



Inline Filter ACSSF

up to 100 l/min, up to 1035 bar



1. TECHNICAL SPECIFICATIONS

1.1 FILTER HOUSING

Construction

The filter housings are designed in accordance with international regulations. They consist of a filter head and a screw-on filter bowl.

Standard equipment:

- without bypass valve
- connection for a clogging indicator
- oil drain plug in filter bowl

1.2 FILTER ELEMENTS

HYDAC filter elements are validated and their quality is constantly monitored according to the following standards:

- ISO 2941
- ISO 2942
- ISO 2943
- ISO 3724
- ISO 3968
- ISO 11170
- ISO 16889

Filter elements are available with the following pressure stability values:

Betamicon® (BN4HC):	20 bar
Betamicon® (BN4HC) /-SS-SO361:	20 bar
Betamicon® (BH4HC):	210 bar
Betamicon® (BH4HC) /-SS-SO361:	210 bar
Stainless steel wire mesh (D):	210 bar
Wire mesh (W/H):	20 bar
Chemicon® (M):	210 bar

1.3 FILTER SPECIFICATIONS

Nominal pressure	1035 bar
Test pressure	1707 bar (design pressure 1138.5 bar)
Temperature range	-20 °C to +100 °C
Material of filter head	316S11 EN 1.4404 stainless steel
Material of filter bowl	UNS S31803 DUPLEX EN 1.4462
Type of clogging indicator	VDAC (Differential pressure indicator up to 1035 bar operating pressure)
Pressure setting of clogging indicator	5 bar (others on request)
Bypass cracking pressure (optional)	6 bar (others on request)

1.4 SEALS

FPM (Viton)

1.5 INSTALLATION

Inline filter

1.6 SPECIAL MODELS AND ACCESSORIES

- Seals in NBR, NLT, EPDM, HNBR, Kalrez®
- Without bypass valve
- Without port for clogging indicator
- With 2 clogging indicators (visual and electrical)
- With gauge ports (for external piping of pressure sensors)
- Higher pressures on request

1.7 SPARE PARTS

See Original Spare Parts List

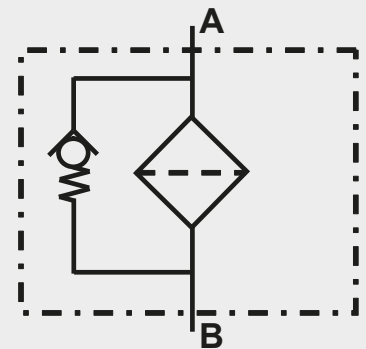
1.8 CERTIFICATES AND APPROVALS

On request

1.9 COMPATIBILITY WITH HYDRAULIC FLUIDS ISO 2943

- Hydraulic oils H to HLPD DIN 51524
- Lubrication oils DIN 51517, API, ACEA, DIN 51515, ISO 6743
- Compressor oils DIN 51506
- Biodegradable operating fluids VDMA 24568 HETG, HEES, HEPG
- Fire-resistant fluids HFA, HFB, HFC and HFD
- Operating fluids with high water content (> 50 % water content) on request

Symbol for hydraulic systems



2. MODEL CODE (also order example)

2.1 COMPLETE FILTER

ACSSF1035 BH/HC 60 A0 005 B X /-V

Filter type

ACSSF1035 1035 bar

Filter material of element

BN/HC Betamicon® (BN4HC)
 BH/HC Betamicon® (BH4HC)
 "SS-SO361" must be used for water-glycol applications!
 M Chemicon®
 W/HC Wire mesh
 D Stainless steel wire mesh

Size of filter

30, 60, 110, 160

Type and size of connection

Type	Port thread	Filter size			
		30	60	110	160
A0	9/16"-18 SF 250 CX20 - 1/4" TUBE O.D.	●	●	●	
A1	13/16"-16 SF 375 CX20 - 3/8" TUBE O.D.		●	●	●
A2	3/4"-14z SF 562 CX20 - 9/16" TUBE O.D.				●
A3	1-3/8"-12 SF 750 CX20 - 3/4" TUBE O.D.				●

Filtration rating in µm

BN/HC, BH/HC : 003, 005, 010, 020
 BN/HC, BH/HC (-SS-SO361) : 003, 010
 M : 001, 003, 005, 010, 020
 W/HC : 025, 050, 100, 200
 D : 025, 040, 060, 100, 150, 200, 250

Type of clogging indicator

W without port (no clogging indicator)
 A stainless steel blanking plug in indicator port
 B visual
 BM visual with manual reset
 C electrical
 BM+C visual with manual reset + electrical (= 2 indicators) - not for size 30
 E 9/16" UNF Autoclave ports for external connection of pressure sensors – not for size 30

For other clogging indicators see brochure no. 7.050./...

Modification number

X the latest version is always supplied

Supplementary details

B. cracking pressure of bypass (e.g.. B6 = 6 bar); no details = without bypass valve
 EX electrical clogging indicator EX version (Eexd IIC T6; cable length 0.25 m standard)
 EX/ENC electrical clogging indicator EX protection (Eexd IIC T6; with IP66 junction box, M20x1.5 cable entry)
 IS intrinsically safe electrical clogging indicator with cable length 0.25 m (standard)
 IS/ENC intrinsically safe electrical clogging indicator with IP66 junction box (M20x1.5 cable entry)
 RC with reverse flow check (not for size 30)
 TB6 with triple bypass valve for reversible flow (= 1 check valve, 2 bypass valves - not for size 30)
 N NBR seals
 V FPM seals
 NLT nitrile low temperature seals
 HNBR hydrogenated nitrile (high temperature) seals
 EPDM EPDM seals
 K Kalrez® seals
 SS-SO361 stainl. steel core and end caps, polyamide support fibre, optimised for water-glycol

2.2 REPLACEMENT ELEMENT

0060 D 003 BN4HC /-V-SS-SO361

Size

0030, 0060, 0110, 0160

Type

D

Filtration rating in µm

BN4HC, BH4HC : 003, 005, 010, 020 (Note: for /-SS-SO361 type only 003 and 010 µm)
 W/HC : 025, 050, 100, 200

Filter material

BN4HC, BH4HC, W/HC

Supplementary details

SS-SO361 stainl. steel core and end caps, polyamide support fibre
 N, V, NLT, HNBR, EPDM, K (for descriptions, see Point 2.1)

2.3 REPLACEMENT ELEMENT - PROCESS TECHNOLOGY

060 - DH - 100 - D - V

Size
030, 060, 110, 160

Type
DH

Filtration rating in μm
Chemicron® (M) : 001, 003, 005, 010, 020
Wire mesh (D) : 025, 040, 060, 100, 150, 200, 250

Filter material
M, D

Supplementary details
N, V, NLT, HNBR, EPDM, K (for descriptions, see Point 2.1)

2.4 REPLACEMENT CLOGGING INDICATOR

VDAC 5 B . X /-V

Type
VDAC differential pressure measurement
up to 1035 bar operating pressure

Pressure setting
5 standard 5 bar, others on request

Type of clogging indicator
(see Point 2.1)

Modification number
X the latest version is always supplied

Supplementary details
V, W (for descriptions, see Point 2.1)

3. FILTER CALCULATION / SIZING

The total pressure drop of a filter at a certain flow rate Q is the sum of the housing Δp and the element Δp and is calculated as follows:

$$\Delta p_{\text{total}} = \Delta p_{\text{housing}} + \Delta p_{\text{element}}$$

$$\Delta p_{\text{housing}} = (\text{see Point 3.1})$$

$$\Delta p_{\text{element}} = Q \cdot \frac{SK^*}{1000} \cdot \frac{\text{viscosity}}{30}$$

(*see Point 3.2)

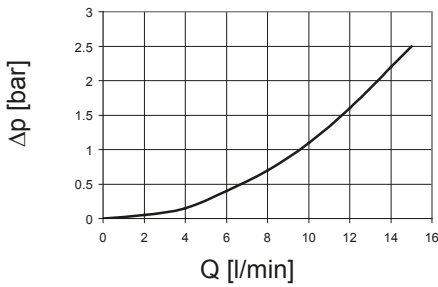
For ease of calculation, our Filter Sizing Program is available on request free of charge.

NEW: Sizing online at www.hydac.com

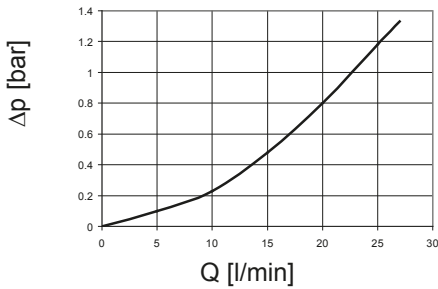
3.1 Δp -Q HOUSING CURVES BASED ON ISO 3968

The housing curves apply to mineral oil with a density of 0.86 kg/dm³ and a kinematic viscosity of 30 mm²/s. In this case, the differential pressure changes proportionally to the density.

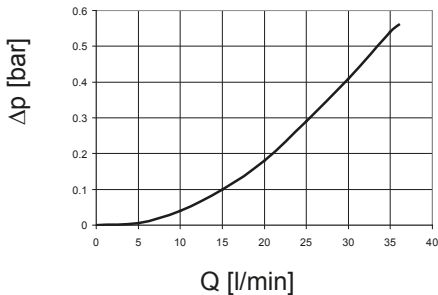
Size 30: 1/4" BSPP/NPT



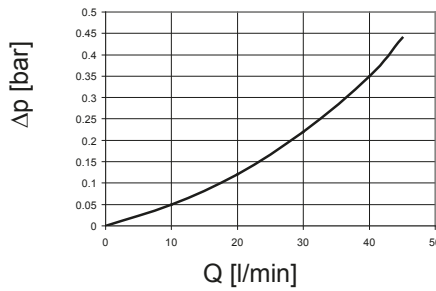
Size 30: 1/2" BSPP/NPT



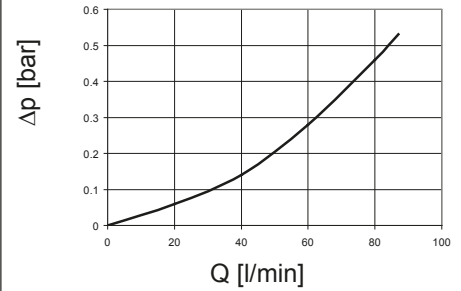
Size 60-110: 1/2" BSPP/NPT



Size 60-110: 3/4" BSPP/NPT



Size 160: 1" BSPP/NPT

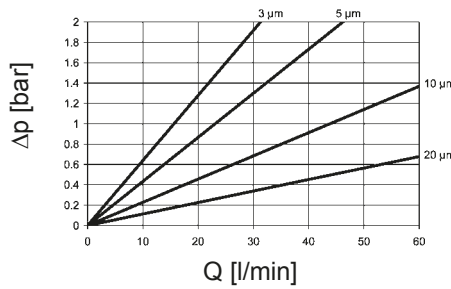


3.2 GRADIENT COEFFICIENTS (SK) FOR FILTER ELEMENTS

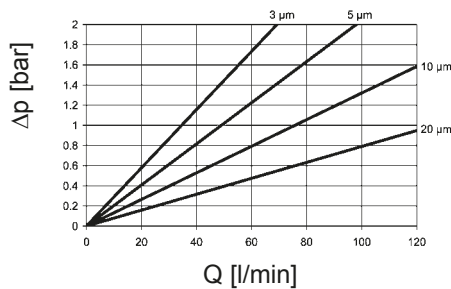
The gradient coefficients in mbar/(l/min) apply to mineral oils with a kinematic viscosity of 30 mm²/s. The pressure drop changes proportionally to the change in viscosity.

	BH4HC		W/HC
	3 μm	10 μm	—
30	91.2	36.3	—
60	58.6	18.1	0.757
110	25.4	8.9	0.413
160	16.8	5.9	0.283

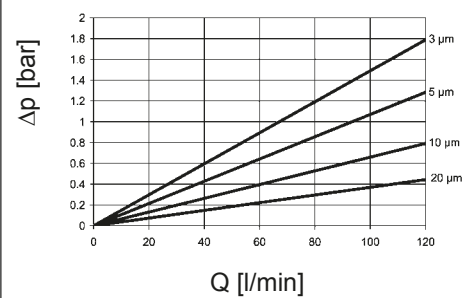
BN4HC: 30



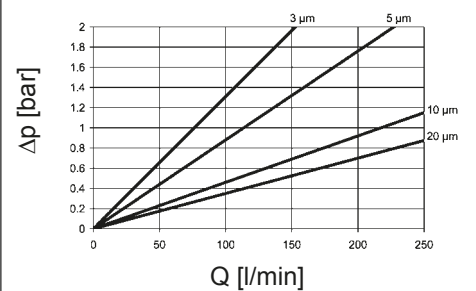
BN4HC: 60



BN4HC: 110



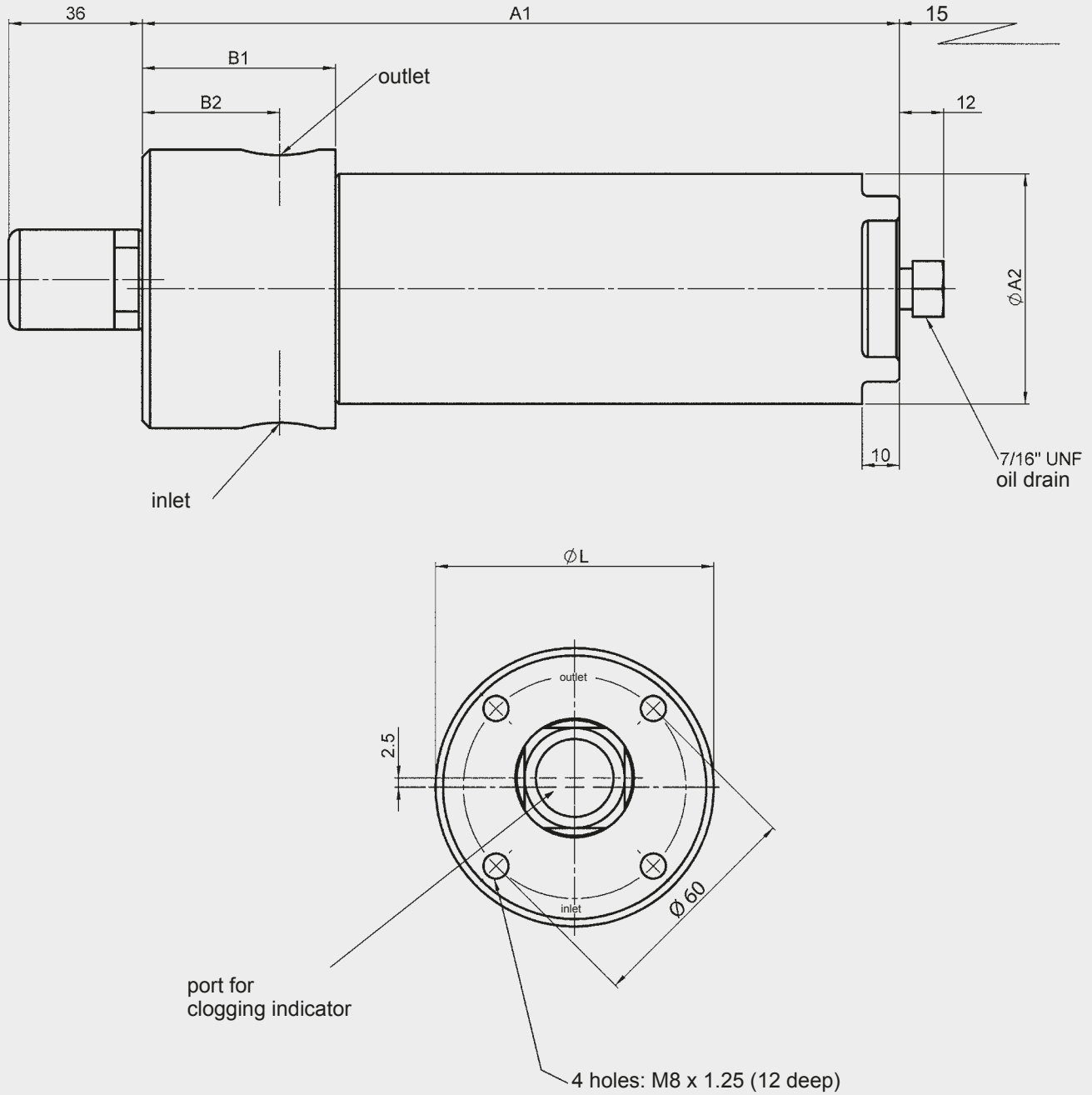
BN4HC: 160



4. DIMENSIONS

Inline Filter ACSSF

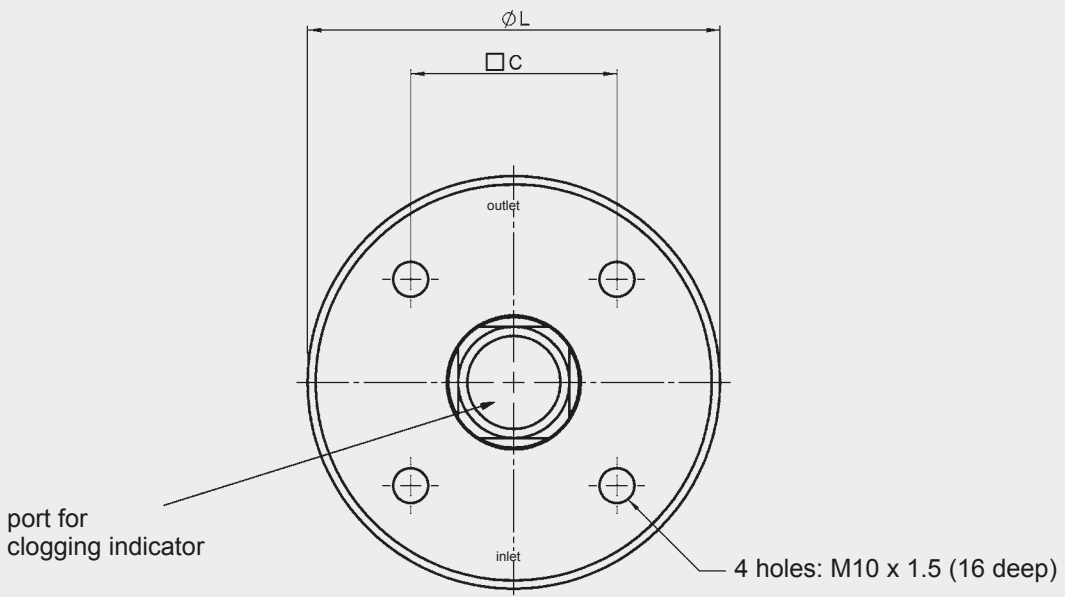
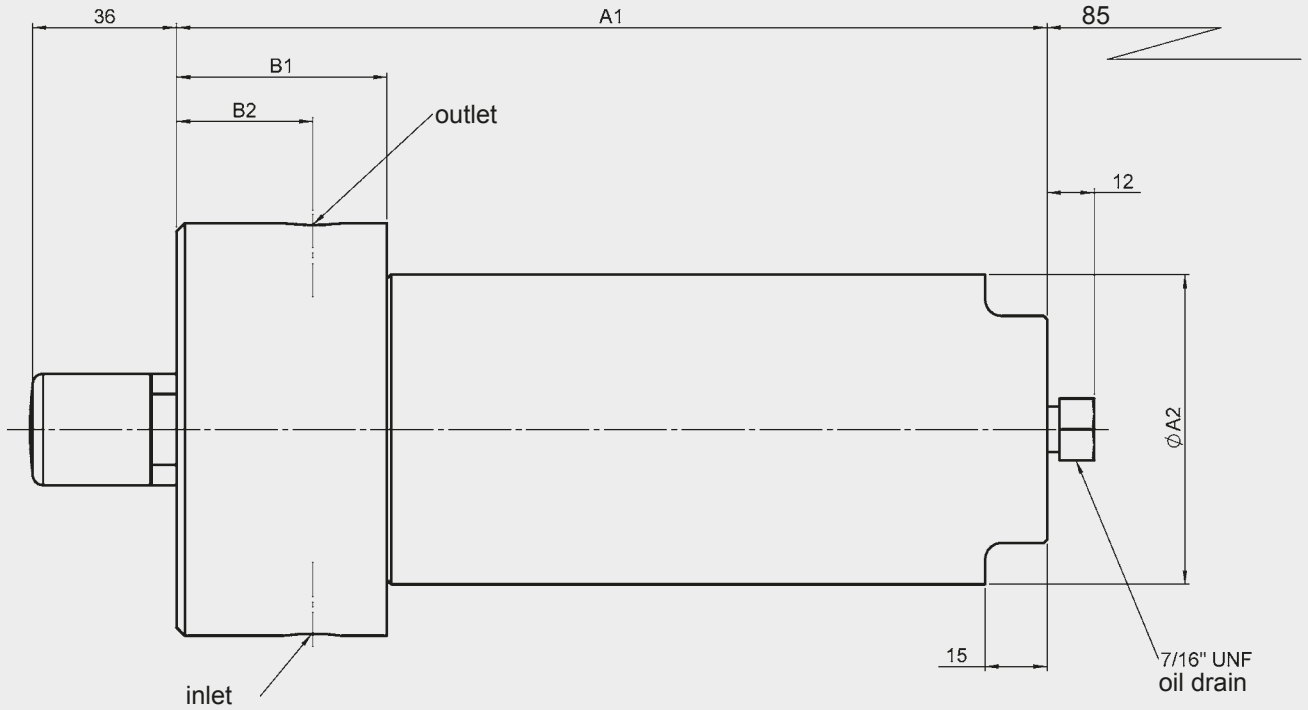
Size 30



ACSSF	A1	A2	B1	B2 ±5mm	L
30	204	63.5	52	37	75

Inline Filter ACSSF

Size 60 - 160



ACSSF	A1	A2	B1	B2 ±5mm	C	L
60	213	85	51	33	50	100
110	281	85	51	33	50	100
160	275	127	65	35	60	127

NOTE

The information in this brochure relates to the operating conditions and applications described.
 For applications or operating conditions not described, please contact the relevant technical department.
 Subject to technical modifications.

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