



Modular Hi Flow FRLs

P3N 1 Inch Series

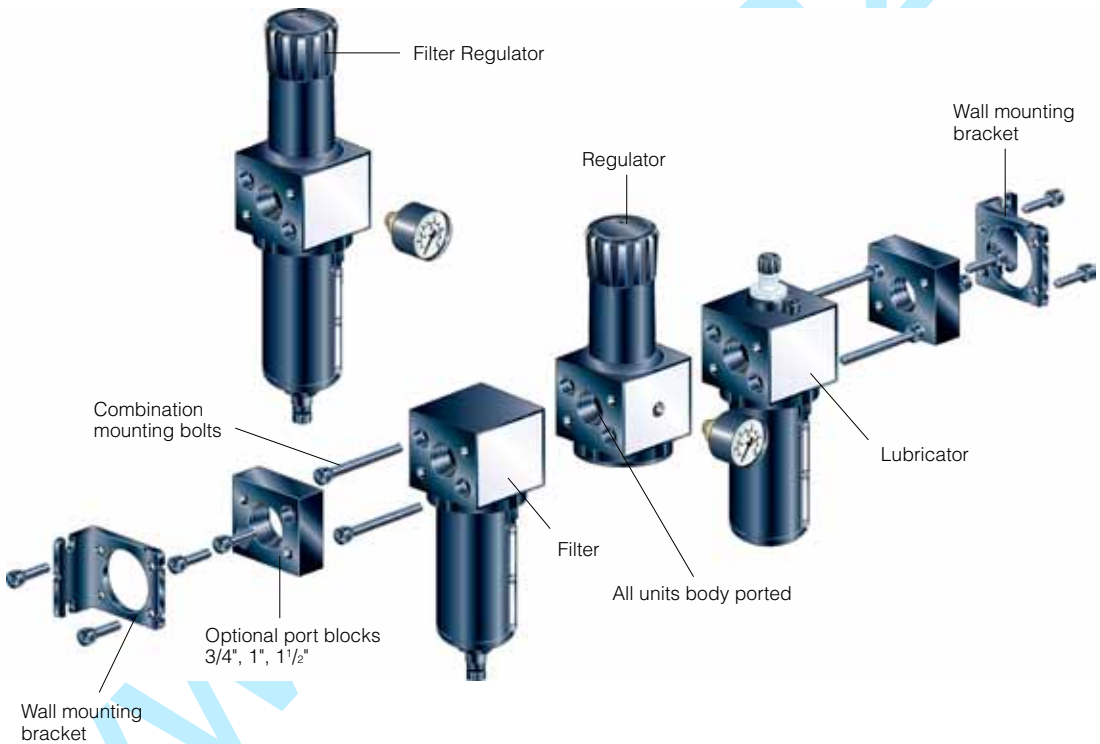
The System

The Modular system 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.

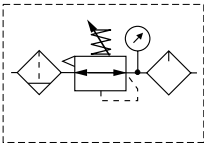
The 1" Series filters are specially designed to efficiently filter out rust, dirt, moisture and other impurities from compressed air lines. Operation is fully automatic with a minimum of pressure drop.

The 1" Series Regulators are designed to provide quick response and accurate pressure regulation for the most demanding Hi-flow industrial applications. The unique solid piston was designed for long trouble-free operation and will not rupture or tear under high cycle or other demanding applications.

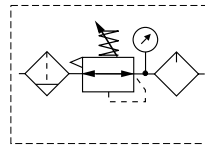
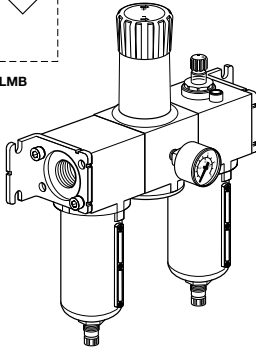
The 1" Series mist lubricators are designed to provide lubrication for many general purpose applications in a pneumatic system.



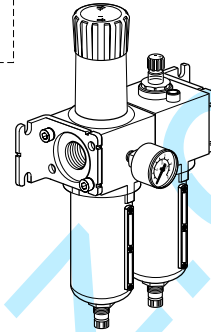
Combinations



P3NCB18SGMNNLMB



P3NCA18SGMNNLMB



Typical Combination

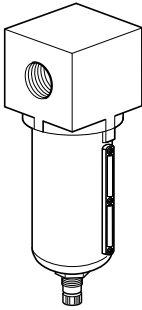
1" FRL
 40 micron elements, 8 bar regulator
 + wall mounting brackets

Typical Combination

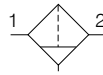
Filter/Regulator - Lubricator
 40 micron elements, 8 bar regulator
 + wall mounting brackets

P3N	C		1		S				L		B
Modular Combinations				Metal bowl with sight glass						Wall mounting brackets	
Units		Port type		Port size		Filter elements		Regulator type		Lubricator drain options	
Filter/reg + Lubricator	A	'G' Thread (BSPP)	1	1" ports	8	40 micron element (Standard)	G	Relieving	B	Metal bowl Manual drain	M
Filter+Regulator + Lubricator	B	NPT	9	1.1/2" ports (1" units with 1.1/2" port extensions)	P	5 micron element (Optional)	E	Non-relieving	N	Metal bowl No drain	N
				3/4" ports	6						
						Filter drain options		Reg. Pressure range			
						Manual Drain M		Without gauge			
						Auto Drain A		0 - 2 bar Y			
								0 - 4 bar L			
								0 - 8 bar N			
								0 - 16 bar H			
								With gauge			
								0 - 2 bar Z			
								0 - 4 bar M			
								0 - 8 bar G			
								0 - 16 bar J			

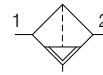
Filters



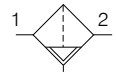
Symbols



Manual drain



Semi auto drain



Auto drain

- Excellent water removal efficiency.
- Metal bowl with sight gauge.
- Larger filter element surface guarantees low pressure drop and increased element life.
- Manual drain or Auto Drain options.

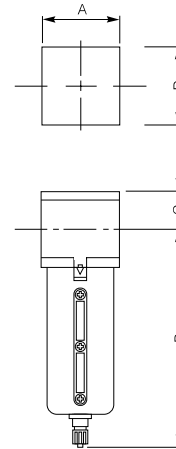
Options:

P3N	F	A					
	Filter						
Port type		Port size		Filter elements		Bowl/drain options	
'G' Thread (BSPP)		1" ports		40 micron element (Standard)		Metal bowl Manual drain	
NPT		3/4" ports		5 micron element (Optional)		Metal bowl Auto drain	
	1		8		G		SM
	9		6		E		SA

Technical information

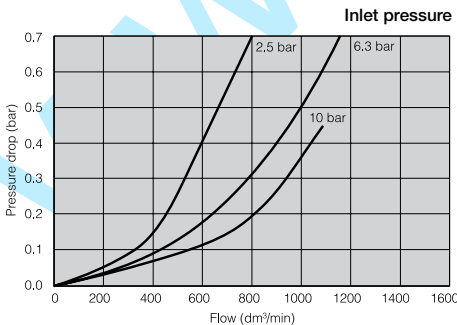
Port sizes	3/4" & 1"
Filter element grade:	Standard 40 micron Option 5 micron
Pressure range:	17 bar max
Temperature range:	-20°C to +80°C
Weight:	1600 g

Dimensions (mm)



Port sizes	A	B	C	D
3/4" & 1"	92	254	35	92

Flow characteristics



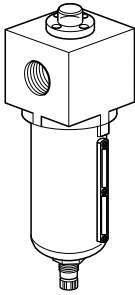
Filter Element Kits

5 Micron element	P3NKA00ESE
40 Micron element	P3NKA00ESG

Filter Spare Kits

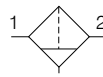
Description	Order code
Manual drain kit	P3E-KA00DBN
Auto drain kit	P3E-KA00DDN

Coalescing and adsorber filters

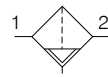


Note: To optimise the life of the coalescing element, it is advisable to install a P3NFA 5 micron pre-filter upstream of the coalescing filter. Always install a coalescing filter up-stream of the adsorber filter.

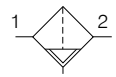
Symbols



Manual drain



Semi auto drain



Auto drain

- DPI indicator as standard.
- Removes liquid aerosols and sub micron particles.
- Oil free air for critical applications.
- Metal bowl with sight gauge.
- Larger filter element surface guarantees low pressure drop and increased element life.
- Manual drain as standard or optional auto drain available (only on coalescing filter).
- Adsorbing activated carbon element removes oil vapour and most hydrocarbons.

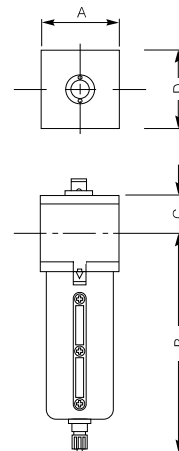
Options:

P3N	F	A					
Coalescing Filter							
Port type		Port size		Filter elements		Bowl/drain options	
'G' Thread (BSPP)		1" ports		Coalescing 0.01µm with pressure drop indicator (Standard)	D	Metal bowl	SM
NPT		3/4" ports		Adsorber element with pressure drop indicator	B	Metal bowl * Auto drain	SA
				Adsorber element without pressure drop indicator	A	* Coalescing filter only.	

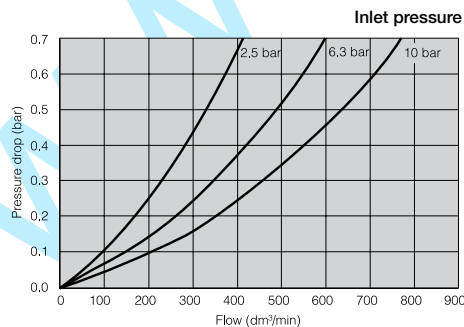
Technical information

Port sizes	3/4" & 1"
Coalescing element grade:	0.01 microns
Pressure range:	17 bar max
Temperature range:	-20°C to +80°C
Weight:	1600 g

Dimensions (mm)



Flow characteristics

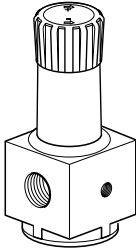


Port sizes	A	B	C	D
3/4" & 1"	92	254	35	92

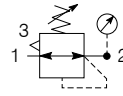
Filter Element Kits

Coalescing element	P3NKA00ESC
Adsorber element	P3NKA00ESA

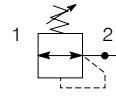
Regulators



Symbols



Self bleed regulator with gauge



Non bleed regulator

- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation.
- Solid control piston for extended life.

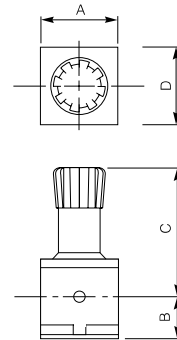
Options:

P3N	R	A	1			N	
Regulator		Port type		Port size		Regulator type	
		'G' Thread (BSPP)	1	1" ports		Relieving	B
		NPT	9	3/4" ports		Non-relieving	N
				Regulator Pressure range			
				Without gauge	With gauge		
				0 - 2 bar	Y	0 - 2 bar	Z
				0 - 4 bar	L	0 - 4 bar	M
				0 - 8 bar	N	0 - 8 bar	G
				0 - 16 bar	H	0 - 16 bar	J

Technical information

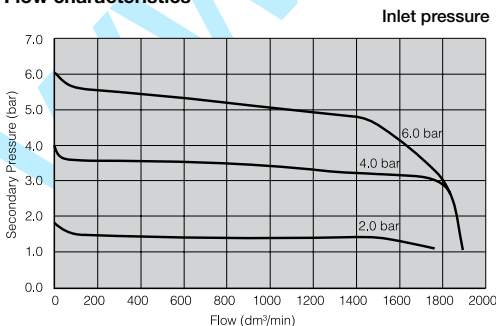
Port sizes	3/4" & 1"
Gauge ports:	1/4"
Max inlet pressure (p1):	17 bar max
Secondary pressure range: (p2)	Standard: 0.1 to 8 bar Option 1: 0.1 to 2 bar Option 2: 0.1 to 4 bar Option 3: 0.3 to 16 bar
Temperature range:	-20°C to +80°C
Weight:	1900 g

Dimensions (mm)



Port sizes	A	B	C	D
3/4" & 1"	92	53	162	92

Flow characteristics



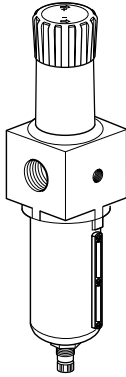
Regulator Spare Kits

Repair kit (self-relieving)	P3NKA00RR
Repair kit (non-relieving)	P3NKA00RN

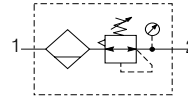
Gauges

Description	Pressure range (bar)	Port size	Dial mm	Weight g	Order code
Rear entry	0-4	G1/4	50	74	P6G-ERB2040
Rear entry	0-14	G1/4	50	74	P6G-ERB2140
Rear entry	0-20	G1/4	50	74	P6G-ERB2200

Filter/Regulators



Symbol



- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation.
- Solid control piston for extended life.

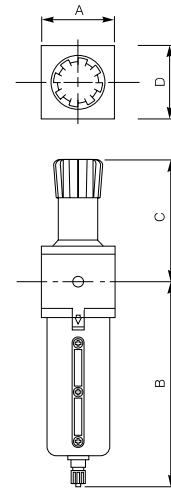
Options:

P3N	E	A	1					B	N	
Filter/ Regulator								Relieving		
Port type	Port size			Filter elements		Bowl/drain options		Spring rating		
'G' Thread (BSPP)	1" ports		40 micron element (Standard)		Metal bowl Manual drain		Without gauge		With gauge	
NPT	3/4" ports		5 micron element (Optional)		Metal bowl Auto drain		0 - 2 bar		0 - 2 bar	
	1	8	G	SA			Y		Z	
	9	6	E	SA			0 - 4 bar		0 - 4 bar	
							L		M	
							0 - 8 bar		0 - 8 bar	
							N		G	
							0 - 16 bar		0 - 16 bar	
							H		J	

Technical information

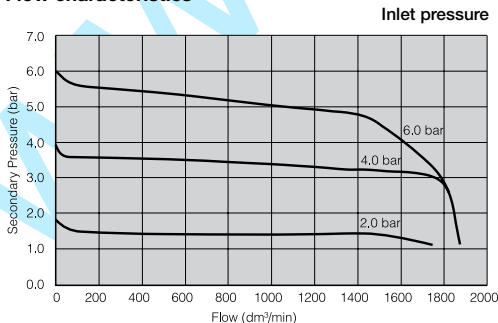
Port sizes	3/4" & 1"
Gauge ports:	1/4"
Max inlet pressure (p1):	17 bar max
Secondary pressure range:	Standard: 0.1 to 8 bar
(p2)	Option 1: 0.1 to 2 bar
	Option 2: 0.1 to 4 bar
	Option 3: 0.3 to 16 bar
Temperature range:	-20°C to +80°C
Weight:	2400 g

Dimensions (mm)



Port sizes	A	B	C	D
3/4" & 1"	92	243	162	92

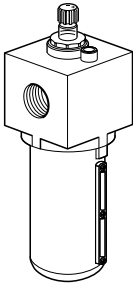
Flow characteristics



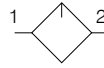
Filter/Regulator Spare Kits

5 Micron element	P3NKA00ESE
40 Micron element	P3NKA00ESG
Repair kit (self-relieving)	P3NKA00RR
Repair kit (non-relieving)	P3NKA00RN

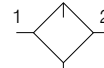
Lubricators



Symbols



Lubricator



Lubricator with drain

- Proportional oil delivery over a wide range of air flows.
- Bowl can be filled while air line is under pressure.
- Transparent sight dome for 360° visibility.

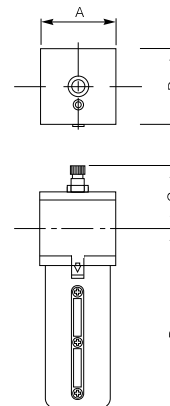
Options:

P3N	L	A			L		
	Lubricator						
		Port type		Port size		Bowl/drain options	
		'G' Thread (BSPP)	1	1" ports		Metal bowl Manual drain SM	
		NPT	9	3/4" ports		Metal bowl No drain SN	

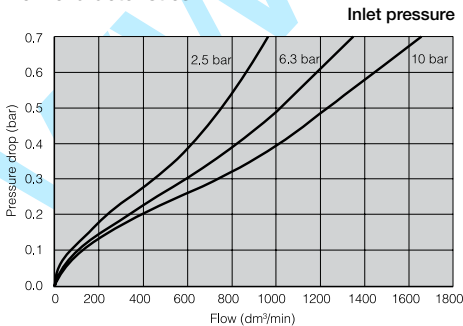
Technical information

Port sizes	3/4" & 1"
Max inlet pressure (p1):	17 bar max
Min flow oil pickup:	3.7 dm ³ /s
Bowl capacity:	300cc
Recommended lubricant:	See page 190
Temperature range:	-20°C to +80°C
Weight:	1600 g

Dimensions (mm)

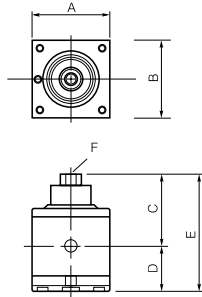
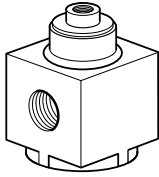


Flow characteristics



Port sizes	A	B	C	D
3/4" & 1"	92	230	71.3	92

Air pilot regulators



- Self relieving feature plus balanced poppet provides quick response and accurate pressure regulation.
- Solid control piston for extended life.

Order code

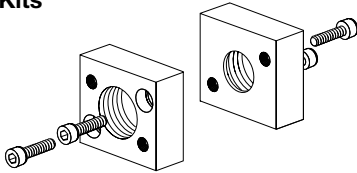
P3NRA18BPP

Dimensions (mm)

A	A (PB)	B	C	D	E	F
92	142	92	86	53	139	G ¹ / ₄

(PB = Port blocks)

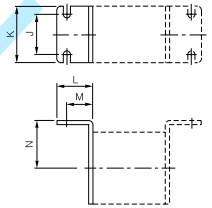
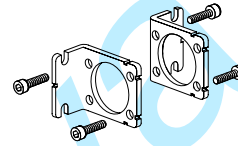
Port Block Kits



Description	Connection	Weight g	Order Code
Kits for single Units or Combinations without Lubricators (2 port blocks + 2 seals)	G ³ / ₄	574	P3NKB16CP
	G1	554	P3NKB18CP
	G ¹ / ₂	534	P3NKB1BCP
Kits for Combinations with Lubricators (2 port blocks + 2 seals)	G ³ / ₄	574	P3NKB16CL
	G1	554	P3NKB18CL
	G ¹ / ₂	534	P3NKB1BCL

For NPT threads change **1** to **9**.

Mounting brackets



Order code

P3NKA00MW For 3/4 & 1" sizes

P3NKB00MW For 1.1/2" port size

Dimensions (mm)

L	M	N	J	K
45	33	60	50	70

Body Covers



Order code

P3NKA00PM

Each kit contains two covers.

Materials

Filter

Body	Aluminium
Bowl	Aluminium
Deflector	Plastic
Drain	Plastic
Seals	Nitril
Element	Plastic
Sight Glass	Polyamide

Lubricator

Body	Aluminium
Bowl (metal)	Aluminium
Drains	Plastic
Injector meter block & brass assembly	Plastic
Seals	Nitrile
Sight glass	Polyamide
Sight dome	Polycarbonate

Regulator

Adjustment Stem	Steel
Body	Aluminium
Bonnet	Aluminium
Knob	Plastic
Piston	Plastic
Poppet Assembly	Brass
Seals	Nitrile
Spring (Poppet & Control)	Steel

Filter/Regulator

Body, Bonnet & Bowl	Aluminium
Deflector	Plastic
Drains	Plastic
Seals	Nitrile
Element	Plastic
Sight glass	Polyamide
Piston	Plastic
Knob	Plastic
Spring (Poppet & Control)	Steel

Lubrication of airlines

Satisfactory operation of airline equipment and effective lubrication depends upon the proper selection of lubrication oil. Oils having a viscosity below ISO3448 Grade 10 to 22 will satisfy most high-speed pneumatic tools and other light duty requirements.

Heavy duty tools and pneumatic valves and cylinders will normally require oils in the viscosity ISO3448 Grade 32 to 68.

Only Paraffinic based oils can be used and the following recommendations are given as a general guide to types of oil that are suitable for use with Parker airline equipment.

Oil Company	High speed tools and systems		Air Cylinders and valves	
	ISO Grade	Grade	ISO Grade	Grade
Century Oils	Century P - 198	15	P.W.L.A	32
Alexander Duckham	Zurcon 2	15	Zurcon 4 32	
Gulf	Harmony 38AW	15	Harmony 43AW	32
Shell (UK) Oil	Tellus 22	22	Tellus 37	37
Burmah Castrol	Hyspin AWS15	15	Hyspin AWS32	32
Edgar Vaughan	KSO 5L	10	Hydrodrive HP100	32
Esso Petroleum	NUTO 1115	15	NUTO H32	32
B.P.	HLP 22	22	HLP 32	32
Mobile Oil Company	Velocite No.6	10	DTE Oil - Light	32
Mobile			VPI-A	32
Silkolene	Silkair GP22	22	Derwent 32	32
Silkolene	Dove 15	15		
Shell	Cassida Fluid HF*	32		
Klüberoil	4UH1*	32		

* For food industry applications : approved oil USDA-H1

Most Parker Pneumatic valves and cylinders are designed for use in non-lube operation. However airline lubrication will increase the service life.

Note! If oil lubrication is used, it must be maintained for the service life of the product.

Some specialised lubricants, particular synthetic reclaimed oils and low temperature additives, may contain compounds which are incompatible with certain materials, internal 'O' rings and seals. They may also attack plastic piping or the transparent bowls of the airline lubricator. Attention is drawn to BS6005 (Specification for moulded transparent polycarbonate bowls used in compressed air filters and lubricators).

Do not use oils with additives, compounds oils containing solvents, graphite, detergents or synthetic oils.