Moltiplicatori di pressione 1:2 / 1:3 / 1:4

Pressure boosters 1:2 / 1:3 / 1:4

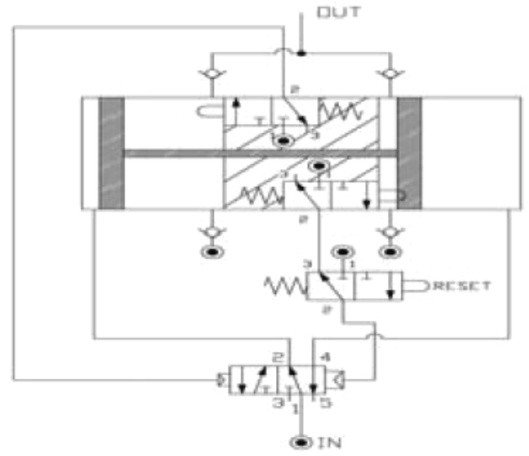
Moltiplicatori di pressione - *Pressure boosters*

Generalità - *Information*

Il moltiplicatore di pressione serve a fornire una pressione in utilizzo maggiore di quella disponibile in ingresso, a spese di una perdita di portata (come espresso dall'equazione di stato dei gas perfetti pV=nRT).

Pressure boosters provide an output pressure higher than the available system pressure applied on the entrance, at the expense of a loss of air flow (as expressed by the ideal gas law pV=nRT).

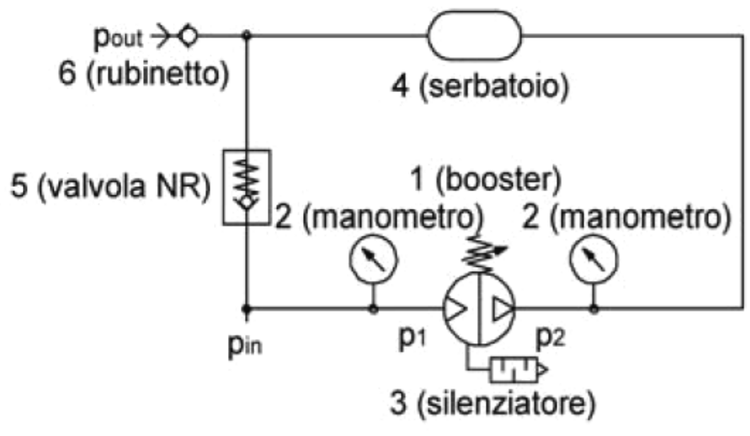
Funzionamento - *Function*



Meccanicamente il moltiplicatore è composto da due pistoni tra di loro collegati che comprimono alternativamente l'aria in ingresso. I pistoni sono comandati da una valvola 5/2, a sua volta comandata da due finecorsa pneumatici. Il moltiplicatore di pressione entra automaticamente in funzione appena si applica una pressione in ingresso e lavora fino a che la pressione in uscita raggiunge il doppio di quella in ingresso. La pressione in uscita può eventualmente essere regolata tramite un regolatore di pressione montato in ingresso. Quando non viene prelevata aria in uscita, il moltiplicatore si ferma automaticamente appena viene raggiunta la pressione moltiplicata. La presenza delle valvole di non ritorno integrate permette di mantenere la pressione moltiplicata anche in assenza di pressione in ingresso.

Mechanically the pressure booster is composed of two pistons connected between them which compress alternatively the inlet air. The pistons are controlled by a 5/2 pneumatic valve, in turn controlled by two limit switches. The pressure booster starts automatically as soon as a pressure is applied to the inlet and works until it reaches twice the inlet pressure. The outlet pressure can possibly be adjusted using a pressure regulator mounted at the inlet. When no air is drawn, the multiplier will automatically stop as soon as the pressure is multiplied. The presence of non-return valves integrated allows to keep the pressure multiplied even in the absence of inlet pressure.

Collegamento all'impianto - *Connection to the compressed air network*



In caso di collegamento diretto del moltiplicatore in un impianto si deve prevedere una valvola 3/2 per aprire
e chiudere il circuito. Si consiglia di utilizzare sempre un serbatoio d'aria (4) all'uscita del moltiplicatore per evitare pulsazioni all'utilizzo. Una valvola di non ritorno opzionale (5) può essere utile per velocizzare il primo riempimento dell'impianto. I moltiplicatori di pressione non sono pensati per funzionare in sostituzione di un compressore, ma per fornire aumenti di pressione momentanei su applicazioni che necessitino di maggiore forza pneumatica.

In case of direct connection of the booster in a system it should be provided a 3/2 valve to open and close the circuit. We recommend you always to use an air tank (4) the output of the multiplier to avoid pulse. An optional non-return valve (5) can be useful to speed up the initial filling of the system. The pressure boosters are not designed to operate in place of a compressor, but to provide momentary pressure increases on applications that require greater pneumatic force.

Manutenzione - Maintenance

Il moltiplicatore di pressione ha una vita media di 20 milioni di scambi in condizioni di impiego ottimali; una buon grado di filtrazione (<50 micron) aiuta ad aumentare la vita del componente.Si raccomanda di proteggere le bocche di scarico dalla polvere con filtri idonei, e si raccomanda, ove possibile, di lavorare con aria non lubrificata.

Kit di ricambio per le guarnizioni di tenuta soggette ad usura sono fornibili su richiesta.

The booster has an average life of 20 million cycles when the conditions of use are optimal; a high degree of filtration (<50 microns) helps to increase the life of the component. We recommend using suitable filters to protect from dust the exhaust ports, and it is recommended, wherever it is possible, to use non lubricated air.

Replacement kit for the seals are available on request.

Chiave di codifica – *Key code*

Tipo - *Type*	Alesaggio - *Bore*	Rapp. di compressione – *Compression ratio*
-UM11- (normale - *standard*)	040	RC1.2
-UM21- (con riduttore – *with regulatour*)	063	RC1.3 (Ø40 / Ø63)
	100	RC1.4 (Ø40 / Ø63)

Alesaggio - *Bore* (mm):	Ø40	Ø63	Ø100
Connessioni - *Connections*:	G1/8"	G3/8"	G1/2"
Pressione - Working pressure (bar):	2.5 ÷ 10	2.5 ÷ 10	2.5 ÷ 10
Ø nom. – *Nominal bore* (mm):	5	7	12
Peso - *Weight* (Kg):	1.6	2.8	9.7

Dati tecnici – *Technical data*

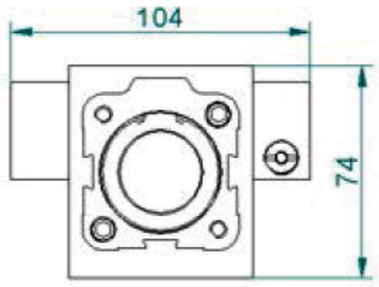
Fluido: aria filtrata, lubrificata* o (preferibilmente) non lubrificata.
Fluid: filtered air, lubricated or (preferred) non lubricated.*
Pressione di alimentazione: Max 10 bar.
Inlet pressure: Max 10 bar.
Temperatura ambiente: -20°C ÷ +50°C.
Ambient temperature: -20°C ÷ +50°C.
Posizione di montaggio: si suggerisce il montaggio con l'alimentazione dall'alto.
Mounting position: it is suggested mounting with the inlet connection above.
***ATTENZIONE**: tutti gli elementi scorrevoli e le guarnizioni, sono prelubrificati con grasso speciale ad alte prestazioni. Nel caso si iniziasse a lubrificare con olio nebulizzato, ciò dovrà perdurare in maniera costante.
***ATTENTION**: all the sliding elements and the seals, are lubricated with special high performance grease. If you began to lubricate with oil mist, you will have to lubricate continuously.*

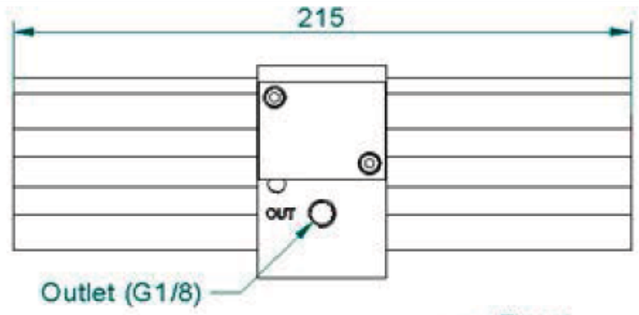
Caratteristiche componenti – *Components specifications*		
Descrizione - Description	**Materiale - Material**	**Trattamento - Treatment**
Corpo, fondelli – Body, caps	Lega 11s – Aluminium 2011	Anodizzazione – Anodized
Pistoni – Pistons	Lega 11s – Aluminium 2011	
Stelo – Rod	Acciaio cromato – Chromated steel	
Viti di fissaggio – Fixing screws	Acciaio – Steel	Zincatura - Galvanized
Spole valvole – Valves spools	Lega 11s, OT58 – Aluminium 2011, Brass	
Elementi di tenuta - Seals	NBR, Poliuretano – NBR, Polyurethane	

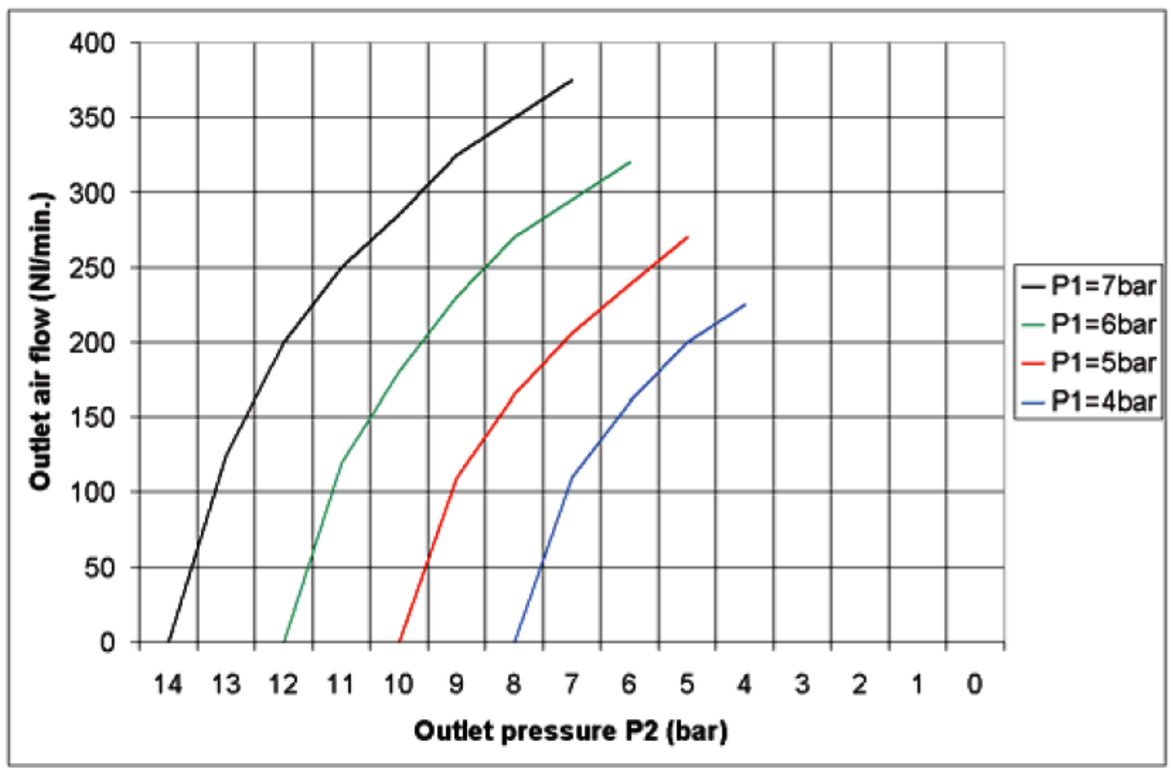
Ø40 Rc=1:2

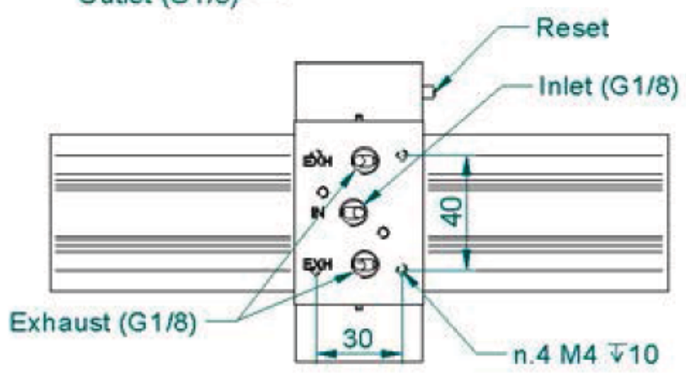
-UM11-040RC1.2

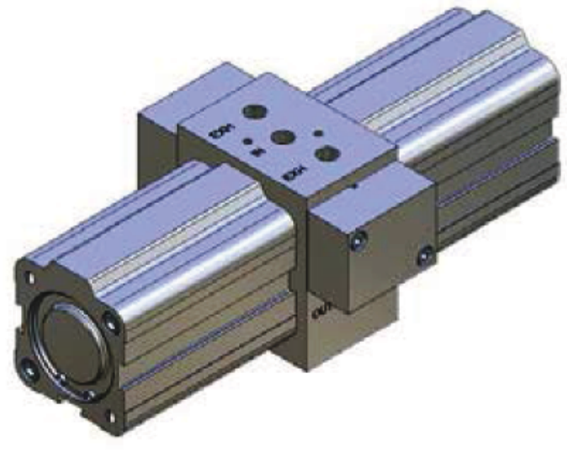
-UM21-040RC1.2







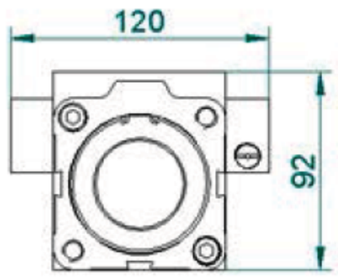


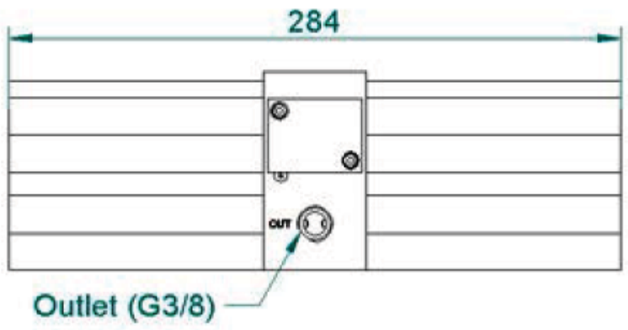


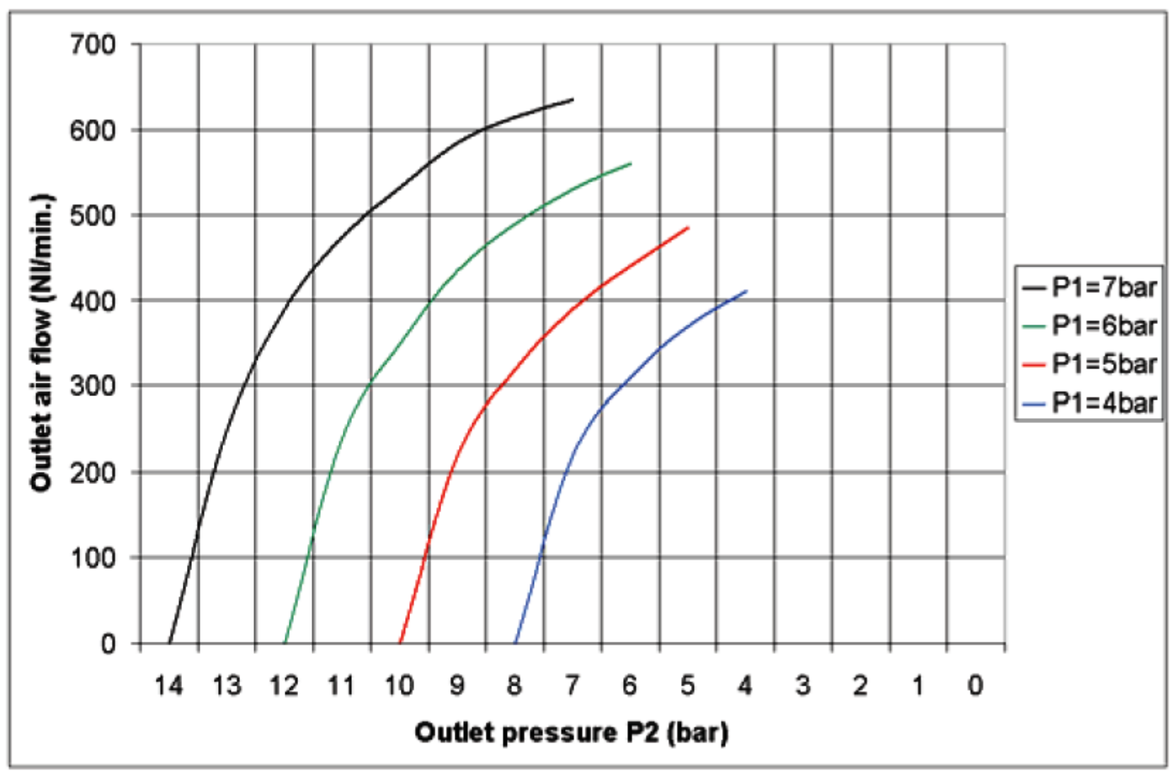
Ø63 Rc=1:2

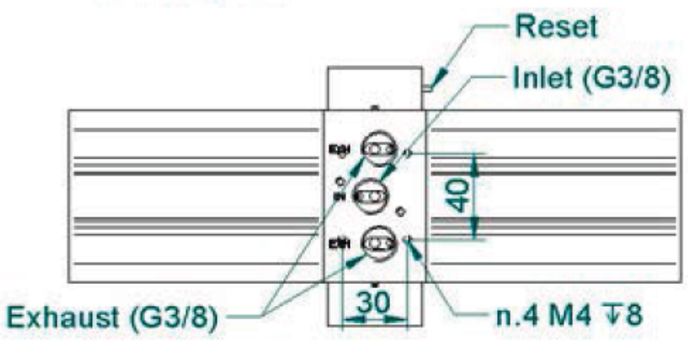
-UM11-063RC1.2

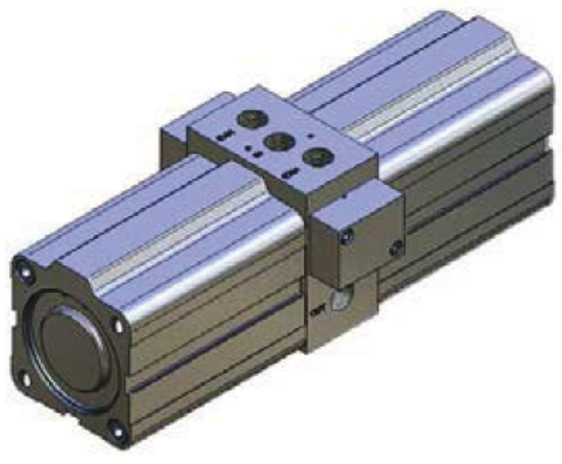
-UM21-063RC1.2







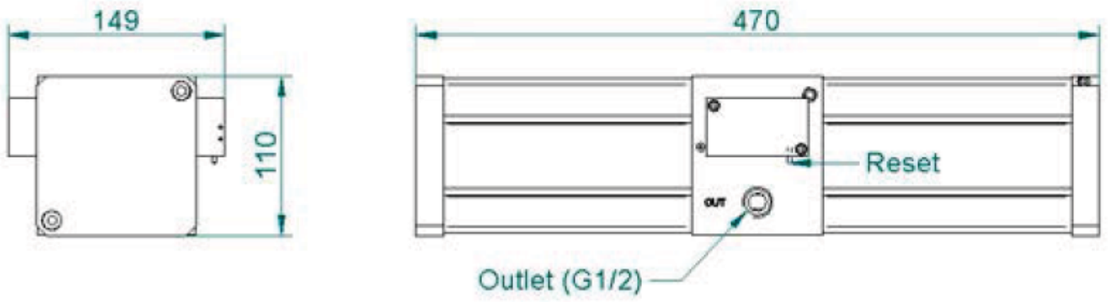


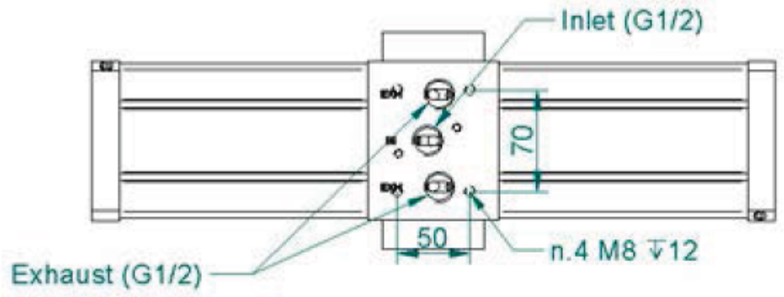


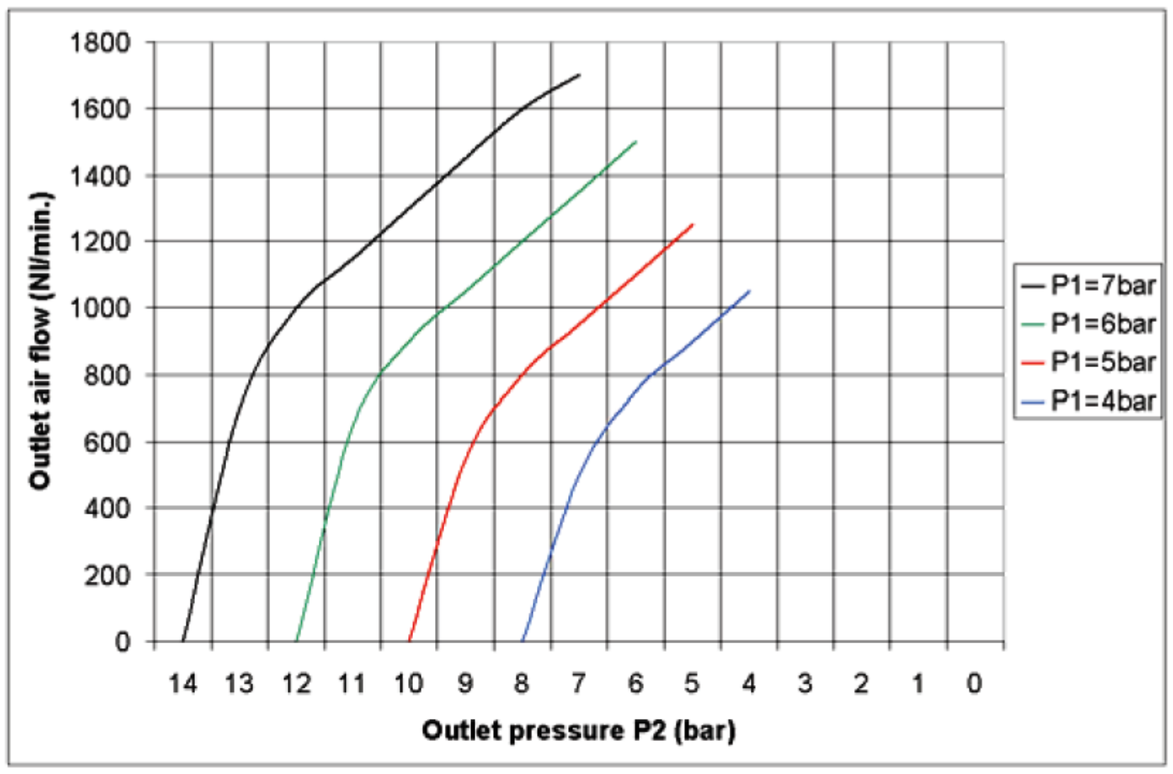
Ø100 Rc=1:2

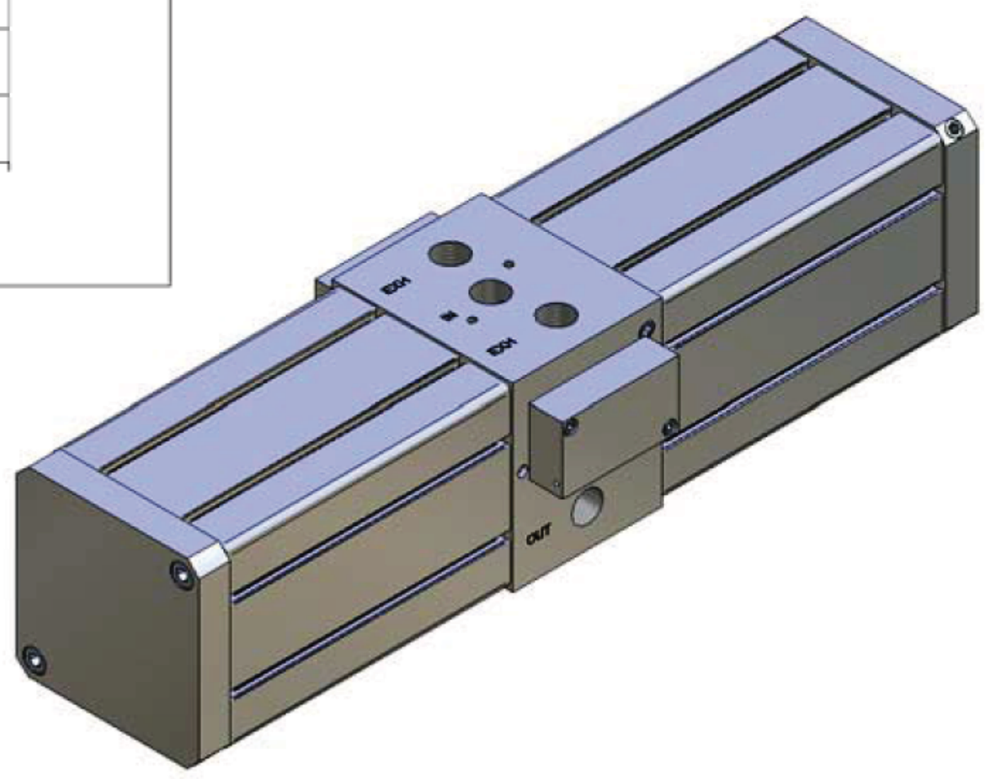
-UM11-100RC1.2

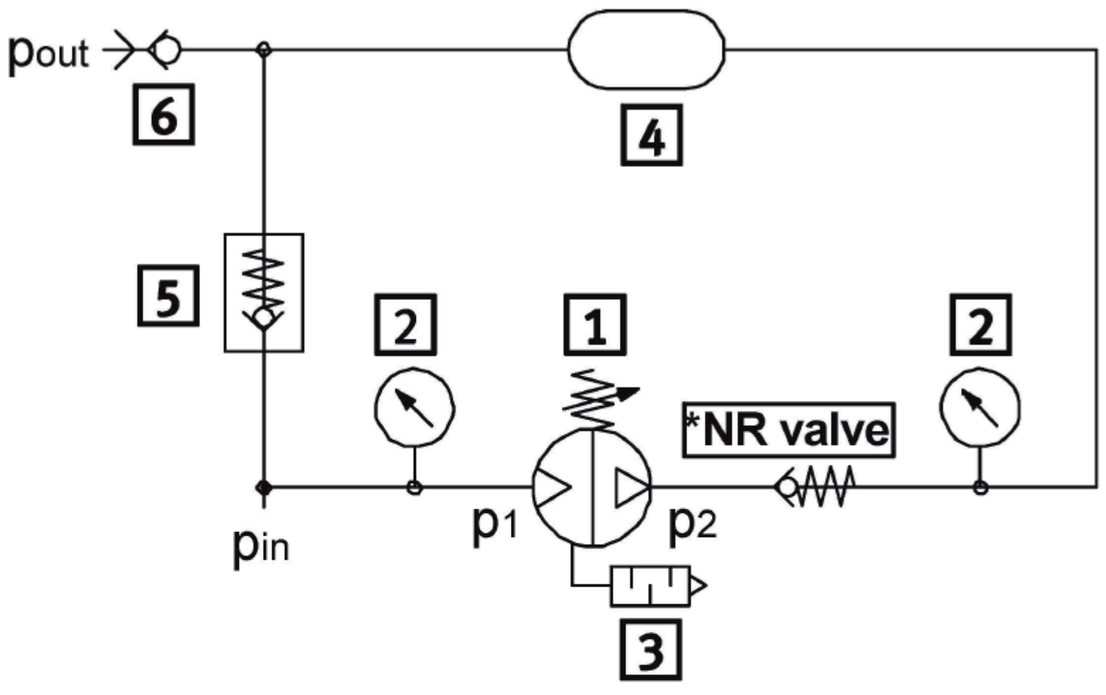
-UM21-100RC1.2











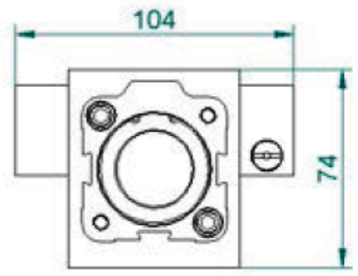
* Solo per il modello Ø100:
si consiglia di collegare una valvola di non ritorno da 1/2" (contenuta nell'imballo) direttamente all'uscita del booster.

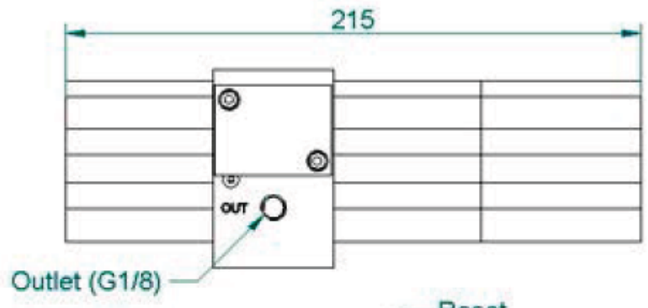
* Only for Ø100 model:
it is suggested to connect a non-return 1/2" valve (included inside the packaging) directly on the output of the booster.

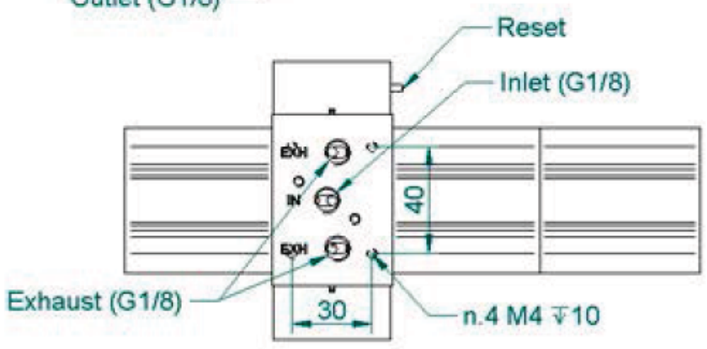
Ø40 Rc=1:3

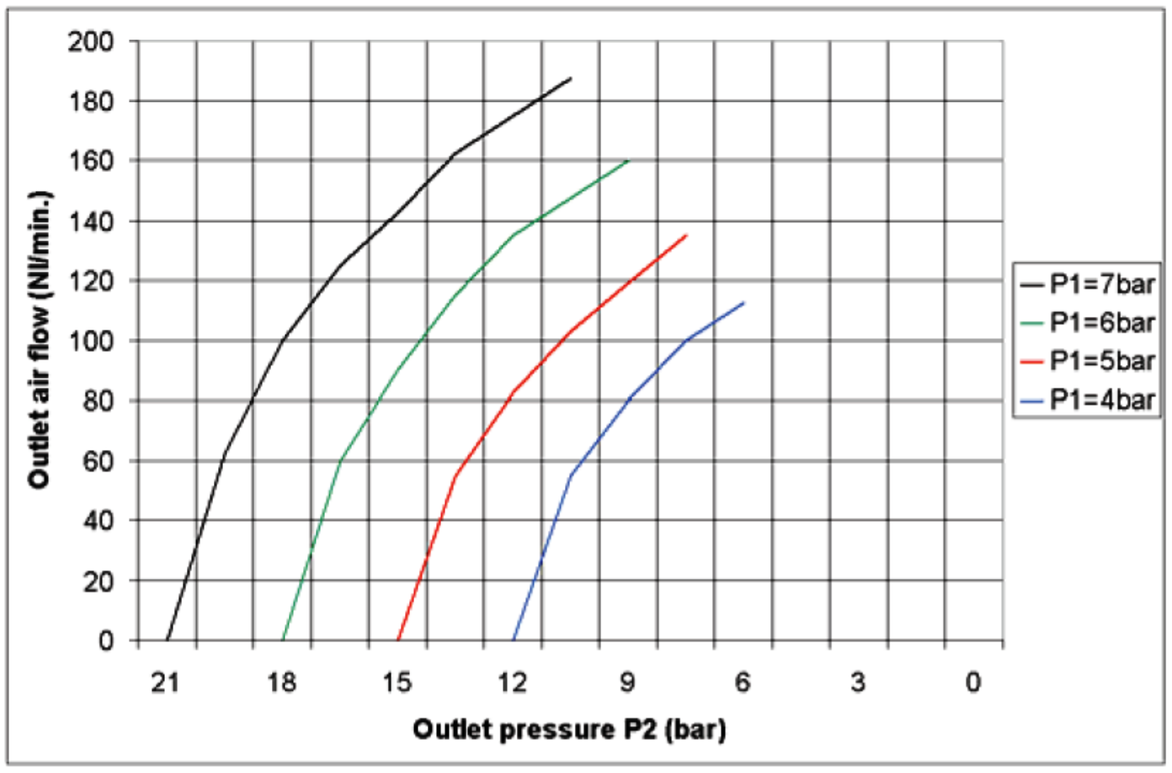
-UM11-040RC1.3

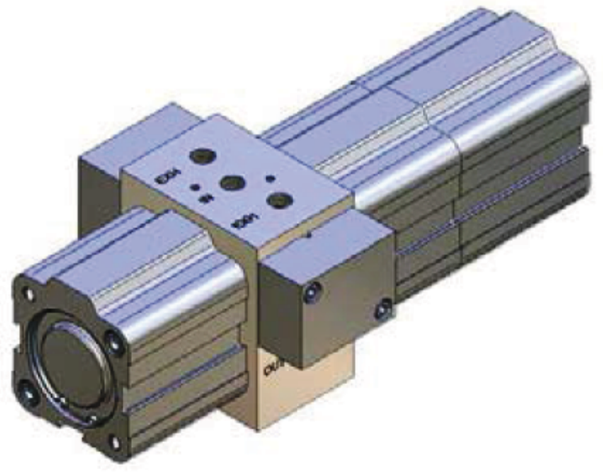
-UM21-040RC1.3







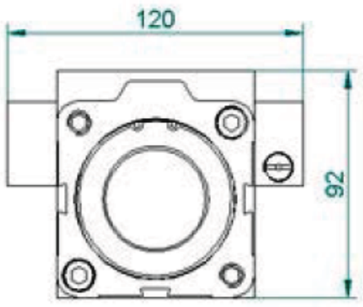


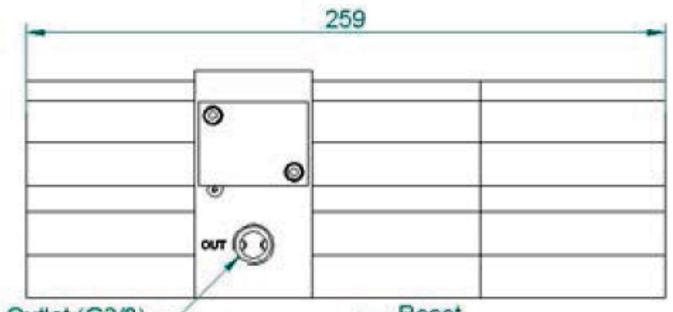


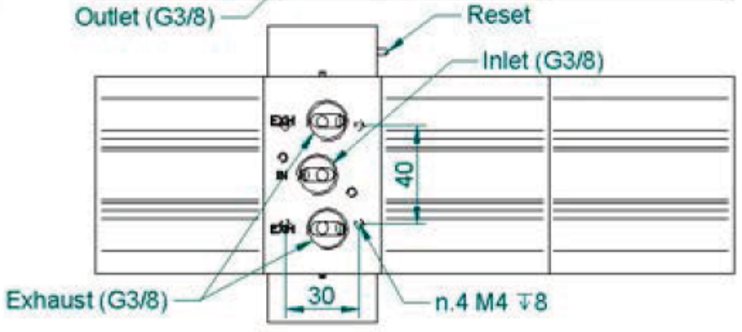
Ø63 Rc=1:3

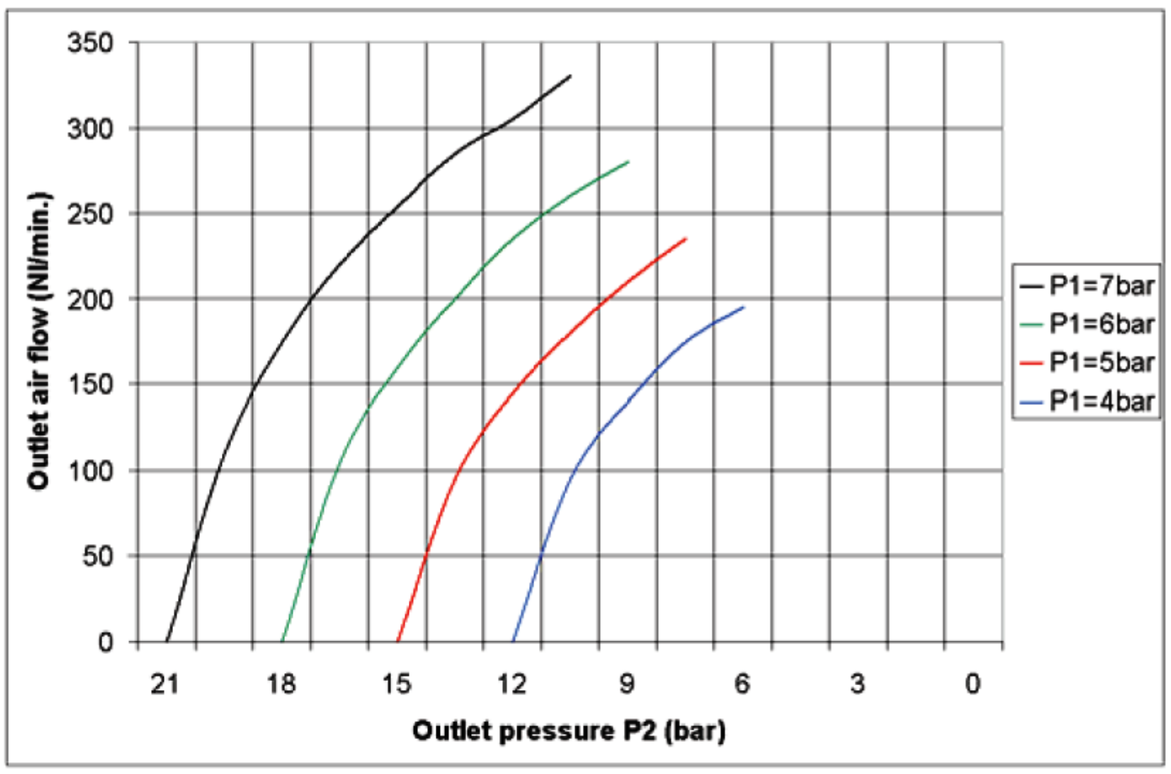
-UM11-063RC1.3

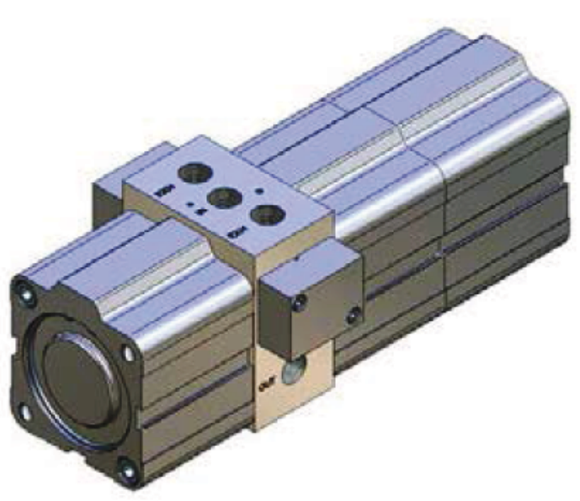
-UM21-063RC1.3







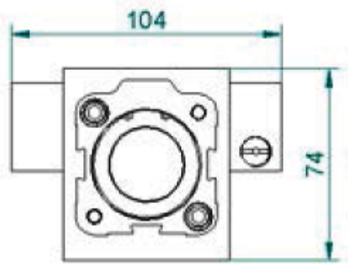


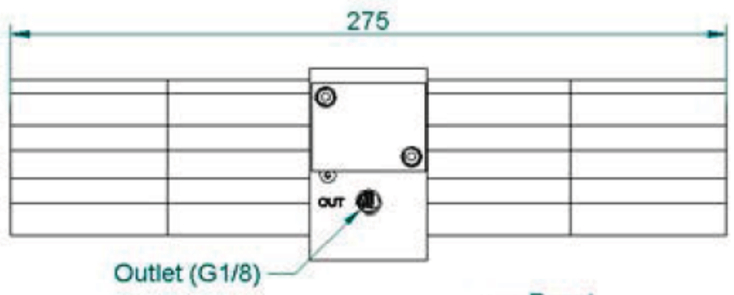


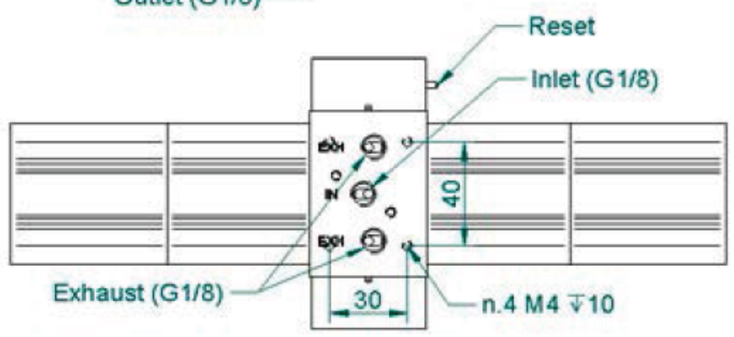
Ø40 Rc=1:4

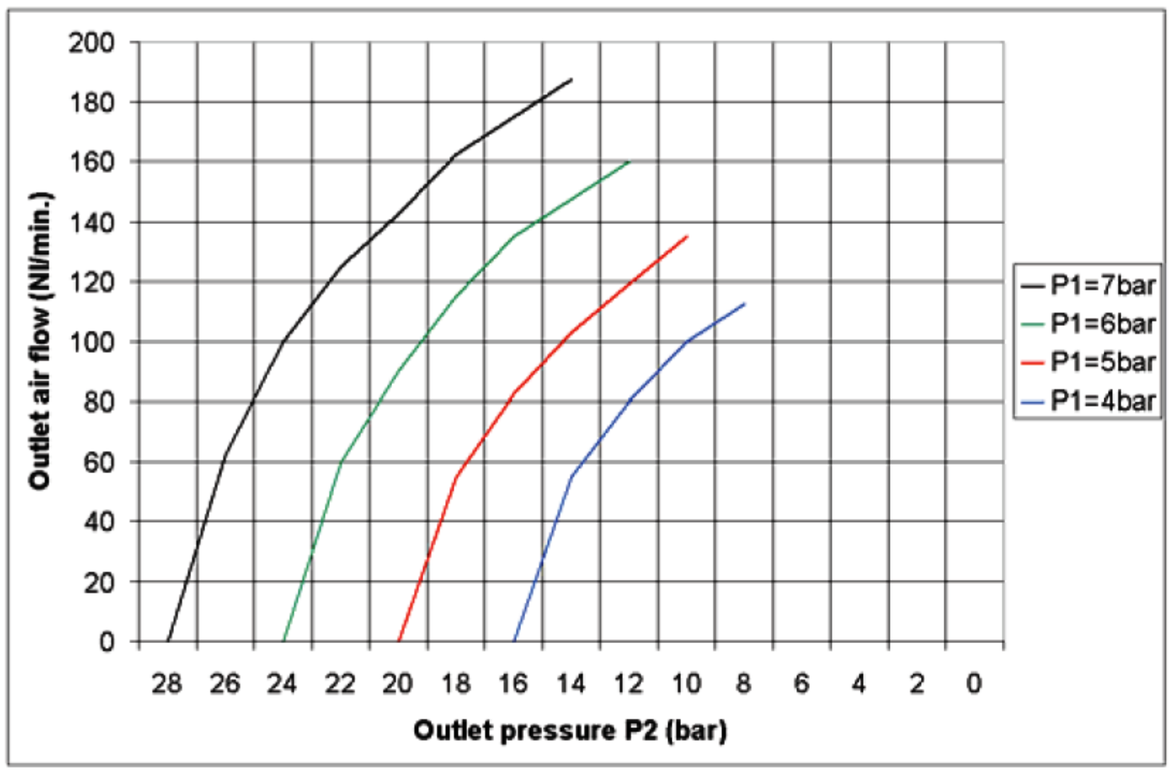
-UM11-040RC1.4

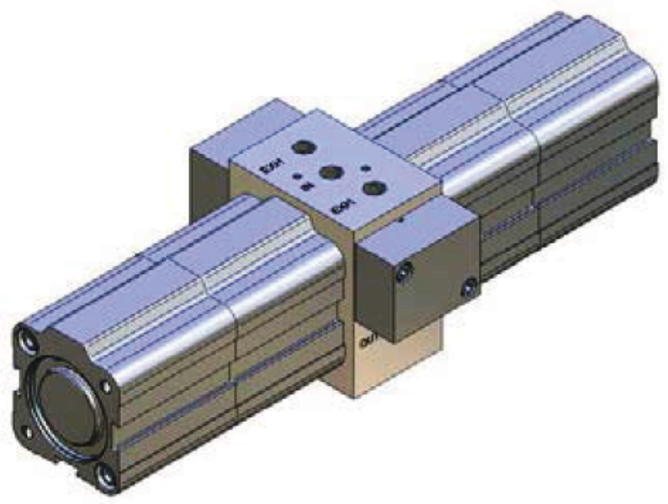
-UM21-040RC1.4







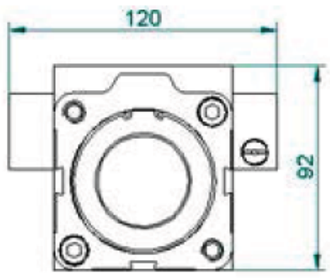


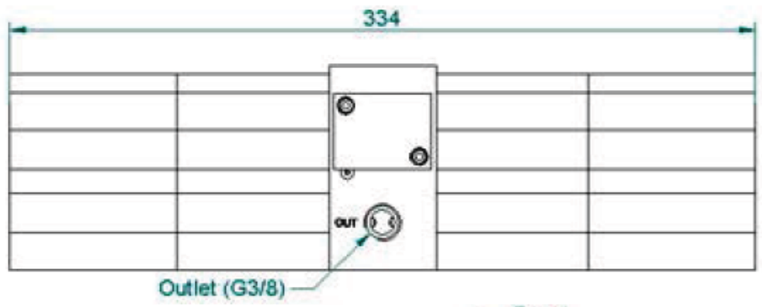


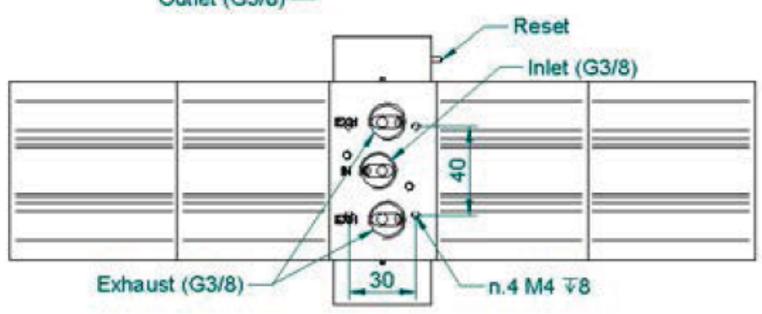
Ø63 Rc=1:4

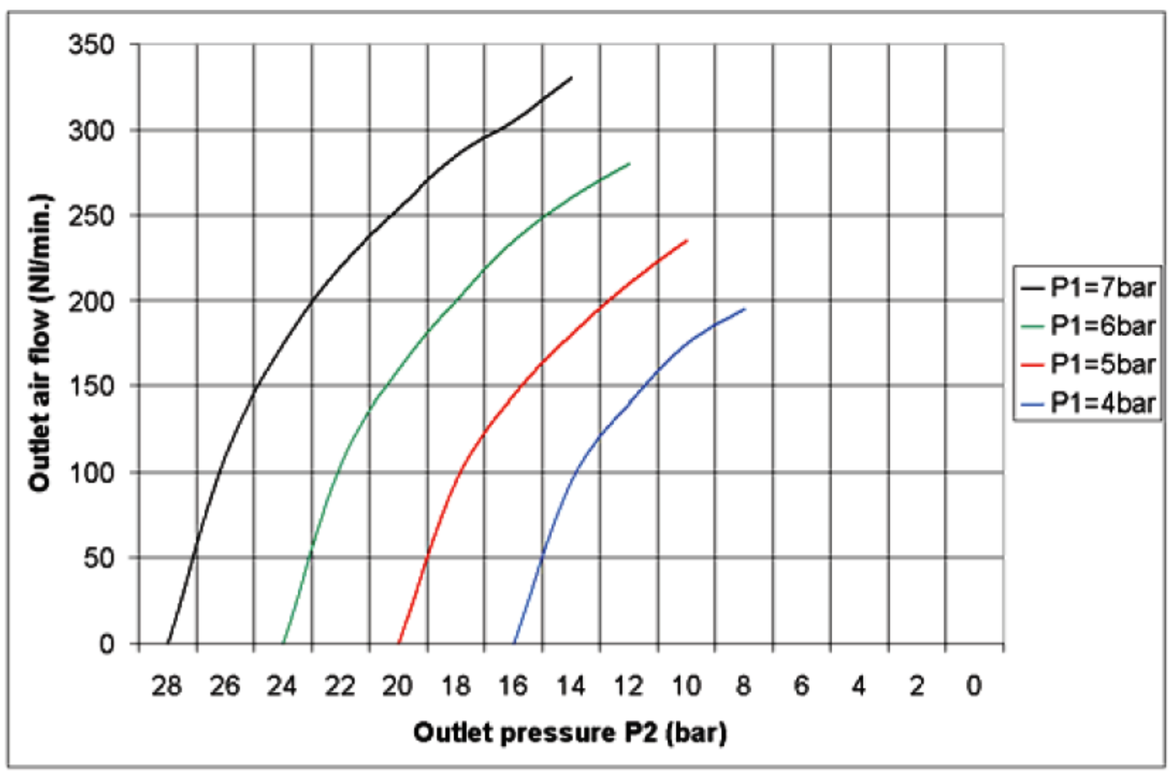
-UM11-063RC1.4

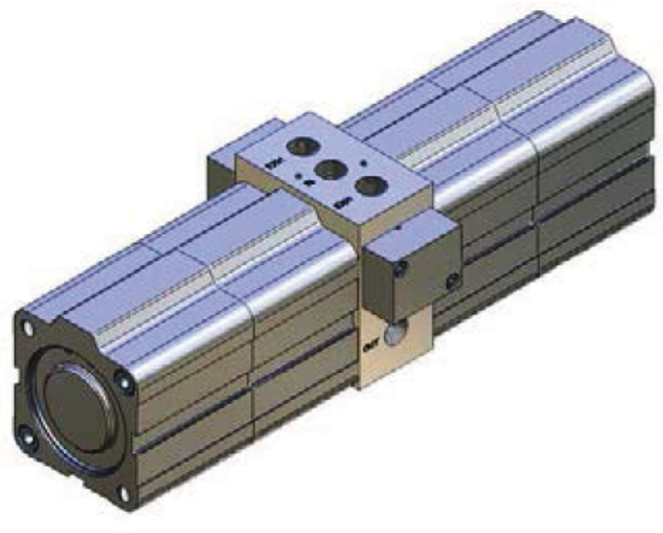
-UM21-063RC1.4











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