

# 22PD/32PD Series

High Pressure Duplex Filters

Max 260 l/min - 210 bar



## A duplex design with a wide application capability

### Designed to offer continuous operation during element change

The 22PD/32PD Series utilizes a duplex design with integrated balancing valve and vent ports. Microglass III glassfibre media is standard. Maximum pressure 210 bar. Maximum flow 260 l/min. A changeover valve operates on the upstream side of the filter, ensuring a contamination free system.



## Contact Information:

Parker Hannifin  
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## Product Features:

- 22PD/32PD utilizes a duplex design with integrated balancing valve and vent ports.
- Microglass III glassfibre media is standard.
- Maximum pressure 210 bar. Maximum flow 260 l/min.
- Designed to offer continuous operation during element change.

# 22PD/32PD Series

## High Pressure Duplex Filters

### Features & Benefits

Features	Advantages	Benefits
Duplex design	Element service possible during operation	Allows to keep machine running with full contamination protection
Integrated balancing valve	No external piping required	Safety and reliability
Vent ports	Purges all trapped air in filter	Get the maximum performance from the elements Prevents a "flabby" system
Microglass III replacement elements	Multi-layered design produced high capacity and efficiency	Great performance value Reliable performance throughout element life
	Wire support reduces pleat bunching, keeps performance consistent	Reduces downtime, maximises element life
Visual, electrical and electronic indicators available	Check element condition at a glance	Optimises element life, prevents bypassing
	Right style for the application	Matches your system electrical connections

### Typical Applications

- Ship steering systems
- Continuous operation industrial systems
- High flow flushing systems

### The Parker Filtration 22PD/32PD Series High Pressure Duplex Filters.

Specially designed to offer continuous operation, even during element change.

A changeover valve operates on the upstream side of the filter, ensuring a contamination free system.



# Specification

**Pressure ratings:**

Maximum allowable operating pressure 210 bar.  
Filter housing pressure pulse fatigue tested: 10<sup>6</sup> cycles 210 bar.

**Connections:**

Inlet and outlet connections are threaded.

Connection style	Model	
BSPF(G)	22PD	32PD
Flange SAE 3000-M	1" 1/4"	1 1/2"

\*3000-M is a SAE style with appropriate metric fixing threads.

**Filter housing:**

Head material cast iron (GSI).  
Bowl material steel.

**Seal material:**

Nitrile or Fluoroelastomer.

**Operating temperature range:**

Seal material Nitrile: -40 °C to +100 °C.  
Seal material Fluoroelastomer: -20 °C to +120 °C.

**Bypass valve:**

Opening pressure 3.5 bar

**Filter element:**

**Degree of filtration:**

Determined by multipass-test according to ISO 16889.

**Flow fatigue characteristics:**

Filter media is supported so that the optimal fatigue life is achieved (ISO 3724).

**Microglass III:**

Supported with epoxy coated metal wire mesh, end cap material reinforced composite and metal inner core. Collapse rating 20 bar (ISO 2941).

**High collapse elements:**

(to be used when no bypass function in filter housing).  
Microglass III media supported with epoxy coated metal wire mesh on upstream and stainless steel on downstream, end cap material steel. Strong metal inner core. Collapse rating 210 bar (ISO 2941).

**Indicator options:**

Indicating differential pressure: 2.5 ± 0.3 bar.

- visual M3.
- electrical T1.
- electronic F1 (PNP).
- electronic F2 (NPN).

For indicator details see catalogue section 6.

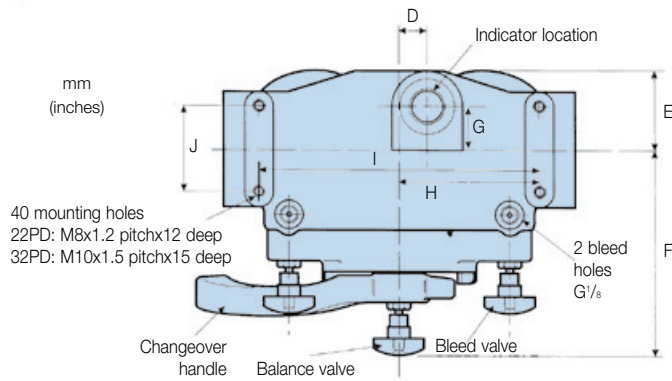
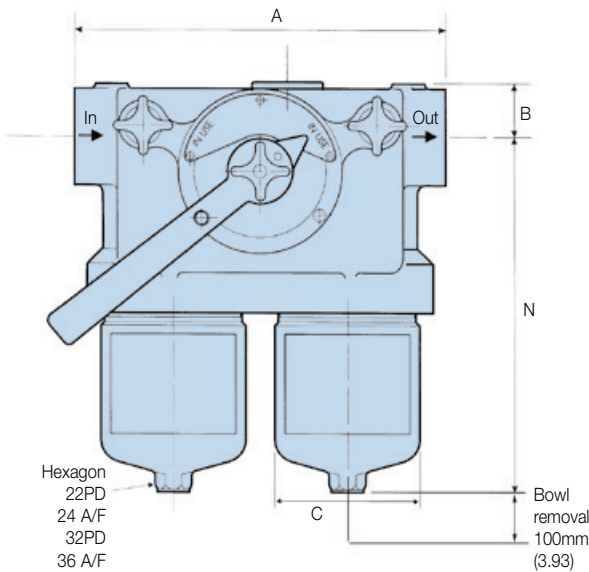
**Weights (kg):**

Model	Length 1	Length 2
22PD	22	27
32PD	44	50

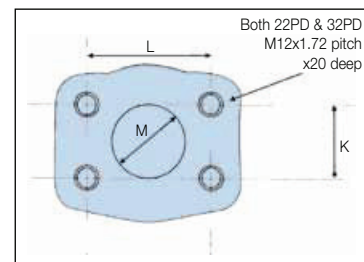
**Fluid compatibility:**

Suitable for use with mineral and vegetable oils, and some synthetic oils. For other fluids, please consult Parker Filtration.

Dimensions mm (inches)														
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
22PD-1	240	35	92	18	55	150	32	96	192	60	30	59	30.75Ø	236 (9.29)
22-PD-2	(9.45)	(1.38)	(3.62)	(0.71)	(2.16)	(5.91)	(2.21)	(3.70)	(7.56)	(2.36)	(1.18)	(2.32)		345 (13.58)
32PD-1	306	42	130	20	78	170	33	120	240	75	36	70	38Ø	317 (12.48)
32PD-2	(12.05)	(1.65)	(5.12)	(0.79)	(3.07)	(6.69)	(2.28)	(4.72)	(9.45)	(2.95)	(1.42)	(2.75)		437 (17.20)



**Flange face detail**



# 22PD/32PD Series

## High Pressure Duplex Filters

### Pressure Drop Curves

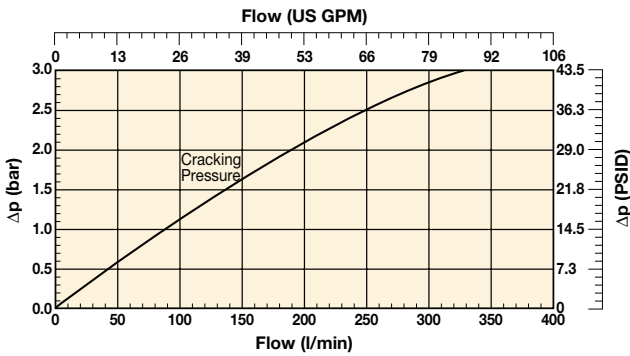
The recommended level of initial pressure drop is max. 1.2 bar.

If the medium used has a viscosity different from 30 cSt, pressure drop over the filter can be estimated as follows:

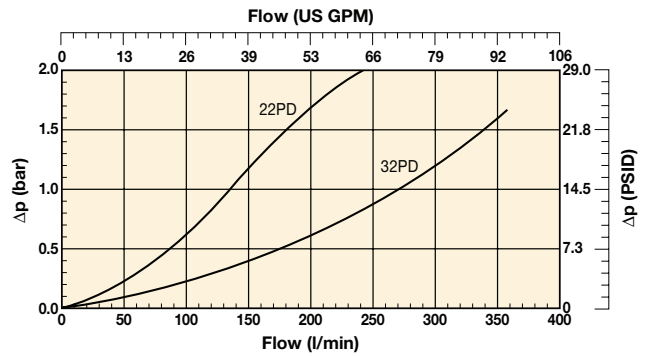
$$\Delta p = (\Delta p_{30} \times \text{viscosity of medium used}) / 30 \text{ cSt.}$$

The total  $\Delta p$  = housing  $\Delta p_h$  + (element  $\Delta p_e \times \text{working viscosity}/30$ ).

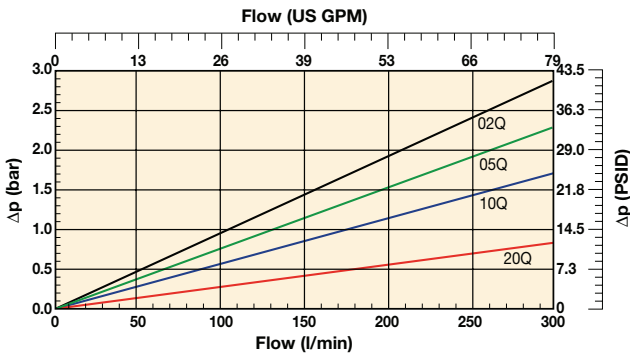
**22PD/32PD Bypass Valve**



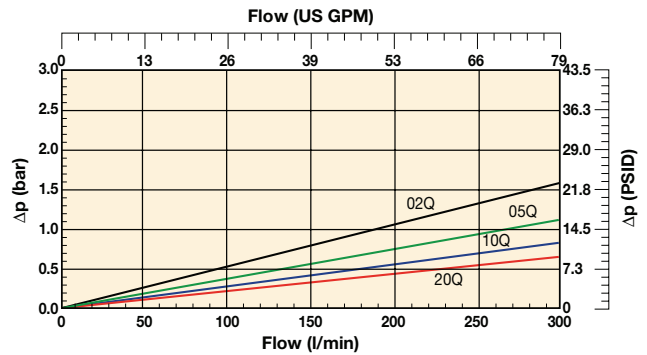
**22PD/32PD Empty Housing**



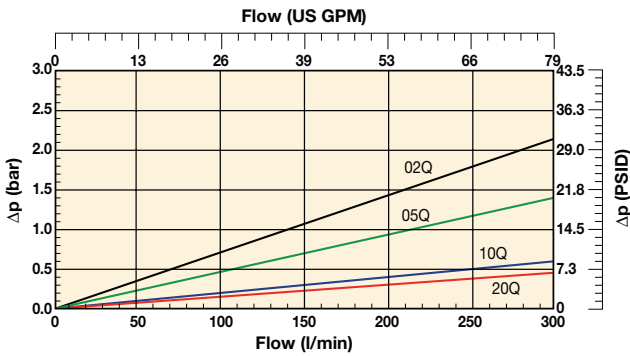
**22PD-1 Elements**



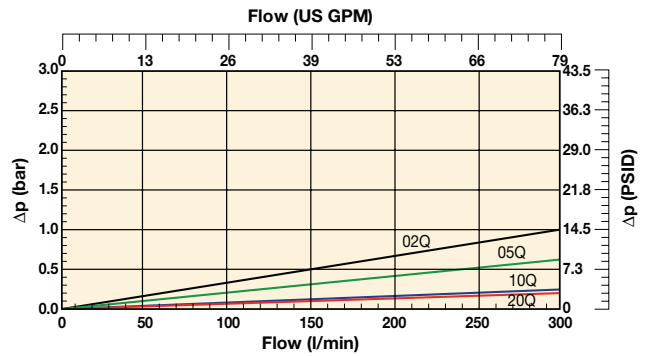
**22PD-2 Elements**



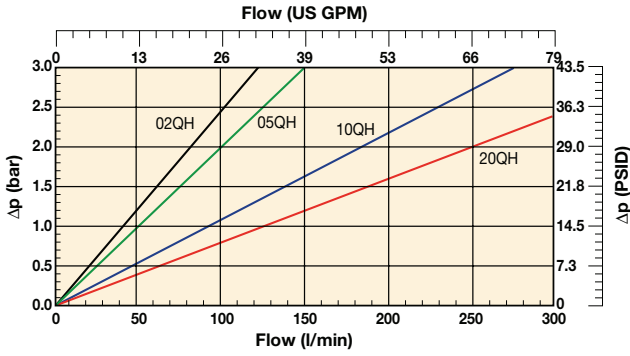
**32PD-1 Elements**



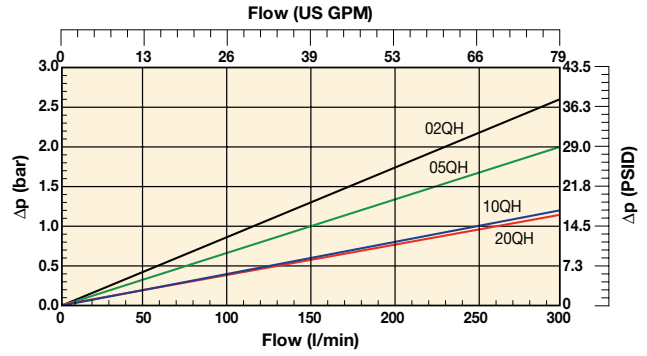
**32PD-2 Elements**



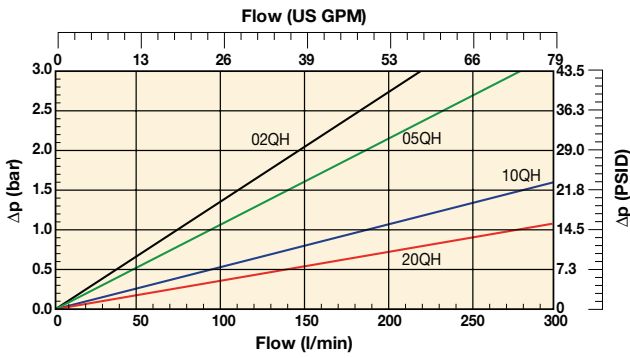
### 22PD-1 High Collapse Elements



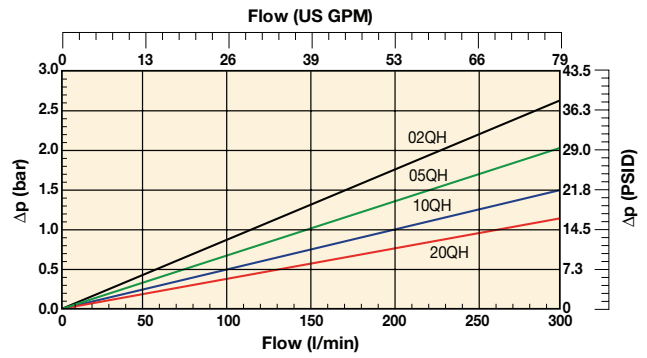
### 22PD-2 High Collapse Elements



### 32PD-1 High Collapse Elements



### 32PD-2 High Collapse Elements



## Ordering Information

### Standard products table

Part number	Supersedes	Flow (l/min)	Model number	Element length	Media rating (μ)	Seals	Indicator	Bypass settings	Ports	Replacement elements
22PD210QBM3KG161	0-22-PD-2-10Q-V-50-C-1	120	22PD	Length 2	10	Nitrile	Visual	3.5 bar	G1"	G01315Q
22PD210QBT1KG161	0-22-PD-2-10Q-TW3-50-C-1	120	22PD	Length 2	10	Nitrile	Electrical	3.5 bar	G1"	G01315Q
22PD220QBM3KG161	0-22-PD-2-20Q-V-50-C-1	140	22PD	Length 2	20	Nitrile	Visual	3.5 bar	G1"	G01938Q
22PD220QBT1KG161	0-22-PD-2-20Q-TW3-50-C-1	140	22PD	Length 2	20	Nitrile	Electrical	3.5 bar	G1"	G01938Q
32PD210QBM3KG201	0-32-PD-2-10Q-V-50-D-1	240	32PD	Length 2	10	Nitrile	Visual	3.5 bar	G1½"	G01098Q
32PD210QBT1KG201	0-32-PD-2-10Q-TW3-50-D-1	240	32PD	Length 2	10	Nitrile	Electrical	3.5 bar	G1½"	G01098Q
32PD220QBM3KG201	0-32-PD-2-20Q-V-50-D-1	260	32PD	Length 2	20	Nitrile	Visual	3.5 bar	G1½"	G01954Q
32PD220QBT1KG201	0-32-PD-2-20Q-TW3-50-D-1	260	32PD	Length 2	20	Nitrile	Electrical	3.5 bar	G1½"	G01954Q

Note: Filter assemblies ordered from the product configurator on the next page are on extended lead times. Where possible, please make your selection from the table above.

# 22PD/32PD Series

## High Pressure Duplex Filters

### Ordering Information (cont.)

#### Product configurator

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<b>22PD</b>	<b>2</b>	<b>10Q</b>	<b>B</b>	<b>M3</b>	<b>K</b>	<b>G16</b>	<b>1</b>

Box 1		Box 2	
Code		Filter type	
<b>Model</b>	<b>Code</b>	<b>Length</b>	<b>Code</b>
Small high pressure duplex filter	<b>22PD</b>	Length 1	<b>1</b>
Large high pressure duplex filter	<b>32PD</b>	Length 2	<b>2</b>

Box 2	
Filter type	
<b>Length</b>	<b>Code</b>
Length 1	<b>1</b>
Length 2	<b>2</b>

Box 3				
Degree of filtration				
Element media	<b>Glass fibre</b>			
	<b>Media code</b>			
Microglass III element	02Q	05Q	<b>10Q</b>	<b>20Q</b>
High collapse element	02QH	05QH	10QH	20QH

Box 4	
Seal type	
<b>Seal material</b>	<b>Code</b>
Nitrile	<b>B</b>
Fluoroelastomer	V

Box 5	
Indicator	
	<b>Code</b>
Visual indicator	<b>M3</b>
Electrical indicator	<b>T1</b>
Plugged with steel plug	P
No indicator port	N
Electronic 4 LED, PNP, N.O.	F1
Electronic 4 LED, NPN, N.O.	F2
Electronic 4 LED, PNP, N.C.	F3
Electronic 4 LED, NPN, N.C.	F4

Box 6		
Bypass and indicator settings		
<b>Bypass valve</b>	<b>Indicator</b>	<b>Code</b>
3.5 bar	2.5 bar	<b>K</b>
No bypass	5.0 bar	M
No bypass	No indicator	X

+ Box 8: code 2  
+ Box 8: code 2

When filter includes a bypass valve but not an indicator, code denotes bypass setting.

Box 8	
Options	
<b>Options</b>	<b>Code</b>
Standard	<b>1</b>
No bypass	2
ATEX certified* (Category 2, non-electrical equipment)	EX

Note 1\*: For ATEX classified filters add EX after the code.  
ATEX certified filters with electrical indicator are available on request.  
Visual indicators are classified as Category 2, non electrical equipment.  
Filter assemblies with EX code will be supplied with a dedicated name plate.  
Pls consult Parker Filtration for any questions related to the classification of our products.

Box 7	
Filter connection	
<b>Ports</b>	<b>Code</b>
22PD: Thread G 1	<b>G16</b>
SAE flange 1 1/4" 3000-M	R20
32PD: Thread G 1 1/2	<b>G20</b>
SAE flange 1 1/2" 3000-M	R24

Replacement elements with nitrile seals				
Media	22PD-1	22PD-2	32PD-1	32PD-2
02Q	<b>G01282Q</b>	<b>G01316Q</b>	<b>G01069Q</b>	<b>G01099Q</b>
05Q	<b>G02721Q</b>	<b>G02724Q</b>	<b>G02567Q</b>	<b>G02727Q</b>
10Q	<b>G01281Q</b>	<b>G01315Q</b>	<b>G01068Q</b>	<b>G01098Q</b>
20Q	<b>G01930Q</b>	<b>G01938Q</b>	<b>G01946Q</b>	<b>G01954Q</b>
02QH	G01442Q	G01448Q	G01454Q	G01460Q
05QH	G03737Q	G03738Q	G03739Q	G03740Q
10QH	G01441Q	G01447Q	G01453Q	G01459Q
20QH	G01932Q	G01940Q	G01948Q	G01956Q

Nominal flow (l/min) at viscosity 30 cSt				
Filter model	02Q	05Q	10Q	20Q
22PD-1	70	80	100	120
22PD-2	100	110	120	140
32PD-1	100	150	210	230
32PD-2	180	210	240	260

Seal kits		
Filter model	Nitrile	Fluoroelastomer
22PD	S04233	S04234
32PD	S03520	S03522

Replacement elements with fluoroelastomer seals				
Media	22PD-1	22PD-2	32PD-1	32PD-2
02Q	G01302Q	G01336Q	G01089Q	G01119Q
05Q	G02723Q	G02726Q	G02569Q	G02729Q
10Q	G01301Q	G01335Q	G01088Q	G01118Q
20Q	G01934Q	G01942Q	G01950Q	G01958Q
02QH	G01446Q	G01452Q	G01458Q	G01464Q
05QH	G04235Q	G04236Q	G04237Q	G04238Q
10QH	G01445Q	G01451Q	G01457Q	G01463Q
20QH	G01935Q	G01943Q	G01951Q	G01959Q

#### Highlights Key (Denotes part number availability)

<b>123</b>	Item is standard
<b>123</b>	Item is standard green option
<b>123</b>	Item is semi standard
123	Item is non standard

Degree of filtration						Code	
Average filtration beta ratio $\beta$ (ISO 16889) / particle size $\mu\text{m}$ [c]							
$\beta_x(c)=2$	$\beta_x(c)=10$	$\beta_x(c)=75$	$\beta_x(c)=100$	$\beta_x(c)=200$	$\beta_x(c)=1000$		
% efficiency, based on the above beta ratio ( $\beta_x$ )							
50.0%	90.0%	98.7%	99.0%	99.5%	99.9%	Disposable	High collapse element
N/A	N/A	N/A	N/A	N/A	4.5	<b>02Q</b>	02QH
N/A	N/A	4.5	5	6	7	<b>05Q</b>	05QH
N/A	6	8.5	9	10	12	<b>10Q</b>	10QH
6	11	17	18	20	22	<b>20Q</b>	20QH

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.  
Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

