

BOOSTER REGULATOR SERIES VBA

- Increases main line pressure
- Compact design
- Protects downstream equipment from pressure fluctuations when used with an air tank
- Increases the power of actuator without changing to a larger cylinder
- No need for electrical input
- Optional air tanks for higher flow rate demand available for VBA2, VBA4
- Pressure gauges and silencers included
- Remote adjustment possible



TECHNICAL SPECIFICATIONS

Specification	VBA1110	VBA1111	VBA2, VBA4
Pressure increase ratio	Max. 2:1	Max. 4:1	Max. 2:1
Media	Air	Air	Air
Proof pressure	3.0MPa (30Bar)		1.5MPa
Max. working pressure	2.0MPa (20Bar)		0.99MPa
Set pressure range	0.2~2.0MPa		0.2~0.99MPa
Ambient and media temp. range	0 ~ 50°C		
Lubrication	Not required		
Installation	Horizontal		
Pressure adjustable mechanism	Relieving type		

INSTALLATION

The booster regulator should be installed with its piston in a horizontal position.

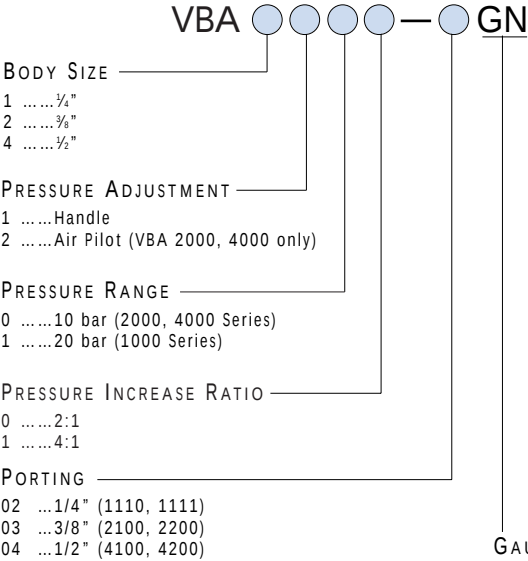
Air Preparation

Type	Handle Type				Air Pilot Operated Type	
	VBA1110-02	VBA1111-02	VBA2100-03	VBA4100-04	VBA2200-03	VBA4200-04
Max. flow*	400 ℓ/n/min*	60 ℓ/n/min**	1000 ℓ/n/min**	1900 ℓ/n/min**	1000 ℓ/n/min**	1900 ℓ/n/min*
Port Size (IN, OUT)	¼	¼	¾	½	¾	½
EXH. Port Size	¼	¼	¾	½	¾	½
Pilot EXH. Port Size	-				¾	
Pilot Pressure	-				1 ~ 5 Bar	
Weight	0.85 kg	0.98 kg	3.8 kg	7.5 kg	3.8 kg	7.5 kg

*Pressure IN=OUT=1.0MPa
**Pressure IN=OUT=0.5MPa

HOW TO ORDER

VBA BOOSTER REGULATOR



FOR FURTHER TECHNICAL
DETAILS ON THIS
PRODUCT REQUEST
CATALOGUE REFERENCE
E118

ACCESSORIES

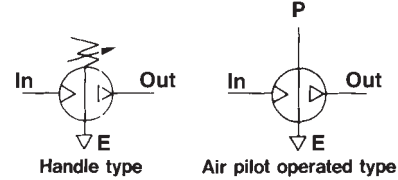
VBA BOOSTER REGULATOR

38 LITRE AIR TANK
The above tank is of UK manufacture and is made in accordance with BS EN286-1. A pressure relief valve, a tank mounted pressure gauge and a condensate drain valve are all included.
UKT138 VBA2000/4000 Series

SPARES KITS
KT-VBA1110-P VBA1110 Series
KT-VBA1111-P VBA1111 Series
KT-VBA2100-P VBA2000 Series
KT-VBA4100-P VBA4000 Series

STOCKED PRODUCTS
FOR A LIST OF STOCKED PRODUCTS,
PLEASE SEE THE CURRENT SMC PRICE LIST

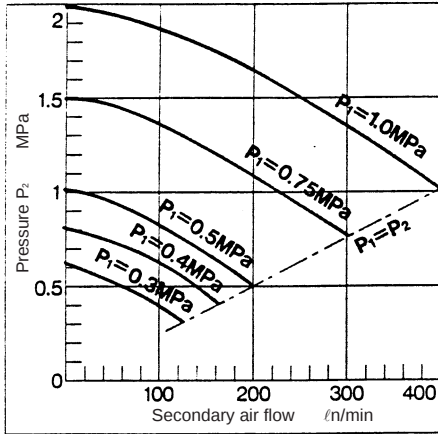
SYMBOL



DIMENSIONS
SEE NEXT PAGE

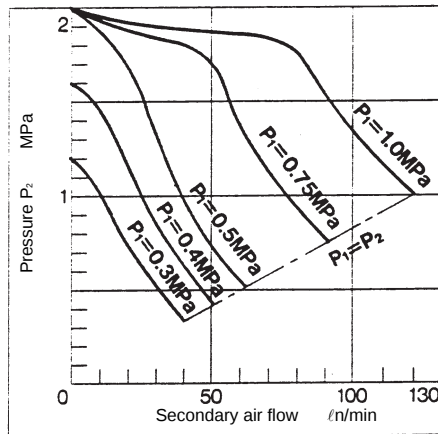
VBA1110

FLOW CHARACTERISTICS



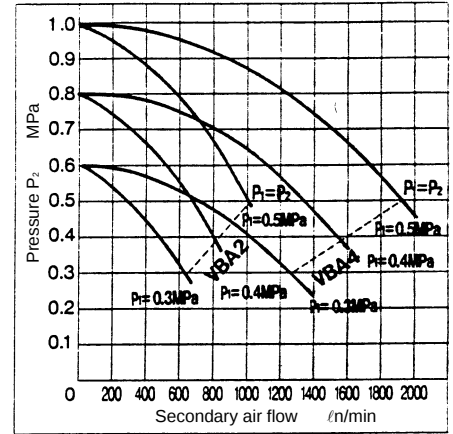
VBA1111

FLOW CHARACTERISTICS



VBA2, VBA4

FLOW CHARACTERISTICS



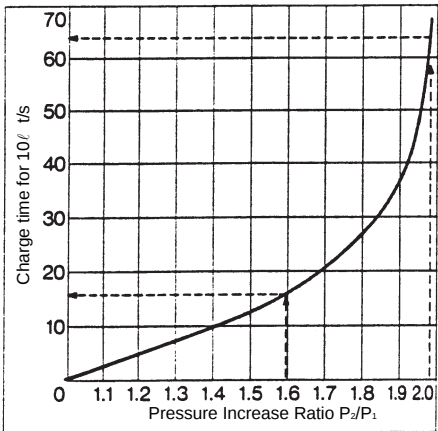
Example:

VBA 4 $P_1 = 0.5 \text{ MPa}$ $P_2 = 0.8 \text{ MPa}$

Then maximum flow output = 1200 l/min

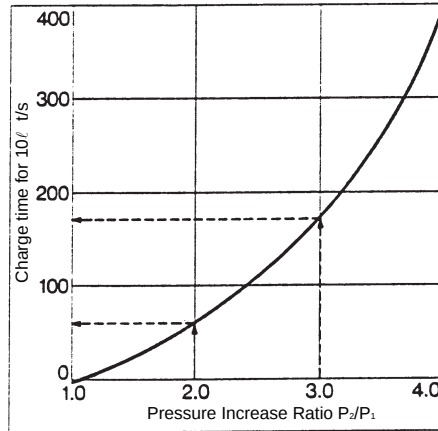
VBA1110

CHARGE CHARACTERISTICS



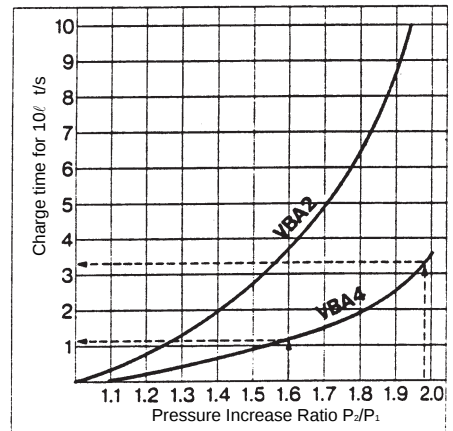
VBA1111

CHARGE CHARACTERISTICS



VBA2, VBA4

CHARGE CHARACTERISTICS



These graphs illustrate the time required to increase pressure in a closed tank

Example: to increase tank pressure to 0.8MPa, where $P_1 = 0.4 \text{ MPa}$ and tank pressure = 0.64MPa using a VBA booster:

$$\text{initial } \frac{P_2}{P_1} = \frac{0.64}{0.4} = 1.6 \text{ taking 1.1s on graph}$$

$$\text{final } \frac{P_2}{P_1} = \frac{0.8}{0.4} = 2 \text{ taking 3.2s on graph}$$

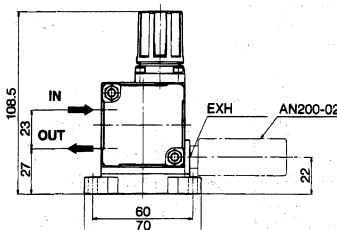
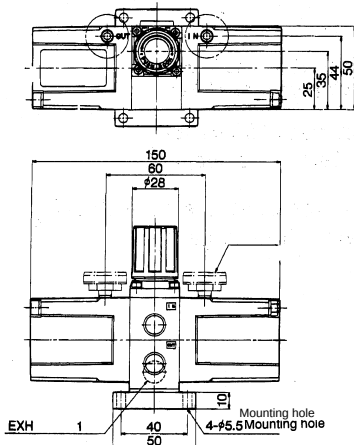
Time taken to increase pressure = 3.2 - 1.1 seconds

= 2.1 seconds per 10 litre volume of tank

DIMENSIONS

HANDLE TYPE

VBA1110-02/VBA1111-02



SEE INSIDE FRONT COVER FOR
DETAILS OF YOUR LOCAL SALES OFFICE

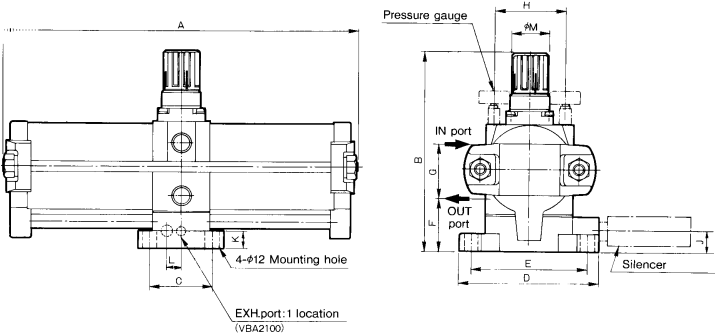


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DIMENSIONS

HANDLE TYPE

VBA2100-03, VBA4100-04

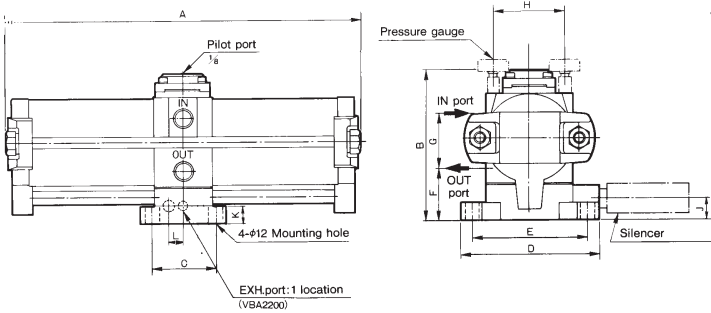


Model	Port Size	A	B	C	D	E	F	G	H	J	K	L	ØM
VBA2100-03	3/8"	300	170	53	118	98	46	43	60.5	18	15	—	31
VBA4100-04	1/2"	404	207.5	96	150	130	62.8	62	90	17	15	20	40

DIMENSIONS

AIR PILOT OPERATED TYPE

VBA2200-03, VBA4200-04



Model	Port Size	A	B	C	D	E	F	G	H	J	K	L
VBA2200-03	3/8"	300	126.5	53	118	98	46	43	60.5	18	15	—
VBA4200-04	1/2"	404	167	96	150	130	62.8	62	90	17	15	20

ACCESSORIES

KIT TO MOUNT AND PIPE BOOSTER REGULATOR TO TANK

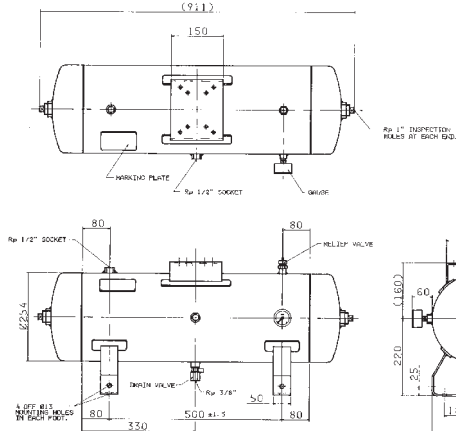
Part N° of Kit
VBA2100 / VBA2200UKT138-VBA2
VBA4100 / VBA4200UKT138-VBA4
VBA1110 / VBA1111not applicable

STOCKED PRODUCTS

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DIMENSIONS

TANK UKT138



Applicable to VBA2 and VBA4
Max. working pressure 1.1MPa
Volume 37 litres
Construction to BS EN286-1
Pressure Certificate supplied
Assembly includes pressure relief valve, drain valve and gauge.