Filter elements

Type 1.; 2.; 4.; 6.; 7. and 20. filter elements

RE 51420
Edition: 2017-02
Replaces: 12.14

HAD8040_d

- Sizes according to **DIN 24550:**
  1. and 2. 0040 ... 1000
- Additional sizes:
  1.0045 ... 2500; 2.0130; 2.0150
  4.06 ... 4.20; 6.56 ... 560; 7,002 ... 008
  20.0101 ... 1051
- Pressure differential resistance up to 330 bar *[4786 psi]*

Features

- Filter media
  - Glass fiber material of the 5th product generation with electrically conductive non-woven medium and increased dirt holding capacity
  - Glass fiber material with water-absorbing function
  - Additional filter media: Filter paper, wire mesh, non-woven material and non-woven metal fiber for numerous fields of application in fluid filtration.
- Extended product range for non-mineral oil based fluids

Contents

Ordering code
Filter element

Filter element type 1.

01	02	03		04	05	06		07		08
1.			**–**				**–**	**0**	**–**	

Filter element [1)]

01	Design	**1.**

Size

02	According to **DIN 24550**	**0040** **0063** **0100** **0160** **0250** **0400** **0630** **1000**
	According to **Bosch Rexroth standard**	**0045** **0055** **0120** **0130** **0150** **0200** **0270** **2000** **2500**

Filter rating in µm

03	**Nominal**	Stainless steel wire mesh, reusable (cleanable)	**G10** **G25** **G40** **G60** **G100** **G200** **G500** **G800**
		Filter paper, non-reusable (not cleanable)	**P10** **P25**
		Non-woven material, non-reusable (not cleanable)	**VS25** **VS40** **VS60**
	Absolute **(ISO 16889; $\beta_{x(c)}$ ≥200)**	Glass fiber material generation 5, non-reusable (not cleanable)	**H1XL** **H3XL** **H6XL** **PWR10** **H20XL**
		Non-woven metal fiber, non-reusable (not cleanable)	**M5** **M10**
	Water-absorbing	Non-reusable (not cleanable)	**AS3** [2)] **AS6** [2)] **AS10** [2)] **AS20** [2)]

Pressure differential

04	Max. admissible pressure differential of the filter element 30 bar *[435 psi]*	**A**
	Max. admissible pressure differential of the filter element 160 bar *[2321 psi]*	**C**

Ordering code
Filter element

Filter element type 1.

01	02	03		04	05	06		07		08
1.			**–**				**–**	**0**	**–**	

Element design

05	Standard adhesive	**0**
	Special adhesive	**H** [3]

Element design

06	Standard material	**0**
	Stainless steel 1.4571	**V** [4]

Bypass valve

07	**Without** bypass valve	**0**

Seal

08	NBR seal	**M**
	FKM seal	**V**

[1] For the admissible temperature ranges, refer to chapter "Technical data"

[2] Only configurable with pressure differential A = 30 bar *[435 psi]*

[3] Improved temperature and media resistance, only in connection with FKM "V" seal

[4] Only in connection with special adhesive "H" and seal FKV "V"

Order example:
1.0040 PWR10-A00-0-M

Material no.: R928005837

Further filter ratings and seal materials are available upon request.

Ordering code
Filter element

Filter element type 2.

01	02	03		04	05	06		07		08
2.			**–**				**–**	**0**	**–**	

Filter element [1)]

01	Design	**2.**

Size

02	According to **DIN 24550**	**0040** **0063** **0100** **0160** **0250** **0400** **0630** **1000**
	According to **Bosch Rexroth standard**	**0130** **0150**

Filter rating in µm

03	**Nominal**	Stainless steel wire mesh, reusable (cleanable)	**G10** **G25** **G40** **G60** **G100** **G200** **G500** **G800**
		Filter paper, non-reusable (not cleanable)	**P10** **P25**
		Non-woven material, non-reusable (not cleanable)	**VS25** **VS40** **VS60**
	Absolute **(ISO 16889; $\beta_{x(c)}$ ≥200)**	Glass fiber material generation 5, non-reusable (not cleanable)	**H1XL** **H3XL** **H6XL** **PWR10** **H20XL**
		Non-woven metal fiber, non-reusable (not cleanable)	**M5** **M10**
	Water-absorbing	Non-reusable (not cleanable)	**AS3** [2)] **AS6** [2)] **AS10** [2)] **AS20** [2)]

Pressure differential

04	Max. admissible pressure differential of the filter element 30 bar *[435 psi]*	**A**
	Max. admissible pressure differential of the filter element 330 bar *[4786 psi]*	**B**

Ordering code
Filter element

Filter element type 2.

01	02	03		04	05	06		07		08
2.			**–**				**–**	**0**	**–**	

Element design

05	Standard adhesive	**0**
	Special adhesive	**H** [3]

Element design

06	Standard material	**0**
	Stainless steel 1.4571	**V** [4]

Bypass valve

07	**Without** bypass valve	**0**

Seal

08	NBR seal	**M**
	FKM seal	**V**

[1] For the admissible temperature ranges, refer to chapter "Technical data"

[2] Only configurable with pressure differential A = 30 bar *[435 psi]*

[3] Improved temperature and media resistance, only in connection with FKM "V" seal

[4] Only in connection with special adhesive "H" and seal FKV "V"

Order example:
2.0040 PWR10-A00-0-M

Material no.: R928006647

Further filter ratings and seal materials are available upon request.

Ordering code
Filter element

Filter element type 2.Z
for sandwich plate filter 320PZR

01	02	03		04	05		06
2.Z			**–**	**B00**	**0**	**–**	

Filter element [1)]

01	Design	**2.Z**

Size

02	According to **Bosch Rexroth standard**	**025** **075** **125**

Filter rating in µm

03	**Absolute** **(ISO 16889; $\beta_{x(c)} \geq 200$)**	Glass fiber material, non-reusable (not cleanable)	**H3PZ** **H6PZ** **H10PZ** **H20PZ**

Pressure differential

04	Max. admissible pressure differential of the filter element 330 bar *[4786 psi]*	**B00**

Bypass valve

05	**Without** bypass valve	**0**

Seal

06	NBR seal	**M**
	FKM seal	**V**

1) For the admissible temperature ranges, refer to chapter "Technical data"

Order example:
2.Z125 H10PZ-B00-0-M

Material no.: R928051781

Ordering code
Filter element

Filter element type 2.0058 and 2.0059
for inline filter 16 FE or duplex filter 16 FD

01	02	03		04	05	06		
2.			**–**	**A00**	**–**		**–**	

Filter element [1)]

01	Design		**2.**

Size

02	According to **Bosch Rexroth standard**		**0058** **0059**

Filter rating in µm

03	**Nominal**	Stainless steel wire mesh, reusable (cleanable)	**G10** **G25** **G40** **G60** **G100** **G200** **G500** **G800**
		Filter paper, non-reusable (not cleanable)	**P10** **P25**
		Non-woven material, non-reusable (not cleanable)	**VS25** **VS40** **VS60**
	Absolute **(ISO 16889; $\beta_{x(c)}$ ≥200)**	Glass fiber material generation 5, non-reusable (not cleanable)	**H1XL** **H3XL** **H6XL** **PWR10** **H20XL**
	Water-absorbing	Non-reusable (not cleanable)	**AS3** **AS6** **AS10** **AS20**

Pressure differential

04	Max. admissible pressure differential of the filter element 30 bar *[435 psi]*	**A00**

Bypass valve

05	Filter element **without** bypass valve	**0**
	Filter element **with** bypass valve – cracking pressure 3 bar *[43.5 psi]*	**6**

Seal

06	NBR seal	**M**
	FKM seal	**V**

[1)] For the admissible temperature ranges, refer to chapter "Technical data"

Order example:
2.0058 PWR10-A00-6-M

Material no. R928007115

Further filter ratings and seal materials are available upon request.

Ordering code
Filter element

Filter element type 4.
for inline filters 20 L

01	02	03		04	05	06		07		08
4.			**–**	**A**			**–**	**0**	**–**	

Filter element [1]

01	Design	**4.**

Size

02	According to **Bosch Rexroth standard**	**06** **10** **20**

Filter rating in µm

03	**Nominal**	Stainless steel wire mesh, reusable (cleanable)	**G10** **G25** **G40** **G60** **G100** **G200** **G500** **G800**
		Filter paper, non-reusable (not cleanable)	**P10** **P25**
	Absolute **(ISO 16889; $\beta_{x(c)}$ ≥200)**	Glass fiber material generation 5, non-reusable (not cleanable)	**H1XL** **H3XL** **H6XL** **PWR10** **H20XL**

Pressure differential

04	Max. admissible pressure differential of the filter element 30 bar *[435 psi]*	**A**

Element design

05	Standard adhesive	**0**
	Special adhesive	**H** [2]

Element design

06	Standard material	**0**
	Stainless steel 1.4571	**V** [3]

Bypass valve

07	**Without** bypass valve	**0**

Seal

08	NBR seal	**M**
	FKM seal	**V**

[1] For the admissible temperature ranges, refer to chapter "Technical data"

[2] Improved temperature and media resistance, only in connection with FKM "V" seal

[3] Only in connection with special adhesive "H" and seal FKV "V"

Order example:
4.20 PWR10-A00-0-M

Material no.: R928046366

Further filter ratings and seal materials are available upon request.

Ordering code
Filter element

Filter element type 6.
for housing suction filters SE

01	02	03	04	05	06
6.			**S00**	**0**	**0**

Filter element [1)]

01	Design	**6.**

Size

02	According to **Bosch Rexroth standard**	**56** **90** **140** **225** **360** **460** **560**

Filter rating in µm

03	**Nominal**	Stainless steel wire mesh, reusable (cleanable)	**G10** **G25** **G40** **G60** **G100** **G200** **G500** **G800**
		Filter paper, non-reusable (not cleanable)	**P10** **P25**
		Non-woven material, non-reusable (not cleanable)	**VS25** **VS40** **VS60**
	Absolute **(ISO 16889; $\beta_{x(c)}$ ≥200)**	Glass fiber material generation 5, non-reusable (not cleanable)	**H1XL** **H3XL** **H6XL** **PWR10** **H20XL**

Pressure differential

04	Admissible pressure differential of the filter element 1 bar *[14.5 psi]*	**S00**

Bypass valve

05	**Without** bypass valve	**0**

Seal

06	**Without** seal	**0**

[1)] For the admissible temperature ranges, refer to chapter "Technical data"

Order example:
6.140 PWR10-A00-0-0

Material no.: R928019715

Further filter ratings are available upon request.

Ordering code
Filter element

Filter element type 7.
for tank breathing filters TLF

01	02	03	04		05		06
7.			**–**	**–**	**0**	**–**	

Filter element [1)]

01	Design	**7.**

Size

02	According to **Bosch Rexroth standard**	**002** **004** **006** **007** **008**

Filter rating in µm

03	**Nominal**	Stainless steel wire mesh, reusable (cleanable)	**G10** **G25** **G40** **G60** **G100** **G200** **G500** **G800**
		Filter paper, non-reusable (not cleanable)	**P10** **P25**
	Absolute **(ISO 16889; $\beta_{x(c)}$ ≥200)**	Glass fiber material generation 5, non-reusable (not cleanable)	**H1XL** **H3XL** **H6XL** **PWR10** **H20XL**
	Water-absorbing	Non-reusable (not cleanable)	**AS10**

Pressure differential

04	Admissible pressure differential of the filter element 1 bar *[14.5 psi]* – standard material	**S00**
	Admissible pressure differential of the filter element 1 bar *[14.5 psi]* – stainless steel material	**S0V** [2)]

Bypass valve

05	**Without** bypass valve	**0**

Seal

06	NBR seal	**M**
	FKM seal	**V**

1) For the admissible temperature ranges, refer to chapter "Technical data"

2) Only in connection with special adhesive "H" and seal FKV "V"

Order example:
7.006 PWR10-A00-0-M

Material no.: R928016626

Further filter ratings and seal materials are available upon request.

Ordering code
Filter element

Filter element type 20.
for tank mounted return line filters 25TE

01	02	03		04	05		06	
20.			**–**	**E00**	**–**		**–**	

Filter element [1)]

01	Design		**20.**

Size

02	According to **Bosch Rexroth standard**		**0101** **0201** **0351** **1051**

Filter rating in µm

03	**Nominal**	Stainless steel wire mesh, reusable (cleanable)	**G10** **G25** **G40** **G60** **G100**
		Filter paper, non-reusable (not cleanable)	**P10** **P25**
	Absolute **(ISO 16889; $\beta_{x(c)}$ ≥200)**	Glass fiber material generation 5, non-reusable (not cleanable)	**H3XL** **H6XL** **PWR10** **H20XL**
	Water-absorbing	Non-reusable (not cleanable)	**AS6** **AS10** **AS20**

Pressure differential

04	Max. admissible pressure differential of the filter element 20 bar *[290 psi]*	**E00**

Bypass valve

05	**With** bypass valve	**6**
	Without bypass valve	**0**

Seal

06	NBR seal	**M**
	FKM seal	**V**

1) For the admissible temperature ranges, refer to chapter "Technical data"

Order example:
20.0101 PWR10-E00-6-M

Material no.: R928053667

Further filter ratings and seal materials are available upon request.

Preferred types

Filter element type 1.

Type	Material no. of filter element, filter rating in µm		
	H3XL	H6XL	PWR10
1.0040 ... -A00-0-M	**R928005835**	**R928005836**	**R928005837**
1.0063 ... -A00-0-M	**R928005853**	**R928005854**	**R928005855**
1.0100 ... -A00-0-M	**R928005871**	**R928005872**	**R928005873**
1.0130 ... -A00-0-M	**R928037178**	**R928045104**	**R928037180**
1.0150 ... -A00-0-M	**R928037181**	**R928037182**	**R928037183**
1.0160 ... -A00-0-M	**R928005889**	**R928005890**	**R928005891**
1.0250 ... -A00-0-M	**R928005925**	**R928005926**	**R928005927**
1.0400 ... -A00-0-M	**R928005961**	**R928005962**	**R928005963**
1.0630 ... -A00-0-M	**R928005997**	**R928005998**	**R928005999**
1.1000 ... -A00-0-M	**R928006033**	**R928006034**	**R928006035**
1.2000 ... -A00-0-M	**R928041312**	**R928048158**	**R928040797**
1.2500 ... -A00-0-M	**R928041314**	**R928046806**	**R928040800**

Filter element type 2.

Type	Material no. of filter element, filter rating in µm		
	H3XL	H6XL	PWR10
2.0040 ... -A00-0-M	**R928006645**	**R928006646**	**R928006647**
2.0063 ... -A00-0-M	**R928006699**	**R928006700**	**R928006701**
2.0100 ... -A00-0-M	**R928006753**	**R928006754**	**R928006755**
2.0130 ... -A00-0-M	**R928022274**	**R928022275**	**R928022276**
2.0150 ... -A00-0-M	**R928022283**	**R928022284**	**R928022285**
2.0160 ... -A00-0-M	**R928006807**	**R928006808**	**R928006809**
2.0250 ... -A00-0-M	**R928006861**	**R928006862**	**R928006863**
2.0400 ... -A00-0-M	**R928006915**	**R928006916**	**R928006917**
2.0630 ... -A00-0-M	**R928006969**	**R928006970**	**R928006971**
2.1000 ... -A00-0-M	**R928007023**	**R928007024**	**R928007025**

Filter element type 2.Z

Type	Material no. of filter element, filter rating in µm		
	H3PZ	H6PZ	H10PZ
2.Z025 H...PZ-B00-0-M	**R928051771**	**R928053299**	**R928051773**
2.Z075 H...PZ-B00-0-M	**R928051775**	**R928051776**	**R928051777**
2.Z125 H...PZ-B00-0-M	**R928051779**	**R928051780**	**R928051781**

Filter element type 2.0058 and 2.0059

Type	Material no. of filter element, filter rating in µm		
	H3XL	H6XL	PWR10
2.0058 ... -A00-6-M	**R928007113**	**R928007114**	**R928007115**
2.0059 ... -A00-6-M	**R928007131**	**R928007132**	**R928007133**

Preferred types

Filter element type 4.

Type	Material no. of filter element, filter rating PWR10 in µm
4.06 PWR10-A00-0-M	**R928028880**
4.10 PWR10-A00-0-M	**R928046351**
4.20 PWR10-A00-0-M	**R928046366**

Filter element type 6.

Type	Material no. of filter element, filter rating in µm	
	PWR10	G10
6.56 ...-S00-0-0	**R928053777**	**R928046438**
6.90 ...-S00-0-0	**R928046448**	**R928046444**
6,140 ...-S00-0-0	**R928019715**	**R928027883**
6,225 ...-S00-0-0	**R928040938**	**R928046428**
6,360 ...-S00-0-0	**R928052226**	**R928046432**
6,460 ...-S00-0-0	**R928046435**	**R928037008**
6,560 ...-S00-0-0	**R928054604**	**R928039963**

Filter element type 7.

Type	Material no. of filter element, filter rating in µm P10
7,002 ...-S00-0-M	**R928039681**
7,004 ...-S00-0-M	**R928016621**
7,006 ...-S00-0-M	**R928016624**
7,007 ...-S00-0-M	**R928016627**
7,008 H..XL-S00-0-M	**R928039600**

Filter element type 20.

Type	Material no. of filter element, filter rating in µm			
	H3XL	H6XL	PWR10	H20XL
20.0101 ...-E00-6-M	**R928054019**	**R928054020**	**R928053667**	**R928054021**
20.0201 ...-E00-6-M	**R928054022**	**R928054023**	**R928053669**	**R928054024**
20.0351 ...-E00-6-M	**R928054025**	**R928054026**	**R928053671**	**R928054027**
20.1051 ...-E00-6-M	**R928054028**	**R928054029**	**R928053672**	**R928054030**

Filter element assignment to filter series

Element type	Series	Application	Data sheet no. [1]
1.	40FLE(N)	Inline filter	51401
	100FLE(N)		51402
	40FLD(N)	Duplex filter	51408
	100FLD(N)		51409
	40FLDK(N)		51407
	63FLDK(N) -1X		51445
	10TE(N)	Tank mounted return line filter	51424
	10FRE(N)		51425
	10TD(N)-1X	Tank mounted return line filter, switchable	51454
	10 FRD(N)		–

Element type	Series	Application	Data sheet no. [1]
2.	40LE(N)	Inline filter	51400
	100LE(N)		51400
	50LE(N)		51447
	110LE(N)		51448
	245LE(N)		51421
	350LE(N)		51422
	445LEN		51423
	16FE		51403
	40/160 LD(N)	Duplex filter	51406
	250/450 LD(N)		51411
	50LD(N)		51453
	150LD(N)		51446
	400LD(N)		51429
	16FD		51410
	250/450FE(N)	Block mounting filters	51405
	245PSF(N)		51418
	350PSF(N)		51419
	450PBF(N)		51417

Element type	Series	Application	Data sheet no. [1]
2.Z	320PZR	Sandwich plate filter	51427
	320PZR/PZL-2X	Sandwich plate filter, generation 2X	51468

Element type	Series	Application	Data sheet no. [1]
4.	20 L	Inline filter	–

Element type	Series	Application	Data sheet no. [1]
6.	SE	Housing suction filter	–

Element type	Series	Application	Data sheet no. [1]
7.	TLF	Tank breathing filter	51415

Element type	Series	Application	Data sheet no. [1]
20.	25TE	Tank mounted return line filter	51472

[1] For any further information, please refer to the respective data sheet

Function, section

Rexroth filter elements are used for the filtration of hydraulic fluids in the hydraulic system as well as for the filtration of lubricants, industrial fluids and gases. The actual filtration process takes part in the filter element, the central component of an industrial filter. In connection with the filter medium, it defines the main filter variables, such as retention capacity, dirt holding capacity and pressure loss.

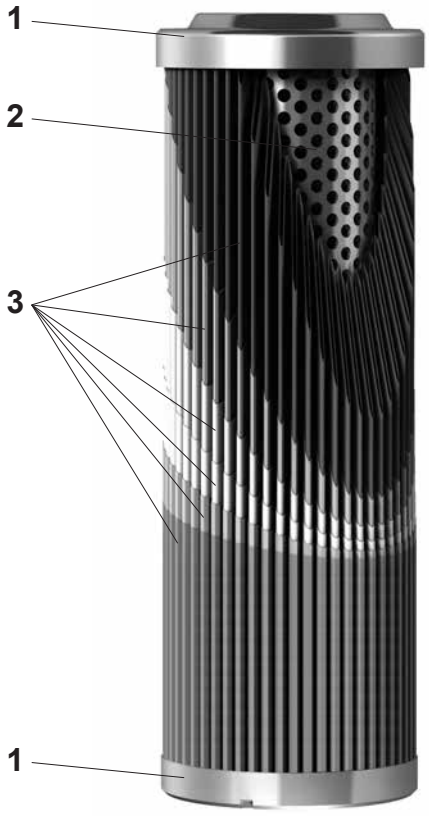
The configuration of the filter material PWR... of generation 5 consists of 3 filter-efficient glass fiber layers and contains an electrically conductive non-woven medium by default.

1.; 2. and 20. filter elements
The filter element consists of a combination of star-like pleated filter media (3). The filter layers are laid around a perforated support tube (2). Filter element 20. features additional external protection of the filter element mat by means of an also perforated protective cage (4). In longitudinal direction, the filter element is sealed using a 2-component adhesive. Support tube and filter element mat are glued to both end disks (1). The protective cage allows for a continuous fluid flow around the filter element mat and, at the same time, provides mechanical protection against external damage. Sealing between the filter element and the filter housing is effected by means of one or two seals.

Series 2.0058 and 2.0059 may optionally be selected with a bypass valve at the filter element bottom. There is generally flow from the outside to the inside.

All filter elements 1. and 2. of the Rexroth preferred program are made of zinc-free components thus preventing the formation of zinc-soap, in particular if water-containing fluids (HFA/HFC) and synthetic oils are used. The use of zinc-free filter elements prevents early "element blocking", thus considerably increasing the life cycle of an element. Therefore, Rexroth filter elements can be used universally for typical hydraulic fluids and lubricants.

4. and 7. filter elements
Filter elements consist of a combination of star-like pleated filter media (3) which are laid around a perforated support tube (2). In longitudinal direction, the filter element is sealed using a 2-component adhesive and support tube and filter element mat are connected with both end disks (1). Sealing between the filter element and the filter housing is effected by means of one or two seals. There is generally flow from the outside to the inside. If HFA/HFC and synthetic oils are used, a filter element made of stainless steel has to be used.



Type 2.0250

6. Filter elements
Filter elements consist of a combination of star-like pleated filter media which are laid in perforated and external support tubes. In longitudinal direction, the filter element is sealed using a 2-component adhesive and support tube and filter element mat are connected with both end disks. The sealing of the filter element is part of the filter housing.
There is generally flow from the inside to the outside.
If HFA/HFC and synthetic oils are used, a filter element made of stainless steel has to be used.

Filter variables
(for series 1.; 2.; 4.; 6. and 20.)

Filter rating and attainable oil cleanliness
The main goal when using industrial filters is not only the direct protection of machine components but to attain the required oil cleanliness. Oil cleanliness is defined on the basis of oil cleanliness classes which classify the particle distribution of existing contamination in the operating liquid.

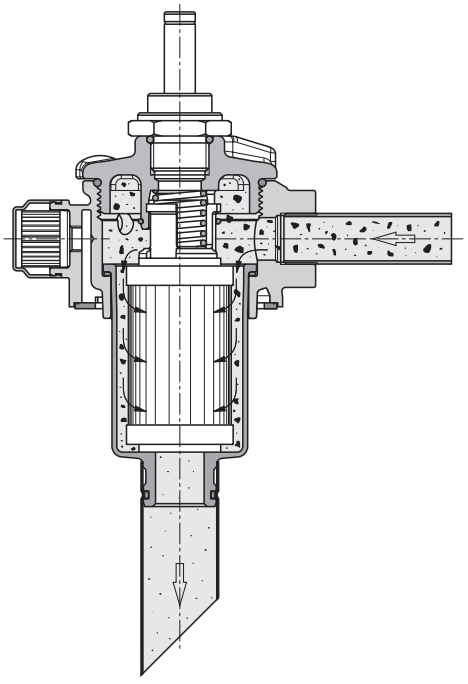
Filtration performance

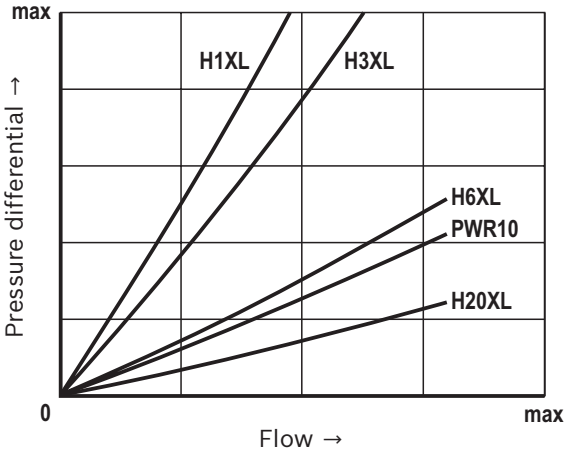
Filtration ratio $\beta_{x(c)}$ (β value)
The retention capacity of hydraulic filters is characterized by the filtration ratio $\beta_{x(c)}$. This variable is therefore the most important performance characteristic of a hydraulic filter. It is measured in the multipass test according to ISO 16889 using test dust according to ISO 12103-1.
The filtration ratio $\beta_{x(c)}$ specifies the ratio of the number of particles of the same size upstream and downstream of the filter.

Dirt holding capacity
It is also measured using the multipass test and determines the amount of test dust which is fed to the filter medium until a specified pressure differential increase has been reached.

Pressure loss (also pressure differential or delta p)
The pressure loss of the filter element is the relevant characteristic value for the determination of the filter size. These are recommended values of the filter manufacturer or specifications by the filter user. This characteristic value depends on many factors. Mainly: the rating of the filter medium, its geometry and arrangement in the filter element, the filter area, the operating viscosity of the fluid and the flow. The term "delta p" is often also expressed with the symbol "Δp".
When dimensioning the complete filter, an initial pressure loss is determined which must not be exceeded by the new filter state on the basis of the aforementioned conditions. The size design of a Rexroth filter on the basis of an initial Δp or pressure loss may be comfortably completed using our online design software "BOSCH REXROTH FILTERSELECT".

The diagram shows the typical pressure loss behavior of filter elements with different material fineness at different flows.

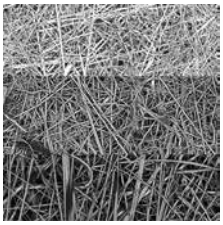
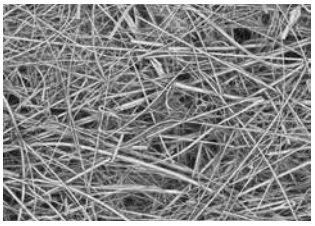
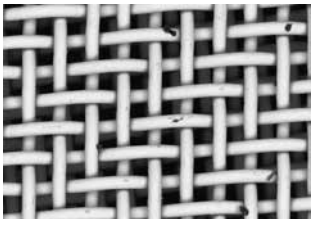
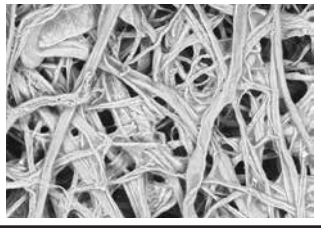
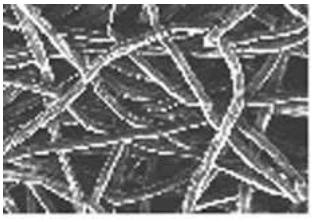
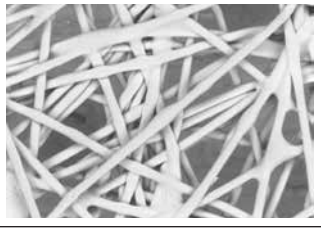
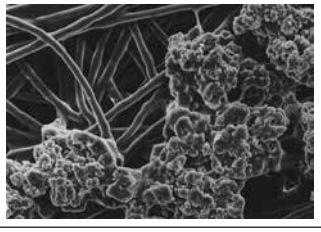




Filter variables

Overview

Depending on the application and requirements, different filter media in different filtration ratings are used for the separation of particles.

Filter medium/set-up	Electron microscope image
PWR..., glass fiber material Glass fiber material generation 5. Configuration with a total of 6 layers consisting of 3 filter-efficient glass fiber layers, with electrically conductive non-woven media by default.	
H...PL, glass fiber material Depth filter, combination of inorganic micro glass filter medium. Single-layer variants of H...XL for use in sandwich plate filters.	
G..., stainless steel wire mesh material 1.4401 or 1.4571 Surface filter made of stainless steel wire mesh with supporting mesh.	
P..., filter paper Inexpensive depth filter made of filter paper with supporting mesh. Made of specially impregnated cellulose fiber preventing humidity and swelling.	
M..., non-woven metal fiber Material 1.4404 Depth filter made of stainless steel fibers with supporting mesh.	
VS..., non-woven material Surface filter made of extra strong fiber compound in the form of polyethylene-covered polypropylene fiber.	
AS ..., water-absorbing Depth filter, non-woven material with water-absorbing material combined with micro glass filter media.	

Technical data of preferred program
(For applications outside these values, please consult us!)

general								
Weight (1. filter elements) [1]	NG	**1.0040**	**1.0063**	**1.0100**	**1.0130**	**1.0150**	**1.0160**	
	kg *[lbs]*	0.16 *[0.35]*	0.24 *[0.53]*	0.38 *[0.83]*	0.59 *[1.30]*	0.67 *[1.47]*	0.74 *[1.63]*	
	NG	**1.0250**	**1.0400**	**1.0630**	**1.1000**	**1.2000**	**1.2500**	
	kg *[lbs]*	1.07 *[2.36]*	1.48 *[3.26]*	2.42 *[5.33]*	3.44 *[7.58]*	4.8 *[10.58]*	9.14 *[20.15]*	
Weight (2. filter elements) [1]	NG	**2.0040**	**2.0063**	**2.0100**	**2.0130**	**2.0150**		
	kg *[lbs]*	0.1 *[0.22]*	0.17 *[0.38]*	0.28 *[0.61]*	0.29 *[0.66]*	0.32 *[0.7]*		
	NG	**2.0160**	**2.0250**	**2.0400**	**2.0630**	**2.1000**		
	kg *[lbs]*	0.5 *[1.1]*	0.75 *[1.65]*	1.14 *[2.51]*	1.5 *[3.31]*	2.58 *[5.68]*		
	NG	**2.0058**	**2.0059**	**2.Z025**	**2.Z075**	**2.Z0125**		
	kg *[lbs]*	3.4 *[7.7]*	3.8 *[8.5]*	0.09 *[0.2]*	0.16 *[0.35]*	0.3 *[0.66]*		
Weight (4. filter elements) [1]	NG	**4.06**		**4.10**		**4.20**		
	kg *[lbs]*	0.170 *[0.37]*		0.200 *[0.44]*		0.225 *[0.51]*		
Weight (6. filter elements) [1]	NG	**6.56**	**6.90**	**6.140**	**6.225**	**6.360**	**6.460**	**6.560**
	kg *[lbs]*	0.14 *[0.31]*	0.40 *[0.88]*	0.50 *[1.10]*	0.70 *[1.54]*	0.75 *[1.65]*	1.2 *[2.65]*	1.5 *[3.31]*
Weight (7. filter elements) [1]	NG	**7.002**	**7.004**	**7.006**	**7.007**	**7.008**		
	kg *[lbs]*	0.12 *[0.26]*	0.26 *[0.57]*	0.46 *[1.01]*	1.28 *[2.82]*	1.6 *[3.53]*		
Weight (20. filter elements) [1]	NG	**20.0101**	**20.0201**	**20.0351**	**20.1051**			
	kg *[lbs]*	0.12 *[0.26]*	0.36 *[0.79]*	0.80 *[1.76]*	1.74 *[3.84]*			
Filtration direction	▶ 1.; 2.; 4.; 7.; 20. filter elements	From the outside to the inside only						
	▶ 6. filter elements	From the outside to the inside only						
Ambient temperature range	°C *[°F]*	–10 ... +65 *[+14 ... +149]* (for short periods down to –30 *[–22]*)						
Storage conditions	▶ Seal NBR °C *[°F]*	–40 ... +65 *[–40 ... +149]*; max. relative air humidity 65%						
	▶ Seal FKM °C *[°F]*	–20 ... +65 *[–4 ... +149]*; max. relative air humidity 65%						
Material 1. and 2. filter elements	▶ Pressure differential stability bar *[psi]*	30 *[435]*		160 *[2321]*		330 *[4786]*		
	▶ Cover/base	Polyamide		Tin-coated steel		Tin-coated aluminum		
	▶ Support tube	Tin-coated steel						
	▶ Seals	NBR or FKM						
Material 4. filter element	▶ Pressure differential stability bar *[psi]*	30 *[435]*						
	▶ Cover	Polyamide						
	▶ Base	Galvanized steel						
	▶ Support tube	Galvanized steel						
	▶ Seals	NBR or FKM						
Material 6. filter element	▶ Pressure differential stability bar *[psi]*	1 *[14.5]*						
	▶ Cover/base	Galvanized steel						
	▶ Support tube	Galvanized steel						
Material 7. filter element	▶ Pressure differential stability bar *[psi]*	1 *[14.5]*						
	▶ Cover/base	Galvanized steel						
	▶ Support tube	Galvanized steel						
	▶ Seals	NBR or FKM						
Material 20. filter element	▶ Pressure differential stability bar *[psi]*	20 *[290]*						
	▶ Cover/base	Plastic						
	▶ Support tube	Tin-coated steel						
	▶ Seals	NBR or FKM						
	▶ Protective cage	Plastic						

[1] Net weights refer to glass fiber material

Technical data of preferred program
(For applications outside these values, please consult us!)

hydraulic		
Minimum conductivity of the medium	pS/m	300
Reduction of the electrical charging is realized by means of a conductive non-woven medium with clearly lower resistance than previously used filter material layers. Due to its conductivity, the conductive medium in connection with a conductive supporting mesh reduces separation of charges in the various filter material layers (particularly between glass fiber and outlet layer)		

Admissible operating temperature range, depending on material combination

Material	**Code letter**	**Operating temperature range °C** *[°F]*
Seal		
NBR	M	–40 ... +100 *[–40 ... +212]*
FKM	V	–20 ... +210 *[–4 ... +410]*
Filter element adhesive		
Standard	0	–40 ... +100 *[–40 ... +212]*
Special	H	–55 ... +170 *[–67 ... +338]*
Filter element material (cover, base, support tube)		
Standard	0	–40 ... +100 *[–40 ... +212]*
Stainless steel	V	–55 ... +170 *[–67 ... +338]*
Filter element material (filter material)		
Aquasorb	AS...	0 ... +160 *[32 ... +320]*
Stainless steel wire mesh	G...	–55 ... +500 *[–67 ... +932]*
Glass fiber material	PWR...	to +160 *[to +320]*
Non-woven metal fiber	M...	–55 ... +250 *[–67 ... +482]*
Filter paper	P...	to +130 *[to +266]*
Non-woven material	VS...	to +80 *[to +176]*

Compatibility with permitted hydraulic fluids

Hydraulic fluid		**Classification**	**Design type key version**			**Suitable sealing materials**	**Standards**
			1.; 2. and 20. filter elements	**4. and 7. filter elements**	**6. filter elements**		
Mineral oil		HLP	A00 or B00 or C00 or E00	A00 or S00	S00	NBR	DIN 51524
Bio-degradable	▶ Insoluble in water	HETG		A0V or S0V (stainless steel)	not possible	NBR	VDMA 24568
		HEES				FKM	
	▶ Soluble in water	HEPG				FKM	VDMA 24568
Flame-resistant	▶ Water-free	HFDU, HFDR				FKM	VDMA 24317
	▶ Containing water	HFAS				NBR	DIN 24320
		HFAE				NBR	
		HFC				NBR	VDMA 24317

☞ **Important information on hydraulic fluids:**
- For further information and data on the use of other hydraulic fluids, please refer to data sheet 90220 or contact us!
- **Flame-resistant - containing water:** due to possible chemical reactions with materials or surface coatings of machine and system components, the service life with these hydraulic fluids may be less than expected.

Filter materials made of filter paper (cellulose) must not be used, filter elements with glass fiber material have to be used instead.
- **Bio-degradable:** If filter materials made of filter paper are used, the filter life may be shorter than expected due to material incompatibility of and swelling.

Filter media

Technical data	PWR...
Glass fiber material generation 5, PWR... The filter medium achieves the best cleanliness possible compared to other filter media. It is suitable for hydraulic oils, lubricants, chemical and industrial liquids. Due to its defined retention capacity (ISO 16889), it offers highly effective protection for machines and system components which are sensitive to contamination. An optimized dirt holding capacity in connection with an excellent cleanliness class is achieved by three glass fiber liners which are relevant for filtration. The stainless steel mesh used on the clean side is also responsible for a very high degree of stability of the filter element in case of pulsations. The electrostatic effects occurring with non-conductive fluids are reduced by the conductive non-woven medium integrated by default. ▶ By default, electrically conductive non-woven media ▶ Absolute filtration/defined retention capacity according to ISO 16889 ▶ High dirt holding capacity due to multi-layer set-up ▶ Non-reusable filter (not cleanable due to the depth filtration effect)	
Filter rating and attainable oil cleanliness The following table provides recommendations for the selection of a filter medium in dependency of the application and indicates the average oil cleanliness class attainable according to ISO 4406 or SAE-AS 4059.	

Glass fiber material

Oil cleanliness class ISO 4406	to be achieved with filter			Hydraulic system	
	$ß_{x(c)}$ = 200	Material	Possible arrangement		
10/6/4 - 14/8/6	1 µm	Glass fiber material	Return flow or pressure filter	--------	Special applications
13/10/8 - 17/13/10	3 µm			--------	Servo valves
15/12/10 - 19/14/11	6 µm			------	High-response valves
17/14/10 - 21/16/13	10 µm			---	Proportional valves
19/16/12 - 22/17/14	20 µm			-	Pumps and valves in general

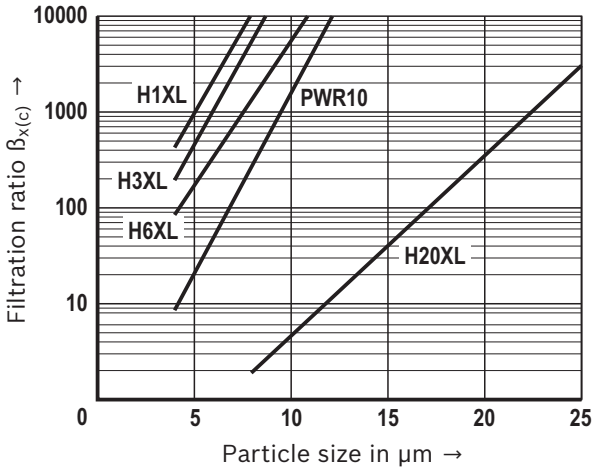
Attainable filtration ratio $β_{x(c)}$ (β value)

Typical β values of up to 2.2 bar *[31.9 psi]* Δ*p* pressure increase at the filter element [1)]

Filter medium	Particle size "x" for different β values, measurement according to ISO 16889		
	$β_{x(c)} ≥ 75$	$β_{x(c)} ≥ 200$	$β_{x(c)} ≥ 1000$
H1XL	< 4.0 µm(c)	< 4.0 µm(c)	< 4.0 µm(c)
H3XL	4.0 µm(c)	< 4.5 µm(c)	5.0 µm(c)
H6XL	4.8 µm(c)	5.5 µm(c)	7.5 µm(c)
PWR10	7.5 µm(c)	8.5 µm(c)	10.5 µm(c)
H20XL	18.5 µm(c)	20.0 µm(c)	22.0 µm(c)

1) Filtration ratio $β_{x(c)}$ for other filter media upon request

Filtration ratio $ß_{x(c)}$ dependent on particle size µm(c)



Filter media

Technical data	PWR...

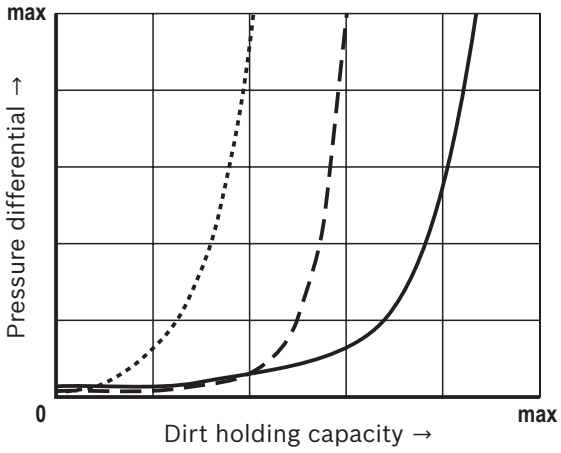
Dirt holding capacity according to ISO 16889
Compared to conventional filter media with single layer technology, the PWR... filter material features a high dirt holding capacity because it is made of three separate filter layers connected in series.

Conventional filter element ------
(single-layer glass fiber material)

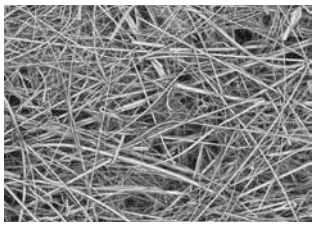
Two-layer filter element – – –
(former Rexroth H...XL material combination)

Rexroth PWR... filter element ——
(three-layer glass fiber material with electrically conductive non-woven medium)

Comparison of typical dirt holding capacities of glass fiber filter elements



Filter media

Technical data	H...PZ
Glass fiber material, H...PZ The filter medium achieves the best cleanliness possible compared to other filter media. It is suitable for hydraulic oil. Due to its defined retention capacity (ISO 16889), it offers highly effective protection for machines and system components which are sensitive to contamination. ▶ Depth filter made of inorganic glass fiber material ▶ Absolute filtration/defined retention capacity according to ISO 16889 ▶ Non-reusable filter (not cleanable due to the depth filtration effect)	
Filter rating and attainable oil cleanliness The following table provides recommendations for the selection of a filter medium in dependency of the application and indicates the average oil cleanliness class attainable according to ISO 4406 or SAE-AS 4059.	

Glass fiber material

Oil cleanliness class ISO 4406	to be achieved with filter			Hydraulic system		
	$ß_{x(c)}$ = 200	Material	Possible arrangement			
13/10/8 - 17/13/10	3 µm	Glass fiber material H...PZ	Sandwich plate filter 320PZ...		----------	Vertical stacking (sandwich plate assembly)
15/12/10 - 19/14/11	6 µm					
17/14/10 - 21/16/13	10 µm					
19/16/12 - 22/17/14	20 µm					

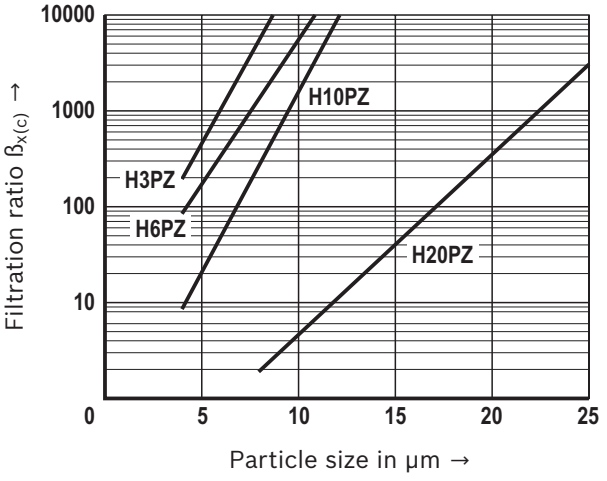
Attainable filtration ratio $β_{x(c)}$ (β value)

Typical β values of up to 2.2 bar *[31.9 psi]* Δ*p* pressure increase at the filter element [1)]

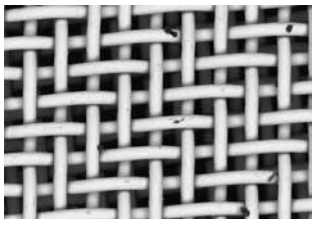
Filter medium	Particle size "x" for different β values, measurement according to ISO 16889		
	$β_{x(c)} ≥ 75$	$β_{x(c)} ≥ 200$	$β_{x(c)} ≥ 1000$
H3PZ	4.0 µm(c)	< 4.5 µm(c)	5.0 µm(c)
H6PZ	4.8 µm(c)	5.5 µm(c)	7.5 µm(c)
H10PZ	6.5 µm(c)	7.5 µm(c)	9.5 µm(c)
H20PZ	18.5 µm(c)	20.0 µm(c)	22.0 µm(c)

1) Filtration ratio $β_{x(c)}$ for other filter media upon request

Filtration ratio $ß_{x(c)}$ dependent on particle size µm(c)



Filter media

Technical data	**G...**
Stainless steel wire mesh, G... There is a comprehensive field of applications for wire mesh filter media. Not only pre-filtration is possible, but also the filtration of lubricating oils, hydraulic oils, coolants and water-like fluids. **Wire mesh G10 ... G40** As surface filters, these materials are generally cleanable. Due to their fine mesh, however, cleaning is more difficult than with coarser filter mesh. Therefore, we recommend cleaning the filters in an ultrasonic bath. **Wire mesh G60 ... G800** Due to their coarser mesh size, the cleaning of these filter media is easier. ▶ Surface filter made of stainless steel wire mesh ▶ Reusable, cleanable ▶ Pleated design: single, two or three-layer design	

Filter medium	Design	Mesh size
G10	Special Dutch weave	10 µm nom.
G25	Woven roving	25 µm nom.
G40		40 µm nom.
G60 ... G800	Plain mesh	60 ... 800 µm nom.

Stainless steel wire mesh

Oil cleanliness class according to ISO 4406	to be achieved with filter			Fluid system	
	nominal	Material	Possible arrangement		
20/18/13 - 21/20/15	10 µm	Stainless steel wire mesh, G...	Return flow, pressure filters or suction filters	--------	For existing systems (hydraulics) and as protective filter (G10, G25) For fluids such as: ▶ Lubricants ▶ Petrochemicals ▶ Water filter ▶ Wastewater treatment systems / thermal oils
Cannot be used for wire mesh > 10 µm	25 ... 800 µm				

Filter media

Technical data	G...

Cleaning of filter elements

Cleaning or replacement
Before cleaning a G... element, the filter element has to be dismantled first and then checked whether it makes sense to clean the element. For example, if the mesh contains many fibrous substances and consists of a material finer than G40, effective and complete cleaning is not possible in many cases. Filter mesh which has visible defects due to frequent cleaning must be replaced. In general, the following applies: The finer the mesh, the thinner the wire. Therefore, especially fine mesh must be cleaned gently to protect the material. Cracks in the folds of the wire mesh and the non-woven metal fiber are to be avoided. Otherwise, the filter capacity will be insufficient.

Cleaning frequency
Experience has shown that filter elements made of G10, G25 and G40 can be cleaned up to ten times.
Filter mesh > 60 µm can usually be cleaned more than ten times. Reusability, however, very much depends on the type of contamination as well as on pressurization (final Δp before dismantling the filter element). For maximum reusability, we therefore recommend replacing in particular the fine mesh at a final Δp of 2.2 bar *[31.9 psi]* at the latest. Due to the given reasons, the aforementioned values must be regarded as reference values for which we do not assume any liability.

Recommendations for cleaning

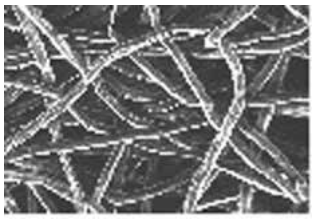
Manual and simple cleaning method for G... elements

Procedure	Wire mesh G10, G25, G40	Wire mesh G60 ... G800
Chemical pre-cleaning	Let the filter element drain for approx. 1 hour after disassembly. Bathe in solvent afterwards.	
Mechanical pre-cleaning	Remove rough dirt with a brush or scrubber. Do not use hard or pointed objects which could damage the filter medium.	
Mechanical/chemical main cleaning	Put pre-cleaned element in an ultrasonic bath with special solvent. Clean the element in the ultrasonic bath until any visible contamination is removed.	Evaporate with hot washing solution (water with corrosion protection agent)
Checking	Visually check the material for damage. Replace the filter element if you identify obvious damage.	
Preservation	After drying, you must spray the cleaned element with preservative agents and store it sealed against dust in a plastic foil.	

Automated cleaning for G... elements

Procedure	Wire mesh G10, G25, G40, G60 ... G800
Chemical pre-cleaning	Let the filter element drain for approx. 1 hour after disassembly. Bathe in solvent afterwards.
Mechanical/chemical main cleaning	By means of special cleaning systems for filter elements. Most of these systems are provided with a fully automated and combined cleaning mechanism including ultrasound as well as mechanical and chemical cleaning processes. This allows for best possible cleaning results with gentle cleaning processes.

Filter media

Technical data	M...
Non-woven metal fiber, M... Non-woven metal fiber serves for higher cleanliness for special fluids or high operating temperatures. It offers absolute filtration for effective protection for machine components sensitive to contamination. As this material consists of stable, and meshed and bound stainless steel fibers, it is also classified as depth filter medium and as not cleanable. ▶ Absolute filtration, measurement according to ISO 16889 ▶ Depth filter made of stainless steel fibers ▶ Non-reusable filter ▶ Pleated design: two or three-layer design ▶ Supporting mesh: Epoxy or stainless steel wire mesh	

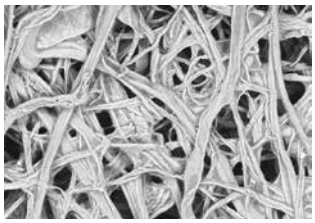
Filter medium	Particle size for filtration ratio > 75 [1]
M5	5 µm
M10	10 µm

[1] according to ISO 16889

Non-woven metal fiber

Oil cleanliness class according to ISO 4406	to be achieved with filter			Hydraulic system	
	$ß_{x(c)}$ = 75	Material	Possible arrangement		
16/13/10 - 20/15/11	5 µm	Non-woven metal fiber M...	Return flow or pressure filter	--------	Filter material for special applications
18/14/10 - 21/17/13	10 µm				

Filter media

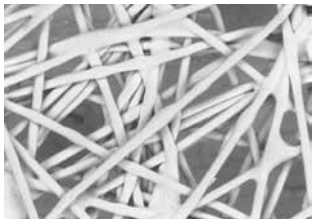
Technical data	P...
Filter paper, P... Filter paper is used for the filtration of lubricating oil and for pre-filtration. Filter paper has the following features: ▶ Depth filter made of cellulose fibers ▶ Specially impregnated against swelling caused by humidity ▶ Pleated design: single, two or three-layer design ▶ Non-reusable filter (not cleanable due to the depth filtration effect)	

Filter medium	Nominal filter rating	Filtration ratio β values [1]	Retention rate with 10 µm [1]
P10	10 µm	$\beta_{10(c)} > 2.0$	50%
P25	25 µm	$\beta_{10(c)} > 1.25$	20%

[1] according to ISO 16889

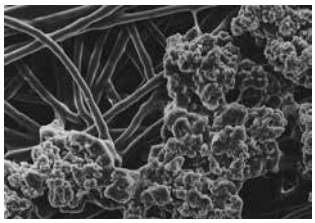
Filter paper

Oil cleanliness class according to ISO 4406	to be achieved with filter			Hydraulic system	
	$\beta_{x(c)} = 200$	Material	Possible arrangement		
20/19/14 - 22/20/15	10 µm	Paper P...	Return flow or pressure filter	--------	For existing systems
21/20/15 - 22/21/16	25 µm				

Technical data	VS...
Non-woven material, VS... The non-woven material VS... serves for filtration of cooling lubricants, water and water-based media. Additionally, this filter medium can also be used for filtration of emulsions or for general pre-filtration. ▶ Depth filter material made of polyolefin fibers ▶ Free of binding agents ▶ Heat-set ▶ Extremely resistant ▶ Pleated design: single or two-layer design ▶ Supporting mesh: epoxy-coated or stainless steel wire mesh ▶ Non-reusable filter (not cleanable due to the depth filtration effect)	

Filter medium	Nominal filter rating
VS 25	25 µm
VS 40	40 µm
VS 60	60 µm

Filter media

Technical data	AS...
Water-absorbing, AS... AS ... **Aquasorb** filter elements absorb free water from hydraulic fluids and lubricating oils as well as air humidity for breathing filters. Even low water concentrations over the saturation point of the oil may accelerate oil aging due to oxidation. This leads to increased corrosion and wear. Additionally, specific oil additives may lead to change or settling in form of solid, slimy substances causing early clogging of the pores of the filters used. Its combination with glass fiber filter media additionally ensures highly efficient separation of contamination. ▶ Absolute filtration ISO 16889 ▶ Surface filter made of water-absorbing non-woven filter medium ▶ Combined with non-woven glass fiber media ▶ Non-reusable filter (not cleanable due to the depth filtration effect) ▶ Pleated design: multi-layer design	

Filter medium	Particle size $\beta_{x(c)} = 200$ [1]	Particle size $\beta_{x(c)} = 1000$ [1]
AS3	4.5 µm(c)	5.0 µm(c)
AS6	5.5 µm(c)	7.5 µm(c)
AS10	7.5 µm(c)	9.5 µm(c)
AS20	20 µm(c)	22 µm(c)

[1] according to ISO 16889

Aquasorb

Oil cleanliness class according to ISO 4406	to be achieved with filter			Hydraulic system	
	$\beta_{x(c)} = 200$	Material	Possible arrangement		
13/10/8 - 17/13/10	3 µm	Aquasorb AS...	Return flow, bypass or breathing filter	--------	Servo valves
15/12/10 - 19/14/11	6 µm			------	High-response valves
17/14/10 - 21/16/13	10 µm			---	Proportional valves
19/16/12 - 22/17/14	20 µm			-	Pumps and valves in general

Functional principle

Like Rexroth industrial filter elements, Rexroth Aquasorb filter elements are pleated, however, they include a non-woven layer with a water-binding material in the form of a fine granulate. Behind this non-woven material, the respective non-woven glass fiber media is combined depending on the filter rating.

Effectiveness

The efficiency of Rexroth Aquasorb elements was verified in internal tests and by an independent institution in scientific analyses. The water content (free water) can be reduced to the saturation point of the oil. The efficiency and water absorption depend on the filter area load, oil viscosity and oil temperature. The following values refer to the water absorption and change at higher viscosity.

Design and area of application

Rexroth Aquasorb filter elements are to be dimensioned in such a way that an initial pressure loss of 0.2 bar *[2.9 psi]* is not exceeded. They are to be preferably used as bypass filters in a low-pressure range < 5 bar *[72.5 psi]*. The filter element has to be changed at a pressure differential of 2.2 bar *[31.9 psi]* the latest.
Rexroth Aquasorb can only be used in HLP and HEES.

Filter media

Technical data	AS...

Type	Rated flow in l/min *[US gpm]*	Calculative water absorption			
		at 15 cst in ml	at 30 cst in ml	at 46 cst in ml	at 120 cst in ml
1.0040	5 *[1.33]*	60	40	35	20
1.0063	8 *[2.21]*	100	70	55	35
1.0100	14 *[3.57]*	160	110	90	60
1.0130	19 *[5.01]*	225	155	130	85
1.0150	30 *[8.03]*	360	250	210	135
1.0160	20 *[5.25]*	265	185	155	100
1.0250	32 *[8.57]*	435	305	255	165
1.0400	40 *[10.57]*	785	550	455	300
1.0630	66 *[17.32]*	1290	900	750	490
1.1000	97 *[25.67]*	1435	1005	830	545
1.2000	189 *[49.85]*	2785	1950	1615	1055
1.2500	197 *[51.94]*	3650	2555	2115	1385

Type	Rated flow in l/min *[US gpm]*	Calculative water absorption			
		at 15 cst in ml	at 30 cst in ml	at 46 cst in ml	at 120 cst in ml
2.0040	3 *[0.74]*	35	25	20	15
2.0063	5 *[1.25]*	55	40	30	20
2.0100	8 *[2.01]*	90	65	50	35
2.0130	9 *[2.48]*	110	75	65	40
2.0150	12 *[3.24]*	145	105	85	55
2.0160	17 *[4.50]*	200	140	115	75
2.0250	28 *[7.27]*	325	225	190	125
2.0400	45 *[11.90]*	525	370	305	200
2.0630	46 *[12.17]*	715	500	415	270
2.1000	73 *[19.40]*	835	585	485	315
2.0058	105 *[27.7]*	1545	1080	895	585
2.0059	121 *[32.05]*	1790	1250	1035	680

Assembly, commissioning, maintenance

When has the filter element to be replaced or cleaned?
As soon as the dynamic pressure or the pressure differential set at the maintenance indicator is reached, the red pushbutton of the mechanical/visual maintenance indicator pops out. If an electronic switching element is provided, an electric signal will moreover sound. In this case, the filter element must be replaced or cleaned.
If the filter does not have a maintenance indicator, we recommend exchanging or cleaning filter elements after a maximum of 6 months.

Filter element exchange

- For single filters:
  Switch off the system and discharge the filter on the pressure side.
- For installed duplex switch filters:
  Refer to the relevant maintenance instructions according to the data sheet.

Detailed instructions with regard to the filter element exchange can be found on the data sheet of the relevant filter series.

⚠ WARNING!

- Filters are containers under pressure. Before opening the filter housing, check whether the system pressure in the filter has been decreased to ambient pressure. Only then may the filter housing be opened for maintenance.

☞ **Notice:**

- Due to the high viscosity, the pre-set signal value of the visual maintenance indicator may be exceeded during cold start.
  After the operating temperature has been reached, the mechanical/visual indicator can be acknowledged manually. The electrical signal will go out after the operating temperature has been reached.
  If the maintenance indicator is disregarded, the disproportionally increasing pressure differential may damage the filter element (collapse).
- Information on dirt holding capacity characteristic values exclusively refer to the measurement results obtained under laboratory conditions according to ISO 16889. These may deviate from these measurements in real applications due to numerous influencing factors.
  According to the state of the art, products offering a higher dirt holding capacity according to ISO 16889 at a comparable filtration ratio $ß_{x(c)}$ are expected to achieve it also under real conditions.
- Warranty becomes void if the delivered item is changed by the ordering party or third parties or improperly mounted, installed, maintained, repaired, used or exposed to environmental conditions that do not comply with the installation conditions.
- Technical characteristic values like retention rate and dirt holding capacity have been determined at a temperature of 40 °C ±5 °C.

Directives and standardization

Rexroth filter elements are tested and quality-monitored according to different ISO test standards:

Filtration performance test (multipass test)	ISO 16889:2008-06
Δ*p* (pressure loss) characteristic curves	ISO 3968:2001-12
Compatibility with hydraulic fluid	ISO 2943:1998-11
Collapse pressure test	ISO 2941:2009-04

The development, manufacture and assembly of Rexroth industrial filters and Rexroth filter elements is carried out within the framework of a certified quality management system in accordance with ISO 9001:2000.

Notes

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