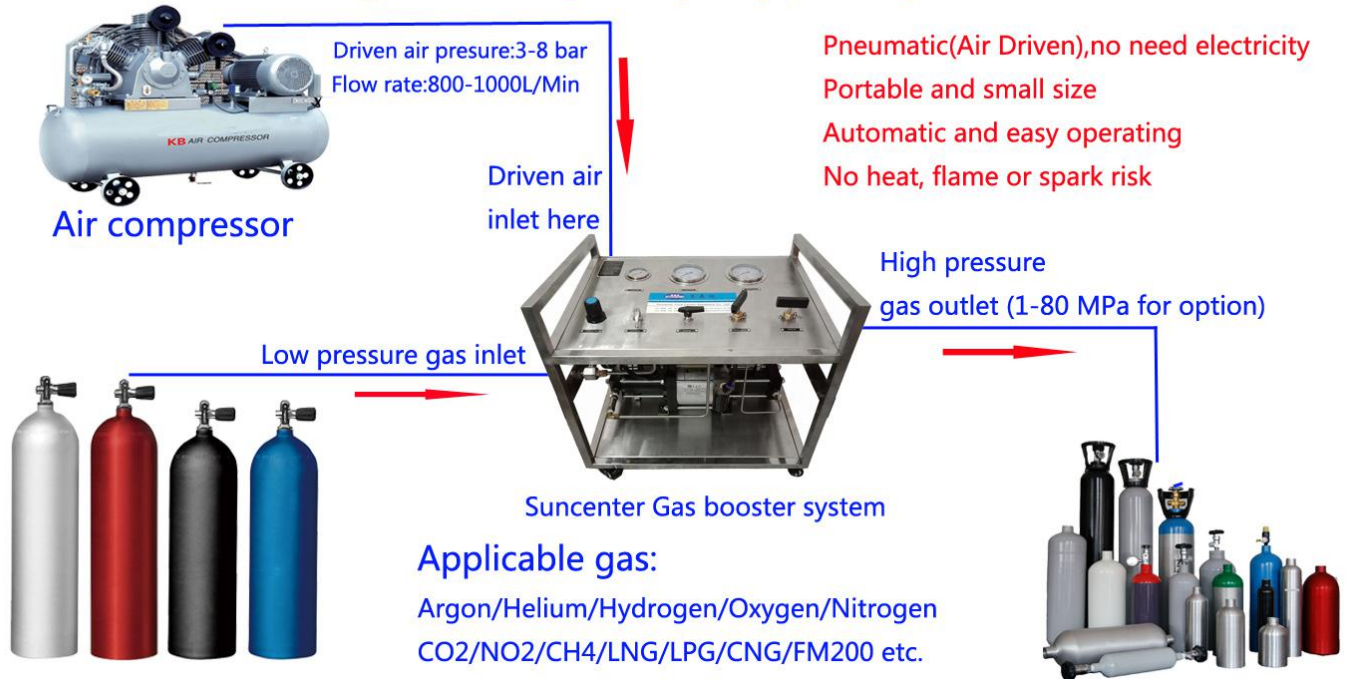


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Suncenter gas booster system working circuit

For gas transfer/filling/recovery or high pressure gas test





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How to Select Suncenter Air Driven Gas Boosters/Systems?

In order to choose suitable booster pump or systems for you, please kindly reply us the following questions:

- 1.What is your present gas pressure?()bar**
- 2.What is your gas?oxygen gas,nitrogen gas or other gases?**
- 3.What outlet gas pressure do you want?()bar**
- 4.What driven air pressure (of your air compressor) can you offer?()bar, because our booster is completely air operated and no need any electricity**
- 5.What outlet gas flow rate do you need?()L/min**

**If you are interested in any of our products, please feel free to contact us.
We could also make the customized products according to your special requirements.**

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