

Low Pressure Filter Spin-on Cartridges HC/OC

Nominal pressure 10/16/25 bar (140/230/360 psi), nominal size up to 160

1. Features

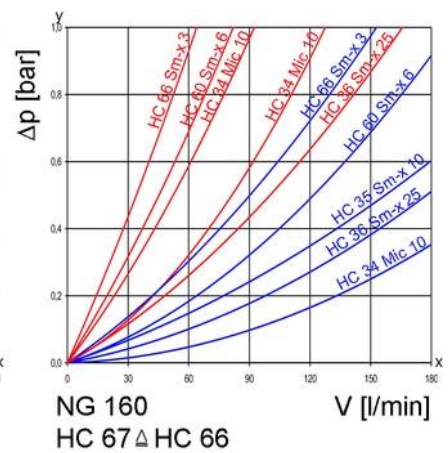
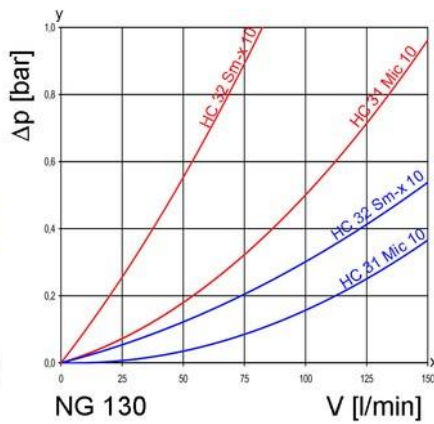
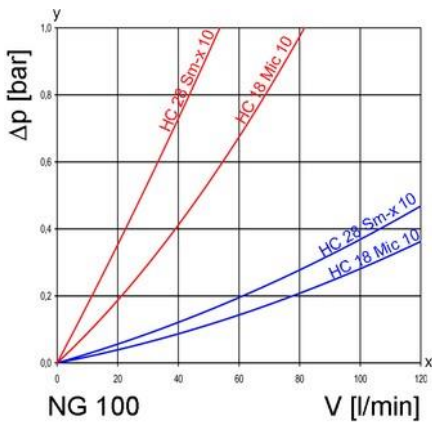
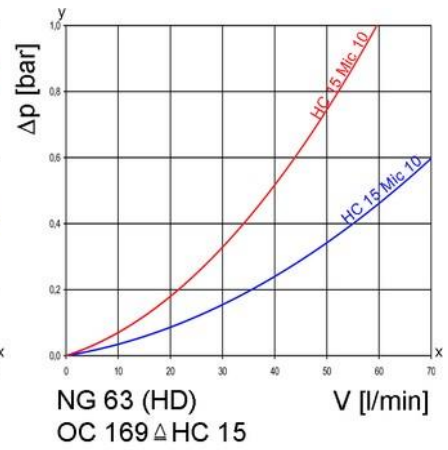
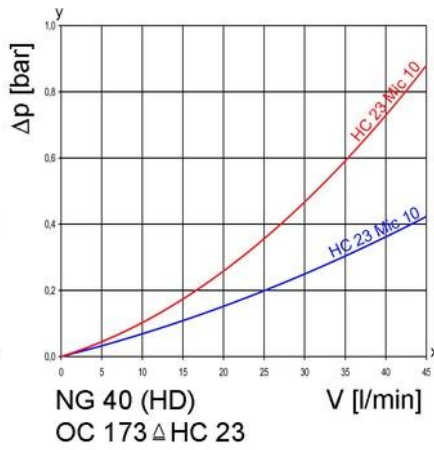
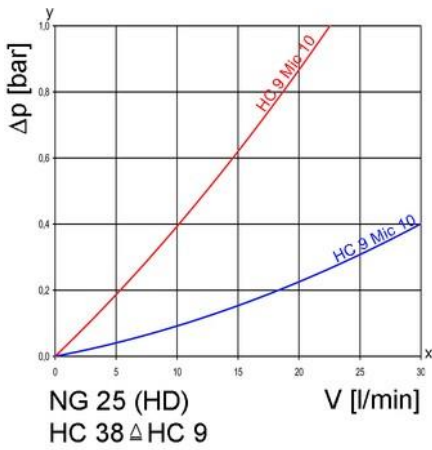
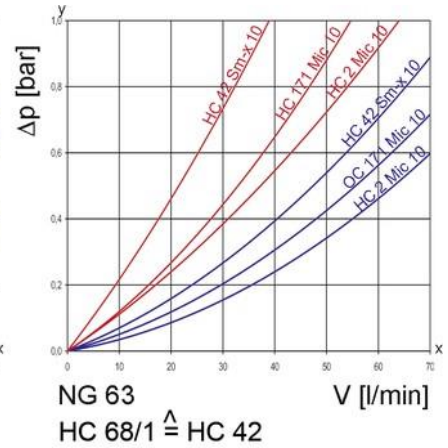
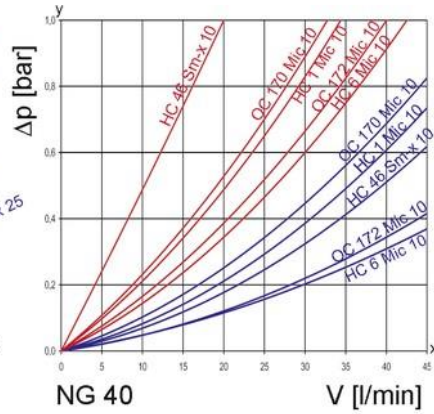
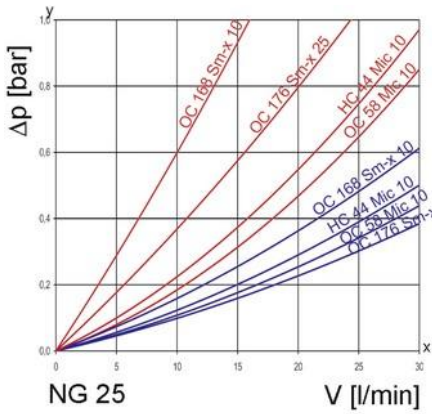
High performance filters for modern hydraulic systems

- Modular design
- Compact design
- Minimal pressure drop through optimal flow design
- Quality filters, easy to service
- Equipped with highly efficient Mic or Sm-x filter elements
- Beta rated elements according to ISO 16889 multipass test
- Elements with high differential pressure stability and dirt holding capacity
- Worldwide distribution



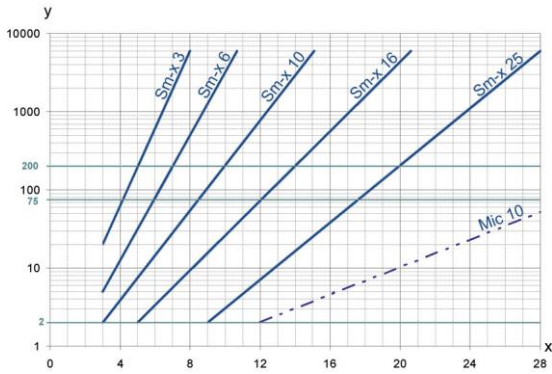
2. Flow rate/pressure drop curve complete filter

■ 190 mm²/s
■ 33 mm²/s



y = differential pressure Δp [bar]
 x = flow rate V [l/min]

3. Separation grade characteristics



y = beta-value

x = particle-size [μm]

determined by multipass tests (ISO 16889)

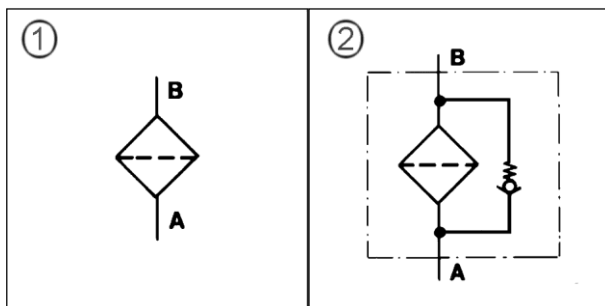
calibration according to ISO 11171 (NIST)

5. Quality assurance

Filtration Group filters and filter elements are produced according to the following international standards:

| Norm | Designation |
|--------------|---|
| DIN ISO 2941 | Hydraulic fluid power; filter elements; verification of collapse/burst resistance |
| DIN ISO 2942 | Hydraulic fluid power; filter elements; verification of fabrication integrity |
| DIN ISO 2943 | Hydraulic fluid power; filter elements; verification of material compatibility with fluids |
| DIN ISO 3723 | Hydraulic fluid power; filter elements; method for end load test |
| DIN ISO 3724 | Hydraulic fluid power; filter elements; verification of flow fatigue characteristics |
| ISO 3968 | Hydraulic fluid power filters; evaluation of pressure drop versus flow characteristics |
| ISO 10771.1 | Fatigue pressure testing of metal containing envelopes in hydraulic fluid applications |
| ISO 16889 | Hydraulic fluid power filters; multipass method for evaluation filtration performance of a filter element |

6. Symbols



1. without bypass

2. with bypass

4. Filter performance data

measured according to ISO 16889 (multipass test)

Sm-x elements with max. Δp 5 bar

| | | | |
|------|----|-----------------|------------|
| Sm-x | 3 | $\beta_{5(C)}$ | ≥ 200 |
| Sm-x | 6 | $\beta_{7(C)}$ | ≥ 200 |
| Sm-x | 10 | $\beta_{10(C)}$ | ≥ 200 |
| Sm-x | 25 | $\beta_{20(C)}$ | ≥ 200 |

values guaranteed up to 5 bar differential pressure

Subject to technical alteration without prior notice.

7. Order numbers

| 7.1 Housing design | | | | | | | |
|----------------------------|-----------------|---------|------------------------------|--------------------|--------------------------------------|-----------------------|----------------|
| Nominal size NG [l/min] | Order number | Type | Nominal pressure [bar] | Filter material | Filter surface [cm ²] | Bypass valve [bar] | Check valve |
| 25 | 77785983 | OC 58 | 10 | Mic 10 | 1775 | | |
| | 77500184 | OC 168 | | Sm-x 10 | 1309 | | |
| | 77500341 | HC 44 | | Mic 10 | 1775 | 2.5 | x |
| 40 | 77640899 | HC 1 | | Mic 10 | 3000 | | |
| | 77844780 | OC 170 | | Mic 10 | 3000 | 2.5 | x |
| | 77501273 | HC 6 | | Mic 10 | 3000 | | |
| | 77501232 | HC 46 | | Sm-x 10 | 2075 | | |
| | 71348143 | OC 172 | | Mic 10 | 3000 | 2.5 | x |
| 63 | 72013241 | HC 2 | | Mic 10 | 5440 | | |
| | 77501372 | HC 42 | | Sm-x 10 | 3360 | | |
| | 72013027 | OC 171 | | Mic 10 | 5440 | 2.5 | x |
| 100 | 77643331 | HC 18 | | Mic 10 | 7000 | | |
| | 77643398 | HC 28 | | Sm-x 10 | 3400 | | |
| | 77727183 | HC 4 | | Mic 10 | 7260 | | |
| 130 | 77500077 | HC 31 | | Mic 10 | 9755 | | |
| | 77500051 | HC 32 | Sm-x 10 | 5400 | | | |
| 160 | 77504194 | HC 34 | 16 | Mic 10 | 14025 | | |
| | 78714750 | HC 66 | | Sm-x 3 | 7638 | | |
| | 77478829 | HC 60 | | Sm-x 6 | 7638 | | |
| | 77643844 | HC 35 | | Sm-x 10 | 7638 | | |
| | 77643851 | HC 36 | | Sm-x 25 | 7638 | | |
| | 78714768 | HC 67 | 10 | Sm-x 3 | 7638 | | |
| 25 | 77373020 | HC 9 | 25 | Mic 10 | 2050 | 3.5 | |
| | 77503964 | HC 38 | | Mic 10 | 2050 | | |
| 40 | 77803257 | OC 173 | | Mic 10 | 4100 | 2.5 | |
| | 77502180 | HC 23 | | Mic 10 | 4100 | | |
| 63 | 77502511 | OC 169 | | Mic 10 | 5440 | 2.5 | |
| | 77502628 | HC 15 | | Mic 10 | 5440 | | |
| | 78787921 | HC 68/1 | | Sm-x 3 | 3360 | | |

8. Technical specifications

| | |
|-------------------------------|---|
| Nominal pressure: | 10/16/25 bar (140/230/360 psi) |
| Temperature range: | - 10 °C to + 120 °C |
| Housing material: | steel |
| Sealing material: | perbunan |
| Opening pressure check valve: | ≤ 0.12 bar |
| Installation: | preferably vertical |
| Collapse pressure of element: | $\Delta p \geq 5$ bar (70 psi) |
| Long time rupture strength: | min. 10^5 load alterations at nominal pressure |

Spin-on cartridges are resistant against mineral oil.

We draw attention to the fact that all values indicated are average values which do not always occur in specific cases of application. Our products are continually being further developed. Values, dimensions and weights can change as a result of this. Our specialized department would be pleased to offer you advice.

We recommend to contact us concerning applications of our filters in areas governed by the EU directive 94/9 EG (ATEX 95). The standard version can be used for liquids based on mineral oil (corresponding to the fluids in Group 2 of Directive 97/23 EG Article 9). If you consider to use other fluids please contact us for additional support.

Subject to technical alteration without prior notice.

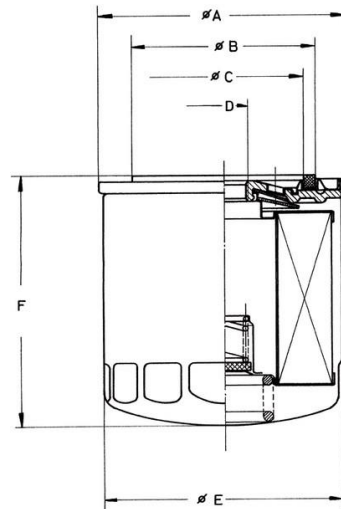


Figure shows spin-on cartridge with relief valve and check valve (optional).

9. Dimensions

All dimensions except "D" in mm.

| Type | Ø A | Ø B | Ø C | D | Ø E | F | Weight [kg] |
|---------|-----|-----|-----|--------------|-----|-----|-------------|
| OC 58 | 80 | 72 | 62 | ¾" 16 UNF 2B | 76 | 120 | 0.40 |
| OC 168 | 80 | 72 | 62 | ¾" 16 UNF 2B | 76 | 120 | 0.55 |
| HC 44 | 80 | 72 | 62 | ¾" 16 UNF 2B | 76 | 120 | 0.40 |
| HC 1 | 95 | 72 | 62 | ¾" 16 UNF 2B | 93 | 141 | 0.55 |
| OC 170 | 95 | 72 | 62 | ¾" 16 UNF 2B | 93 | 141 | 0.55 |
| HC 6 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 141 | 0.55 |
| HC 46 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 141 | 0.75 |
| OC 172 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 141 | 0.55 |
| HC 2 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 210 | 0.75 |
| HC 42 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 210 | 0.75 |
| OC 171 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 210 | 0.75 |
| HC 18 | 143 | 111 | 100 | 1½" 16 UN 2B | 136 | 172 | 1.50 |
| HC 28 | 143 | 111 | 100 | 1½" 16 UN 2B | 136 | 172 | 1.80 |
| HC 4 | 143 | 111 | 100 | G 1¼ | 136 | 172 | 1.50 |
| HC 31 | 143 | 111 | 100 | 1½" 16 UN 2B | 136 | 240 | 1.70 |
| HC 32 | 143 | 111 | 100 | 1½" 16 UN 2B | 136 | 240 | 2.20 |
| HC 34 | 143 | 111 | 100 | 1½" 16 UN 2B | 136 | 310 | 1.95 |
| HC 66 | 143 | 111 | 100 | 1½" 16 UN 2B | 136 | 310 | 2.65 |
| HC 60 | 143 | 111 | 100 | 1½" 16 UN 2B | 136 | 310 | 2.65 |
| HC 35 | 143 | 111 | 100 | 1½" 16 UN 2B | 136 | 310 | 2.65 |
| HC 36 | 143 | 111 | 100 | 1½" 16 UN 2B | 136 | 310 | 2.65 |
| HC 67 | 143 | 111 | 100 | G 1¼ | 136 | 310 | 2.65 |
| HC 9 | 80 | 72 | 62 | ¾" 16 UNF 2B | 76 | 140 | 0.55 |
| HC 38 | 80 | 72 | 62 | ¾" 16 UNF 2B | 76 | 140 | 0.55 |
| OC 173 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 180 | 0.80 |
| HC 23 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 180 | 0.80 |
| OC 169 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 215 | 0.90 |
| HC 15 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 215 | 0.90 |
| HC 68/1 | 95 | 72 | 62 | 1" 12 UNF 2B | 93 | 215 | 1.20 |

10. Accessories

All dimensions except "D" in mm.

| Order number | Adapter | | | D | E | SW | F |
|--------------|---------|----|----|----------------|----|----|---------|
| | A | B | C | | | | |
| 77802382 | 32 | 15 | 12 | ¾" 16 UNF 2A | 13 | 27 | M18x1.5 |
| 77802390 | 35 | 15 | 15 | 1" 12 UNF 2A | 17 | 27 | M24x1.5 |
| 77893860 | 27 | 15 | 10 | 1" 12 UNF 2A | 16 | 27 | M22x1.5 |
| 77802408 | 35 | 15 | 15 | 1 ½" 16 UNF 2A | 25 | 41 | M38x1.5 |

The sealing surface for block mounting should be in accordance with ISO 6415.

