

AIR DRIVEN

Gas Boosters & SYSTEMS



MAXPRO[®]
TECHNOLOGIES

Accepting VISA, MasterCard and American Express

Gas Boosters

AIR DRIVEN FROM 30 PSI TO 21,750 PSI

Maximator gas boosters are an excellent alternative to high pressure stationary type compressors. These boosters offer a compact, lightweight design that requires no electrical power or lubrication, thereby providing a more flexible and efficient source for delivering high pressure gas.

Maximator gas boosters will compress gases such as nitrogen and argon up to 21,750 psi, while oxygen can be compressed up to 5,000 psi using special seals and cleaning procedures. A wide variety of other gases can be compressed including hydrogen, natural gas, ethylene, nitrous oxide, neon, carbon dioxide, carbon monoxide and breathing air. Consult MAXPRO for special seals, venting, or cleaning requirements for these gases.

In applications where high output pressures are required and the gas supply pressure is low, Maximator gas boosters can be operated in series. MAXPRO supplies these booster combinations in 2, 3 or 4 stage arrangements as complete packages. To achieve higher gas flows, two or more boosters can work in parallel as a unit. Consult MAXPRO for more information on these special applications.

Features

- Pressures to 21,750 psi for most gases and 5,000 psi for oxygen
- Easy to install and operate
- Compact, lightweight design
- Single or double acting and two stage models
- Double air head available in single and two stage boosters
- No electrical power required
- Requires no lubrication
- Boosters are contaminant free
- Units can be operated in series or parallel
- Variety of pressure and compression ratios available



Applications

- Low pressure gas reclaim from storage bottles
- Oxygen boosting
- Gas pressure and leak testing
- Charging of accumulators
- Boosting gas pressures from nitrogen or Oxygen generators
- Nitrogen injection for molding machines
- Breathing air systems for scuba and fire department tanks
- Leak detection systems
- Low pressure autoclaving
- Typical Gases – air, nitrogen, helium, oxygen, carbon dioxide, nitrous oxide, neon, argon, hydrogen, carbon monoxide, methane, ethylene and natural gas

Accessories

All MAXPRO gas boosters are available with an optional air control unit (ACP). This package is shown below and consists of an air filter, regulator with gauge, shutoff valve and necessary fittings and hose for plumbing unregulated pilot port.



MAXPRO offers a wide variety of other accessories to assist the installation of your Maximator gas booster.

- Gas receivers
- Pressure gauges
- Air pilot pressure switches
- Filters
- High pressure valves, fittings and tubing
- Miscellaneous plumbing components

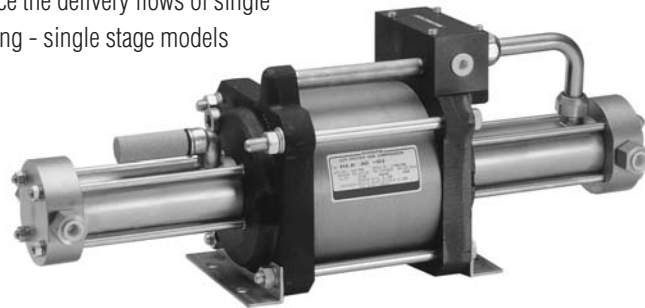
Styles

MAXPRO offers five gas boosters in the single acting - single stage configuration. These booster models include the DLE2-1, DLE5-1, DLE15-1, DLE30-1 and DLE75-1. Single stage - single acting boosters are the smallest and lightest of the Maximator family, yet capable of output pressures up to 10,000 psi.



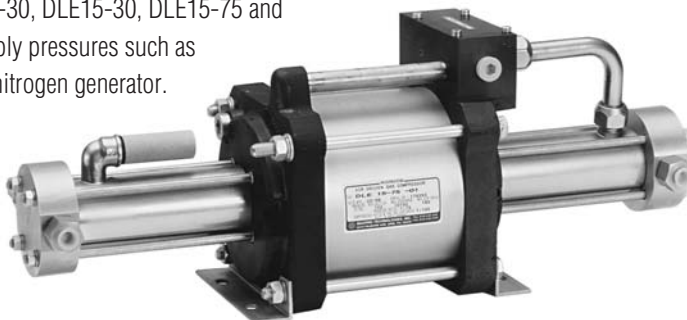
**SINGLE
ACTING
SINGLE
STAGE**

Double acting - single stage gas boosters provide twice the delivery flows of single acting boosters at a more constant output. Double acting - single stage models include DLE2, DLE5, DLE15, DLE30 and DLE75.



**DOUBLE
ACTING
SINGLE
STAGE**

MAXPRO offers six models in single air head, double acting - two stage configuration. These boosters include the DLE2-5, DLE5-15, DLE5-30, DLE15-30, DLE15-75 and DLE30-75. These boosters are ideal for low gas supply pressures such as salvaging bottled gas or boosting pressures from a nitrogen generator.



**TWO
STAGE**

For the greatest combination of pressure and compression ratios the double acting - two stage - double air head models are ideal. There are four double air head - two stage boosters, DLE5-30-2, DLE15-30-2, DLE15-75-2 and DLE30-75-2. These boosters provide maximum flow in low air drive and gas supply pressure conditions.

For high pressure applications or where air drive pressure is low MAXPRO offers three double acting - single stage boosters with a double air head. These models include the DLE15-2, DLE30-2 and DLE75-2.



**DOUBLE
AIR HEAD
SINGLE AND
TWO STAGE**

TECHNICAL INFORMATION

STYLE	CATALOG NUMBER	PRESSURE RATIO	COMPRESSION RATIO	SUPPLY PRESSURE (PSI)			OUTLET PRESSURE (PSI) MAX.	STALL PRESSURE	CONNECTIONS		MAX. FREQ. CYCLES/MIN.	DISPL PER CYCLE (IN. ³)	MAX. TEMP. F	WEIGHT (LBS.)
				MIN. *	MIN. **	MAX.			INLET	OUTLET				
SINGLE ACTING SINGLE STAGE	DLE2-1	2:1	10:1	0	30	290	290	2Pa	1	3/4	100	56.2	140	34
	DLE5-1	5:1	15:1	30	50	725	725	5Pa	3/8	3/8	110	22.7	140	
	DLE15-1	15:1	20:1	100	110	2,175	2,175	15Pa	1/4	1/4	130	7.4	210	29
	DLE30-1	30:1	20:1	220	220	4,350	4,350	30Pa	9/16"-18	9/16"-18	130	3.6	210	
	DLE75-1	75:1	20:1	500	550	10,875	10,875	75Pa	9/16"-18	9/16"-18	130	1.5	210	
DOUBLE ACTING SINGLE STAGE	DLE2	2:1	10:1	0	60	580	580	2Pa+Ps	1	3/4	90	112.5	140	45
	DLE5	5:1	15:1	30	100	1,450	1,450	5Pa+Ps	3/8	3/8	110	45.5	140	
	DLE15	15:1	20:1	100	220	4,350	4,350	15Pa+Ps	1/4	1/4	120	14.8	210	40
	DLE30	30:1	20:1	220	440	8,700	8,700	30Pa+Ps	9/16"-18	9/16"-18	120	7.3	210	
	DLE75	75:1	20:1	500	1,100	21,750	21,750	75Pa+Ps	9/16"-18	9/16"-18	130	3.0	210	
DOUBLE ACTING SINGLE STAGE DOUBLE AIR HEAD	DLE15-2	30:1	20:1	145	220	4,350	4,350	30Pa+Ps	1/4	1/4	100	14.8	210	51
	DLE30-2	60:1	20:1	290	440	8,700	8,700	60Pa+Ps	9/16"-18	9/16"-18	100	7.3	210	
	DLE75-2	150:1	20:1	650	1,100	21,750	21,750	150Pa+Ps	9/16"-18	9/16"-18	100	3.0	210	
	DLE2-5	5:1	25:1	0	60	0.8xPa	1,450	5Pa+2.5Ps	1	3/8	100	56.2	140	45
	DLE5-15	15:1	45:1	30	100	1.6xPa	4,350	15Pa+3Ps	3/8	1/4	110	22.7	210	42
DOUBLE ACTING TWO STAGE	DLE5-30	30:1	90:1	30	100	0.5xPa	8,700	30Pa+6Ps	3/8	9/16"-18	110	22.7	210	
	DLE15-30	30:1	40:1	100	220	7.5xPa	8,700	30Pa+2Ps	1/4	9/16"-18	120	7.4	210	
	DLE15-75	75:1	100:1	100	220	2.5xPa	12,325	75Pa+5Ps	1/4	9/16"-18	120	7.4	210	
	DLE30-75	75:1	50:1	220	450	12.0xPa	15,225	75Pa+2.5Ps	9/16"-18	9/16"-18	120	3.6	210	
	DLE30-75-2	150:1	50:1	220	450	24.0xPa	21,750	150Pa+2.5Ps	9/16"-18	9/16"-18	110	3.6	210	
DOUBLE ACTING TWO STAGE DOUBLE AIR HEAD	DLE15-30-2	60:1	90:1	30	100	1.0xPa	8,700	60Pa+6Ps	3/8	9/16"-18	100	22.7	210	53
	DLE15-30-2	60:1	40:1	100	220	15xPa	8,700	60Pa+2Ps	1/4	9/16"-18	100	7.4	210	
	DLE15-75-2	150:1	100:1	100	220	5.0xPa	21,750	150Pa+5Ps	1/4	9/16"-18	100	7.4	210	
	DLE30-75-2	150:1	50:1	220	450	24.0xPa	21,750	150Pa+2.5Ps	9/16"-18	9/16"-18	110	3.6	210	

NOTE: * = Minimum required for basic operation

** = Minimum required to achieve maximum outlet pressures

Pa = Drive air pressure, 145 psi maximum, 15 psi minimum

Ps = Gas supply (suction) pressure

The 9/16"-18 is a 1/4" O.D. tubing, high pressure coned and threaded connection.

Stall pressure must not be allowed to exceed outlet pressure rating.

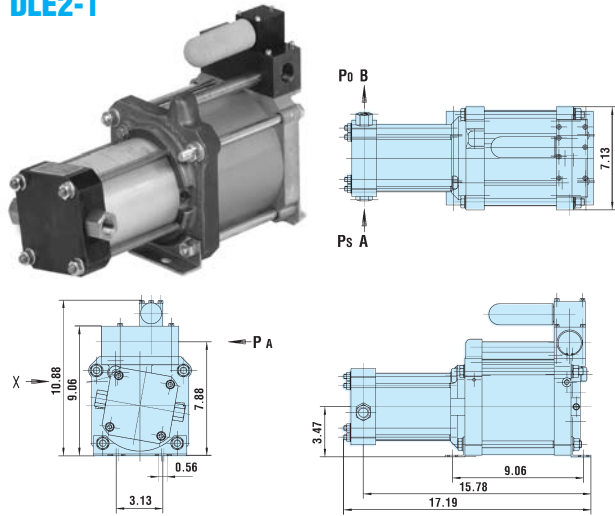
Compression ratio is the minimum required ratio of outlet pressure/supply pressure.

Adapter (MT30-21NFBHM4) is available to convert the 9/16"-18 connection to 1/4" FNPT. Order separately.

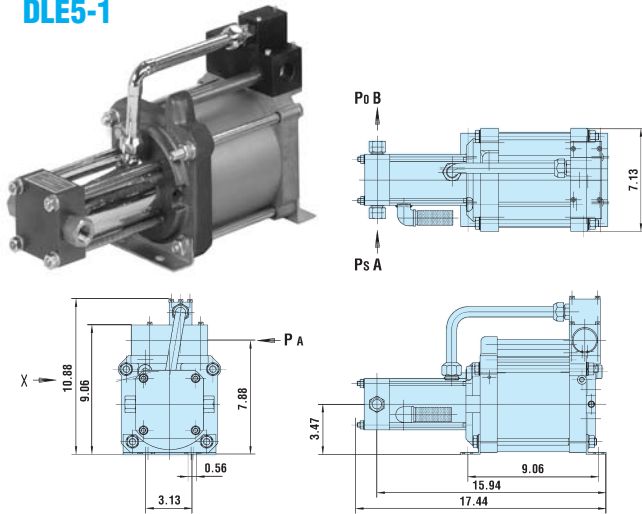
DIMENSIONS (inches)

SINGLE ACTING-SINGLE STAGE

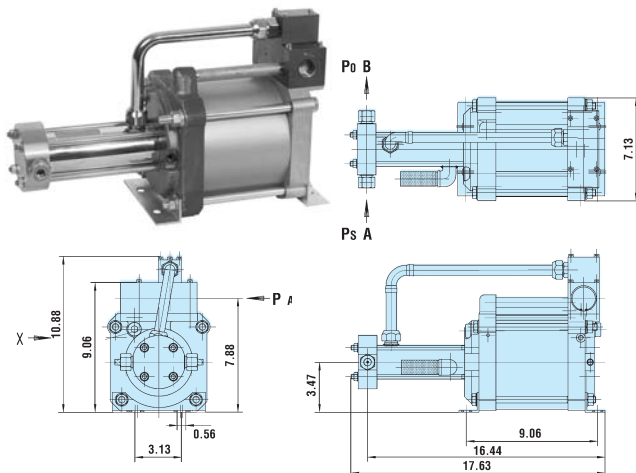
DLE2-1



DLE5-1

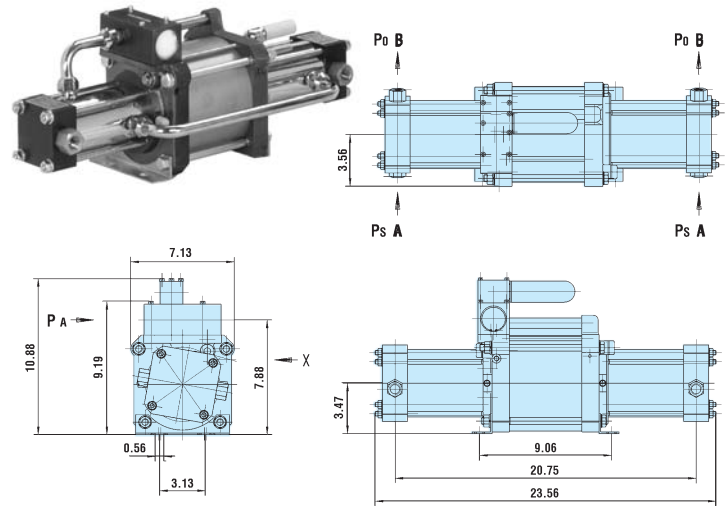


DLE15-1, DLE30-1, DLE75-1

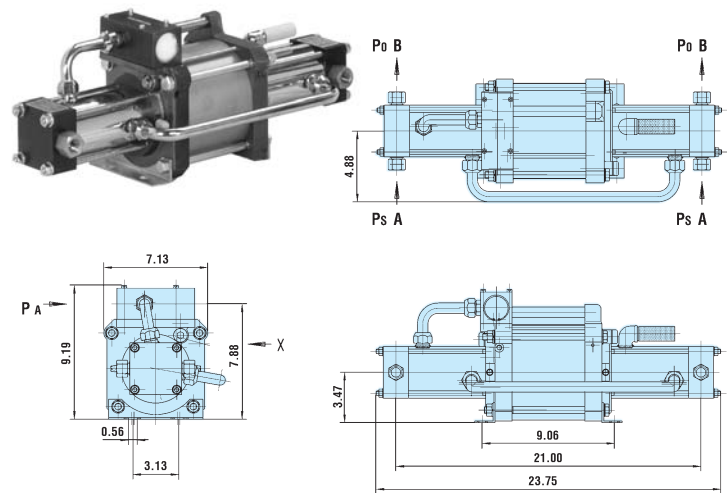


DOUBLE ACTING-SINGLE STAGE

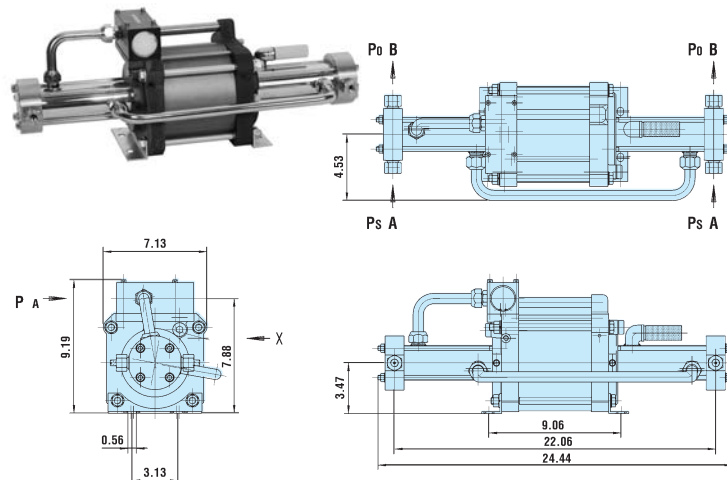
DLE2



DLE5

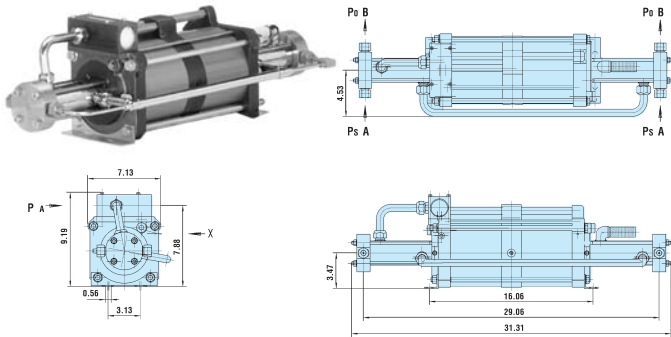


DLE15, DLE30, DLE75



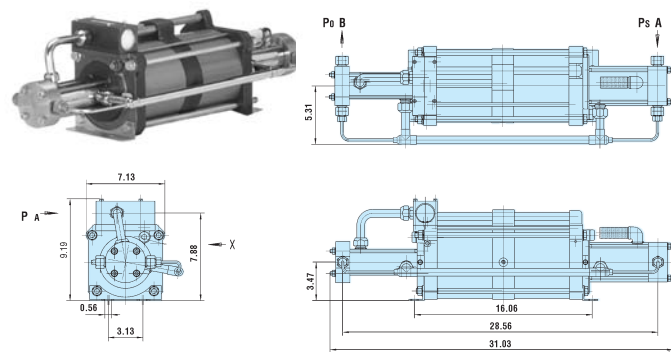
DOUBLE ACTING-SINGLE STAGE DOUBLE AIR HEAD

DLE15-2, DLE30-2, DLE75-2

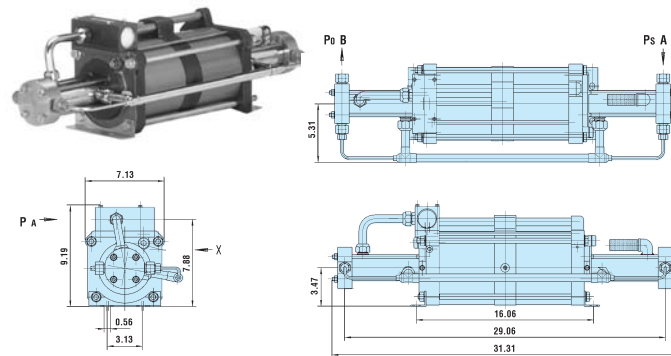


DOUBLE ACTING-TWO STAGE DOUBLE AIR HEAD

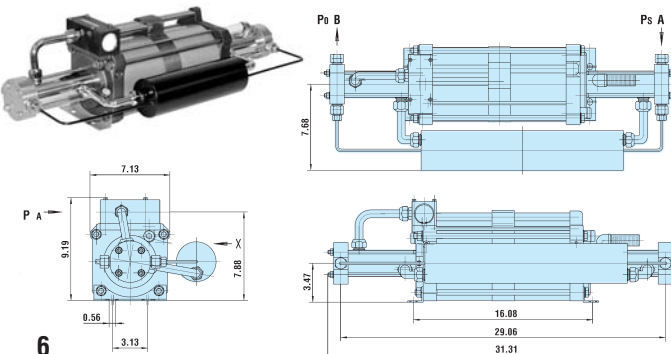
DLE5-30-2



DLE15-30-2, DLE15-75-2

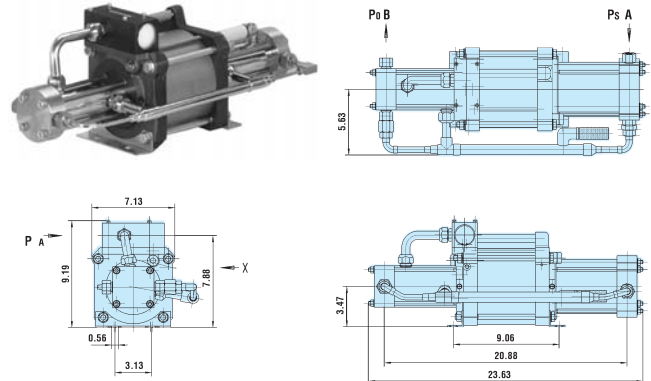


DLE30-75-2

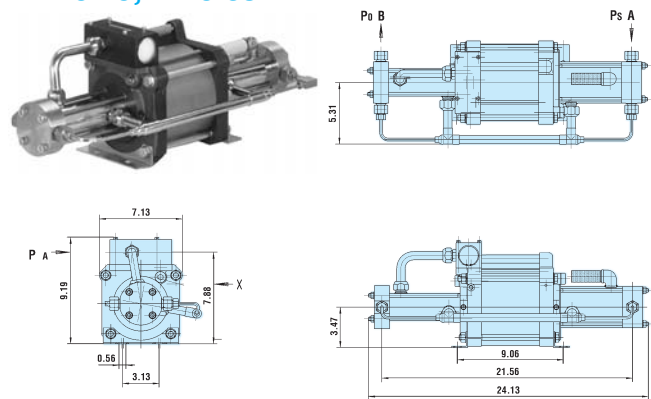


DOUBLE ACTING-TWO STAGE

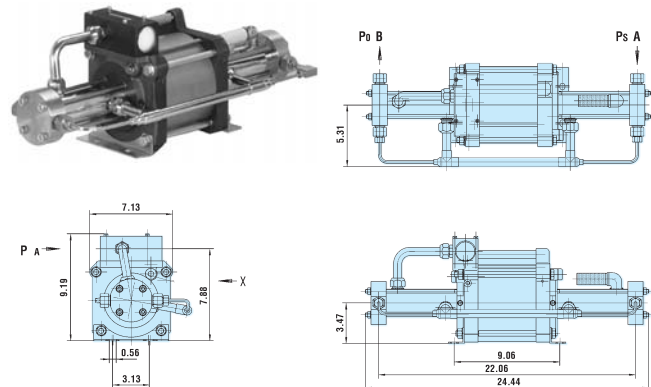
DLE2-5



DLE5-15, DLE5-30



DLE15-30, DLE15-75, DLE30-75



FLOW CHART

GAS BOOSTER SAMPLE FLOW RATES (SCFM)

CATALOG NUMBER	Pa = 90 psi		
	Ps	Po	F
DLE2-1	60	90	6.68
	60	120	5.29
	90	120	7.44
	90	150	4.35
DLE5-1	80	200	3.94
	80	350	2.17
	120	200	5.58
	120	350	3.06
DLE15-1	250	500	4.62
	250	1,000	2.69
	500	500	8.82
	500	1,000	5.26
DLE30-1	500	1,500	3.74
	500	2,500	0.92
	1,000	1,500	7.41
	1,000	2,500	1.77
DLE75-1	750	3,000	2.51
	750	5,000	1.55
	1,500	3,000	5.00
	1,500	5,000	3.08
DLE2	60	120	12.10
	60	200	5.00
	90	150	17.00
	90	250	3.85
DLE5	80	250	7.22
	80	450	2.60
	120	250	11.00
	120	500	3.23
DLE15	250	500	8.50
	250	1,250	4.14
	500	750	16.70
	500	1,500	8.00
DLE30	500	1,000	8.28
	500	3,000	1.08
	1,250	1,500	21.30
	1,250	3,000	11.40
DLE75	750	1,000	5.98
	750	5,000	3.13
	1,500	2,000	11.10
	1,500	6,000	5.68

CATALOG NUMBER	Pa = 90 psi		
	Ps	Po	F
DLE15-2	500	1,000	13.80
	500	3,000	1.88
	1,250	1,500	35.50
	1,250	3,000	19.10
DLE30-2	750	1,000	10.90
	750	5,000	3.74
	1,500	2,000	21.30
	1,500	6,000	5.91
DLE75-2	1,000	2,000	5.73
	1,000	10,000	2.95
	1,500	2,000	8.68
	1,500	12,500	2.61
DLE2-5	35	100	5.10
	35	400	3.03
	70	100	8.71
	70	500	4.85
DLE5-15	60	100	3.38
	60	1,000	2.38
	120	250	6.10
	120	1,500	2.07
DLE5-30	30	100	1.98
	30	2,250	0.96
	45	100	2.71
	45	2,500	1.05
DLE15-30	150	250	2.71
	150	2,250	1.51
	220	500	3.86
	220	2,500	1.90
DLE15-75	150	250	2.72
	150	5,000	1.83
	220	500	3.88
	220	6,000	2.16
DLE30-75	250	500	2.18
	250	6,000	0.95
	1,000	1,500	8.40
	1,000	7,500	4.55
DLE5-30-2	60	200	2.04
	60	4,000	1.27
	80	200	2.61
	80	5,000	0.94

CATALOG NUMBER	Pa = 90 psi		
	Ps	Po	F
DLE15-30-2	250	500	2.43
	250	4,000	1.58
	1,000	1,500	9.35
	1,000	5,000	7.21
DLE15-75-2	250	500	2.43
	250	10,000	1.58
	400	750	3.81
	400	12,500	1.78
DLE30-75-2	500	1,000	2.36
	500	10,000	1.55
	1,500	2,000	6.98
	1,500	15,000	2.58

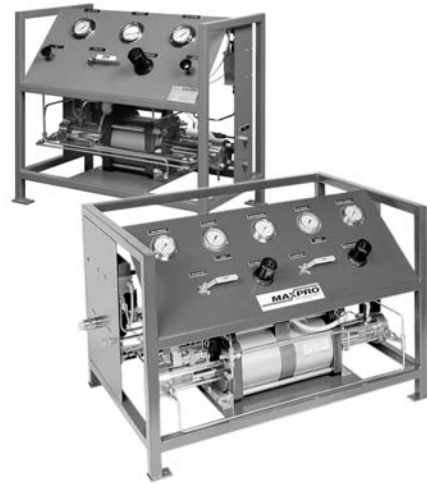
NOTE: Maximum air drive pressure is 145 psi.
Minimum air drive pressure is 15 psi.
Pa = Drive air pressure (psi)
Ps = Gas supply pressure (psi)
Po = Gas outlet pressure (psi)

Drive air flow requirements are up to 70 SCFM for single air head boosters and up to 140 SCFM for double air head boosters.
Air drive flows as low as 30 SCFM will work but outlet gas flows will be reduced correspondingly.
Drive air should be filtered to between 5µ and 40µ and have a dew point between 0°F and 50°F.
Consult factory for conditions outside these parameters.
Inlet gas supply to the booster should be filtered to a maximum of 15µ.

Gas Booster Systems

MAXPRO gas booster systems provide a compact, portable source for increasing gas pressures. These air driven booster systems are shipped assembled and fully tested, ready for turn-key installation. As with standard boosters, the gas booster systems require no electrical power, providing safe and economical operation.

Gas booster systems are capable of compressing most gases including nitrogen, argon, helium and hydrogen up to 20,000 psi. Systems featuring special seals and cleaning can pressurize oxygen to 5,000 psi. All MAXPRO systems for use with hazardous gases are modified to ensure vent ports are piped to a common vent connection.



SYSTEM CATALOG NUMBER			GAS BOOSTER TYPE	SYSTEM RATING (PSI)	MINIMUM SUCTION PRESSURE	DIMENSIONS DP x HG x LG	WEIGHT
INERT GAS	HAZARDOUS GAS	OXYGEN GAS					
MTIG3-30	MTHG3-30	MT02-3-30	DLE30	3,000	175	16" x 23" x 28"	120
MTIG3-5-30	MTHG3-5-30	MT02-3-5-30	DLE5-30	3,000	40	16" x 23" x 28"	120
MTIG5-75	MTHG5-75	MT02-5-75	DLE75	5,000	300	16" x 23" x 28"	120
MTIG5-15-75	MTHG5-15-75	MT02-5-15-75	DLE15-75	5,000	150	16" x 23" x 28"	120
MTIG10-75-2	MTHG10-75-2	N/A	DLE75-2	10,000	725	16" x 23" x 38"	150
MTIG10-30-75-2	MTHG10-30-75-2	N/A	DLE30-75-2	10,000	220	16" x 23" x 38"	150
MTIG15-30-75-2	N/A	N/A	DLE30-75-2	15,000	400	16" x 23" x 38"	150

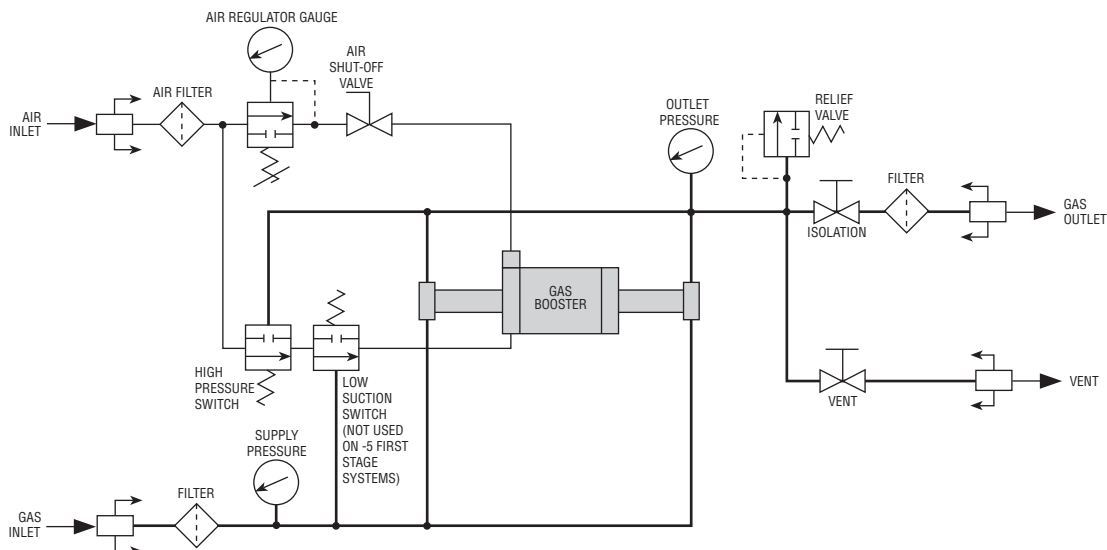
NOTE:

1. Various other gas booster models can be used to best fit your specific application.
2. Schematic shown is the standard system. Other options may be added or removed as required.
3. The hazardous gas systems have all vent ports plumbed to a common discharge port. This port must be plumbed to a safe vent area.
4. The oxygen systems have all components cleaned for oxygen service.
5. For higher flow rates and/or multiple stages, more than one booster may be used in the system.

Applications

- Leak testing of pressure components
- Low pressure gas reclaim from storage bottles
- Gas charging accumulators
- Pressurizing gas cylinders and shock absorbers
- Breathing air systems for scuba and fire department tanks
- Boosting gas pressures from nitrogen and oxygen generators
- Gas assist injection molding
- Boosting gas pressures from vaporized liquid source

FLOW SCHEMATIC



Oxygen Gas Booster Packages

Small, lightweight and economical, MAXPRO oxygen gas booster packages are ideal for aircraft and bottle filling applications. Requires only an air source for power (70 psi minimum) and an oxygen supply bottle that can be used to as low as 100 psi. These booster packages will achieve 1,800 psi or 2,000 psi outlet pressures. Single and double acting boosters are available to meet flow rate requirements

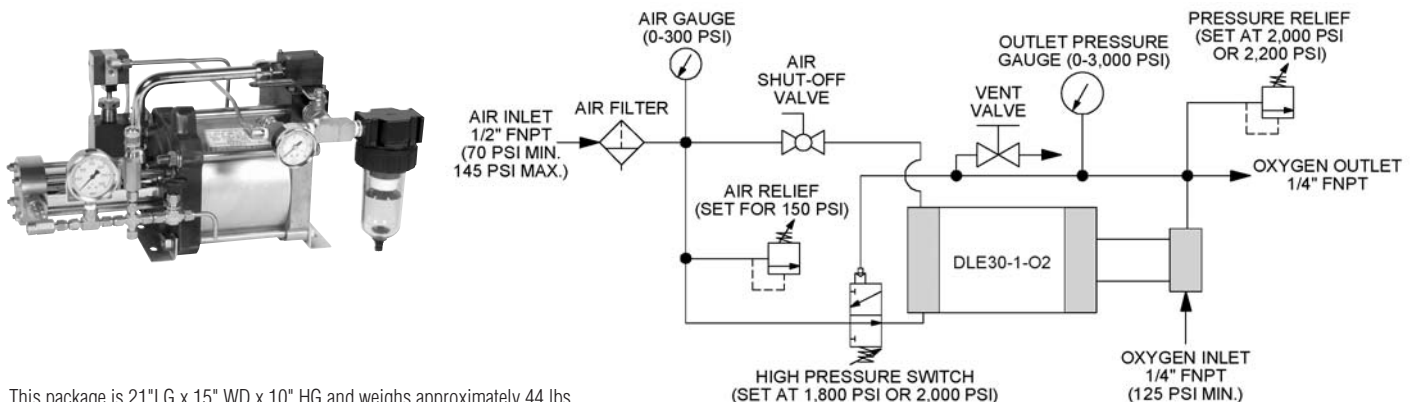
Features

- All stainless steel components, cleaned for oxygen service
- Contaminant free operation with complete separation and isolation between the oxygen and air drive sections
- No electrical power required, only a 70 psi shop air source
- Automatic shut-off at desired outlet pressure for unattended operation
- Safety relief devices and pressure gauges included on both gas and air sides
- Manual vent valve for venting gas pressure prior to disconnecting outlet line
- Drive air filter and shut-off ball valve to manually stop booster
- Drive air connection is 1/2" FNPT
- Oxygen gas inlet and outlet connections are 1/4" FNPT
- All components are mounted to the booster and tested prior to shipment

SINGLE ACTING OXYGEN BOOSTER PACKAGE

MT02-2-DLE30-1

FLOW SCHEMATIC

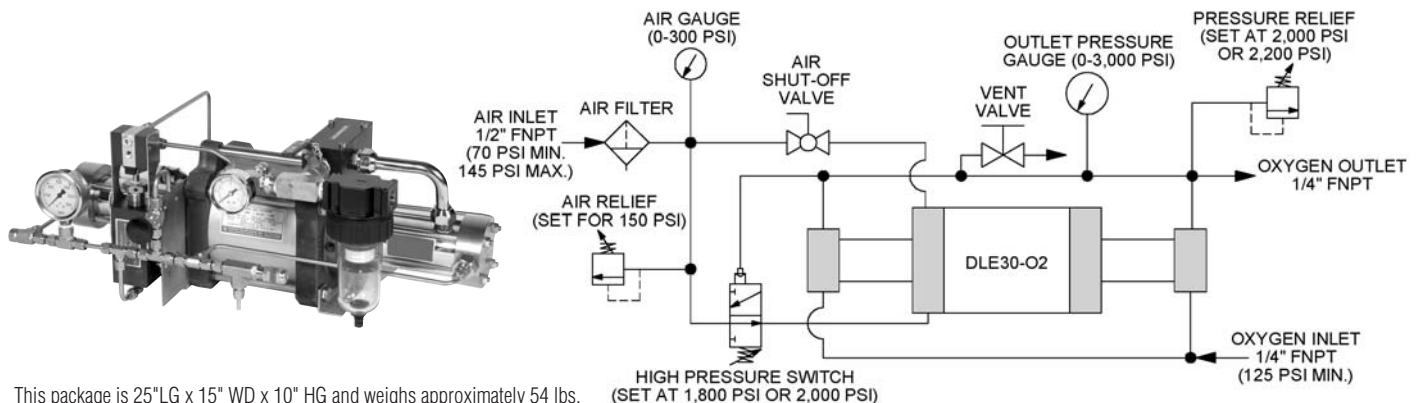


This package is 21" LG x 15" WD x 10" HG and weighs approximately 44 lbs.

DOUBLE ACTING OXYGEN BOOSTER PACKAGE - FOR HIGHER FLOW RATES

MT02-2-DLE30

FLOW SCHEMATIC



This package is 25" LG x 15" WD x 10" HG and weighs approximately 54 lbs.

Nitrogen Gas Booster Packages

MAXPRO nitrogen gas booster packages offer an economical method of boosting nitrogen (or other select gases or air) gas pressure up to 4,400 psi. The package features a compact and lightweight arrangement that is turn-key and fully tested. No electrical power required, only a 75 psi shop air source is needed. Single and double acting boosters are available to meet flow rate requirements.

Applications

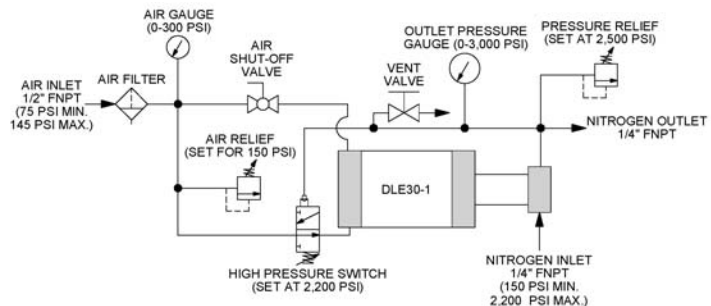
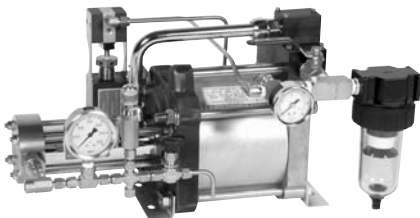
- “Pop floats” or tire filling
- Pressurizing shock struts
- Charging hydraulic accumulators
- Gas reclaim from bottles
- Boosting pressures from nitrogen generators
- Boosting pressures from vaporized liquid nitrogen

Features

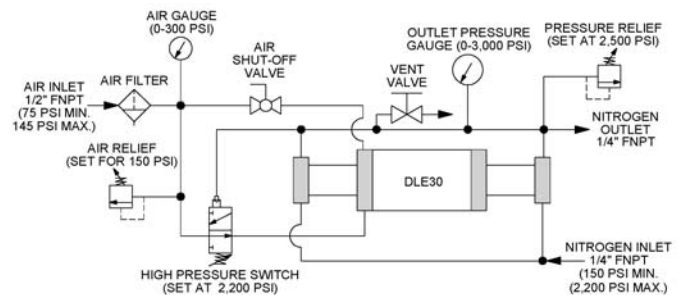
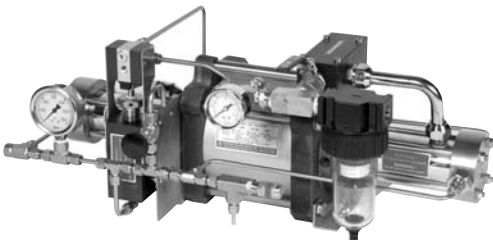
- Available for plant air or nitrogen drive
- Nitrogen drive units include:
 - high pressure regulator with gauge
 - gas supply pressure switch to stop booster when supply bottle pressure is too low
 - dry air spool modification on the booster for longer service life
- All packages include:
 - contaminant free operation with complete separation and isolation between the gas and air drive sections
 - automatic shut-off at desired outlet pressure for unattended operation
 - safety relief valves and gauges on gas and air/nitrogen sides
 - drive air/nitrogen shut-off ball valve to manually stop booster
 - manual vent valve for venting gas pressure prior to disconnecting outlet line
 - drive air/nitrogen connection is 1/2" FNPT
 - gas outlet connection is 1/4" FNPT
 - for air driven version, gas inlet connection is 1/4" FNPT
 - for air driven version, an air filter is included

NITROGEN BOOSTER PACKAGES - TO 2,200 psi

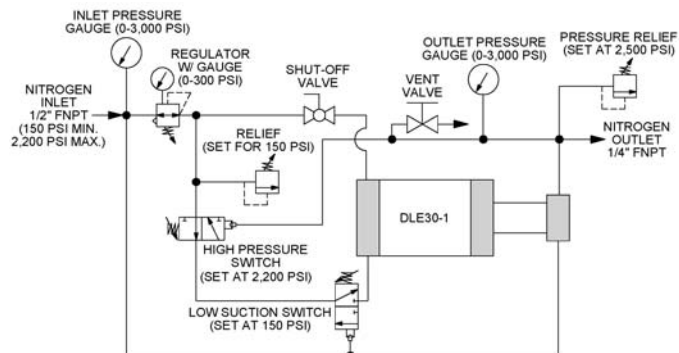
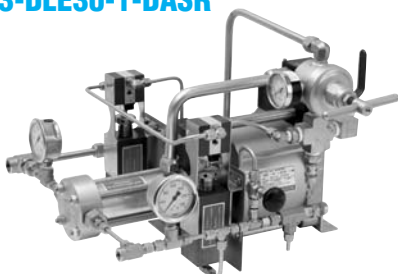
SINGLE ACTING/AIR DRIVEN MTNB3-DLE30-1



DOUBLE ACTING/AIR DRIVEN MTNB3-DLE30

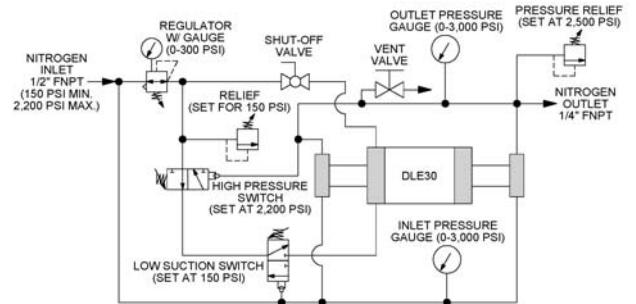
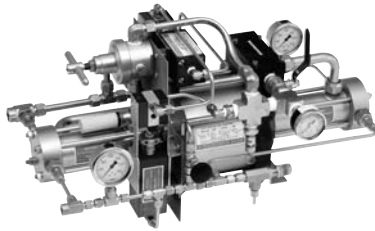


SINGLE ACTING/NITROGEN DRIVEN MTNB3-DLE30-1-DASR



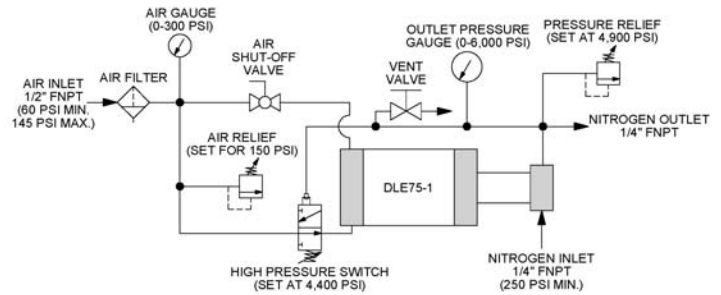
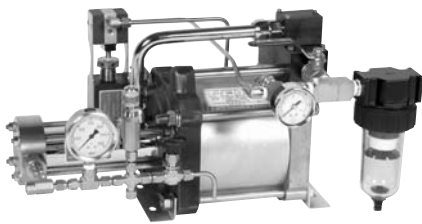
NITROGEN BOOSTER PACKAGES - TO 2,200 psi (cont.)

DOUBLE ACTING/NITROGEN DRIVEN MTNB3-DLE30-DASR

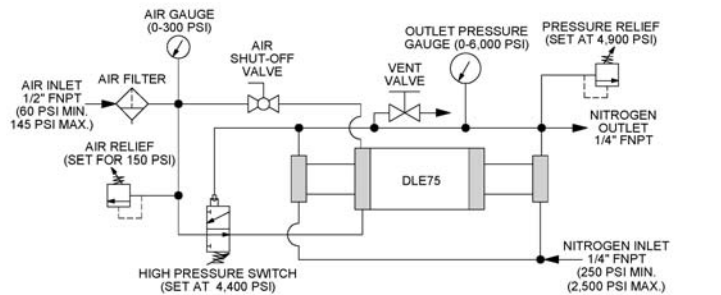
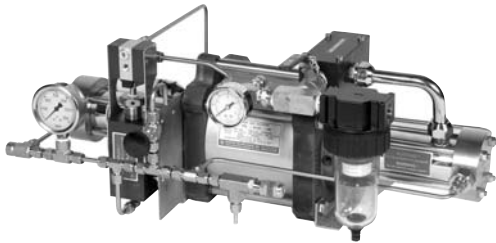


NITROGEN BOOSTER PACKAGES - TO 4,400 psi

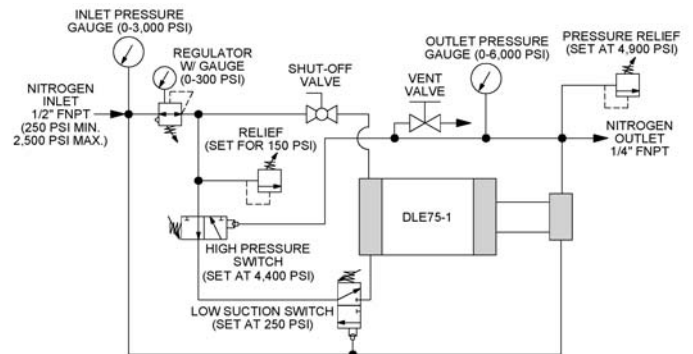
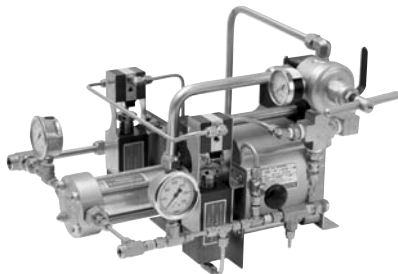
SINGLE ACTING/AIR DRIVEN MTNB4-DLE75-1



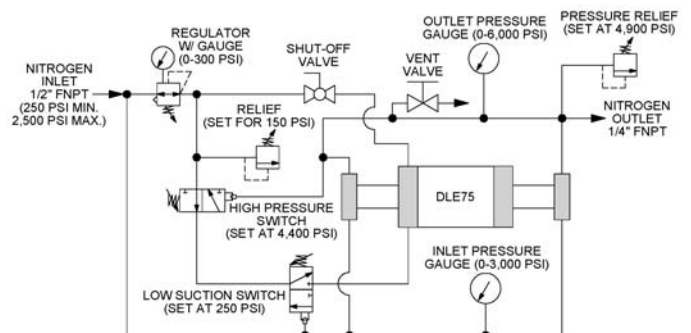
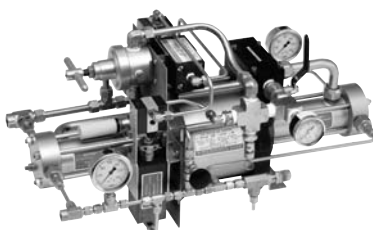
DOUBLE ACTING/AIR DRIVEN MTNB4-DLE75



SINGLE ACTING/NITROGEN DRIVEN MTNB4-DLE75-1-DASR



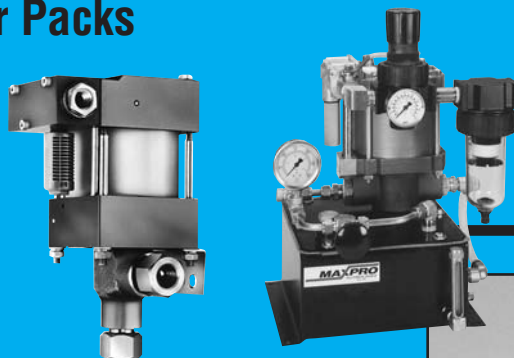
DOUBLE ACTING/NITROGEN DRIVEN MTNB4-DLE75-DASR



OTHER MAXPRO POWER PRODUCTS

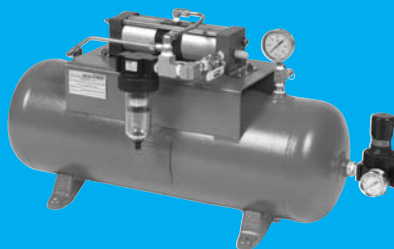
Liquid Pumps & Power Packs

- Air driven to 60,000 PSI
- Economic hydraulic power
- Interchangeable with other leading pumps
- Requires no electrical power
- Variety of sizes and styles to suit your application



Air Amplifiers & Systems

- Air driven with ranges from 100 to 5,000 PSI
- Deliver increased air pressure to shop floor equipment and work stations
- Requires no electrical power
- Single or double acting models



Packaged Systems

- Air Amplifier System for boosting shop air
- Gas Booster System for gas reclaim and bottle filling
- Portable test carts
- Hydraulic Test Stands for pressure testing



Repair & Refurbishing Service Available

- Guaranteed quality workmanship
- Cost effective
- Quick turn around
- Use original manufacture parts
- Factory support



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