HIGH PRESSURE TECHNOLOGY
HYDRAULICS
PNEUMATICS
TESTING
EQUIPMENT





**Air Amplifiers** 

## **Applications and Design**

## **MAXIMATOR®**



MAXIMATOR PLV series Air Amplifiers are suitable for the compression of pressurised air or nitrogen. The units are capable of increasing normal pressures of 4 bar or 6 bar to the desired final pressures. The PLV Air Amplifiers are operated with normal shop air and are provided with a variety of amplification ratios.

All PLV Air Amplifiers can be supplied with an air control unit comprising a filter, pressure regulator with pressure gauge and an air shut-off valve.

The desired operating pressure can be preset by means of the air control unit in correspondence with the different pressure ratios.

We can offer you a choice between a standard PLV Air Amplifier Station or a customised solution.





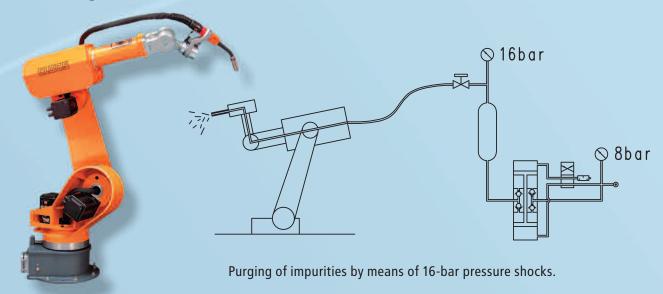








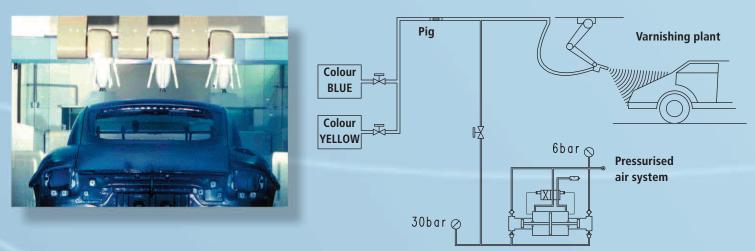
## **Burner cleaning**



## **Automotive sector**

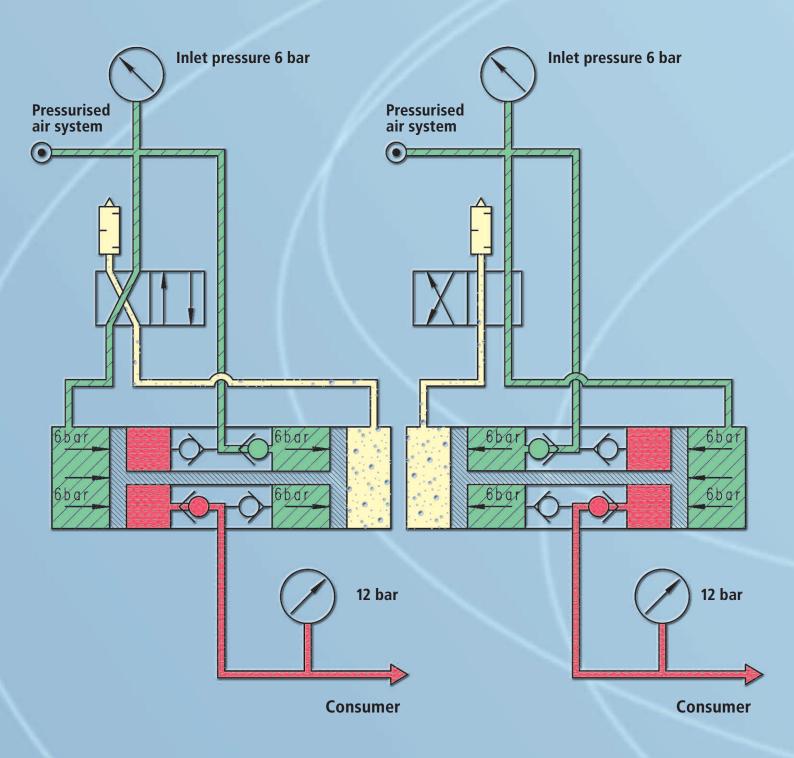


## **Cleaning of varnishing systems (pigging)**



The dyes are forced back into the tanks by means of a pressurised air-driven pig.





The compressed air from the standard air system is compressed to the desired higher final pressure.

This is a simple, safe and economic mode of operation.

Thus, expenditures for an in-house high-pressure system or a separate decentralised compressor plant can be saved.

## The benefits of this design are:

- Selected pressure boosting upstream of individual consumers.
- Zero energy consumption after final pressure is attained.
- No electrical installations are required.

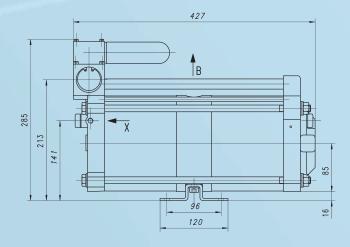
## Air Amplifier GPLV 2 1200 I<sub>N</sub>/min\*

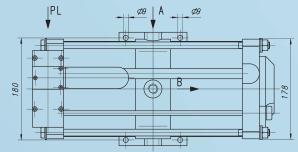




## The benefits of the GPLV2 design are:

- Selected pressure boosting upstream of individual consumers.
- Zero energy consumption after final pressure is attained.
- No electrical installations are required, i.e. suitable for use in explosion-proof areas





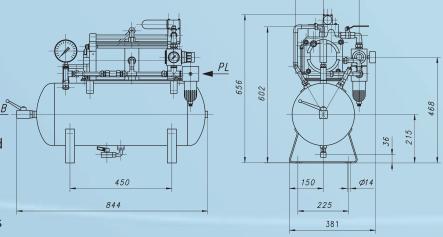


## The benefits of the GPLV 2-Station are:

 Pressure pulsation rates lower than compared to units without air receivers.

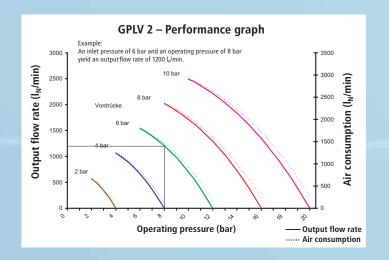
 Any air consumption peaks are compensated by the air receiver volume reserve.

• Operating pressure can be adjusted by means of a reducing regulator.



Туре	GPLV 2
Pressure ratio (i)	1:2
Air drive pressure $(p_{\iota})$ in bar	1 – 10
Max. discharge pressure (p <sub>B</sub> ) in bar	20 (16)1)
Max. noise level	79 dB(A)
Max. operating temperature (T) in °C	60
Air drive connection	BSP 3/4"
Inlet connection	BSP 1/2"
Outlet connection	BSP 1/2"
Net weight in kg	20.5
(Station) net weight in kg	49.0

- \* at inlet pressure 6 bar and operating pressure 8 bar and 50 % operating time
- 1) Limited by pressure vessel rating



## Air Amplifier SPLV 2 960 l<sub>N</sub>/min\*

## **MAXIMATOR®**



## The benefits of the SPLV2 design are:

- Selected pressure boosting upstream of individual consumers.
- Zero energy consumption after final pressure is attained.
- No electrical installations are required, i.e. suitable for use in explosion-proof areas.

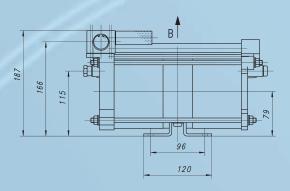


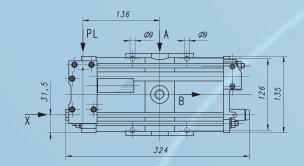
#### The benefits of the SPLV 2-Station are:

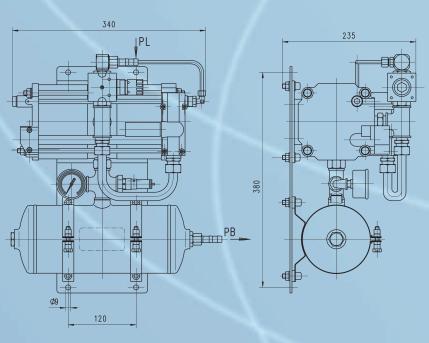
- Pressure pulsation rates lower than compared to units without air receiver.
- Any air consumption peaks are compensated by the air receiver volume reserve.
- Operating pressure can be adjusted by means of a reducing regulator.

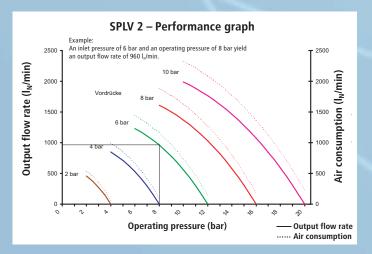
Туре	SPLV 2
Pressure ratio (i)	1:2
Air drive pressure (p <sub>.</sub> ) in bar	1 – 10
Max. discharge pressure (p <sub>B</sub> ) in bar	20 (16)1)
Max. noise level	79 dB(A)
Max. operating temperature (T) in °C	60
Air drive connection	BSP 1/2"
Inlet connection	BSP 1/2"
Outlet connection	BSP 1/2"
Net weight in kg	8.5
(Station) net weight in kg	16.0

- \* at inlet pressure 6 bar and operating pressure 8 bar and 50 % operating time
- 1) Limited by pressure vessel rating









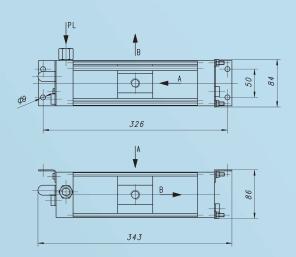
## Air Amplifier MPLV 2 580 l<sub>N</sub>/min\*





## The benefits of the MPLV 2 design are:

- Selected pressure boosting upstream of individual consumers.
- Zero energy consumption after final pressure is attained.
- No electrical installations are required, i.e. suitable for use in explosion-proof areas.





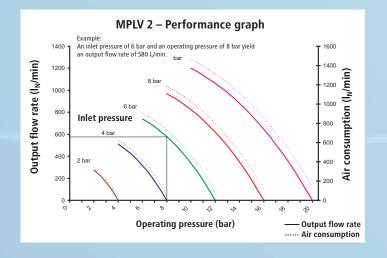
### The benefits of the MPLV 2-Station are:

- Pressure pulsation rates lower than compared to units without air receiver
- Any air consumption peaks are compensated by the air receiver volume reserve.
- Operating pressure can be adjusted by means of a reducing regulator.

# 160 120 160 160 160

Туре	MPLV 2
Pressure ratio (i)	1:2
Air drive pressure ( $p_{\iota}$ ) in bar	1 – 10
Max. discharge pressure (p <sub>B</sub> ) in bar	20 (16)1
Max. noise level	79 dB(A)
Max. operating temperature (T) in °C	60
Air drive connection	BSP 3/8"
Inlet connection	BSP 3/8"
Outlet connection	BSP 3/8"
Net weight in kg	3.3
(Station) net weight in kg	13.0

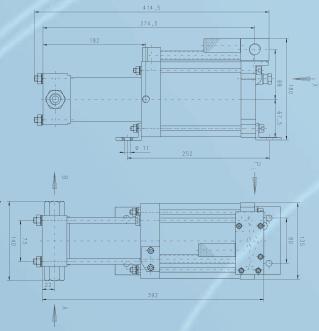
- \* at inlet pressure 6 bar and operating pressure 8 bar and 50 % operating time
- 1) Limited by pressure vessel rating





## The benefits of the SPLV 3 design are:

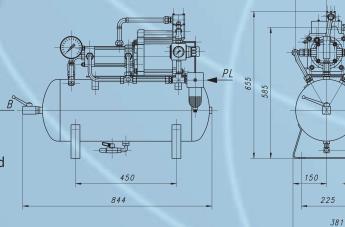
- Selected pressure boosting upstream of individual consumers.
- Zero energy consumption after final pressure is attained.
- No electrical installations are required, i.e. suitable for use in explosion-proof areas





## The benefits of the SPLV 3-Station are:

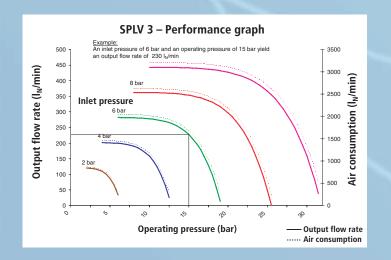
- Pressure pulsation rates lower than compared to units without air receivers.
- Any air consumption peaks are compensated by the air receiver volume reserve.
- Operating pressure can be adjusted by means of a reducing regulator.



#### **Technical data:**

Туре	SPLV 3
Pressure ratio (i)	1:3,2
Air drive pressure (p <sub>L</sub> ) in bar	1 – 10
Max. discharge pressure (p <sub>8</sub> ) in bar	32 (16)1
Max. noise level	79 dB(A)
Max. operating temperature (T) in °C	60
Air drive connection	BSP 1/2"
Inlet connection	BSP 1/2"
Outlet connection	BSP 1/2"
Net weight in kg	8.5
(Station) net weight in kg	16.0

- $^{\star}$  at inlet pressure 6 bar and operating pressure 8 bar and 50 % operating time
- 1) Limited by pressure vessel rating



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## Air Amplifier MPLV 4 50 l<sub>N</sub>/min\*



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50

|B|

220

158

100

PL

80



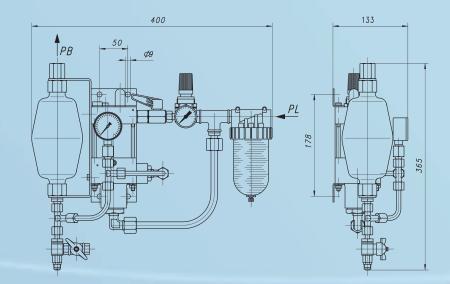
## The benefits of the MPLV 4 design are:

- Selected pressure boosting upstream of individual consumers.
- Zero energy consumption after final pressure is attained.
- No electrical installations are required,
   i.e. suitable for use in explosion-proof areas.



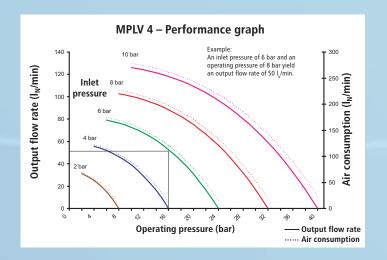
#### The benefits of the MPLV 4-Station are:

- Pressure pulsation rates lower than compared to units without air receiver.
- Any air consumption peaks are compensated by the air receiver volume reserve.
- Operating pressure can be adjusted by means of a reducing regulator.



Туре	MPLV 4
Pressure ratio (i)	1:4
Air drive pressure $(p_{\iota})$ in bar	2 – 10
Max. discharge pressure (p <sub>B</sub> ) in bar	32 (16)¹
Max. noise level	79 dB(A)
Max. operating temperature (T) in °C	60
Air drive connection	BSP 3/8"
Inlet connection	BSP 3/8"
Outlet connection	BSP 1/2"
Net weight in kg	2.2
(Station) net weight in kg	5.3

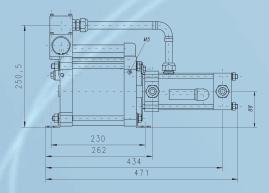
- \* at inlet pressure 6 bar and operating pressure 16 bar and 50 % operating time
- 1) Limited by pressure vessel rating

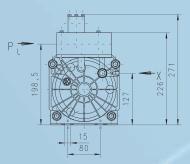


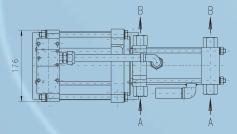


## The benefits of the GPLV5 design are:

- Selected pressure boosting upstream of individual consumers.
- Zero energy consumption after final pressure is attained.
- No electrical installations are required, i.e. suitable for use in explosion-proof areas



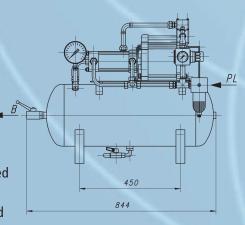


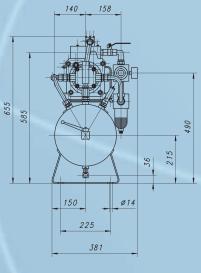




## The benefits of the GPLV 5-Station are:

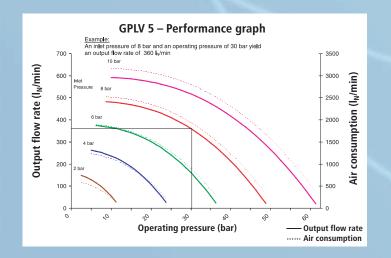
- Pressure pulsation rates lower than compared to units without air receivers.
- Any air consumption peaks are compensated by the air receiver volume reserve.
- Operating pressure can be adjusted by means of a reducing regulator.





Туре	GPLV 5
Pressure ratio (i)	1:5
Air drive pressure $(p_L)$ in bar	1 – 10
Max. discharge pressure (p <sub>B</sub> ) <sup>1)</sup> in bar	60 (40)2)
Max. noise level	79 dB(A)
Max. operating temperature (T) in °C	60
Air drive connection	BSP 3/4"
Inlet connection	BSP 1/2"
Outlet connection	BSP 1/2"
Net weight in kg	20.5
(Station) net weight in kg	49.0

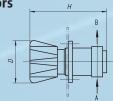
- \* at inlet pressure 6 bar and operating pressure 8 bar and 50 % operating time
- 1) Formula 5 x  $p_L + p_A$
- 2) Limited by pressure vessel rating



## **Accessories**

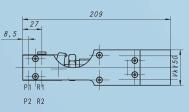


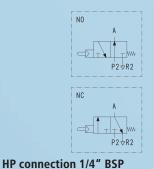
### **Pressure regulators**

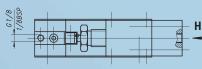


Control range bar	Inlet pressure bar	Medium	Connections	Material	Item N°
0.5-25	40	Air / N <sub>2</sub>	1/4" BSP	Brass	3300.3538
0.5-25	40	Air / N <sub>2</sub>	1/2" BSP	Brass	3300.3635
0.5-50	50	Air / N <sub>2</sub>	1/4" BSP	Brass	3300.5636
0.5-50	50	Air / N <sub>2</sub>	1/2" BSP	Brass	3300.5637

# Air pilot switches







3630.1435

NO Item N°	NC Item N°
(Normally open)	(Normally closed)
3630.1451	3630.1619

3630.1617

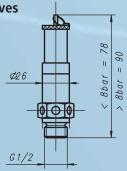
### Safety relief valves

Adjustment range

bar

10-30

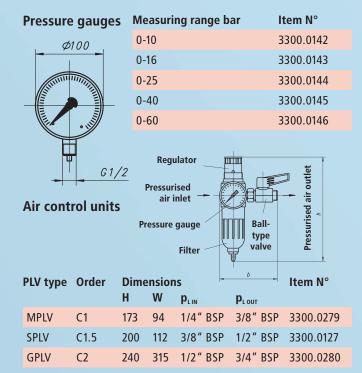
30-100



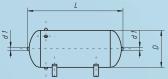
Relief pressure bar	Item N° 1/4" BSP	Item N° 1/2" BSP
5.0	3610.2587	3620.2515
6.0	3610.2589	3620.2690
8.0	3610.2592	3620.4214
16.0	3620.3033	3620.2695
40.0	3610.2594	3620.3688

### Other relief pressures upon request.

All safety valves are accompanied by a TÜV testing authority certificate.

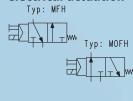


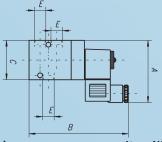
## **Pressurised-air** receivers



Allowed operating pressure bar	Volume capacity litres	L '	Diam.	d1	Item N°
40	0.75	210	90	BSP 1/4"	3610.1636
16	3	315	125	BSP 1/2"	3630.0910
16	20	650	206	BSP 1/2"	3200.0129
16	40	750	276	BSP 1/2"	3300.0456
21	40	750	276	BSP 1/2"	3300.0457
40	40	750	276	BSP 1/2"	3300.3571
16	100	900	400	BSP1 1/2"	3300.1963

## Pneumatic valves, electrical actuation





Туре	ensions in mm				Item N°	
	Α	В	C	D	E	
MFH-3-1/8	71.0	113.0	45.0	26.0	BSP 1/8"	3300.0416
MOFH-3-1/8	71.0	113.0	45.0	26.0	BSP 1/8"	3300.2080
MFH-3-1/4	73.5	128.0	50.0	30.4	BSP 1/4"	3610.2304
MOFH-3-1/4	73.5	128.0	50.0	30.4	BSP 1/4"	3610.2411
MFH-3-1/2	88.5	167.0	80.0	52.0	BSP 1/2"	3300.1296
MOFH-3-1/2	88.5	167.0	80.0	52.0	BSP 1/2"	3300.2074
Solenoid valve	coil	24 V D	C			3610.2402
Solenoid valve	coil	230 V	AC			3610.2305











Your Representative:

# High-pressure pumps for oil, water, emulsions

- Minimum maintenance, explosion-proof
- Low energy consumption
- Max. operating pressures 5,500 bar

# Test benches for pressure, bursting pressure and pulse tests

- Expansion hoses, tubing
- Valves, fittings, bolted unions
- Pressure gauges, pressure-operated switches
- Pressure transducers, vessels
- Special test benches

## Gas boosters up to 1,500 bar

- For pressurising nitrogen, oxygen, noble gases
- Simple handling
- Explosion-proof due to pressurised air drive
- Max. operating pressures 1,500 bar

## Gas assist systems

- Compressor stations with pneumatic, electrical or hydraulic drive
- Control modules with 1, 2 or 4 valves
- Compressor-control module combinations
- Pressurised air / N₂ up to max. 500 bar

# High pressure valves, fittings and tubing

- Stainless steel components in excellent workmanship
- Temperature range 250 °C to + 650 °C
- Max. operating pressures 10,500 bar



Factory MAXIMATOR GmbH

Walkenrieder Str. 15 D-37449 Zorge / Germany

Internet www.maximator.de

Telephon: ++49 5586/8030 Facsimile: ++49 5586/8033040 eMail: info@maximator.de

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