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climate control
electromechanical
filtration
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process control
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P3Z Series Air preparation system

1 1/2" & 2" Ported

Catalogue no. PDE2641TCUK - May 2010



ENGINEERING YOUR SUCCESS.

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P3Z series modular air preparation system

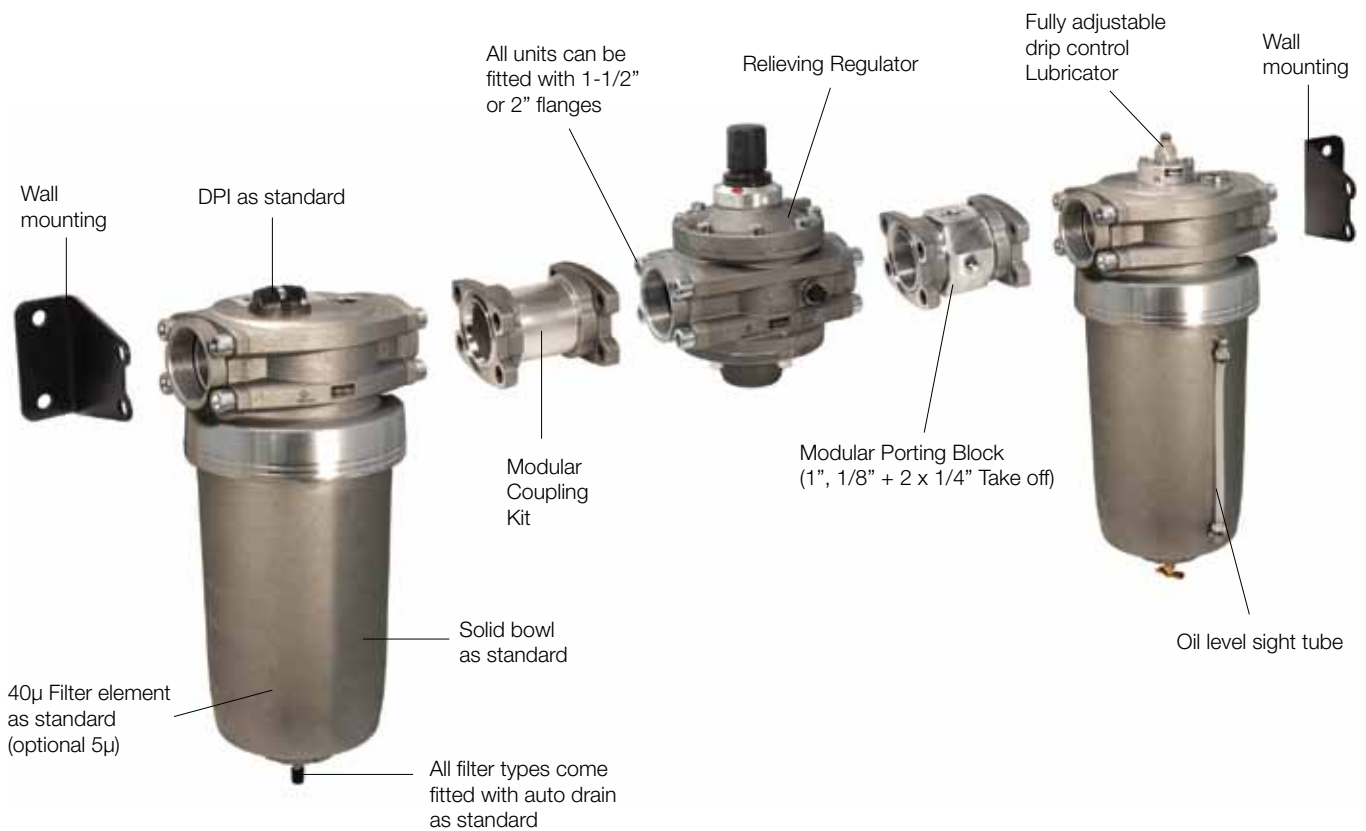
The System

The all metal P3Z system allows units to be connected to most medium sized ring main installations by the use of either 1-1/2" or 2" flanges.

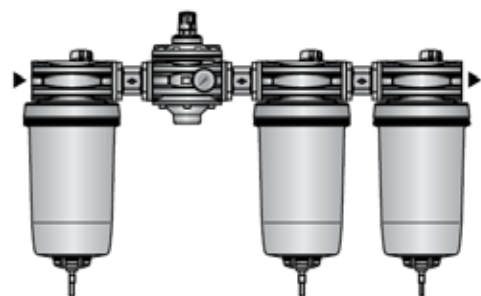
The P3Z Filters are specially designed to efficiently filter out rust, dirt, moisture and other impurities from compressed air lines. Operation is fully automatic with a minimum of pressure drop. Coalescing filters and adsorber filters for high purity air are also included in the P3Z series.

The P3Z Regulators are designed to provide quick response and accurate pressure regulation for the most demanding hi-flow industrial applications. The rolling diaphragm was designed for long trouble-free operation and will not rupture or tear under high cycle or other demanding applications.

The P3Z mist lubricators are designed to provide lubrication for many general purpose applications in a pneumatic system.

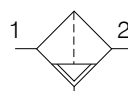


Filter-Regulator - Dust Filter-Adsorber



Filter / Dust Filter

Symbols



Auto drain

- Flanged 1-1/2" or 2" (BSPP & NPT)
- High efficiency particulate element as standard
- Excellent water removal efficiency
- Robust die-cast aluminium construction
- Standard DPI for monitoring (0.5 - 0.8 bar)

Note: To optimise the life of the dust 1µm element, it is advisable to install a P3ZFA pre-filter with a 5 micron element upstream of the coalescing filter.

Options:

P 3 Z F A					M A		N
SAE Mtg - No thread	0	None	0	40 Micron Element + DPI Standard	H	Auto Drain	MA
BSPP flange	1	1-1/2"	B	5 Micron Element + DPI Optional	F		
NPT flange	9	2"	C	1 Micron Element + DPI	M		

Port size	Description	Order Code	Flow dm ³ /s *	Max bar	Min temp °C	Max temp °C	Bowl capacity cm ³	Height mm	Width mm	Depth mm	Weight kg
-	40 micron, auto drain	P3ZFA00HMAN	>666	17.5	0	60	600	445	200	182	6.3
1-1/2"	40 micron, auto drain	P3ZFA1BHMAN	>666	17.5	0	60	600	445	200	182	6.3
2"	40 micron, auto drain	P3ZFA1CHMAN	>666	17.5	0	60	600	445	200	182	6.3
-	1 micron, auto drain	P3ZFA00MMAN	>666	17.5	0	60	600	445	200	182	6.3
1-1/2"	1 micron, auto drain	P3ZFA1BMMAN	>666	17.5	0	60	600	445	200	182	6.3
2"	1 micron, auto drain	P3ZFA1CMMAN	>666	17.5	0	60	600	445	200	182	6.3

* flow with 6,3 bar inlet pressure and 0,5 pressure drop.

Technical Information

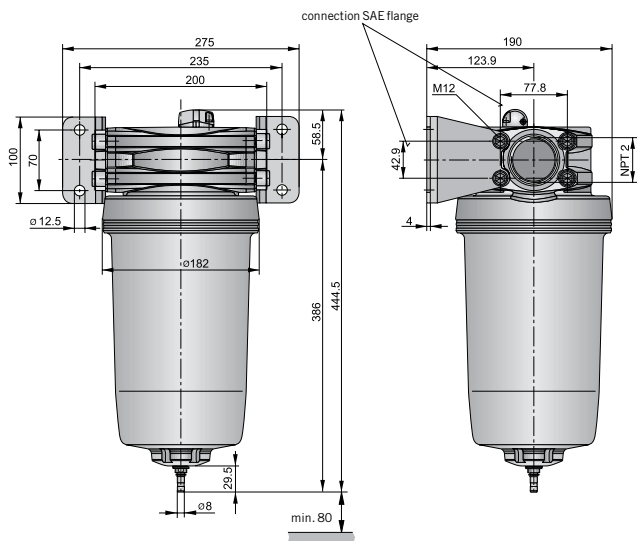
Fluid:	Compressed air
Maximum inlet pressure*:	17.5 bar
Temperature range*:	0°C to +60°C
Particle removal:	40 & 5 micron
Air quality:	Within ISO 8573-1 : 1991 Class 3 and 5 (particulates) Within ISO 8573-1 : 2001 Class 6 and 7 (particulates)
Typical flow with 40µm element 6,3 bar inlet pressure and 0.5 bar pressure drop:	666 dm ³ /s
Auto drain: bowl pressure to close drain Operating range manual override facility (depress pin)	0.8 bar 0.8 to 17.5 bar Ø 10mm brass connection
Bowl sump capacity:	600 cm ³

* Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Material Specification

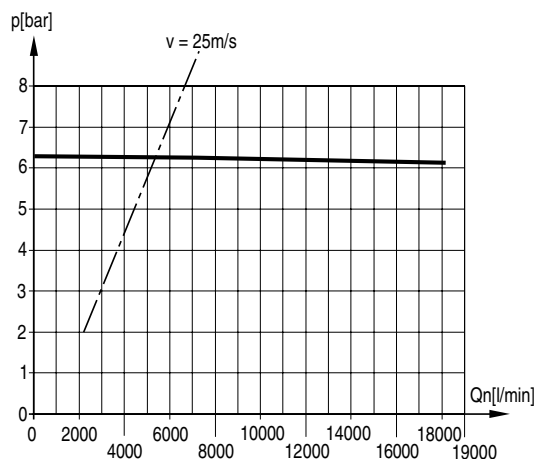
Body:	Aluminium
Element:	Sintered P.E.
Seals:	Nitrile NBR
Drains: Automatic:	PA / Brass connection
Differential pressure indicator materials:	
Body:	Acetal
Internal parts:	Acetal
Spring:	Stainless steel
Seals:	Nitrile NBR
Support plate	ABS
Screws	Steel / zinc plated

Dimensions (mm)



Flow characteristics

(2") 40 Micron Filter



Service kits

Description	Order code
5 micron element kit	P3ZKA00ESE
40 micron element kit	P3ZKA00ESG
1 micron element kit	P3ZKA00ES9

Coalescing Filter / Adsorber Filter



- Extended high efficiency filter element provides greater filtration surface area.
- Flanged 1-1/2" or 2" (BSPP & NPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control

Note: To optimise the life of the coalescing element, it is advisable to install a P3ZFA pre-filter with a 5µm filter upstream of the coalescing filter.

Note: To optimise the life of the adsorber element, it is advisable to install a P3ZFA coalescing 0.01µm filter upstream of the adsorber filter.

Options:

P 3 Z F A	□	□	□	M A	N		
SAE Mtg - No thread	0	None	0	0.01 µm Coalescing element + DPI	D	Auto Drain	MA
BSPP flange	1	1-1/2"	B	Adsorber element	B		
NPT flange	9	2"	C				

Port size	Description	Order Code	Flow dm ³ /s *	Max bar	Min temp °C	Max temp °C	Bowl capacity cm ³	Height mm	Width mm	Depth mm	Weight kg
-	Coalescing filter 0.01 µm auto drain	P3ZFA00DMAN	>167	17.5	0	60	600	445	200	182	6.4
1-1/2"	Coalescing filter 0.01 µm auto drain	P3ZFA1BDMAN	>167	17.5	0	60	600	445	200	182	6.4
2"	Coalescing filter 0.01 µm auto drain	P3ZFA1CDMAN	>167	17.5	0	60	600	445	200	182	6.4
-	Adsorber filter	P3ZFA00BMAN	>167	17.5	0	60	600	445	200	182	6.4
1-1/2"	Adsorber filter	P3ZFA1BBMAN	>167	17.5	0	60	600	445	200	182	6.4
2"	Adsorber filter	P3ZFA1CBMAN	>167	17.5	0	60	600	445	200	182	6.4

* flow with 6,3 bar inlet pressure and 0,5 pressure drop.

Technical Information

Fluid:	Compressed air
Maximum inlet pressure*:	17.5 bar
Temperature range*:	0°C to +60°C
Media specifications:	
Coalescing efficiency	(0.3 to 0.6 micron particles): 99.97%
Max. oil carryover (PPM w/w):	0.008 mg/m ³
Typical flow element @ 6,3 bar inlet pressure and 0.2 bar pressure drop:	Dry element 0.01µm @ dm ³ /s
Auto drain:	
bowl pressure to close drain	0.8 bar
Operating range	0.8 to 17.5 bar
manual override facility (depress pin)	Ø 10mm brass connection
Bowl sump capacity:	600 cm ³

* Air supply must be dry enough to avoid ice formation at temperatures below +2°C

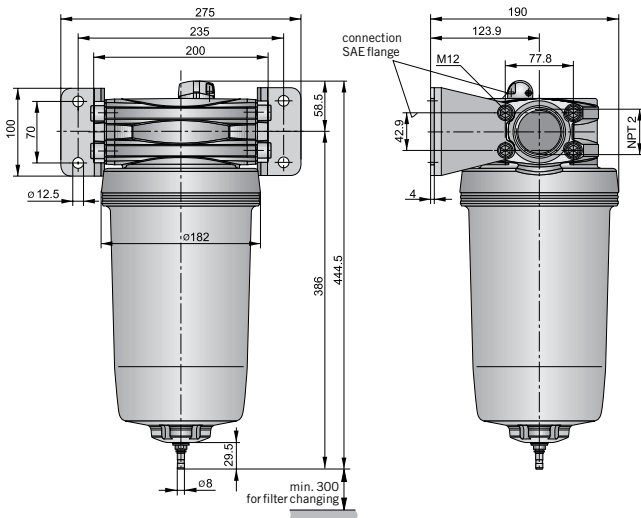
Material Specification

Body:	Aluminium
Filter cover:	ABS
Coalescing element:	Borosilicate & Nano fibres
Top & bottom end cap:	Aluminium
Support cylinders:	Grade 430 stainless steel
Support media:	Polypropylene
Anti re-entrainment barrier:	Polyester
Ensapulate:	Epoxy resin / Hardener
Seals:	Nitrile NBR
Drains:	Automatic: PA / Brass connection

Differential pressure indicator materials:

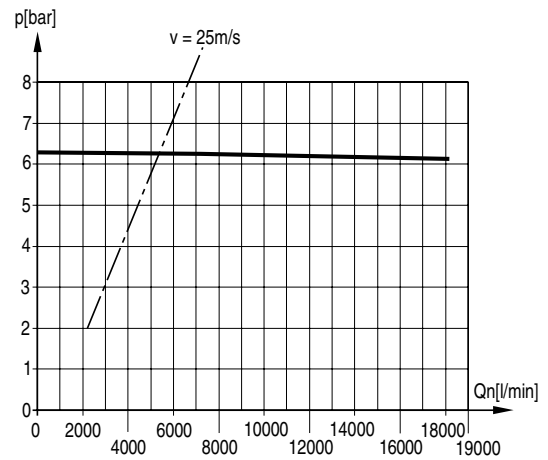
Body:	Acetal
Internal parts:	Acetal
Spring:	Stainless steel
Seals:	Nitrile NBR
Support plate	ABS
Screws	Steel / zinc plated

Dimensions (mm)



Flow characteristics

(2") 0.01µm Coalescing Filter Saturated

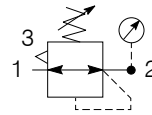


Service kits

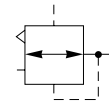
Description	Order code
0.01 micron coalescing element kit	P3ZKA00ESC
Adsorber element kit	P3ZKA00ESA
Differential pressure indicator kit	P3ZKA00RQ

Regulator / Pilot Regulator

Symbols



Self relieving regulator with gauge



Air pilot

- Flanged 1-1/2" or 2" ports (BSPP & NPT)
- Robust die-cast aluminium construction
- Secondary pressure ranges 8 & 16 bar
- Rolling diaphragm for extended life
- Secondary aspiration plus rolling diaphragm provides quick response and accurate pressure regulation
- Air pilot regulator permanent bleed

Options:

P 3 Z R A			B	N		N	
SAE Mtg - No thread	0	None	0	Relieving	B	0 - 8 bar No Gauge	N
BSPP flange	1	1-1/2"	B			0 -16 bar No Gauge	H
NPT flange	9	2"	C			0 - 8 bar Gauge	G
						0 -16 bar Gauge	J
P 3 Z R A			B P P N				
For Air Pilot Regulator option							

Port size	Description	Order Code	Flow dm ³ /s *	Max bar	Min temp °C	Max temp °C	Height mm	Width mm	Depth mm	Weight kg
-	8 bar relieving + gauge	P3ZRA00BNGN	>666	17.5	0	60	230	180	132	3.5
-	8 bar relieving	P3ZRA00BNNN	>666	17.5	0	60	230	180	132	3.5
1-1/2"	8 bar relieving + gauge	P3ZRA1BBNGN	>666	17.5	0	60	230	180	132	3.5
1-1/2"	8 bar relieving	P3ZRA1BBNNN	>666	17.5	0	60	230	180	132	3.5
2"	8 bar relieving + gauge	P3ZRA1CBNGN	>666	17.5	0	60	230	180	132	3.5
2"	8 bar relieving	P3ZRA1CBNNN	>666	17.5	0	60	230	180	132	3.5
-	16 bar relieving + gauge	P3ZRA00BNJN	>666	17.5	0	60	230	180	132	3.5
-	16 bar relieving	P3ZRA00BNHN	>666	17.5	0	60	230	180	132	3.5
1-1/2"	16 bar relieving + gauge	P3ZRA1BBNJN	>666	17.5	0	60	230	180	132	3.5
1-1/2"	16 bar relieving	P3ZRA1BBNHN	>666	17.5	0	60	230	180	132	3.5
2"	16 bar relieving + gauge	P3ZRA1CBNJN	>666	17.5	0	60	230	180	132	3.5
2"	16 bar relieving	P3ZRA1CBNHN	>666	17.5	0	60	230	180	132	3.5
-	Pilot Regulator + gauge	P3ZRA00BPPN	>666	17.5	0	60	182	180	132	3.4
1-1/2"	Pilot Regulator + gauge	P3ZRA1BBPPN	>666	17.5	0	60	182	180	132	3.4
2"	Pilot Regulator + gauge	P3ZRA1CBPPN	>666	17.5	0	60	182	180	132	3.4

* flow with 10 bar inlet 6,3 bar set pressure and 1 bar pressure drop.

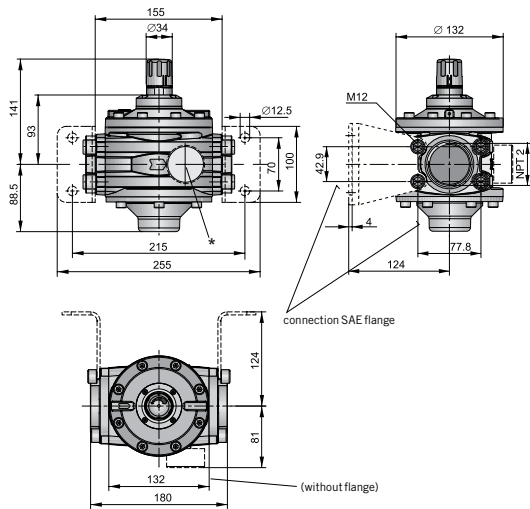
Technical Information

Fluid:	Compressed air
Maximum inlet pressure*:	17.5 bar
Temperature range*:	0°C to +60°C
Typical flow with 10 bar inlet pressure, 8 bar set pressure and 1 bar pressure drop:	2" size >666 dm ³ /s
Gauge port (x 2):	1/4"

* Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Dimensions (mm)

Pressure regulating valve, pilot operated with integrated pilot pressure regulating valve

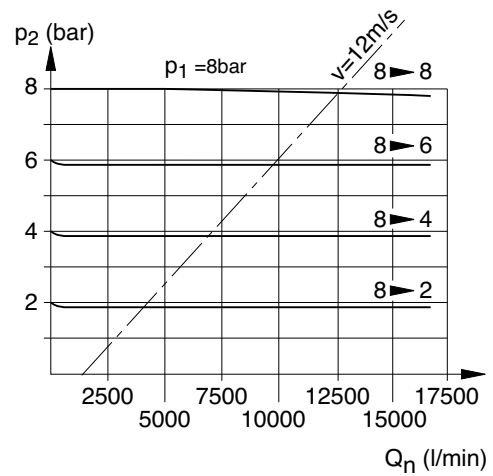


Material Specification

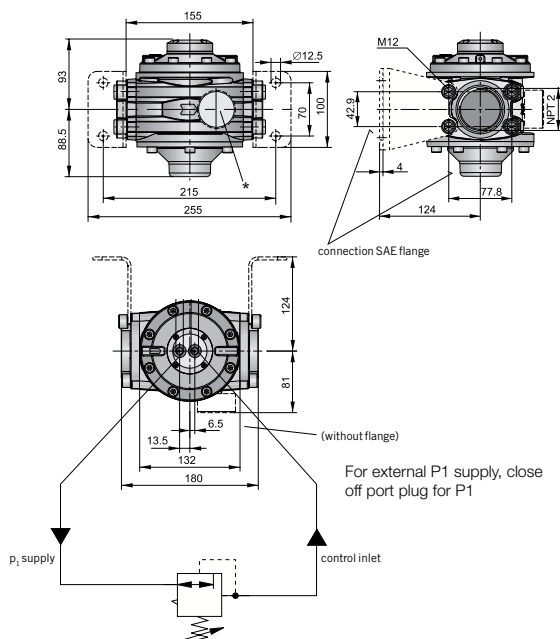
Body:	Aluminium
Bonnet:	Glass filled polyamide
Control Knob:	Glass filled polyamide
Valve:	Brass / NBR
Seals:	Nitrile NBR
Screws:	Steel / zinc plated

Flow characteristics

Pressure regulating valve characteristics - (2") Pilot operated



Pressure regulating valve, pilot operated



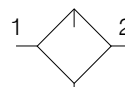
Service kits

Description	Order code
Diaphragm kit (relieving type)	P3ZKA00RR

Lubricator



Symbols



Lubricator with drain

- Flanged 1-1/2" or 2" ports (BSPP & NPT)
- Robust die-cast aluminium construction
- Proportional oil delivery over a wide range of air flows.
- Large oil reservoir

Options:

P 3 Z L A		□	□	L S M N	
SAE Mtg - No thread	0	None	0		
BSPP flange	1	1-1/2"	B		
NPT flange	9	2"	C		

Port size	Description	Order Code	Flow dm ³ /s *	Max bar	Min temp °C	Max temp °C	Bowl capacity cm ³	Height mm	Width mm	Depth mm	Weight kg
-	Lubricator	P3ZLA00LSMN	>666	17.5	0	60	600	460	200	182	6.5
1-1/2"	Lubricator	P3ZLA1BLSMN	>666	17.5	0	60	600	460	200	182	6.5
2"	Lubricator	P3ZLA1CLSMN	>666	17.5	0	60	600	460	200	182	6.5
2"	Central airline lubricator with electrical oil level control	P3ZLA1CEMMW	>666	10	5	60	5000	608	250	237	18
2"	Central airline lubricator with aluminium bowl	P3ZLA1CMMMW	>666	10	5	60	5000	608	250	237	18

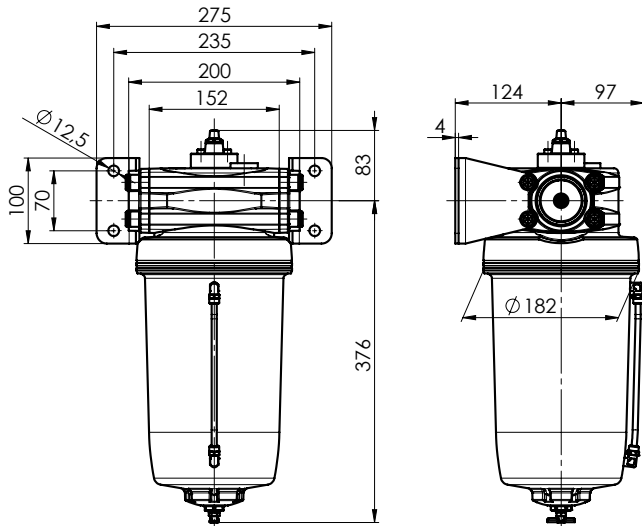
* flow with 6,3 bar inlet pressure and 0,5 bar pressure drop.

Technical Information

Fluid:	Compressed air
Maximum inlet pressure*:	10 bar
Temperature range*:	5°C to +60°C

* Air supply must be dry enough to avoid ice formation at temperatures below +2° C
 Low flow start point (lubrication pick-up): at 6.3bar inlet pressure 0.5 dm³/s
 Typical flow with 6.3bar inlet pressure and 0.7 bar pressure drop: 184 dm³/s

Dimensions (mm)

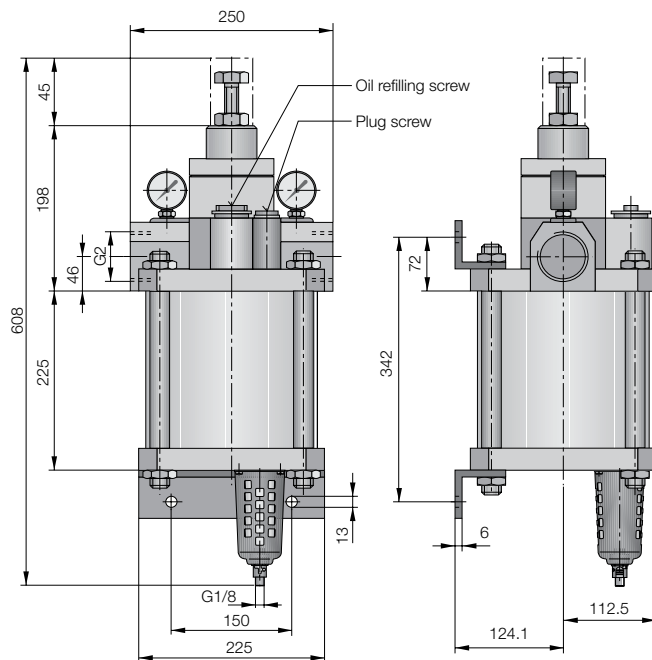
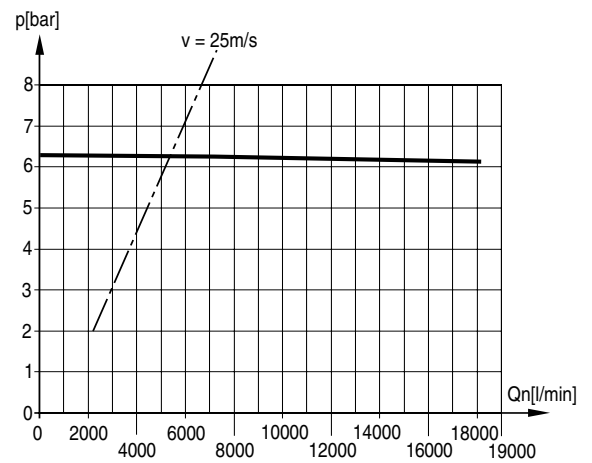


Material Specification

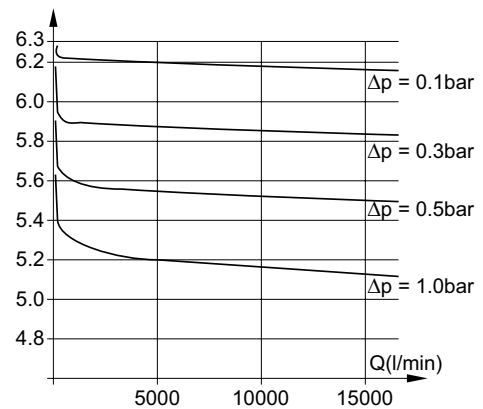
Body:	Aluminium
Sight dome:	Polyamide
Seals:	Nitrile NBR

Flow characteristics

(2") Lubricator



(2") Central Airline Lubricator



Service kits

Description	Order code
Drip control housing	P3ZKA00PG

Modular Manifold



P3Z Series Manifolds, provide up to 4 extra outlet ports, they may be assembled at any position in a combination e.g. before the lubricator to provide oil free take off or at the end of a combination to provide extra outlet ports.

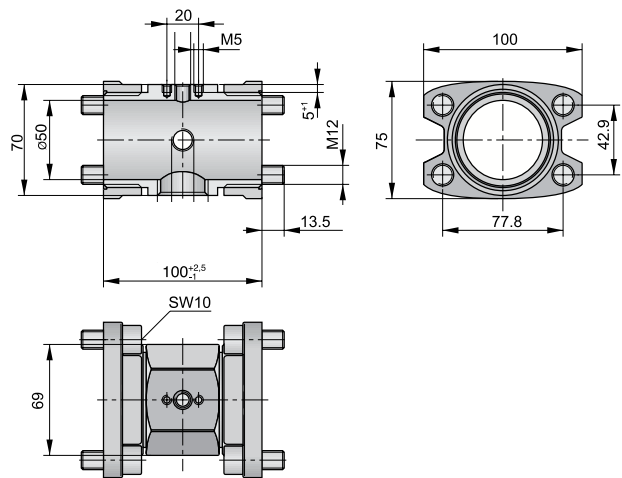
Thread type	Order code
BSPP	P3ZMA1V0N
NPT	P3ZMA9V0N

Dimensions (mm)

Inlet port	Top	Bottom	Front and Back
-	1/8"	1"	1/4"

Material specification:

Body:	Aluminium
Weight (kg):	1.1



Connection Flange Kits



- To change port sizes connection flange kits are available, they are attached to any unit utilising the connecting kit.
- Allows assemblies to be removed from a hard piped system.






Options:

P 3 Z K A				C P	
BSPP (G)	1	1 1/2"	B		
NPT	9	2"	C		

Material specification:

Body:	Aluminium
Weight (kg):	0.6

Accessories

Description	Connection	Weight (kg)	Order code	
Modular wall mounting kit		0.2	P3ZKA00MW	
Modular coupling kit		0.8	P3ZKA00CB	
Pressure gauge	0 to 10 bar 0 to 16 bar	1/4" 1/4"	KG8012-00 KG8013-00	
Lubricator Oil	VG32 - 1 litre	0.92	P3YKA00PPBB	
Modular coupling 'O' ring kit	Qty: 5		P3ZKA00CCY	

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