



东莞赛森特流体控制设备有限公司

Dongguan Suncenter Fluid Control Equipment Co., Ltd

Pneumatic (Air compressor driven) liquid 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



Compressed Air Driven Liquid Booster Pump-DGM/DGG/DGGD Series

We offer the most complete range of Air driven liquid pump models in the industry measured for:

- A. Capability of ultimate pressure, flow or output horsepower.
- B. Compatibility with a broad variety of liquids, such as oil, water and chemical applications.

SUNCENTER pumps are air driven at a drive air pressure of 1bar to 8bar (14.5 psi to 116 psi) by the normal air compressor. Basically the principle of operation is similar to a reciprocating amplifier where control of the piston at the end position is regulated by a pilot operated 4/2 way valve.

Suncenter pumps feature a large air piston joint to a smaller diameter plunger. The pressure ratio is the difference of these two areas and is the method of determining maximum outlet pressure. Higher pressures obtained by using higher pressure ratios. Suncenter model numbers reflect the pumps nominal pressure ratios, while the technical data indicates exact ratios. The outlet pressure is easily to set through a simple air regulator. By multiplying the pressure ratio by the available shop air pressure, the nominal liquid pressure can be calculated.

SUNCENTER pumps are self priming. In general it is not necessary to use an air line lubricator. The liquid to be pumped flows into the suction chamber by the up-stroke of the drive piston. By this suction effect, the inlet check valve is opened and the outlet check valve is closed. The down-stroke generates the pressure at the liquid side. The inlet check valve is closed and the outlet check valve is opened by the generated pressure. SUNCENTER liquid pumps cycle automatically, where the pressure is built up the numbers of cycles slow down, the pump stops automatically when the output pressure forces are equal. The pump restarts with a slight drop in the outlet pressure or an increase in the air drive pressure. Pump performance can be affected by a number of conditions, such as freezing of muffler or pilot valves (which is caused by moisture in air lines), inadequate inlet air line sizes and dirty filters. Don't reduce the indicated port sizes and consult SUNCENTER for exact flow conditions not shown in charts.



Applications include:

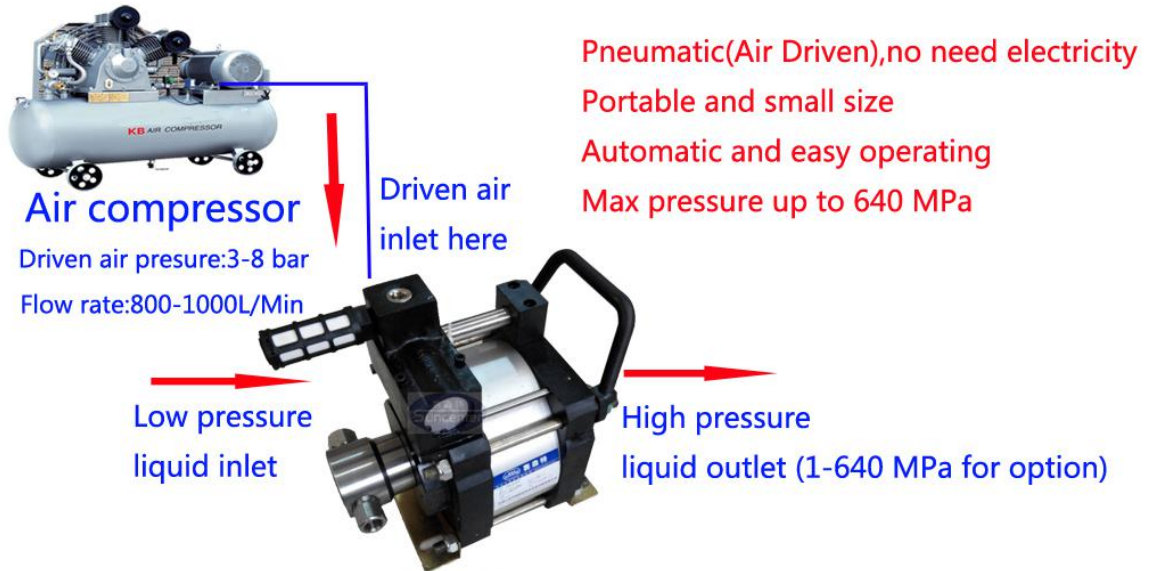
- Pressure testing
- Burst(Hydrostatic) testing
- Work holding/power clamping
- Jacking/lifting
- Valve actuator control
- Hydraulic cylinder actuation
- Press safety overload devices
- Roller tensioning
- Metering
- Precision lubrication and spraying
- Liquefied gas transfer

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
- Pressures to 640Mpa (6400 bar)
- 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



Suncenter liquid booster pump working circuit



Suncenter liquid booster pump
Boost Medium: Water/Oil/Chemical liquid
For hydraulic/hydrostatic test or chemical injection

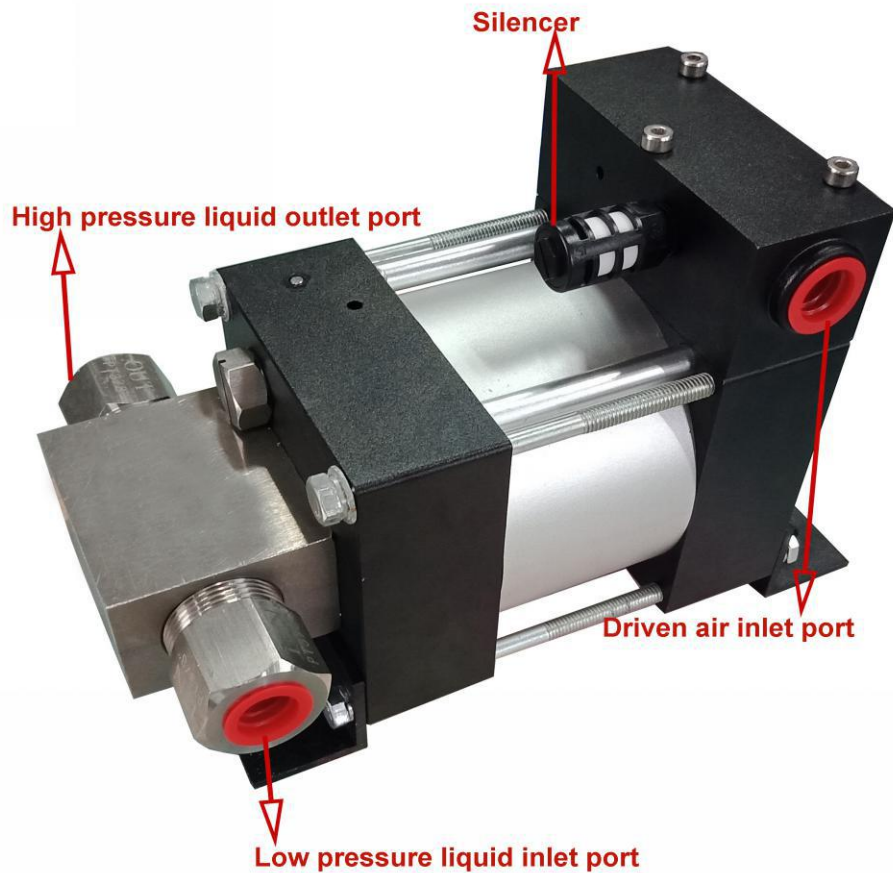


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Dongguan Suncenter Fluid Control Equipment Co., Ltd

DGM Series Liquid Pumps(Single acting, single air drive head)

- They have aluminum bodies, with oxidation treatment and wetted materials of carbon steel or stainless steel, which depending on different service liquid. Material of stainless steel, making them an excellent choice of water application.
- Portable design.
- High quality seals, long service life available
- Easy to install, operate and maintenance.
- Explosion proof and no electrical power required.





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DGM series technical specification

Model	Pressure Boost Ratio	Driven air pressure P_L	Formula to calculate outlet pressure	MAX Outlet Pressure(bar)*	Liquid inlet Connection	Liquid outlet Connection	MaxFlow rate(L/min)**
DGM1	1:1	2-8 bar	$1XP_L$	8	NPT1/2	NPT1/2	20.50
DGM4	4:1	2-8 bar	$4XP_L$	32	NPT1/2	NPT1/2	15.36
DGM10	10:1	2-8 bar	$10XP_L$	80	NPT3/4	NPT1/2	7.15
DGM16	16:1	2-8 bar	$16XP_L$	128	NPT1/2	NPT 1/2	4.59
DGM30	30:1	2-8 bar	$30XP_L$	240	NPT 1/2	NPT 3/8	2.53
DGM44	44:1	2-8 bar	$44XP_L$	352	NPT 3/8	NPT 3/8	1.41
DGM64	64:1	2-8 bar	$64XP_L$	512	NPT 3/8	NPT 3/8	0.95
DGM100	100:1	2-8 bar	$100XP_L$	800	NPT 3/8	NPT 3/8	0.64
DGM170	170:1	2-8 bar	$170XP_L$	1360	NPT 3/8	M14*1.5	0.37

The outlet liquid pressure=Driven air pressure*boost ratio

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

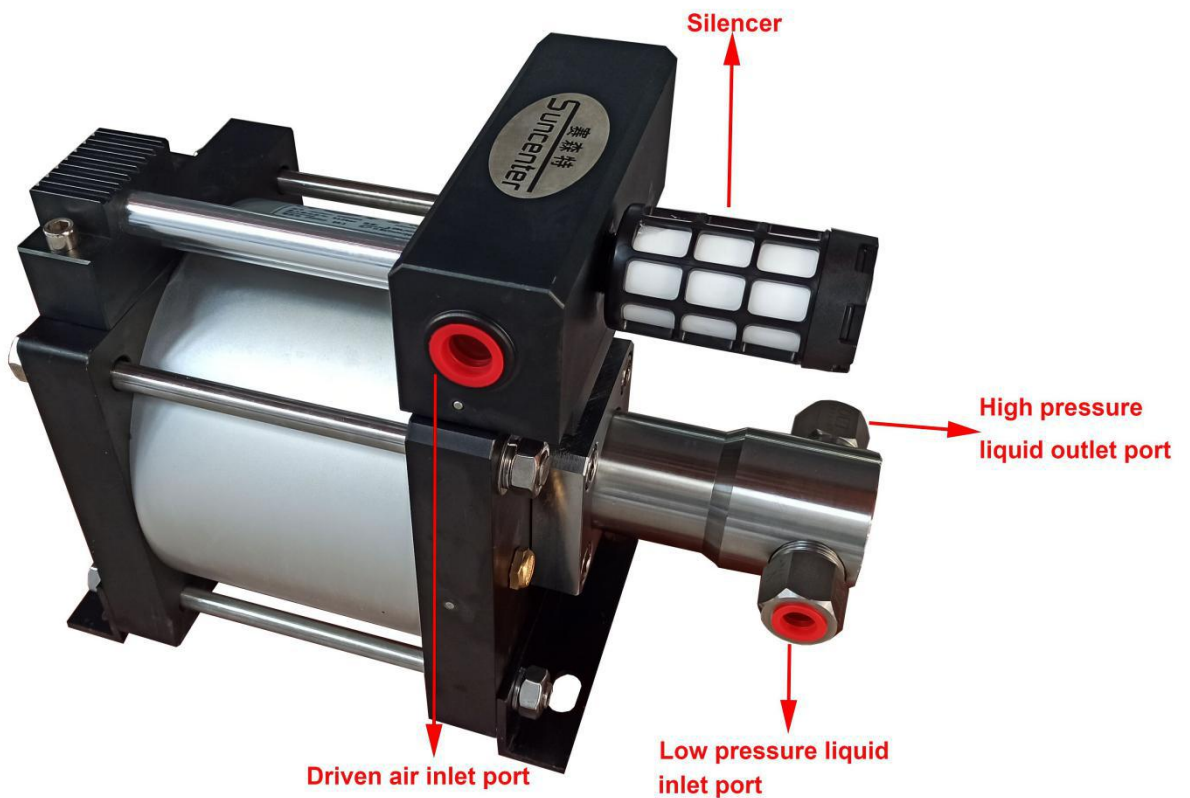


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Dongguan Suncenter Fluid Control Equipment Co., Ltd

DGG Series Liquid Pumps(Single acting, single air drive head)

- DGG pumps have aluminum bodies and wetted materials of stainless steel or carbon steel ,which depends on different service liquid. Materials of stainless steel, make them an excellent choice of water application. High quality seals, long service life available.





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DGG series technical specification

Model	Pressure Boost Ratio	Driven air pressure P_L	Formula to calculate outlet pressure	MAX Outlet Pressure(bar)*	Liquid inlet Connection	Liquid outlet Connection	MAX Flow (L/min)
DGG6	6:1	2-8 bar	$6XP_L$	48	NPT1/2	NPT1/2	29.91
DGG10	10:1	2-8 bar	$10XP_L$	80	NPT1/2	NPT1/2	18.84
DGG16	16:1	2-8 bar	$16XP_L$	128	NPT1/2	NPT1/2	12.42
DGG28	28:1	2-8 bar	$28XP_L$	224	NPT1/2	NPT1/2	7.11
DGG40	40:1	2-8 bar	$40XP_L$	320	NPT1/2	NPT1/2	4.89
DGG64	64:1	2-8 bar	$64XP_L$	512	NPT1/2	NPT3/8	3.08
DGG80	80:1	2-8 bar	$80XP_L$	640	NPT1/2	NPT3/8	2.44
DGG100	100:1	2-8 bar	$100XP_L$	800	NPT1/2	NPT3/8	1.92
DGG130	130:1	2-8 bar	$130XP_L$	1040	NPT1/2	M14X1.5	1.47
DGG175	175:1	2-8 bar	$175XP_L$	1400	NPT3/8	M14X1.5	1.14
DGG255	255:1	2-8 bar	$255XP_L$	2040	NPT1/4	M14X1.5	0.75
DGG400	400:1	2-8 bar	$400XP_L$	3200	NPT1/4	M14X1.5	0.48
DGG510	510:1	2-8 bar	$510XP_L$	4080	NPT1/4	M14X1.5	0.65
DGG800	800:1	2-8 bar	$800XP_L$	6400	NPT1/4	M14X1.5	0.42

The outlet liquid pressure=Driven air pressure*boost ratio

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



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Dongguan Suncenter Fluid Control Equipment Co., Ltd

DGGD Series Liquid Pumps(Double acting, single air drive head)

They are characterized by the same features as the DGG pumps single acting, single air drive head types, but they have less pulsations and deliver approx. 50 % more flow.





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DGGD series technical specification

Model	Pressure Boost Ratio	Driven air pressure P_L	Formula to calculate outlet pressure	MAX Outlet Pressure(bar)*	Liquid inlet Connection	Liquid outlet Connection	MAX Flow (L/min)**
DGGD4	4:1	2-8 bar	$4XP_L$	32	NPT1/2	NPT1/2	70.00
DGGD6	6:1	2-8 bar	$6XP_L$	48	NPT1/2	NPT1/2	48.60
DGGD10	10:1	2-8 bar	$10XP_L$	80	NPT1/2	NPT1/2	30.61
DGGD16	16:1	2-8 bar	$16XP_L$	128	NPT1/2	NPT1/2	19.73
DGGD28	28:1	2-8 bar	$28XP_L$	224	NPT1/2	NPT1/2	11.30
DGGD40	40:1	2-8 bar	$40XP_L$	320	NPT1/2	NPT3/8	7.69
DGGD64	64:1	2-8 bar	$64XP_L$	512	NPT1/2	NPT3/8	4.94
DGGD80	80:1	2-8 bar	$80XP_L$	640	NPT1/2	NPT3/8	3.96
DGGD100	100:1	2-8 bar	$100XP_L$	800	NPT1/2	NPT3/8	3.13
DGGD130	130:1	2-8 bar	$130XP_L$	1040	NPT1/2	M14*1.5	2.40
DGGD175	175:1	2-8 bar	$175XP_L$	1400	NPT3/8	M14*1.5	1.81
DGGD255	255:1	2-8 bar	$255XP_L$	2040	NPT1/4	M14*1.5	1.23
DGGD400	400:1	2-8 bar	$400XP_L$	3200	NPT1/4	M14*1.5	0.79

The outlet liquid pressure=Driven air pressure*boost ratio

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

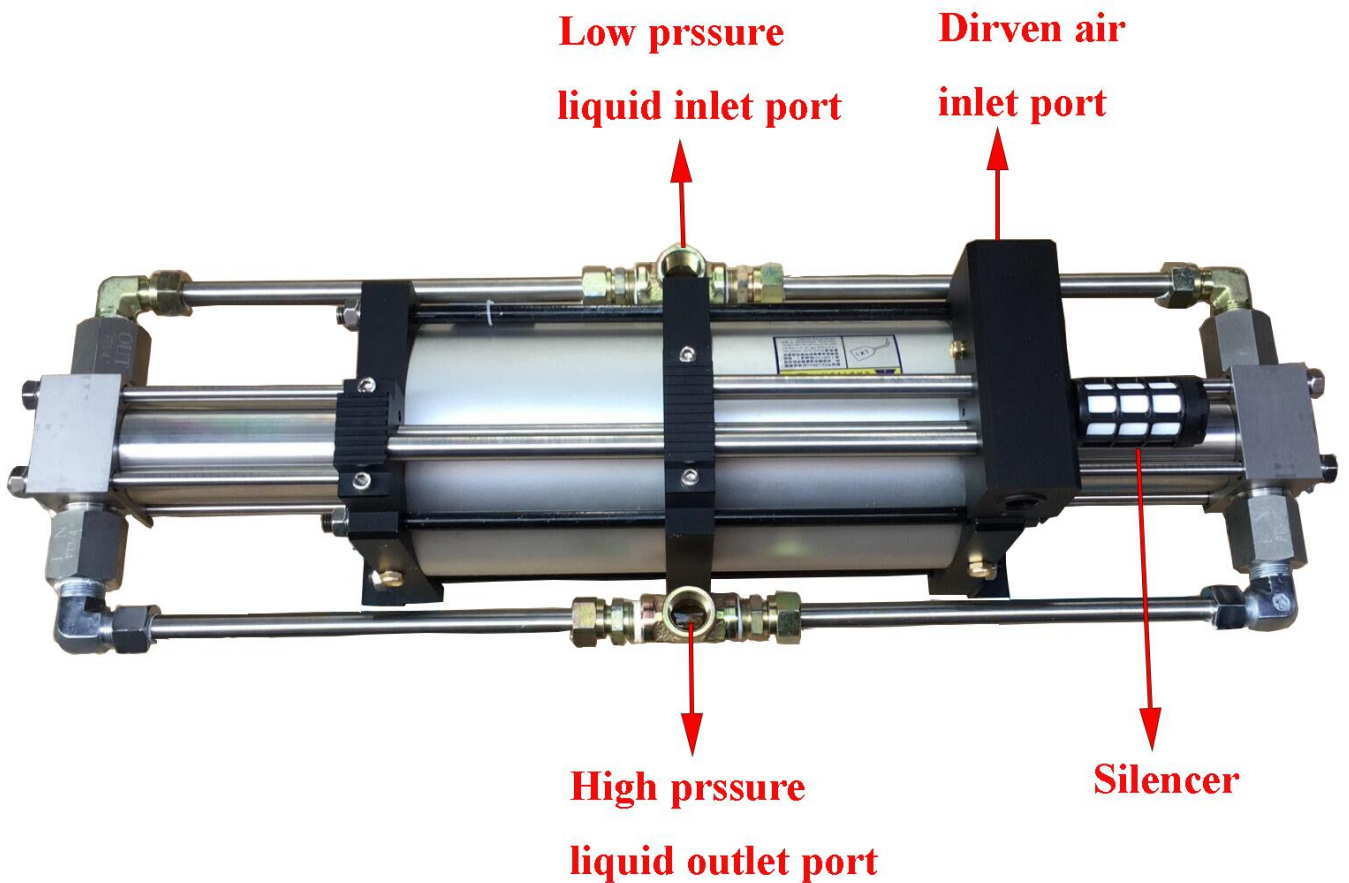


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Dongguan Suncenter Fluid Control Equipment Co., Ltd

2DGGD Series Liquid Pumps(Double acting, Double air drive heads)

They are characterized by the same features as the DGGD pumps double acting, but with two air driven head types, they have less pulsations and deliver approx. 100 % more flow.





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Dongguan Suncenter Fluid Control Equipment Co., Ltd

2DGGD series technical specification

Model	Pressure Boost Ratio	Driven air pressure P_L	Formula to calculate outlet pressure	MAX Outlet Pressure(bar)*	Liquid inlet Connection	Liquid outlet Connection	MAX Flow (L/min)**
2DGGD10	10:1	2-8 bar	$10XP_L$	80	NPT1/2	NPT1/2	61.22
2DGGD16	16:1	2-8 bar	$16XP_L$	128	NPT1/2	NPT1/2	39.46
2DGGD28	28:1	2-8 bar	$28XP_L$	224	NPT1/2	NPT1/2	22.60
2DGGD40	40:1	2-8 bar	$40XP_L$	320	NPT1/2	NPT3/8	15.38
2DGGD64	64:1	2-8 bar	$64XP_L$	512	NPT1/2	NPT3/8	9.88
2DGGD80	80:1	2-8 bar	$80XP_L$	640	NPT1/2	NPT3/8	7.92
2DGGD100	100:1	2-8 bar	$100XP_L$	800	NPT1/2	NPT3/8	6.26
2DGGD130	130:1	2-8 bar	$130XP_L$	1040	NPT1/2	M14*1.5	4.80
2DGGD175	175:1	2-8 bar	$175XP_L$	1400	NPT3/8	M14*1.5	3.62
2DGGD255	255:1	2-8 bar	$255XP_L$	2040	NPT1/4	M14*1.5	2.46
2DGGD400	400:1	2-8 bar	$400XP_L$	3200	NPT1/4	M14*1.5	1.58

The outlet liquid pressure=Driven air pressure*boost ratio

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



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Suncenter DLS Series Pneumatic (Air driven) Liquid Booster System

SUNCENTER- Hydraulic power packs(Liquid pump system) are compact and delicacy solution tailored to customer specific requirements with air driven liquid pumps as well as all accessories to be fitted and installed on the frame or in 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 Hydraulic power packs are available with wide range of pressure ratios make these series of pumps ideal for powering a variety of oil/hydraulic operations. **The maximum operating pressure up to 640 MPa.**

As the pressure will be generated by means of a pneumatically operated pump, the electric connection will not be necessary. To operate this system, the air driven liquid pump have to be equipped with the air control unit combined filter and water separator, pressure-regulating valve, pressure control gauge as well as manual relieve valve. In this operation, the pump will be mounted to the stainless steel tank in the closed cabinet in a compact and space saving manner. Pressure gauges, valves and pressure regulators will be fitted on panel.

The desired operating pressure can be attained by adjusting the driving air pressure. When the driving air pressure and the output pressure reach the balance, the pump stops filling pressure and the output pressure stays at the preset value. This hydraulic unit can be used for all kinds of pressure testing and test tools for research and test institutes or for other functions requiring a determined pressure.



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For the hydraulic test station(liquid booster station),
we have three different cabinet design for choosing



Model A
closed type with
carbon steel material



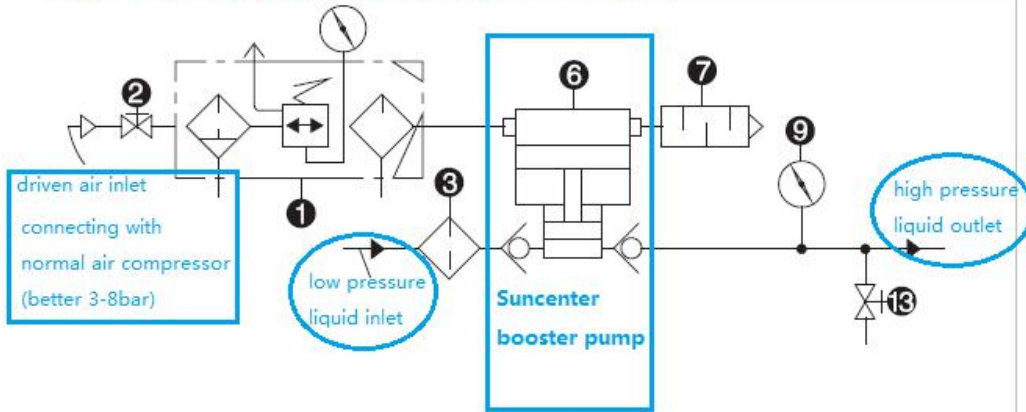
Model B
closed type with
stainless steel material



Model C
frame type with
stainless steel material

DLS Liquid (hydraulic) booster system = Liquid pump+ following valves, gages, and parts

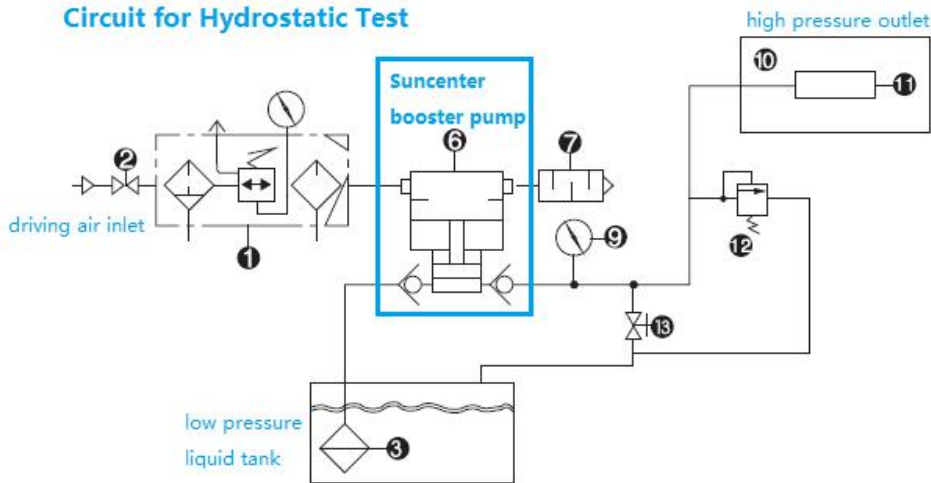
Typical circuit diagram for Air driving liquid booster pump



Number explanation

- ① F.R.L combination
- ② Driving air switch
- ③ Liquid filter
- ⑥ Booster pump
- ⑦ Muffler
- ⑨ Pressure gage
- ⑩ Testing cabinet
- ⑪ Tested part
- ⑫ Safety relief valve
- ⑬ unloading valve

Circuit for Hydrostatic Test





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The standard liquid pump system including following parts:

Air-driven liquid booster pump (DGM/DGG/DGGD 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, water tank

Liquid inlet/outlet switch, high pressure liquid gauge, unloading valve, interconnecting pipes etc.

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

DLS series Liquid Pressure Booster Pump System-The hottest selling Model C cabinet

