



High-Pressure Safety Filters



HD 040 · HD 081 HD 150

- In-line mounting
- Operating pressure up to 315 bar
- Nominal flow rate up to 100 l/min

Description

Application

In the high-pressure circuits of hydraulic systems.

Performance features

Functional

protection: The high-pressure safety filter retains residues

remaining in the system due to installation or after repairs, and intake chips from pumps (especially gear pumps). This prevents functional failures or faults on downstream components, particularly control/regulation

or throttle valves.

Protection

against wear: For wear protection, a fine filter should be installed

elsewhere in the system.

Filter elements

Flow direction from outside to centre. The star-shaped pleating of the filter material provides:

- large filter surfaces
- low pressure drop
- high dirt-holding capacities
- long service life

Materials

Housing: steel, zinc plated
Seals: NBR (Viton on request)

Filter media: stainless steel wire mesh (1.4301)

Selection Chart

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Part No. Nothing flow drop can Dictive up. Carding Dieszin of ph. Base Diwersion Procession of Diversion of D															eight Remarks	
	I/min		μm	cm ²	bar		mm	mm	mm	mm	mm	mm			kg	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
HD 040-110	40	D1 /1	100¹	60	-	M22 x 1,5	12	-	7	15	63	97	36/36	1	0,45	2
HD 081-111	80	D1 /2	1001	125	-	M26 x 1,5	12	52	7,5	18	11	130	46/46	1	1,10	2
HD 150-01	100	D1 /3	100¹	300	-	G3/4	12	65	10,5	-	-	142,5	55/36	1	2,00	-
HD 150-50	100	D1 /4	60	320	3,5	G3/4	12	65	10,5	-	-	142,5	55/36	2	1,90	-

Remark:

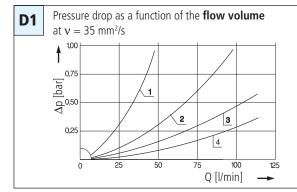
The filters listed in this chart are standard filters. If modifications are required, e.g. different filter finenesses, we kindly ask for your request.

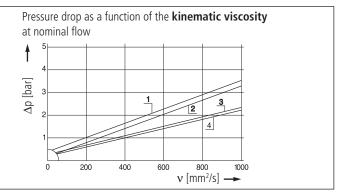
¹ Filter element differential pressure stable up to 160 bar

² Connection according to DIN 3861

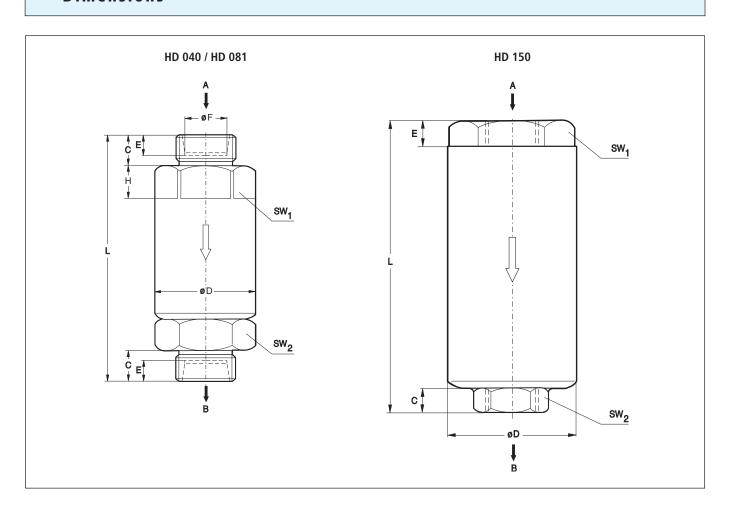
Diagrams

$\Delta p\text{-curves}$ for the filters in Selection Chart, column 3



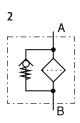


Dimensions



Symbols





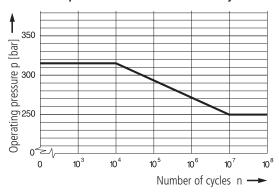
Characteristics

Operating pressure

0 ... 250 bar, min. 10⁷ pressure cycles Nominal pressure according to DIN 24550

0 ... 315 bar, min. 10⁴ pressure cycles Quasi-static operating pressure

Permissible pressure for other numbers of cycles



Nominal flow rate

Up to 100 l/min (see Selection Chart, column 2) The nominal flow rates indicated by ARGO-HYTOS are based on the following features:

- closed by-pass valve at $\nu \leq$ 200 mm²/s
- flow velocity in the connection lines: up to 250 bar ≤ 8 m/s up to 450 bar ≤ 12 m/s

Filter fineness

 $60~\mu m$, $100~\mu m$

(see Selection Chart, column 4)

Hydraulic fluids

Mineral oil and biodegradable fluids (HEES and HETG, see info-sheet 00.20)

Temperature range

- 30 °C ... + 100 °C (temporary - 40° C ... + 120 °C)

Viscosity at nominal flow rate

at operating temperature: v < 60 mm²/s
 as starting viscosity: v_{max} = 1200 m

read from the diagram D (pressure drop as a function of the kinematic viscosity) as follows: Find the 70% Δp of the cracking pressure of the by-pass valve on the vertical axis. Draw a horizontal line so that it intersects the Δp curve at a point. Read this point on the horizontal axis for the viscosity.

Mounting position

As desired

Connection

Threaded ports according to ISO 228, DIN 13 and/or DIN 3861. Sizes see Selection Chart, column 7 (other port threads on request).

Quality Assurance

Quality management according to DIN EN ISO 9001

To ensure constant quality in production and operation, ARGO-HYTOS filter elements undergo strict controls and tests according to the following DIN and ISO standards:

DIN ISO 2941 Verification of collapse/burst resistance
Verification of material compatibility with fluids
DIN ISO 3724 Verification of flow fatigue characteristics

ISO 2942 Verification of fabrication integrity (Bubble Point Test)
ISO 3968 Evaluation of pressure drop versus flow characteristics
Multi-Pass-Test (evaluation of filter fineness and dirt-holding capacity)

Before release into the series production the filter casing is tested for fatigue strength in our pressure pulse test rig. Various quality controls during the production process guarantee the leakfree function and solidity of our filters.

Our engineers will be glad to advice you in questions concerning filter application, selection as well as the cleanliness class of the filtered medium attainable under practical operating conditions.

Illustrations may sometimes differ from the original. ARGO-HYTOS is not responsible for any unintentional mistake in this specification sheet.

