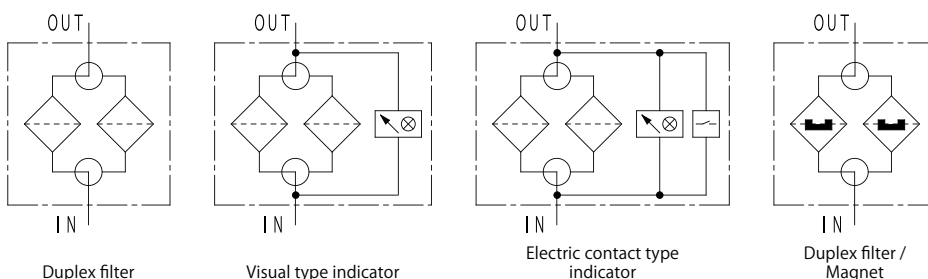


Duplex Filter proven in heavy industry field



Characteristics

- Element replacement without system shut-down is available by handle switching of two filters
- Welded structure filter case
- Clogging indicator and magnet for magnetic particle removal are available (option)
- Pipe connection type is JIS 20K SOP, FF Flange in standard model
- Several types of flange rating are selectable: ANSI, JPI, JIS (option)



★ Refer to P.222 for hydraulic graphic symbol of other combination of optional equipment.

SPECIFICATION

Max working pressure	MPa	2.0
Working temperature	Standard	°C -10 ~ 90
	High temperature*1	°C -10 ~ 150
Indicator working pressure	MPa	0.3
Cracking pressure	MPa	Non bypass
Allowable differential pressure of filter element	MPa	0.7
Flow direction of filter element	C-Fiber, Paper, Wire gauze	IN → OUT
	Notch wire	OUT → IN
Extract direction of filter element		Upward

Inner diameter	04	06	08	10	12	16	20	24	28	32
Standard flow rate ☆	ℓ /min		70	140	340	730	1750			
Main material	Body	STPG, STKM, SS								
	Cover	STKM, SS								
	Cock	FCD								
Coating	Aqua blue									
Weight	kg	24	35	63	170	250				

☆ Standard flow rate is estimated by the condition of density: 0.86, kinematic viscosity: 32mm²/s, filtration rating: 10U, pressure drop: lower than 0.05MPa.

(Since it is adjusted by characteristic of each product, value can be different in some cases.)

★ Please ask us for compatibility of fluid other than mineral oil.

MODEL CODE

(Model code example)

COS - H - 06 - A - 10U - R A E M

Code	Inner diameter
04	15A
06	20A
08	25A
10	32A
12	40A
16	50A
20	65A
24	80A
28	90A
32	100A

Code	Flow direction
A	IN → OUT (Paper or Wire gauze)
B	OUT → IN (Notch wire (Dimple wire))

Code	Filtration rating
C-Fiber	
8C	8 μm
25C	25 μm
Paper	
10U	10 μm
20U*2	20 μm
40U*2	40 μm

Refer to P.15 -16 for detail information of filter element.

Code	Filtration rating
Wire gauze	
5UW	5 μm
10UW	10 μm
20UW	20 μm
40UW	40 μm
50UW	50 μm
200W	200Mesh
150W	150Mesh
100W	100Mesh
60W	60Mesh
Notch wire (Dimple wire)	
50UK	50 μm
200K	200Mesh
150K	150Mesh
100K	100Mesh
60K	60Mesh

Code	Option
① Handle	
Blank	Standard position
R	Opposite position
② Flange rating*3	
Blank	JIS 20K SOP,FF (SS400)
A	ANSI 150LB SO,RF (A105)*4
B	ANSI 300LB SO,RF (SFVC2A)*4
C	JPI 150LB SO,RF (A105)
F	JPI 300LB SO,RF (SFVC2A)
H	JIS 20K SOH,RF (S25C)
③ Indicator	
Blank	Non
I	Visual type
E	Electric contact type
D	Electric contact type (Micro capacity)
④ Magnet	
Blank	Non
M	Magnet

* 1 Sealing parts: FKM, only for wire gauze element, indicator is not available (Max oil temperature is visual type: 130°C, electric contact type: 90°C) * 2 Not available for water-glycol based oil and high water based fluid

* 3 In case of JIS 20K SOP, FF: Different diameter companion flange is attached for inner diameter of 04, 08, 12, 20, 28. Moreover, only inner diameter of 06, 10, 16, 24, 32 are available for other flange rating (companion flange is not included).

* 4 Spiral serrated finish

FLOW RATE GRAPH

Condition

Fluid type : ISO VG32
Oil temperature : 40°C

(Density: 0.86,
Kinematic
viscosity: 32mm²/s)

How to calculate of pressure drop

Estimate pressure drop of filter assembly by following equation:

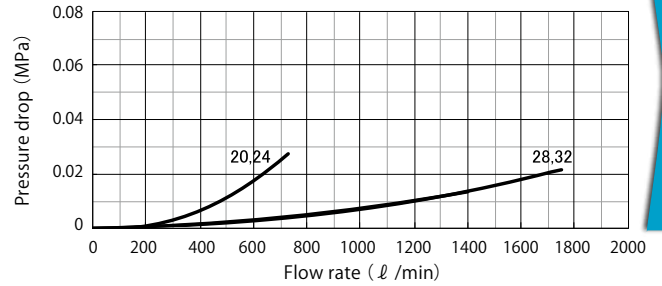
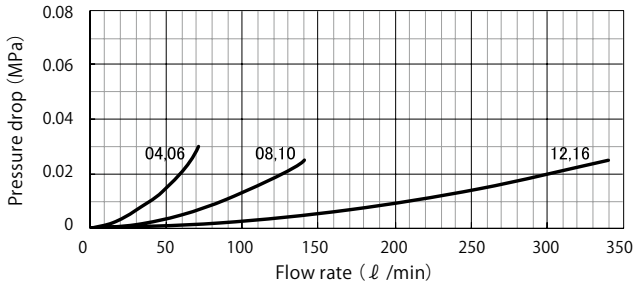
$$\text{Pressure drop of filter assembly} = \text{① Pressure drop of filter housing} + \text{② Pressure drop of filter element}$$

Estimate pressure drop of filter assembly by following equation if required condition is different:

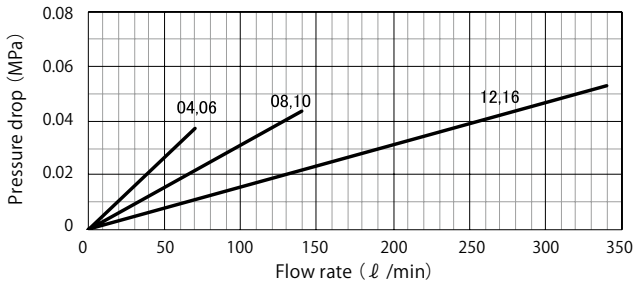
$$\begin{aligned} \text{Pressure drop of filter housing} &= \frac{\text{Fluid density}}{0.86} \times \text{Pressure drop of filter housing at density of 0.86} \\ \text{Pressure drop of filter element} &= \frac{\text{Fluid density}}{0.86} \times \frac{\text{Kinematic viscosity}}{32} \times \text{Pressure drop of filter element at density of 0.86, kinematic viscosity of 32} \end{aligned}$$

★ Pressure drop of filter housing is proportional to fluid density, and pressure drop of filter element is proportional to fluid density and kinematic viscosity.

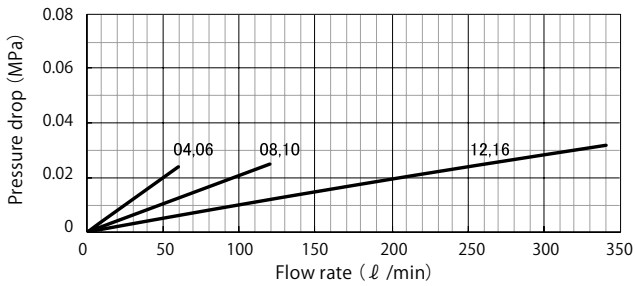
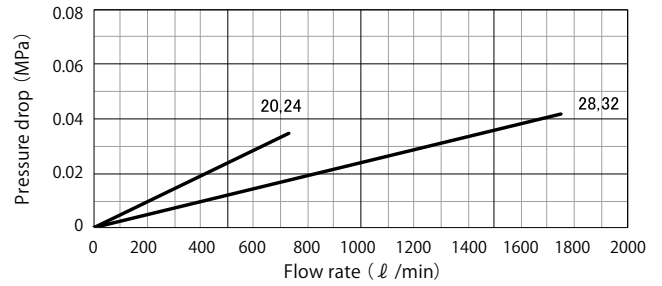
① Pressure drop of filter housing



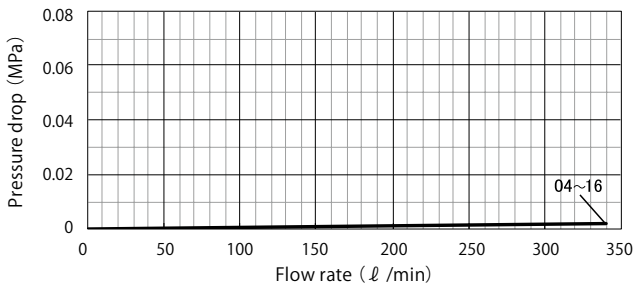
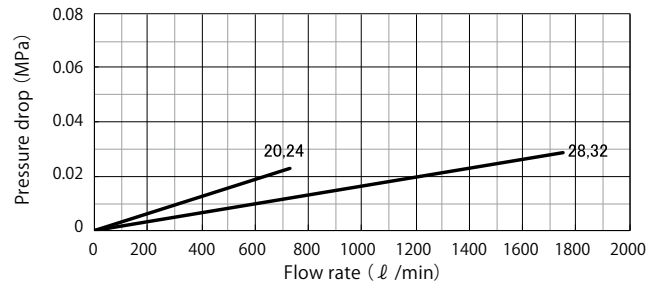
② Pressure drop of filter element



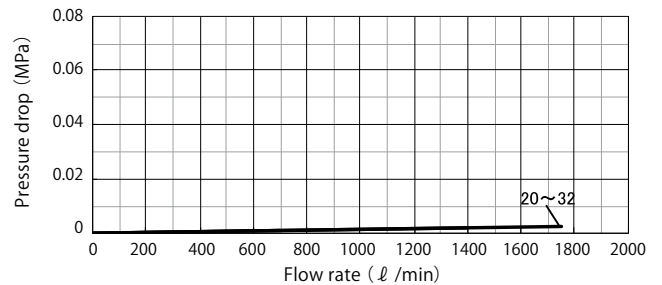
8C
8µm



10U
10µm



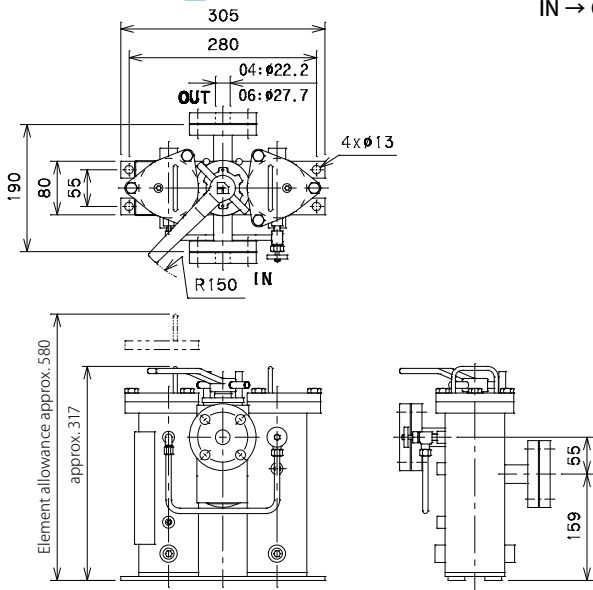
150W
150Mesh*1



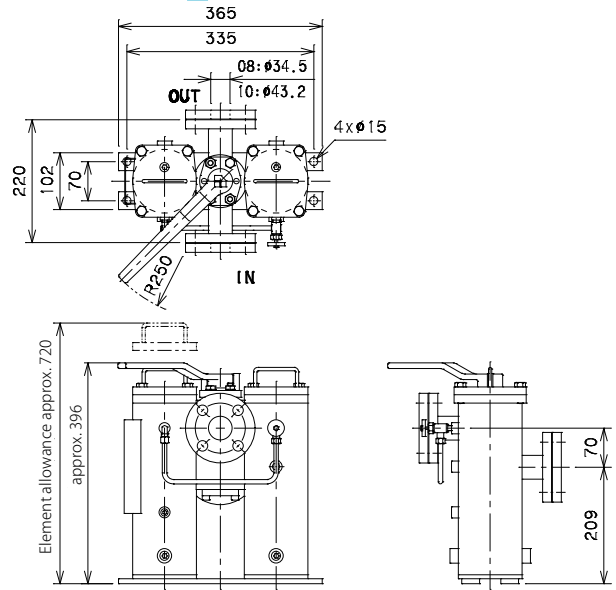
* 1 Pressure drop of wire gauze element is described with one line since the value is low and there is no difference at each filter size.

COS-H-04,06-A-□□

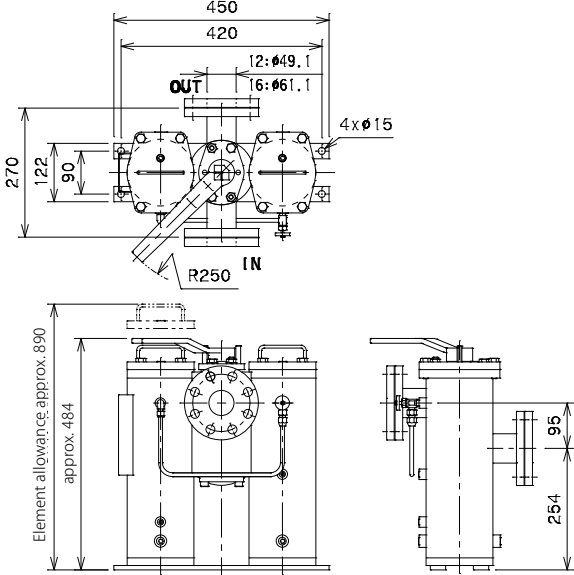
A : Flow direction
IN → OUT



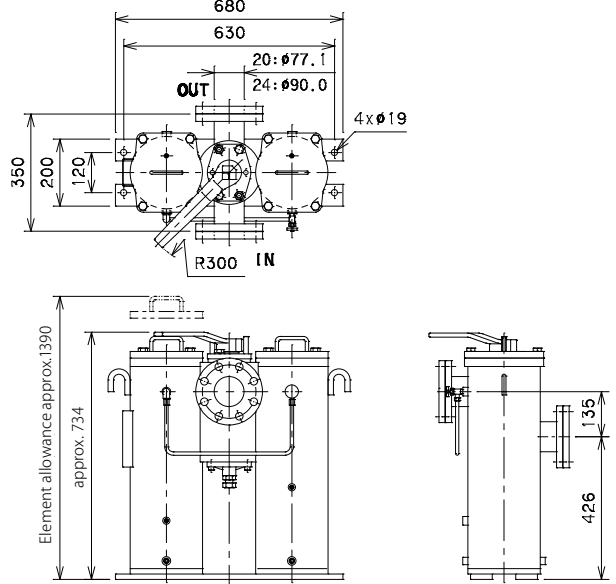
COS-H-08,10-A-□□



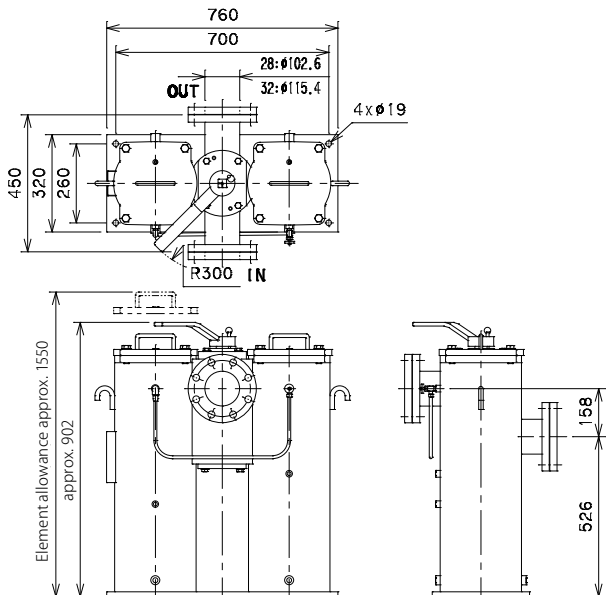
COS-H-12,16-A-□□



COS-H-20,24-A-□□



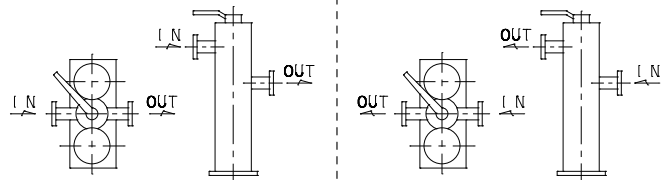
COS-H-28,32-A-□□



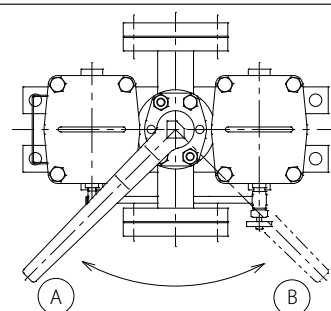
Flow direction and In/Outlet position

A : Flow direction IN → OUT
(Paper, Wire gauze)

B : Flow direction OUT → IN
(Notch wire (Dimple wire))



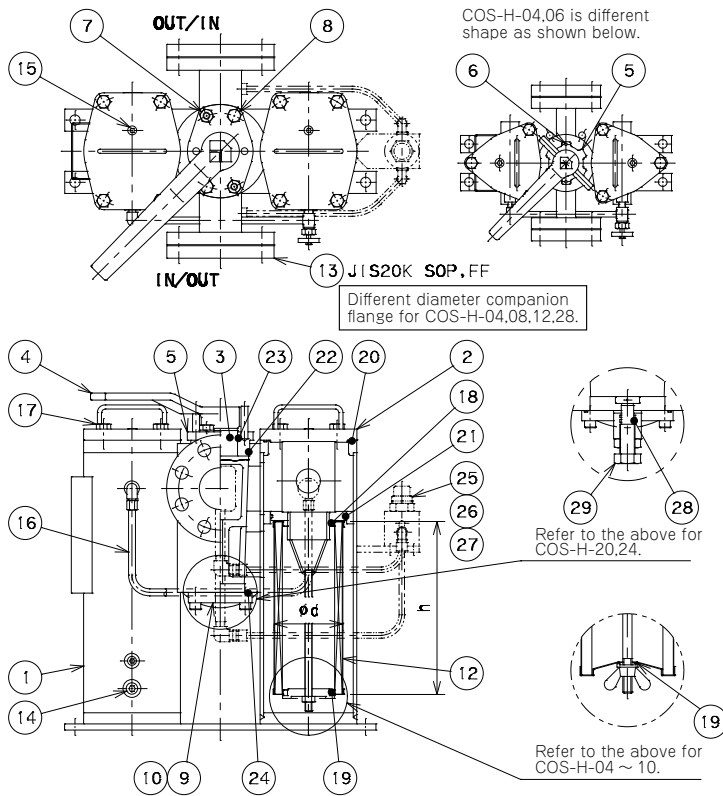
Handle position and operating condition



☆ At position shown in left figure
(for standard handle position)

Mark	Left filter	Right filter
(A)	Filtration	Closed
(B)	Closed	Filtration

CROSS SECTION



PARTS LIST

No.	Item	Qty
1	Body	1
2	Cover	2
3	Cock	1
4	Change handle	1
5	Cock flange	1
6	Cap bolt	2
7	Stud bolt, Nut *1	2
8	Bolt	2
9	Closing plug (Inner diameter : 04,06)	1
10*1	Closing flange (Inner diameter : 08 ~ 32)	4
12	Element	2
13	Companion flange (JIS 20K SOP,FF only)	2
14	Drain plug	4
15	Air vent plug	2
16	Equalizer pipe	1
17	Bolt	1 set
18	Packing	2
19	Packing	2
20	O-ring	2
21	O-ring	2
22	O-ring	1
23	O-ring	1
24	O-ring	1
25	Indicator	1
26	O-ring	1
27	O-ring	1
28	O-ring	1
29	Push rod	1



Cock leakage

Leakage	Model code	Leakage (cc/min)	Conditions
	COS-H-04,06	MAX.30	2MPa
	COS-H-08,10	MAX.50	
	COS-H-12,16	MAX.100	Kinematic viscosity 35mm ² /s
	COS-H-20,24	MAX.125	
	COS-H-28,32	MAX.200	

*Leakage from the operating filter to the standby filter through cock clearance is estimated in the table.

ELEMENT SIZE

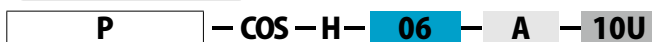
Element Model code	Size(mm)		Weight*2 (kg)
	φ d _i	h ₁	
P-COS-H-04,06-A,B	62.2	150	0.33
P-COS-H-08,10-A,B	82.2	200	0.56
P-COS-H-12,16-A,B	102.2	250	0.93
P-COS-H-20,24-A	153	400	2.44
P-COS-H-20,24-B	147	423	3.20
P-COS-H-28,32-A,B	202	550	3.84

SEALING PARTS LIST

No.	18	19	20	21	22	23	24	26	27	28	13	Item code of sealing parts set*4		
												Material	SP No.: 18 ~ 21	SA*5 No.: 13, 18 ~ 24, 28
Standard*3	Special packing NBR		JIS B2401 1A							Special packing non asbestos				
Model code	Special packing NBR		JIS B2401 1A							Special packing non asbestos				
COS-H-04,06	t8xφ38.5/φ32.5	t2xφ14/φ6.5	G70	G60	P38	P25	—			—	JIS20K-20A	NBR SSF000614	SSF000788	
COS-H-08,10	t8xφ58.5/φ43	t2xφ14/φ8.5	G100	G80	P50	P30	P55			—	JIS20K-32A	FKM SSF000689	SSF000607	
COS-H-12,16	t8xφ73.5/φ61	A t8xφ73.5/φ61	G125	G105	G80	P50	G80	P18	P14	—	JIS20K-50A	NBR SSF000599	SSF000791	
		B t2xφ17/φ8.5										FKM SSF000930	SSF001590	
COS-H-20,24	t2xφ140/φ116	t2xφ140/φ116	G180	G155	G120	P55	G120			P18	JIS20K-80A	NBR SSF000645	SSF000878	
COS-H-28,32	t2xφ202/φ162	t2xφ202/φ162	G250	G210	G135	G55	G140			—	JIS20K-100A	FKM SSF001013	SSF001213	
												NBR SSF000592	SSF000620	
												FKM SSF001588	SSF001592	

MODEL CODE OF SPARE PARTS

Replacement element (Model code example)



("P" represents filter element)



Sealing parts set (Model code example)



Code	Sealing parts set
SP	For element replacement
SA	For overhaul



★ Model code of replacement element exists two types: "Individual code" and "Common code", however it represents same product.

"Individual code": Used in drawings and nameplate as shown in <Model code example>.

"Common code": Used in vouchers and tag Refer to [Spare Element List] on P152 for "Common code".

★ Refer to the [MODEL CODE] table on the previous page for code selection.

★ Sealing parts set for element replacement (CODE:SP) is for 1 filter case. 2 sets are required for 1 duplex filter assembly.

* 1 Hex bolt for COS-H-28,32 * 2 Weight of "Paper" element * 3 Standard for NBR. For other material, conform to the standard. * 4 Sealing parts are available as "Sealing parts set" only. We do not provide single part individually. * 5 Packing is not included for flange rating of JIS 20K SOP, FF.