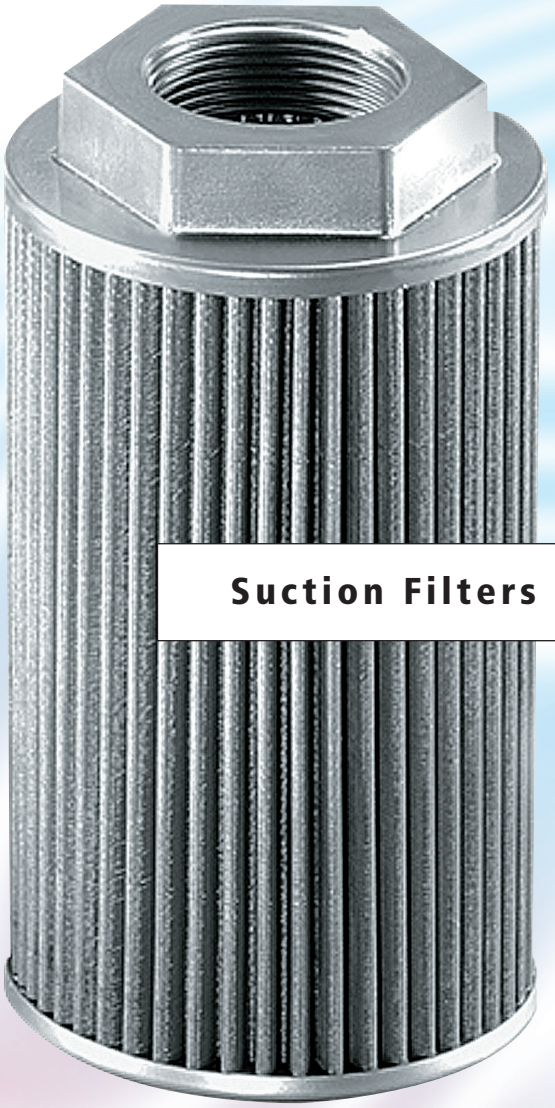
ARGO HYTOS



Suction Filters

AS 010 · AS 025 · AS 040
AS 060 · AS 080 · AS 100
AS 150

- In Tank mounting
- Connection up to G2½
- Nominal flow rate up to 350 l/min

10.10-3e

Description

Application
In the suction line of pumps of hydraulic or lubricating circuits.

Performance features
Protection against
malfunction: By full-flow filtration in the suction line, particularly the pumps are protected from coarse dirt particles that have remained in the system after manufacture or repair, or enter the system when it is filled with oil.

Special features
The robust construction with end caps, inner core, and mesh screen material, all out of metal, offers the following advantages:
- Maximum reliability at increased operating temperatures
- Enormous shock and vibration resistance

Construction
Flow direction from outside to centre. The star-shaped pleating of the filter material results in:
- large filter surfaces
- low pressure drop
- long service life

Filter maintenance
- Cleaning in ultrasonic bath for a few minutes. As an alternative, put suction filter in cleaning agent for approx. 15 minutes and remove dirt from the outside using a brush.
- Then flush with fresh cleaning fluid from the inside to the outside.
- Blow out with compressed air from the inside to the outside.

In any case, be careful that no dirt enters the inner side (clean oil side) of the suction filter.

Selection Chart

Part No.	Nominal flow rate	Pressure drop see diagram **D**/curve no.	Filter fineness	Filter surface	Cracking pressure of by-pass	Connection B	Diameter D	Length L_1	Length L_2	Dimension K	Symbol	Weight	Remarks
	l/min		µm	cm^2	bar		mm	mm	mm	mm		kg	
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
AS 010-00	15	**D1**/1	100	155	-	G½	45	82	60	AF 27	1	0,13	-
AS 025-01	35	**D1**/2	100	420	-	G¾	69,5	91	75	AF 36	1	0,24	-
AS 040-01	60	**D1**/4	100	650	-	G1	69,5	133	117	AF 41	1	0,30	-
AS 040-71	60	**D1**/3	100	650	- 0,3	G1	69,5	133	117	AF 41	2	0,30	-
AS 060-01	90	**D2**/1	100	1030	-	G1¼	70	205	185	AF 50	1	0,42	-
AS 080-01	120	**D2**/2	100	1280	-	G1½	100	182	165	AF 70	1	0,50	-
AS 080-81	120	**D2**/2	100	1400	- 0,3	G1½	100	182	165	AF 70	2	0,50	-
AS 100-01	200	**D2**/4	100	2300	-	G2	100	213	196	AF 70	1	0,60	-
AS 100-81	150	**D2**/3	100	1750	- 0,3	G2	100	213	196	AF 70	2	0,60	-
AS 150-01	350	**D2**/5	100	2300	-	G2½	150	191	165	Ø 82	1	1,40	-

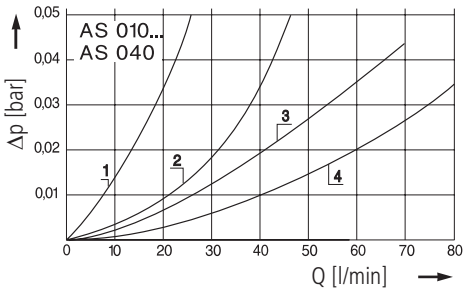
Remarks:
The filters listed in this chart are standard filters. Other designs, e.g. other filter finenesses, available on request.

Diagrams

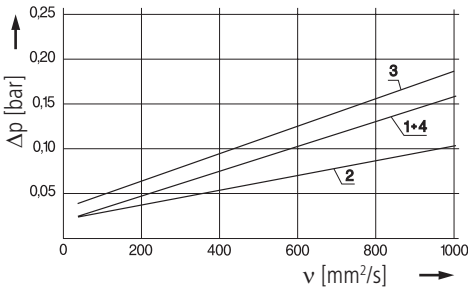
Δp-curves for filters in Selection Chart, column 3

D1

Pressure drop as a function of the **flow volume** at $\nu = 35\ mm^2/s$

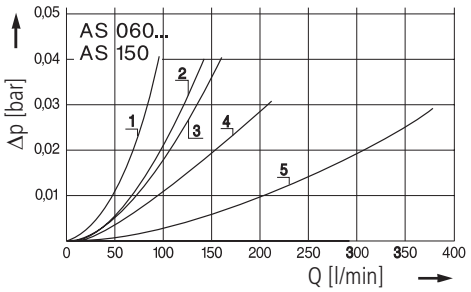


Pressure drop as a function of the **kinematic viscosity** at nominal flow

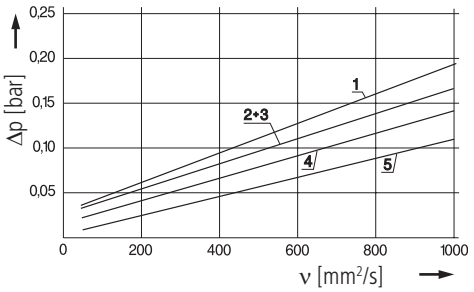


D2

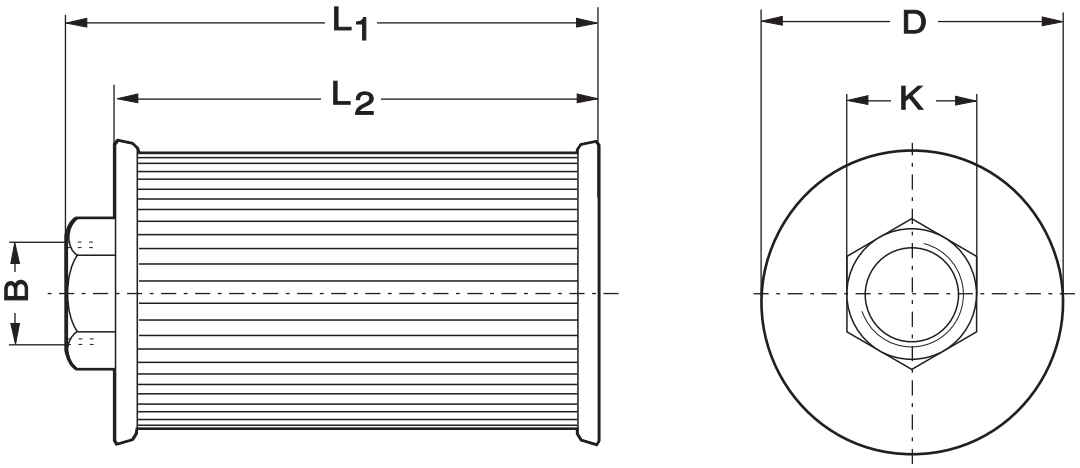
Pressure drop as a function of the **flow volume** at $\nu = 35\ mm^2/s$



Pressure drop as a function of the **kinematic viscosity** at nominal flow



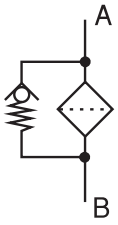
Dimensions



Symbols

1

2



Characteristics

Nominal flow rate
Up to 350 l/min (see Selection Chart, column 2)
The nominal flow rates indicated by ARGO-HYTOS are based on the following features:
- Pressure drop $\Delta p < 0{,}035$ bar at $\nu = 35$ mm²/s
- closed by-pass valve at $\nu \leq 200$ mm²/s
- flow velocity in the connection lines ≤ 1,5 m/s

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

Filter fineness
100 µm

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)

Materials
- AS 010-00 / AS 025-01 / AS 040-01 / AS 060-01 / AS 150-01
  End caps out of steel,
  support mesh out of steel, zinc plated,
  filter mesh out of stainless steel (1.4301)
- AS 080-01 / AS 100-01
  End cap with hexagon out of aluminum,
  bottom end cap out of steel,
  support mesh out of steel, zinc plated,
  filter mesh out of stainless steel (1.4301)
- AS 040-71
  End caps out of steel,
  filter mesh out of stainless steel (1.4301)
- AS 080-81 / AS 100-81
  End cap with hexagon out of aluminum,
  bottom end cap out of steel,
  filter mesh out of stainless steel (1.4301)

Viscosity at nominal flow rate
- at operating temperature: $\nu < 60$ mm²/s
- start-up viscosity: ν_{max} equivalent to the permitted pump inlet pressure (refer to diagram D), Δp to be determined as a function of the viscosity (take pressure loss in connection lines into account!)

Mounting position
Optional; versions equipped with bypass valve preferably in horizontal position. Under all operating conditions (min. oil level, max. inclination) the suction must occur under the oil level.

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 ISO standards:

ISO 2941	Verification of collapse/burst pressure rating
ISO 2942	Verification of fabrication integrity (Bubble Point Test)
ISO 2943	Verification of material compatibility with fluids
ISO 3968	Evaluation of pressure drop versus flow characteristics
ISO 16889	Multi-Pass-Test (evaluation of filter fineness and dirt-holding capacity)
ISO 23181	Determination of resistance to flow fatigue using high viscosity fluid

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.

We produce fluid power solutions
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Subject to change
10.10-3e · 0213