



High-Pressure Safety Filters



HD 040 · HD 081 HD 150

- In-line mounting
- Operating pressure up to 7250 psi
- Nominal flow rate up to 26.4 gpm

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 center. 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 (FKM on request)
Filter media:	stainless steel wire mesh (1.4301)

Selection Chart

			/	/ /	/											
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Part NG). NC	minal flow rate	nsion diagram	Dicurve fineness	s suface conner	tion A/D Dim	iension C	nension Dim	ension E Di	mension	iension C	ension H Dim	ension L Widt	n acrossi Syr	lats AF 12 nbol W	eight Remark
	gpm		μm	inch ²	SAE	inch	inch	inch	inch	inch	inch	inch	mm		lbs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
HD 040-710	10.6	D1 /1	60	7.3	-10/-8 ²	0.61	-	0.91	0.48	0.38	2.48	4.00	36/36	1	1.0	1
HD 081-711	21.1	D1 /2	100	19.4	-12/-12 ³	0.47	2.05	0.30	0.71	0.71	0.43	5.16	46/46	1	2.4	1
HD 150-701	26.4	D1 /3	100	46.5	-12/-124	0.47	2.56	0.41	-	-	-	5.51	55/36	1	4.4	1

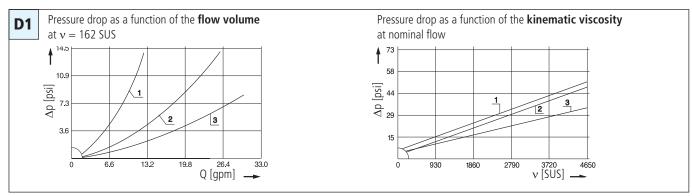
Remark:

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

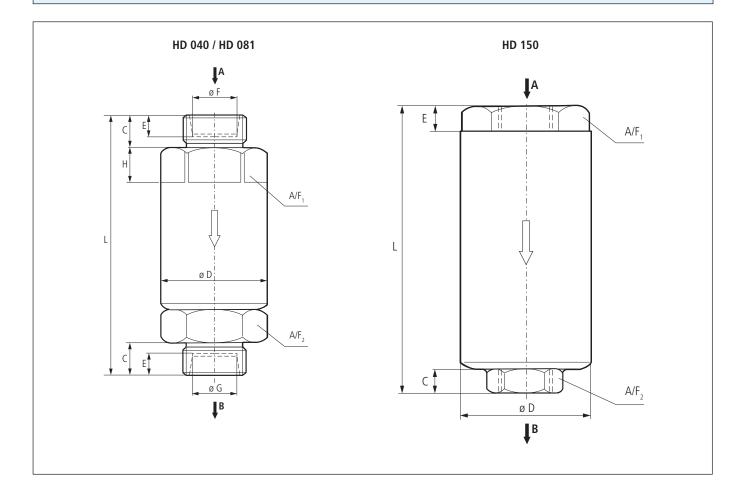
 3 corresponds to $1^{1/_{16}}$ 12 UN-2A / $1^{1/_{16}}$ 12 UN-2A ¹ Filter element differential pressure stable up to 2320 psi $^{\rm 2}$ corresponds to 1-14 UNS-2A / $^{\rm 13}/_{\rm 16}\text{-}16$ UN-2A 4 corresponds to 11/16-12 UN-2B / 11/16-12 UN-2B

Diagrams

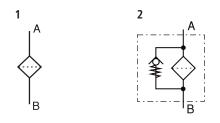
$\Delta p\text{-curves}$ for the filters in Selection Chart, column 3



Dimensions



Symbols



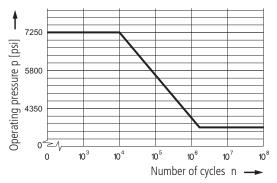
Characteristics

Operating pressure

0 ... 3625 psi min. 2 x 10⁶ pressure cycles Nominal pressure according to DIN 24550

0 ... 7250 psi, min. 10⁴ pressure cycles Quasi-static operating pressure

Permissible pressure for other numbers of cycles



Nominal flow rate

Up to 26.4 gpm (see Selection Chart, column 2) The nominal flow rates indicated by ARGO-HYTOS are based on the following features:

• closed by-pass valve at $v \le 930$ SUS

• flow velocity in the connection lines:

up to 3626 psi	≤ 26.3 ft/s
> 3626 psi	≤ 39.4 ft/s

Filter fineness

60 µm, 100 µm (see Selection Chart, column 4)

Hydraulic fluids

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

Temperature range

- 22 °F ... + 212 °F (temporary - 40 °F ... + 248 °F)

Viscosity at nominal flow rate

- at operating temperature: v < 280 SUS
- as starting viscosity:
- at initial operation:

 $\nu_{\text{max}} = 5560 \text{ SUS}$ The recommended starting viscosity can be 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 SAE standard J514. Sizes see Selection Chart, column 7 (other port threads on request).

Quality Assurance

Quality man	agement according to DIN EN ISO 9001	ISO 3968 ISO 16889	Evaluation of pressure drop versus flow characteristics Multi-Pass-Test (evaluation of filter fineness and				
	stant quality in production and operation, ARGO-HYTOS s undergo strict controls and tests according to the following s:	ISO 23181	dirt-holding capacity) Determination of resistance to flow fatigue using high viscosity fluid				
ISO 2941 ISO 2942 ISO 2943	Verification of collapse/burst pressure rating Verification of fabrication integrity (Bubble Point Test) Verification of material compatibility with fluids	Before release into the series production the filter casing is tested for fati- gue strength in our pressure pulse test rig. Various quality controls during the production process guarantee the leakfree function and solidity of our					

the production process guarantee the leakfree function and solidity of our filters.

Our engineers will be glad to advise 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.

We produce fluid power solutions