Duplex Filter
FDP250/FDP200

Nominal pressure 200/250 bar (2850/3560 psi), nominal size up to 400 according DIN 24550

High performance filters for modern hydraulic systems
Features

High performance filters for modern hydraulic systems

- Modular system
- Compact design
- Minimal pressure drop through optimal flow design
- Visual/electrical/electronic maintenance indicator
- Threaded connections
- Change over valve on upstream side
- Ergonomic switch-over handle with safety lock and pressure compensation
- User-optimized one-hand-operation
- Equipped with highly efficient filter elements
- Beta rated elements according to ISO 16889 multipass test
- Elements with high differential pressure stability and dirt holding capacity
- Worldwide distribution

Type Code

F     S     P     315     N     010     -     D     B     015     S3155     -     50     N     10

Filter function
P   High pressure
R   Low pressure
S   Suction filter
V   Suction filter
T   Tank filter(built-in)

Filter type
S   Standard Filter
D   Duplex filter

Filter-Nominal size Value Nominal size / 10
010 - NG100
016 - NG160
025 - NG250
035 - NG350
040 - NG400
060 - NG600
063 - NG630
100 - NG1000

Filter element size
D - DIN

Design of filter housing
A. Filter housing from below
B. Filter housing upwards
C. Filter housing upwards large

Housing style
013 HD with bypass, el. indicator
015 HD without bypass, el. indicator
058 ND with bypass, el. indicator

pressure in bar

Filter mesh
03 fineness 03µm
10 fineness 10µm

Sealing
N    NBR
F    FPM
E    EPDM
V    V

Indicator setting
Value in 0,1 bar
e.g. 22 = 2,2 bar
e.g. 50 = 5,0 bar

Indicator type
S3115 400 bar, opt./el., Change-over
S3154 160 bar, opt./el. NC/NO
S3155 400 bar, opt./el., NC/NO
Technical specifications

Design: line mounting filter
Nominal: 200 bar
Test pressure: 260 bar
Temperature range: -10 °C to +120 °C
(Other temperature ranges on request)
Bypass setting: $\Delta p \leq 7 \text{ bar} \pm 10\%$
Filter head material: GGG
Filter housing material: St
Sealing material: NBR/PTFE
Maintenance indicator setting: $\Delta p \leq 5 \text{ bar} \pm 10\%$
Electrical data of maintenance indicator:
Max. voltage: 250 V AC/200 V DC
Max. current: 1 A
Contact load: 70 W
Type of protection: IP 65 in inserted and secured status
Contact: normally open/closed
Cable sleeve: M20x1.5

The switching function can be changed by turning the electric upper part by 180° (normally closed contact or normally open contact). The state on delivery is a normally closed contact. By inductivity in the direct current circuit the use of suitable protection circuit should be considered.

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 will 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 EC (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 EC Article 9). If you consider to use other fluids please contact us for additional support.

Subject to technical alteration without prior notice.
Dimensions

All dimensions except “C” in mm.

<table>
<thead>
<tr>
<th>Type</th>
<th>A</th>
<th>B</th>
<th>C*</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
<th>P</th>
<th>R</th>
<th>S</th>
<th>T</th>
<th>U</th>
<th>Gew. [kg]</th>
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<tbody>
<tr>
<td>FDP250N010</td>
<td>78</td>
<td>38</td>
<td>G1</td>
<td>370</td>
<td>427</td>
<td>80</td>
<td>27</td>
<td>66</td>
<td>144</td>
<td>182</td>
<td>M8x15</td>
<td>55</td>
<td>90</td>
<td>10</td>
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<td>86</td>
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<td>50</td>
<td>G1½</td>
<td>311</td>
<td>363</td>
<td>110</td>
<td>30</td>
<td>110</td>
<td>160</td>
<td>280</td>
<td>M12x18</td>
<td>62</td>
<td>140</td>
<td>28</td>
<td>210</td>
<td>136</td>
<td>–</td>
<td>–</td>
<td>–</td>
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<tr>
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<td>G1½</td>
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<td>463</td>
<td>110</td>
<td>30</td>
<td>110</td>
<td>160</td>
<td>280</td>
<td>M12x18</td>
<td>62</td>
<td>140</td>
<td>28</td>
<td>210</td>
<td>136</td>
<td>–</td>
<td>–</td>
<td>–</td>
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<tr>
<td>FDP200N040</td>
<td>78</td>
<td>50</td>
<td>DN 38</td>
<td>562</td>
<td>614</td>
<td>110</td>
<td>30</td>
<td>110</td>
<td>160</td>
<td>280</td>
<td>M12x18</td>
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<td>140</td>
<td>28</td>
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<td>136</td>
<td>35,7</td>
<td>69,85</td>
<td>M12x20</td>
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</table>

* SAE-Flanschanschlüsse auf Anfrage

Maintenance indicators

Differential pressure Indicators with optical and electrical indication

Material lower section: CuZn
Material upper section: PA6

40* = 40 mm wide

<table>
<thead>
<tr>
<th>S3154, S3155</th>
<th>S3115-M12x1</th>
</tr>
</thead>
</table>

Contact type: normally open/normally closed 2 setting points
Contact type: Change-over contact

1. Setting point at 75 % of the indicating pressure (normally open)
2. Setting point at 100 % of the indicating pressure (normally closed)

Max. Voltage: 10-30 V DC
Max. current: 1 A
Max. Contact load: 20 W
Type of protection: IP65 in inserted and secured status
Plug connection: M12x1, 4-pole

LED 1*: Ready, LED green
LED 2*: Setting point 75%, LED yellow
LED 3*: Setting point 100%, LED red

Max. Voltage: 150 V
Max. current: 1 A
Max. Contact load: 20 W
Type of protection: IP65 in inserted and secured status
Plug connection: M12x1, 4-pole
Installation, operating and maintenance instructions

1. Filter installation
When installing the filter make sure that sufficient space is available to remove filter element and filter housing. Preferably the filter should be installed with the filter housing pointing downwards. The maintenance indicator must be visible.

2. Connecting the electrical maintenance indicator
The electrical indicator is connected via a 2-pole appliance plug according to DIN EN 175301-803 with poles marked 1 and 2. The electrical section can be inverted to change from normally open to normally closed position or vice versa.

3. When should the filter element be replaced?
1. Filters equipped with visual and electrical maintenance indicator: During cold starts, the indicator may give a warning signal. Press the red button of the visual indicator once again only after operating temperature has been reached. If the red button immediately pops up again and/or the electrical signal has not switched off after reaching operating temperature the filter element must be replaced after the end of the shift.
2. Please always ensure that you have original Parker spare elements in stock: Disposable elements cannot be cleaned.

4. Element Replacement
Note: The maintenance indicator monitors the filter side in operation, which is identified by the position of the switching lever catch. The change-over transfer valve must be switched prior filter servicing. Now the signal of the maintenance indicators cancelled and the red button can be repressed again:
1. Operate and hold pressure equalizing lever located behind switching lever. Pull catch knob and swivel switching lever. Engage the catch on the clear filter side. Place through or drip pan underneath to collect leaving oil.
2. Loosen vent screw of the filter side not in use by 2-3 turns; max. until contact is made with the safety stop.
3. Unscrew filter housing by turning counterclockwise. Clean the housing using a suitable cleaning solvent.
4. Remove filter element by pulling down carefully.
5. Check o-ring on the filter housing for damage. Replace, if necessary.
6. Make sure that the order number on the spare element corresponds to the order number of the filter name-plate. To ensure no contamination occurs during the exchange of the element first open the plastic bag and push the element over the spigot in the filter head. Now remove plastic bag.
7. Lightly lubricate the thread of the filter housing and screw onto the filter head completely. After that unscrew the filter housing 1/8 to 1/2 return.
8. To refill the filter chamber, operate only the pressure equalizing lever (leave the switching lever arrested in its catch) long enough for the medium to emerge bubble-free from the vent bore.
9. Tighten vent screw. Check filter for leaks by operating the pressure equalizing lever once again.
## Spare parts list

### Order Numbers for spare parts

<table>
<thead>
<tr>
<th>position</th>
<th>Description</th>
<th>Order Number</th>
</tr>
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<tbody>
<tr>
<td><strong>Filter element</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collapse pressure p = 20 bar: Q</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Collapse pressure p = 210 bar: QH</td>
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</tr>
<tr>
<td>Element NG 100, 3µm</td>
<td>FDAE3A02QH</td>
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<tr>
<td>Element NG 100, 10µm</td>
<td>FDAE3A10QH</td>
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<tr>
<td>Element NG 160, 3µm</td>
<td>FDBE1A02QH</td>
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<tr>
<td>Element NG 160, 10µm</td>
<td>FDBE1A10QH</td>
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</tr>
<tr>
<td>Element NG 250, 3µm</td>
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<td>Element NG 250, 10µm</td>
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<tr>
<td>Element NG 400, 3µm</td>
<td>FDBE3A02QH</td>
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<tr>
<td>Element NG 400, 10µm</td>
<td>FDBE3A10QH</td>
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<tr>
<td><strong>Sealing Kit</strong></td>
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<td>Sealing Kit FDP250N010</td>
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<td><strong>Maintenance indicator, complete unit</strong></td>
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<tr>
<td>2 switch points S3155-50</td>
<td>ZKF99-00000030</td>
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<tr>
<td>1 two-way contact S3115-50M12</td>
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<td><strong>Maintenance indicator, only electrical unit</strong></td>
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<tr>
<td>2 switch points S3155-50</td>
<td>ZKF99-00000033</td>
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<tr>
<td>1 two-way contact S3115-50M12</td>
<td>ZKF99-00000037</td>
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