



aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Air Preparation System P3L Lite Series

Fully Modular with 1/4" Body Ports

Catalogue PDE2661TCUK March 2012



ENGINEERING YOUR SUCCESS.



WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met. The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

SALE CONDITIONS

The items described in this document are available for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. Any sale contract entered into by Parker will be governed by the provisions stated in Parker's standard terms and conditions of sale (copy available upon request).

Features	4
Popular Combinations	5
Modular Connector Kit Assembly	5
P3L Lite Particulate Filter	6 - 7
P3L Lite Coalescing and Adsorber Filters	8 - 9
P3L Lite Regulator	10 - 11
P3L Lite Regulator - Brass	12 - 13
P3L Lite Filter/Regulator	14 - 15
P3L Lite Lubricator	16 - 17
Port Block	18
Accessories Kits	19

The System

The new P3L Series FRLs have been developed to provide a rugged, high quality ultra light weight air preparation system with excellent performance and providing real value for money.

The ¼" ported units may be used individually but are also fully modular which allows units to be connected together, without the use of pipe connectors, saving space; providing constant mounting centres; whilst maintaining a modern aesthetically pleasing appearance.

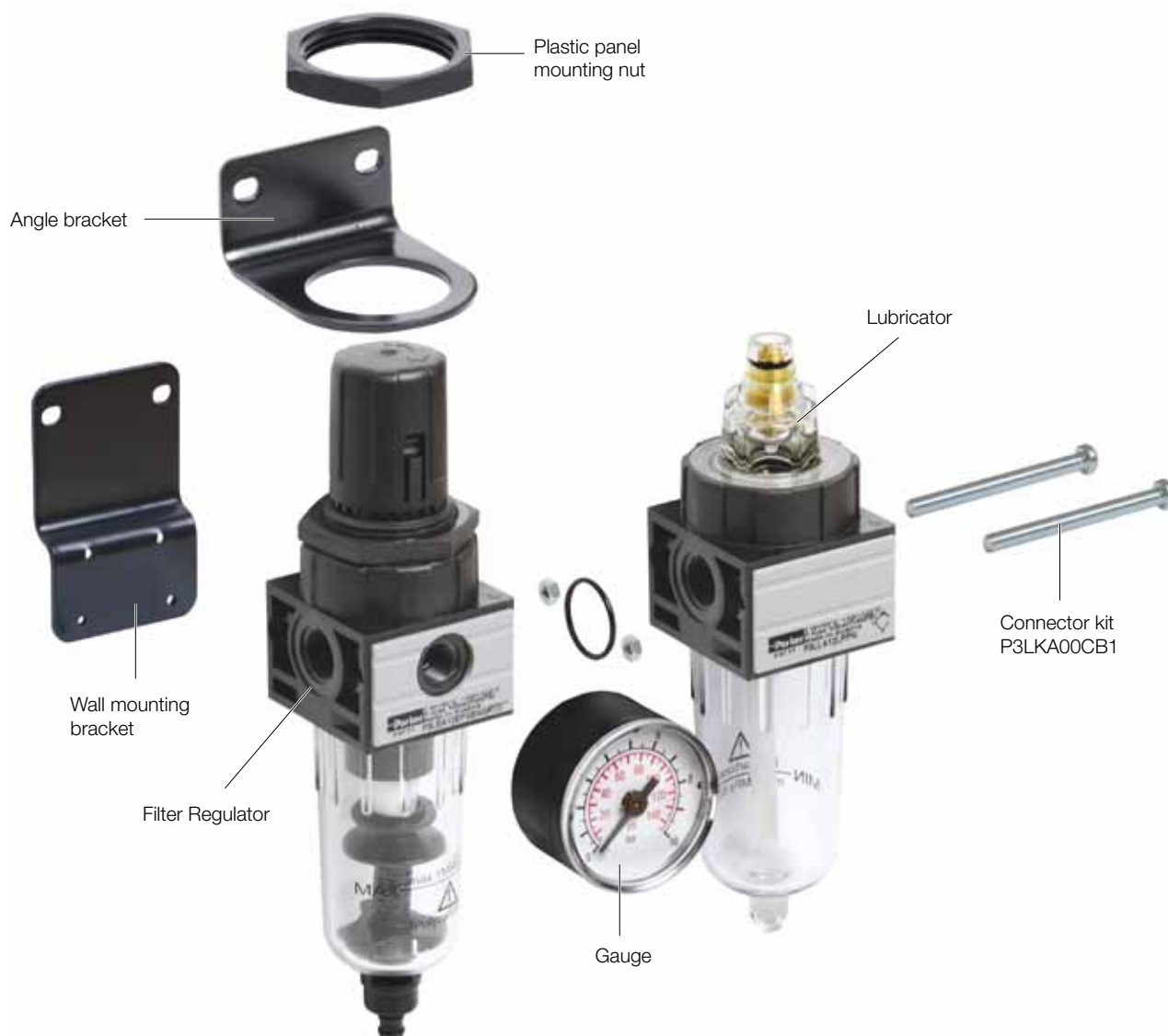
The P3L filters are specially designed to efficiently filter out rust, dirt, moisture and other impurities from compressed air lines. Units are available with a choice of 5 micron or 40 micron elements and with either manual or semi auto drains. Coalescing filters for the removal of liquid aerosols and sub-micron particles and adsorber filters for the removal of oil vapours and most hydrocarbons to provide high purity air are also included in the series.

The P3L regulators have an unbalanced poppet valve as standard, with a solid control piston. The P3L lubricators are designed to provide lubrication for many general purpose applications in a pneumatic system.

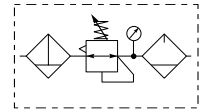
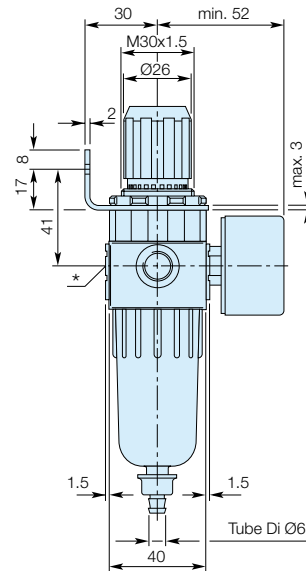
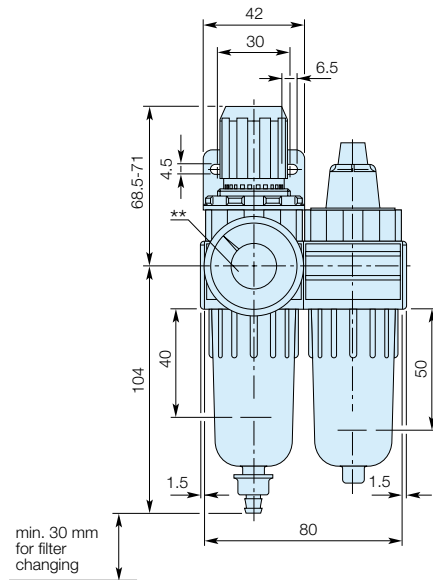
For aggressive environments a brass bodied version is available and both relieving and non-relieving versions are standard options.

The P3L lubricators are designed to provide proportional lubrication over a wide range of air flows for many general purpose applications in a pneumatic system.

An additional feature of this range is the modular manifold block which enables combinations to be made with "air take off" points at selected points in the combination. This allows for an un-lubricated "air take off" or differing pressure "air take off" to be assembled dependent upon position.



Popular Combinations :



* On delivery the screw plug is not assembled
 ** Two opposite gauge ports 1/8

Filter Regulator + Lubricator Combination -

Polycarbonate bowl, 5 micron, 8-bar with Gauge, Wall mounting Bracket.

Port size	Flow dm ³ /s (scfm)	Manual Push Drain	Weight	Semi-Auto Drain	Weight
1/4"	8.0 (17.0)	P3LCA12PEPNGLNW	0.32 kg (70 lbs)	P3LCA12PESNGLNW	0.32 kg (70 lbs)

Inlet pressure 10 bar, Secondary pressure 6.3 bar, 1 bar pressure drop.

P 3 L	C A		2	P			N		LNW
Filter/Reg + Lubricator	BSPP NPT	1 9	1/4	5 µ Element 40 µ Element	E G		2 bar 4 bar 8 bar	Z M G	
				Manual push drain Semi-auto drain	P S				

Modular Connector Kit Assembly



P31KA00CB1
 Connects product
 (E/R + F/L)



P31KA00CB2
 Connects product
 (E/R + M + F/L)
P31KA00CB3
 (E/R + F + F)

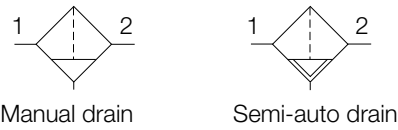


P31KA00CB4
 Connects product
 (F + L)

P3L Lite Particulate Filter



Symbols



- Integral 1/4 ports (BSPP & NPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight construction
- One hand operation for easy element cartridge removal

Options:

Configuration diagram showing options for P3L, FA, Thread type (BSPP 1, NPT 9), Port size (1/4 2), Bowl type (Poly bowl P), Mounting (No bracket * N), Element (5µ Element E, 40µ Element G), and Drain type (Manual push P, Semi-auto S).

Port size	Description	Order Code	Flow dm³/s (scfm)	Max bar (psi)	Height mm (Inches)	Width mm (Inches)	Depth mm (Inches)
1/4"	Poly bowl - Manual drain - 5µ	P3LFA12EPPN	30.5 (65)	10 (150)	115 (4.52)	40 (1.58)	40 (1.58)
1/4"	Poly bowl - Semi-auto drain - 5µ	P3LFA12EPSN	30.5 (65)	10 (150)	115 (4.52)	40 (1.58)	40 (1.58)
1/4"	Metal bowl - Manual drain - 40µ	P3LFA12GPPN	30.5 (65)	10 (150)	115 (4.52)	40 (1.58)	40 (1.58)
1/4"	Metal bowl - Semi-auto drain - 40µ	P3LFA12GPSN	30.5 (65)	10 (150)	115 (4.52)	40 (1.58)	40 (1.58)

* flow with 10 bar (145 psi) inlet pressure and 1 bar (14.5 psi) pressure drop.

PDE2661TCUK
P3L Lite Series Air Preparation System

Specifications

Flow Capacity	1/4	30.5 dm ³ /s (65 scfm)
Operating Temperature	0°C (32°F) to 50°C (122°F)	
Max Supply Pressure	10 bar (150 psi)	
Standard Filtration	5 Micron	
Useful Retention	12 cm ³ (0.4 US oz.)	
Port Size	BSPP / NPT	1/4
Weight	0.11 kg (0.24 lbs)	

* Inlet pressure 10 bar (145 psi). Pressure drop 1 bar (14.5 psi).

Air quality:

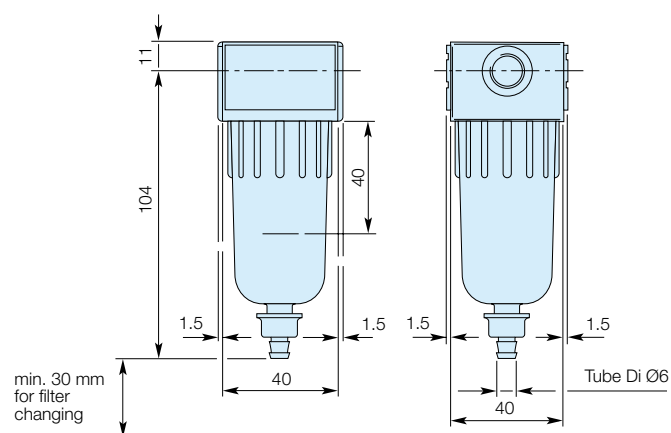
Within ISO 8573-1: 1991 Class 3 (Particulates)

Within ISO 8573-1: 2001 Class 6 (Particulates)

Materials of Construction

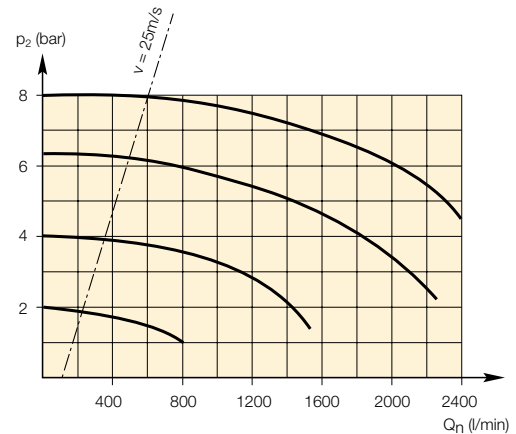
Body	High Tech Polymer
Bowl	Polycarbonate
Element Retainer	POM
Baffle	POM
Filter Element	Sintered Polyethylene
Seals	Nitrile

Dimensions



Flow Charts

5μ Filter



Repair and Service Kits

Plastic bowl / semi-auto drain	P3LKA00BPS
5μ particle filter element	P3LKA00ESE
40μ particle filter element	P3LKA00ESG
Individual mounting bracket - P3LFA / P3LLA	P3LKA00MW

P3L Lite Coalescing and Adsorber Filters



- Integral 1/4 ports (BSPP & NPT)
- Removes liquid aerosols and sub micron particles
- Oil free air for critical applications, such as air gauging, pneumatic instrumentation and control
- Adsorbing activated carbon element removes oil vapours and most hydrocarbons

Note: To optimise the life of coalescing element, it is advisable to install a P3LF pre-filter with a 5 micron element upstream of the coalescing filter.

To optimise the life of an Adsorber it is advisable to install a P3L Coalescing Filter upstream of the Adsorber. Adsorber element should be replaced approx. every 1000 hours of service

Options:

P 3 L

F A

Thread type

BSPP	1
NPT	9

2

Port size

1/4	2
-----	---

Element

0.01µ Element	C
Adsorber	A

P

Bowl type

Poly bowl	P
-----------	---

Drain type

Manual push	P
Semi-auto	S

N

Mounting

No bracket *	N
--------------	---

* for individual mounting bracket see page:19

Port size	Description	Order Code	Flow dm³/s *	(scfm) *	Max bar (psi)	Height mm (Inches)	Width mm (Inches)	Depth mm (Inches)
1/4"	Poly bowl - 0.01 micron - Manual drain	P3LFA12CPPN	2	(4.23)	10 (150)	115 (4.52)	40 (1.58)	40 (1.58)
1/4"	Poly bowl - Adsorber	P3LFA12APPN	6	(12.7)	10 (150)	115 (4.52)	40 (1.58)	40 (1.58)

* flow with 6.3 bar (91.3 psi) inlet pressure and 0.2 bar (3 psi) pressure drop.

Specifications

Flow Capacity		2 dm³/s (4.2) SCFM	
0.01 Micron Coalescing	Energy Efficient Flow*	2	(4.2)
Maximum Flow**		3.8	(8)
Activated Carbon Adsorber	Rated Flow*	6	(13)
Operating Temperature		0°C (32°F) to 50°C (122°F)	
Max Supply Pressure		10 bar (150 psi)	
Standard Filtration		0.01 Micron ppm wt	
Adsorber	Max oil carryover (ppm w/w)	0.003 @ 21°C (70°F)	
Useful Retention		12 cm³ (0.4 US oz.)	
Port Size	BSPP / NPT		1/4
Weight		11kg (24 lbs)	

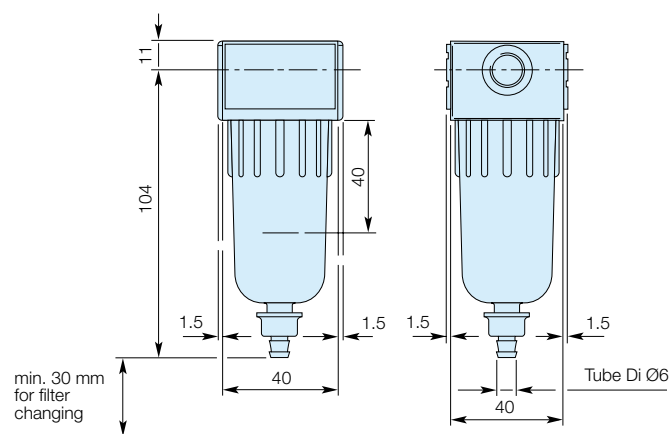
* Inlet pressure 6.3 bar (90 psi), Pressure drop 0.2 bar (3 psi), Saturated Element.

** Inlet pressure 6.3 bar (90 psi), Pressure drop 0.4 bar (6 psi), Saturated Element.

Materials of Construction

Body	High Tech Polymer		
Bowl	Polycarbonate		
Filter Element	0.01 Micron	Borosilicate Cloth	
Adsorber	Activated Carbon		
Seals	Nitrile		

Dimensions



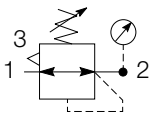
Repair and Service Kits

Plastic bowl / manual push drain Coalescing	P3LKA00BPP1
Plastic bowl / manual push drain, Adsorber	P3LKA00BPP2
0.01µ coalescing filter element	P3LKA00ESC
Activated carbon adsorber filter element	P3LKA00ESA
Individual mounting bracket - P3LFA / P3LLA	P3LKA00MW

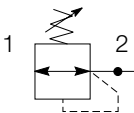
P3L Lite Regulator



Symbols



Self relieving regulator with gauge



Non relieving regulator

- Integral 1/4 ports (BSPP & NPT)
- Robust but lightweight construction
- Secondary pressure ranges 2, 4 & 8 bar
- Unbalanced poppet valve standard, with solid control piston
- Relieving & Non-relieving types
- Non-rising knob

Options:

P 3 L

R A

2

N

P

Thread type	
BSPP	1
NPT	9

Port size	
1/4	2

Relief	
Relieving	B
Non relieving	N

Adjustment range			
With round gauge		Without gauge	
2 bar	Z	2 bar	Y
4 bar	M	4 bar	L
8 bar	G	8 bar	N

Mounting	
Plastic panel mount nut *	P

* for individual mounting bracket see page:19

Port size	Description	Order Code	Flow dm ³ /s *	(scfm) *	Max bar (psi)	Height mm (Inches)	Width mm (Inches)	Depth mm (Inches)
1/4"	8 bar relieving	P3LRA12BNNP	12.8	(27)	10 (150)	88 (3.46)	40 (1.57)	40 (1.57)
1/4"	8 bar relieving + gauge	P3LRA12BNGP	12.8	(27)	10 (150)	88 (3.46)	40 (1.57)	72 (2.83)

* flow with 10 bar (145 psi) inlet pressure, 6.3 bar (91.3 psi) set pressure and 1 bar (14.5 psi) pressure drop.

PDE2661TCUK
P3L Lite Series Air Preparation System

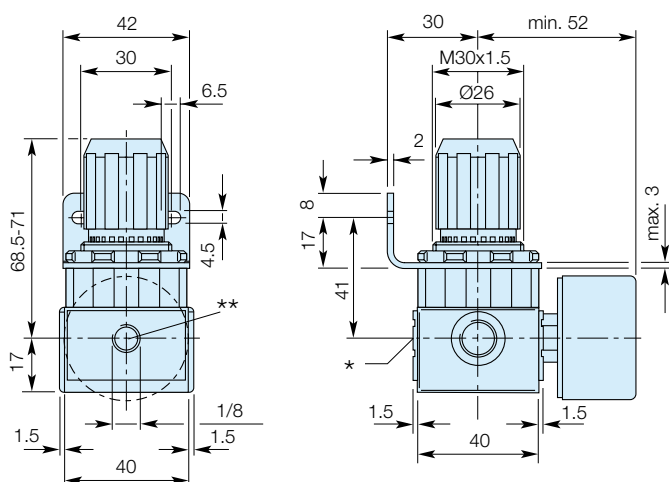
Specifications

Flow Capacity*	1/4	12.8 dm³/s (27 scfm)
Operating Temperature	0°C (32°F) to 50°C (122°F)	
Max Supply Pressure	10 bar (150 psi)	
Adjusting Range Pressure	0-2 bar (30 psi) 0-4 bar (60 psi) 0-8 bar (125 psi)	
Port Size	BSPP / NPT	1/4
Gauge Port (2 ea.)	BSPP / NPSI	1/8
Weight	0.11 kg (24 lbs)	
Inlet pressure 10 bar (145 psi), 6.3 bar (91.3 psi) set pressure and 1 bar (14.5 psi) pressure drop.		

Materials of Construction

Body	High Tech Polymer
Adjustment Knob	Polyamide
Bonnet	High Tech Polymer
Piston	Brass / Nitrile
Springs	Steel
Seals	Nitrile
Panel Nut	Polyamide

Dimensions

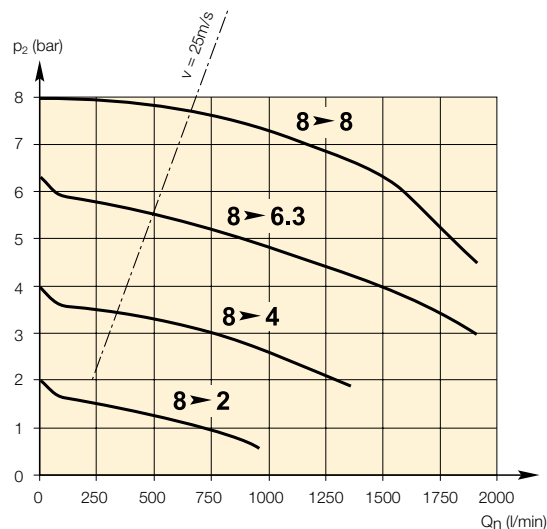


* On delivery the screw plug is not assembled

** Two opposite gauge ports 1/8"

Flow Charts

Regulator



Repair and Service Kits

Panel mount nut - Aluminium	P3LKA00MM
Panel mount nut - Plastic	P3LKA00MP
Angle Bracket (uses panel mount threads)	P3LKA00MR

Gauges

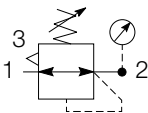
40mm (1 1/2") Round 1/8" centre back mount

0-30 PSI / 0-2 bar	KZ8810-00
0-58 PSI / 0-4 bar	KZ8811-00
0-160 PSI / 0-10 bar	KZ8813-00

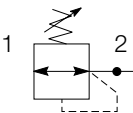
P3L Lite Regulator - Brass



Symbols



Self relieving regulator with gauge



Non relieving regulator

- Integral 1/4 ports (BSPP & NPT)
- Robust brass construction
- Secondary pressure ranges 2, 4 & 8 bar
- Unbalanced poppet valve standard, with solid control piston
- Relieving & Non-relieving types
- Non-rising knob

Options:

P 3 L

R X

2

N

P

Thread type	
BSPP	1
NPT	9

Port size	
1/4	2

Relief	
Relieving	B
Non relieving	N

Adjustment range			
With round gauge		Without gauge	
2 bar	Z	2 bar	Y
4 bar	M	4 bar	L
8 bar	G	8 bar	N

Mounting	
Plastic panel mount nut *	P

* for individual mounting bracket see page:19

Port size	Description	Order Code	Flow dm³/s *	(scfm) *	Max bar (psi)	Height mm (Inches)	Width mm (Inches)	Depth mm (Inches)
1/4"	8 bar relieving	P3LRX12BNNP	9.8	(20.7)	16 (232)	79 (3.11)	40 (1.57)	40 (1.57)
1/4"	8 bar relieving + gauge	P3LRX12BNGP	9.8	(20.7)	16 (232)	79 (3.11)	40 (1.57)	72 (2.83)

* flow with 10 bar (145 psi) inlet pressure, 6.3 bar (91.3 psi) set pressure and 1 bar (14.5 psi) pressure drop.

PDE2661TCUK
P3L Lite Series Air Preparation System

Specifications

Flow Capacity*	1/4	9.8 dm ³ /s (20.7 scfm)
Operating Temperature	0°C (32°F) to 60°C (140°F)	
Max Supply Pressure	16 bar (232 psi)	
Adjusting Range Pressure	0-2 bar (30 psi) 0-4 bar (60 psi) 0-8 bar (125 psi)	
Port Size	BSPP / NPT	1/4
Gauge Port (2 ea.)	BSPP / NPSI	1/8
Weight	0.2 kg (0.44 lbs)	

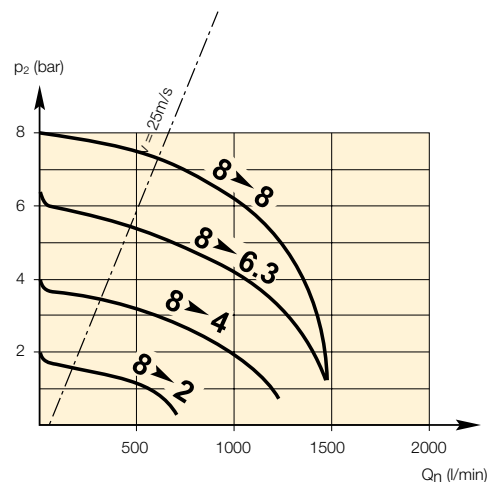
* Inlet pressure 10 bar (145 psi), 6.3 bar (91.3 psi) set pressure and 1 bar (14.5 psi) pressure drop.

Materials of Construction

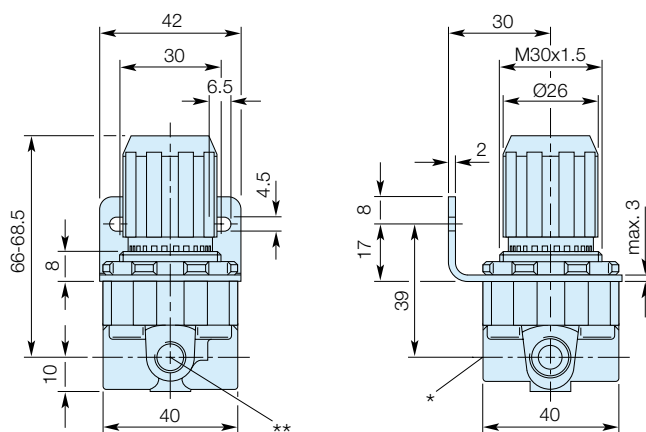
Body	Brass
Adjustment Knob	Polyamide
Bonnet	High Tech Polymer
Piston	Brass / Nitrile
Springs	Steel
Seals	Nitrile
Panel Nut	Polyamide

Flow Charts

Regulator - Brass



Dimensions



* On delivery the scrow plug is not assembled

** Two opposite gauge ports 1/8

Repair and Service Kits

Panel mount nut - Aluminium	P3LKA00MM
Panel mount nut - Plastic	P3LKA00MP
Angle Bracket (uses panel mount threads)	P3LKA00MR

Gauges

40mm (1 1/2") Round 1/8" centre back mount

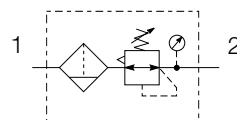
0-30 PSIG / 0-2 bar	KZ8810-00
0-58 PSIG / 0-4 bar	KZ8811-00
0-160 PSIG / 0-10 bar	KZ8813-00

P3L Lite Series Air Preparation System

P3L Lite Filter / Regulator



Symbols



- Integral 1/4 ports (BSPP & NPT)
- High efficiency 5 micron element as standard
- Excellent water removal efficiency
- Robust but lightweight construction
- Secondary pressure ranges 2, 4 & 8 bar
- Unbalanced poppet valve standard, with solid piston control

Options:

P 3 L	E A	2	P		N	P																
Thread type BSPP 1 NPT 9		Drain type Manual push P Semi-auto S		Mounting Plastic panel mount nut * P																		
Port size 1/4 2		Relief Relieving B Non relieving N		Adjustment range <table border="1"> <thead> <tr> <th colspan="2">With round gauge</th> <th colspan="2">Without gauge</th> </tr> </thead> <tbody> <tr> <td>2 bar</td> <td>Z</td> <td>2 bar</td> <td>Y</td> </tr> <tr> <td>4 bar</td> <td>M</td> <td>4 bar</td> <td>L</td> </tr> <tr> <td>8 bar</td> <td>G</td> <td>8 bar</td> <td>N</td> </tr> </tbody> </table>			With round gauge		Without gauge		2 bar	Z	2 bar	Y	4 bar	M	4 bar	L	8 bar	G	8 bar	N
With round gauge		Without gauge																				
2 bar	Z	2 bar	Y																			
4 bar	M	4 bar	L																			
8 bar	G	8 bar	N																			
Element 5µ Element E 40µ Element G		Bowl type Poly bowl P																				

* for individual mounting bracket see page:19

Port size	Description	Order Code	Flow dm ³ /s * (scfm) *	Max bar (psi)	Height mm (Inches)	Width mm (Inches)	Depth mm (Inches)
1/4"	8 bar Relieving - Poly bowl - Manual drain	P3LEA12EPPBNNP	12.9 (27.3)	10 (150)	175 (6.89)	40 (1.57)	40 (1.57)
1/4"	8 bar Relieving - Poly bowl - Semi-auto drain	P3LEA12EPSBNNP	12.9 (27.3)	10 (150)	175 (6.89)	40 (1.57)	40 (1.57)
1/4"	8 bar Relieving - Poly bowl - Manual drain + Gauge	P3LEA12EPPBNGP	12.9 (27.3)	10 (150)	175 (6.89)	40 (1.57)	72 (2.83)
1/4"	8 bar Relieving - Poly bowl - Semi-auto drain + Gauge	P3LEA12EPSBNGP	12.9 (27.3)	10 (150)	175 (6.89)	40 (1.57)	72 (2.83)

* flow with 10 bar (145 psi) inlet pressure, 6.3 bar (91.3 psi) set pressure and 1 bar (14.5 psi) pressure drop.

PDE2661TCUK

P3L Lite Series Air Preparation System

Specifications

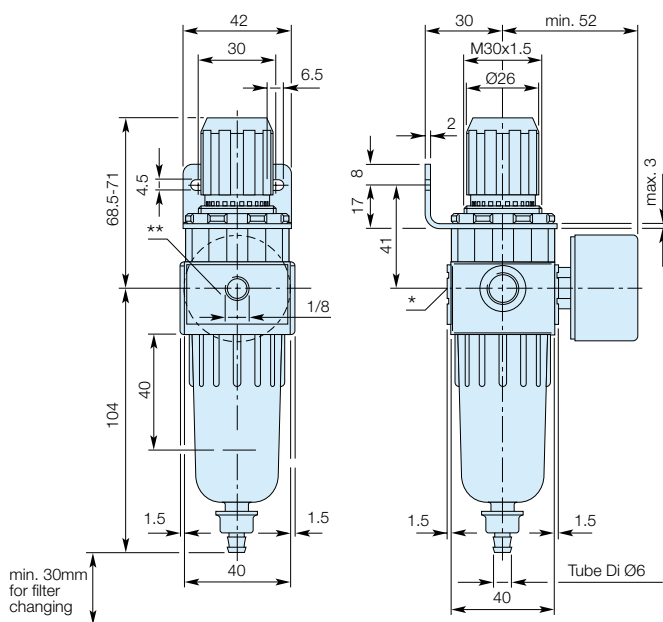
Flow Capacity*	1/4	12.9 dm ³ /s (27.3 scfm)
Operating Temperature	0°C (32°F) to 50°C (122°F)	
Max Supply Pressure	10 bar (150 psi)	
Standard Filtration	5 Micron	
Useful Retention	12 cm ³ (0.4 US oz.)	
Adjusting Range Pressure	0-2 bar (30 psi) 0-4 bar (60 psi) 0-8 bar (125 psi)	
Port Size	BSPP / NPT	1/4
Gauge Port (2 ea.)	BSPP / NPSI	1/8
Weight	0.12 kg (26 lbs)	

* Inlet pressure 10 bar (145 psi), 6.3 bar (91.3 psi) set pressure and 1 bar (14.5 psi) pressure drop.

Materials of Construction

Body	High Tech Polymer
Adjustment Knob	Polyamide
Bonnet	Polyamide
Bowl	Polycarbonate
Filter element	Polyethylene
Seals	Nitrile
Springs	Steel
Piston	Brass / Nitrile
Panel Nut	Polyamide

Dimensions

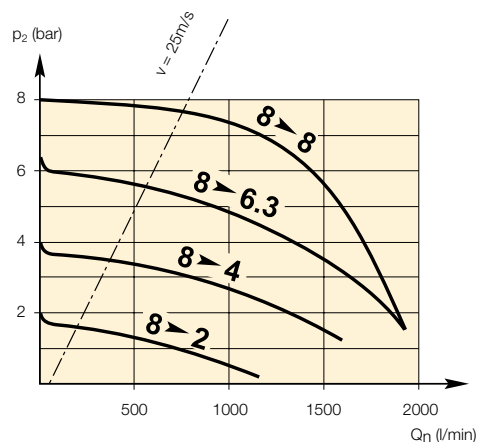


* On delivery the screw plug is not assembled

** Two opposite gauge ports 1/8

Flow Charts

Filter / Regulator



Repair and Service Kits

Plastic bowl / semi-auto drain	P3LKA00BPS
5µ particle filter element	P3LKA00ESE
40µ particle filter element	P3LKA00ESG
Panel mount nut - Aluminium	P3LKA00MM
Panel mount nut - Plastic	P3LKA00MP
Angle Bracket (uses panel mount threads)	P3LKA00MR

Gauges

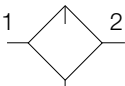
40mm (1 1/2") Round 1/8" centre back mount

0-30 PSI / 0-2 bar	KZ8810-00
0-58 PSI / 0-4 bar	KZ8811-00
0-160 PSI / 0-10 bar	KZ8813-00

P3L Lite Lubricator



Symbols



- Integral 1/4 ports (BSPP & NPT)
- Robust but lightweight construction
- Proportional oil delivery over a wide range of air flows.
- Screw slot control for precise oil drip rate adjustment

Options:

P 3 L	L A		2	L	P	N	N
Thread type		Port size		Bowl type		Mounting	
BSPP 1		1/4 2		Poly bowl P		No bracket * N	
NPT 9						* for individual mounting bracket see page:19	
Type				Drain type			
Oil mist standard sight dome L				No drain; closed end N			

Port size	Description	Order Code	Flow dm³/s (scfm) *	Max bar (psi)	Height mm (Inches)	Width mm (Inches)	Depth mm (Inches)
1/4"	Poly bowl - No drain	P3LLA12LPNN	23.3 (49)	10 (150)	145 (5.7)	40 (1.57)	40 (1.57)

* flow with 6.3 bar (91.3 psi) inlet pressure and 1 bar (14.5 psi) pressure drop.

Specifications

Flow Capacity*	1/4	23.3 dm ³ /s (49 scfm)
Operating Temperature	0°C (32°F) to 50°C (122°F)	
Max Supply Pressure	10 bar (150 psi)	
Useful Retention	12 cm ³ (0.4 US oz.)	
Port Size	BSPP / NPT	1/4
Weight	0.09 kg (20 lbs)	

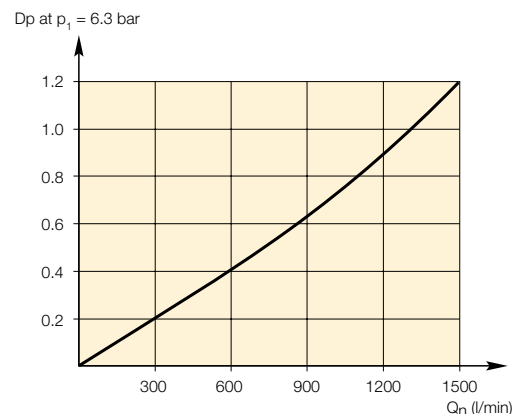
* Inlet pressure 6.3 bar. Pressure drop 1 bar.

Materials of Construction

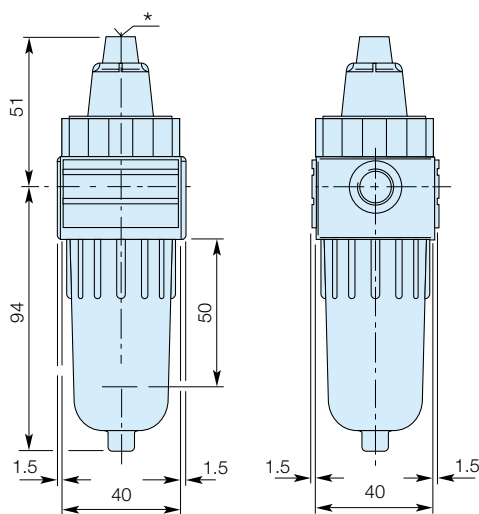
Body	High Tech Polymer
Bowl	Polycarbonate
Seals	Nitrile
Sight Dome	Polycarbonate
Suggested Lubricant	ISO / ASTM VG32

Flow Charts

Lubricator



Dimensions



* Oil adjustment screw

Repair and Service Kits

Plastic bowl - no drain	P3LKA00BPN
Lubricator Oil - VG32 - 1 litre	P3YKA00PPBB

Modular Manifold

Features

- 1/4 ported (BSPP & NPT)
- 1 take-off 1/4 Top or Bottom
- Coupling kit P3LKA00CB2 supplied with 2 sealing rings.

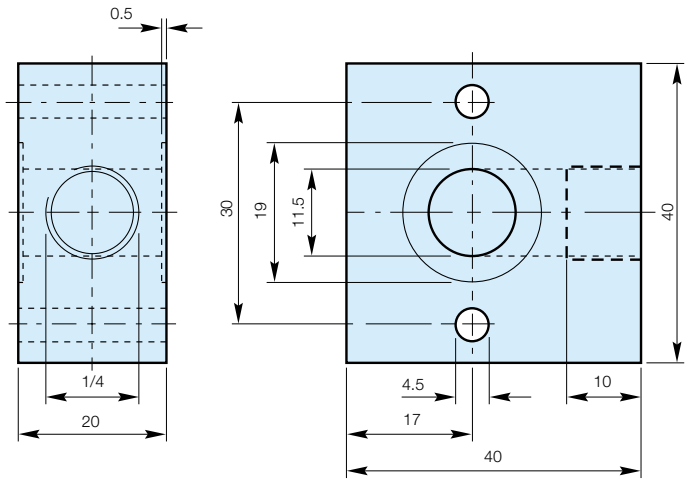
Material

Aluminium - Black anodised

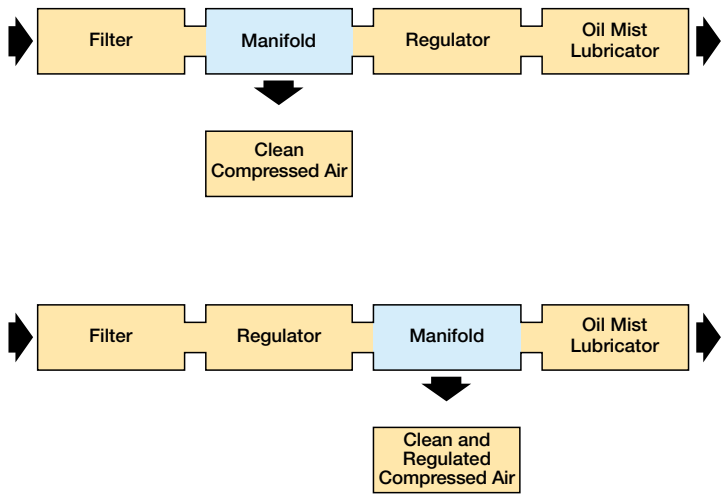


Description	Order code BSPP	Order code NPT	Weight (g)
1/4"	P3LMA12020C	P3LMA92020C	95

Dimensions (mm)



Installation Instructions



P3L Lite Series Air Preparation System**Accessories Kits**

Description	Order Code	
Panel Mount Nut (Plastic)	P3LKA00MP	
Panel Mount Nut (Aluminium)	P3LKA00MM	
5µ Element Kit	P3LKA00ESE	
40µ Element Kit	P3LKA00ESG	
0.01µ Element Kit	P3LKA00ESC	
Adsorber Element Kit	P3LKA00ESA	
Individual mounting bracket fits - Filter & Lubricator	P3LKA00MW	
Angle mounting bracket fits - Regulator & Filter Regulator	P3LKA00MR	
Gauge 0 - 2 bar Gauge 0 - 4 bar Gauge 0 - 10 bar	KZ8810-00 KZ8811-00 KZ8813-00	
Modular connector kit fits - Regulator or Filter Regulator + Filter or Lubricator Regulator or Filter Regulator + Manifold + Filter or Lubricator Regulator or Filter Regulator + Filter + Filter Filter + Lubricator	P3LKA00CB1 P3LKA00CB2 P3LKA00CB3 P3LKA00CB4	