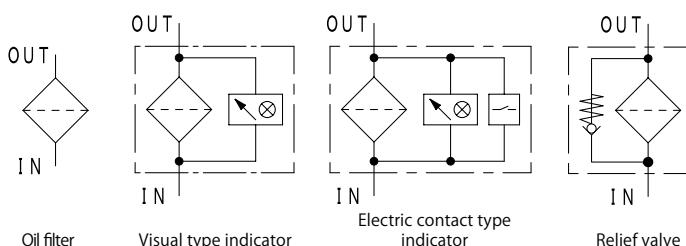


The Highest Pressure Model of TAISEI Filter



Characteristics

- Applicable to 42MPa that is suitable to hydraulic testing machines
- Directly installable on manifold block *1
- Element size is selectable depending on flow rate and contaminant amount
- Install position of clogging indicator (option) is selectable on left/right side
- Element of 4201 can be used in common with GC and SH model.
- Drain port is selectable: with/without.



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

SPECIFICATION

| | | |
|--|---------------------|------------------------------------|
| Max working pressure | MPa | 42.0 |
| Repetition durability test | | 0 ~ 42.0MPa x10 ⁷ times |
| Working temperature | Standard | °C -10 ~ 90 |
| | High temperature *2 | °C -10 ~ 150 |
| Indicator working pressure | Standard | MPa 0.3 |
| | High pressure | MPa 0.7 |
| Cracking pressure | Standard | MPa 0.35 |
| | High pressure | MPa Non bypass |
| Allowable differential pressure of filter element | Standard | MPa 0.7 |
| | High pressure | MPa 21.0 |
| Flow direction/Extract direction of filter element | | OUT → IN / Upward |

| | | | | |
|-----------------------------|---------------------------|------------|-------|----|
| Inner diameter | 12Z-4 | 12Z-5 | 12Z-6 | |
| Standard flow rate ☆ ℓ /min | 300 | 330 | 350 | |
| Main material | Body | FCD | | |
| | Case | Steel pipe | | |
| | Upper cover | SF | | |
| Coating | Protective film treatment | | | |
| Weight | kg | 30 | 33 | 36 |

☆ 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.)

MODEL CODE

<Model code example>

F - **4201** - **12Z** - **4** - **3C** - **RE V Y**

| Code | Fluid type |
|-------|--------------------------------------|
| Blank | Mineral oil |
| F | Phosphate ester fluid |
| G | Water glycol fluid |
| C | Fatty ester fluid |
| W | High water base fluid |
| R | Refrigerant oil *3 |
| S | Fuel (Kerosene, Gas oil, Diesel oil) |
| B | Brake fluid |

| Code | Inner diameter |
|------|----------------|
| 12Z | 40A Equivalent |

| Code | Case length |
|------|-------------|
| | 4 |
| | 5 |
| | 6 |

| Code | Filtration rating |
|-----------------------|-------------------|
| C-Fiber | |
| 3C | 3 μm |
| 8C | 8 μm |
| 25C | 25 μm |
| High pressure C-Fiber | |
| 3CH | 3 μm |
| 8CH | 8 μm |
| 25CH | 25 μm |
| Paper | |
| 10U | 10 μm |
| 20U *4 | 20 μm |
| 40U *4 | 40 μm |

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

| Code | Option |
|-------------------|-----------------------|
| Blank | Indicator *5 |
| Blank | Closing plug |
| RI | Visual type |
| LI | |
| RE | Electric contact type |
| LE | Electric contact type |
| RD | Electric contact type |
| LD | (Micro capacity) |
| ② Relief valve *6 | |
| K | Non |
| V | Relief valve |
| ③ Drain | |
| Blank | Attached |
| Y | Non |

* 1 Surface roughness of manifold should be lower than Ra1.6 * 2 Sealing parts: FKM, only for wire gauze element, indicator and relief valve are not available (Max oil temperature is visual type: 130°C, electric contact type: 90°C) * 3 Refrigerant should be specified * 4 Not available for water-glycol based oil and high water based fluid * 5 Indicator position: Right/Left is as seen from Inlet side * 6 Relief valve is not available if selecting high pressure element

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:

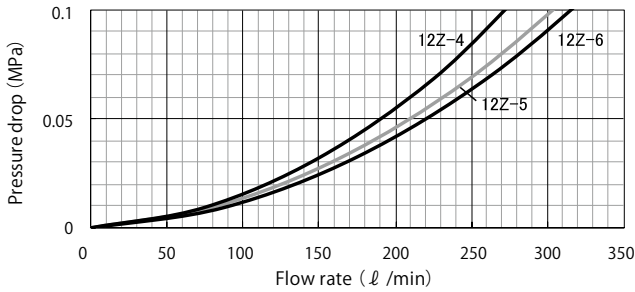
$$\text{Pressure drop of filter assembly} = \text{① Pressure drop of filter housing} + \text{② Pressure drop of filter element}$$

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

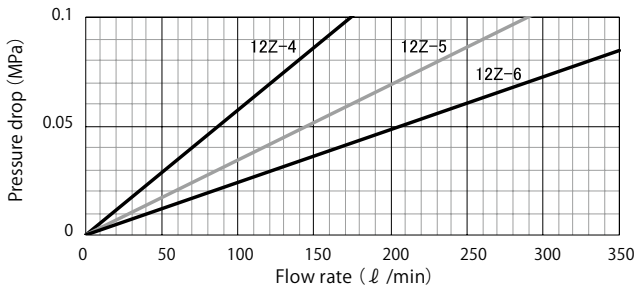
$$\begin{aligned} \text{Pressure drop of filter housing} &= \frac{\text{Fluid density}}{0.86} \times \text{Pressure drop of filter housing at density of 0.86} \\ \text{Pressure drop of filter element} &= \frac{\text{Fluid density}}{0.86} \times \frac{\text{Kinematic viscosity}}{32} \times \text{Pressure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

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

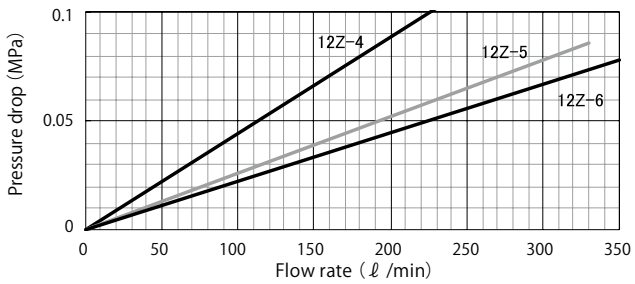
① Pressure drop of filter housing



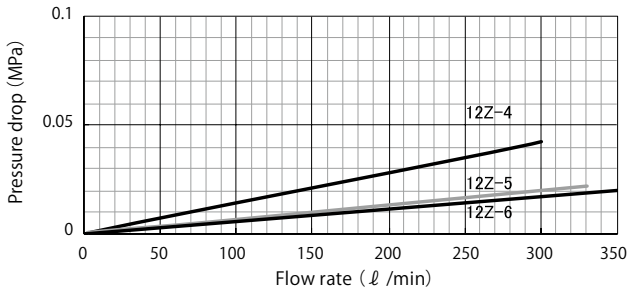
② Pressure drop of filter element



3C
3 μm



8C
8 μm

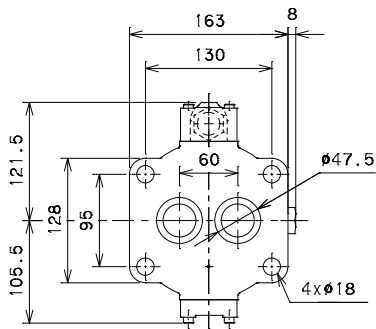
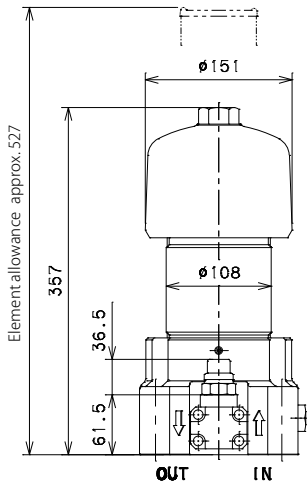


10U
10 μm

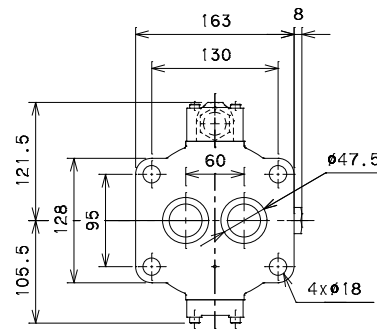
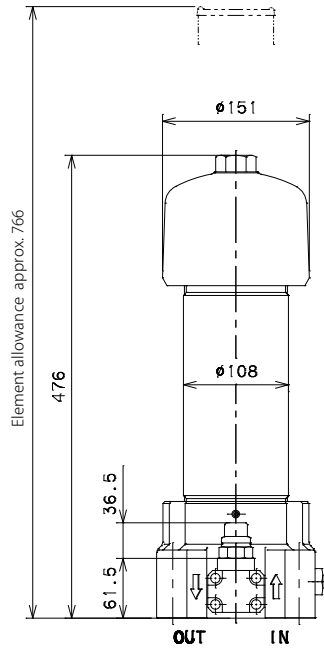
4201

4201-12Z-4-□□-LI□

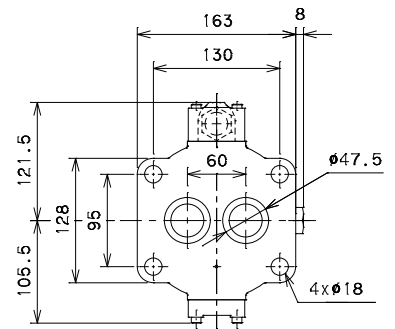
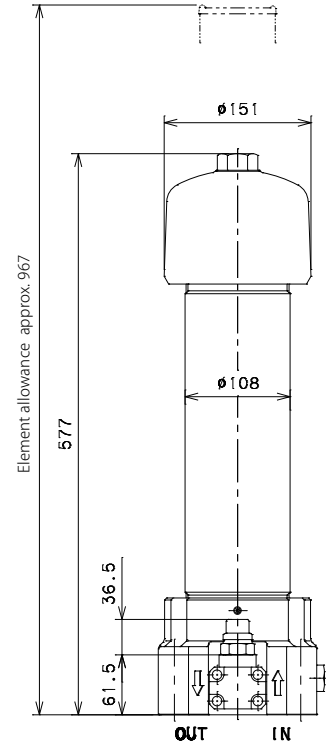
I: Visual type indicator
Drain Attached



4201-12Z-5-□□-LI□

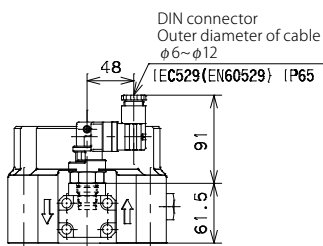


4201-12Z-6-□□-LI□

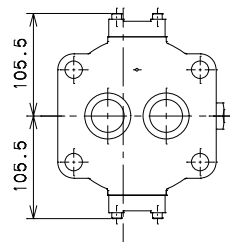


Differential pressure type indicator part

* Common at all size



E,D: Electric contact type indicator
4201-12Z-□□□□-E,D□



Closing plate
4201-12Z-□□□□-□□

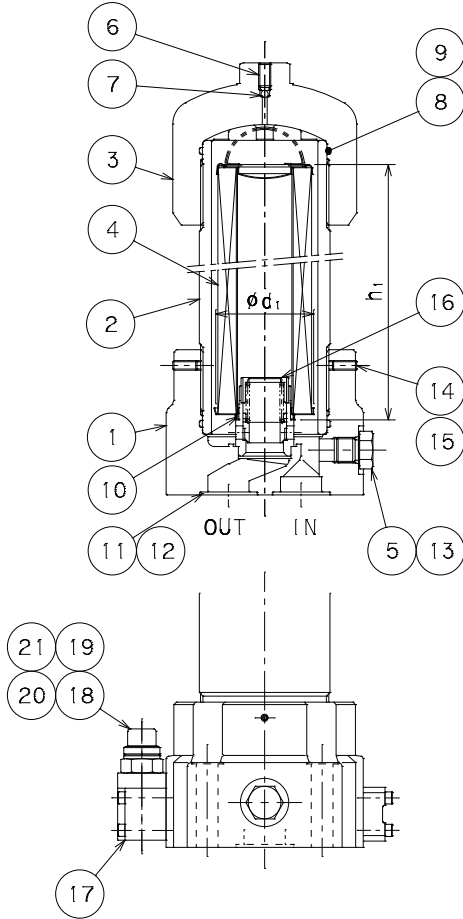
| Model code | Working pressure(MPa) | | |
|------------|---------------------------|----------|-----------------|
| | Visual observation signal | | Electric signal |
| | Caution | Clogging | |
| IH-3 | 0.2 | 0.3 | / |
| IH-7 | | 0.7 | |
| EH-3 | | 0.3 | 0.3 |
| EH-3D | | 0.7 | 0.7 |
| EH-7 | | | |
| EH-7D | | | |

(Micro switch specification)

| Model code | Rated capacity | | Contact diagram : 1C |
|------------|-----------------|-------------------------|----------------------|
| | Resistance load | Inductive load | |
| EH-3 | 3A,250V AC | 2A,250V AC 2A,30V DC | |
| EH-7 | 3A,30V DC | | |
| EH-3D | 100mA,125V AC | 100mA,30V DC | |
| EH-7D | 100mA,30V DC | | |

★ IH-7 and EH-7(D) are for High pressure element.

CROSS SECTION



PARTS LIST

| No. | Item | Qty | No. | Item | Qty |
|-----|---------------|-----|-----|-----------------|-----|
| 1 | Body | 1 | 12 | Backup ring | 2 |
| 2 | Case | 1 | 13 | O-ring | 1 |
| 3 | Upper cover | 1 | 14 | Set screw | 2 |
| 4 | Element | 1 | 15 | Piece | 2 |
| 5 | Drain plug | 1 | 16 | Relief valve | 1 |
| 6 | Air vent plug | 1 | 17 | Indicator block | 1 |
| 7 | Steel ball | 1 | 18 | Indicator | 1 |
| 8 | O-ring | 2 | 19 | O-ring | 1 |
| 9 | Backup ring | 2 | 20 | O-ring | 1 |
| 10 | O-ring | 1 | 21 | Backup ring | 1 |
| 11 | O-ring | 2 | | | |

ELEMENT SIZE

| Element Model code | Size(mm) | | | Weight*1 (kg) |
|--------------------|------------------|----------------|---------------|---------------|
| | φ d ₁ | h ₁ | | |
| | | High mesh | High pressure | |
| P-4201-4 | 81 | 211 | 206 | 1.58 |
| P-4201-5 | | 330 | 325 | 2.22 |
| P-4201-6 | | 431 | 426 | 2.85 |

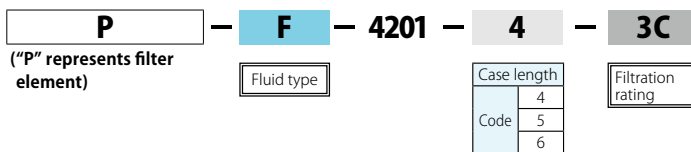
*Common to SH, GC, 4201

SEALING PARTS LIST

| No. | 8 | 9 | 10 | 11 | 12 | 13 | (16) | (17)*2 | 19 | 20 | 21 | | | |
|----------------------------------|-------------|----------------------|---------------------|--------------|-------------------|--------------|-----------|-------------------|--------------|--------------|-------------------------|--------------|----------------------|---------------|
| Model code | Standard*3 | | JIS B2401 1B | AS568 | JIS B2401 1A | JIS B2401 1B | SUN-4B | JIS B2401 1B | JIS B2401 1B | JIS B2401 1B | JIS B2401 1A | JIS B2407 T2 | | |
| 4201-12Z | O-ring | G105 | 131 | P42*4 | G40 | P18 | S32 | P6 | P22 | P16 | | | | |
| | Backup ring | t1.5xφ108/φ103 | t1.25xφ47.2/φ42.9*5 | | For G40 | | | For P6 | | | For P22 | | | |
| Item code of sealing parts set*6 | | | | | | | | | | | | | | |
| Model code | Material | NO.8~10,13*7 | | | NO.8~10*7 | | | NO.8~13,16,17*4*5 | | | NO.8~13,16,17,19~21*4*5 | | | |
| | | SP | SP-H | SP-UW | SP-Y | SP-H-Y | SP-UW-Y | SA-V | SA-UW-V | SA-K | SA-H-K | SA-UW-K | SA-I,E,DV | |
| 4201-12Z | NBR | SSF000137 | SSF000138 | SSF000139 | SSF001986 | SSF001987 | SSF001988 | SSF00958 | SSF001607 | SSF000134 | SSF000135 | SSF000136 | SSF001000 | SSF001609 |
| | FKM | SSF000504 | SSF000505 | SSF000506 | SSF001989 | SSF001990 | SSF001991 | SSF001610 | SSF001616 | SSF000501 | SSF000502 | SSF000503 | SSF001612 | SSF001618 |
| Model code | Material | NO.8~13,17,19~21*4*5 | | | NO.8~12,16,17*4*5 | | | NO.8~12,17*4*5 | | | NO.8~12,16,17,19~21*4*5 | | NO.8~12,17,19~21*4*5 | |
| | | SA-I,E,DK | SA-H,I,E,DK | SA-UW-I,E,DK | SA-VY | SA-UW-VY | SA-KY | SA-H-KY | SA-UW-KY | SA-I,E,DVY | S-UW-I,E,DVY | SA-I,E,DKY | SA-H,I,E,DKY | SA-UW-I,E,DKY |
| 4201-12Z | NBR | SSF000999 | SSF001605 | SSF001608 | SSF001967 | SSF001973 | SSF001966 | SSF001970 | SSF001972 | SSF001969 | SSF001975 | SSF001968 | SSF001971 | SSF001974 |
| | FKM | SSF001611 | SSF001614 | SSF001617 | SSF001977 | SSF001983 | SSF001976 | SSF001980 | SSF001982 | SSF001979 | SSF001985 | SSF001978 | SSF001981 | SSF001984 |

MODEL CODE OF SPARE PARTS

Replacement element (Model code example)



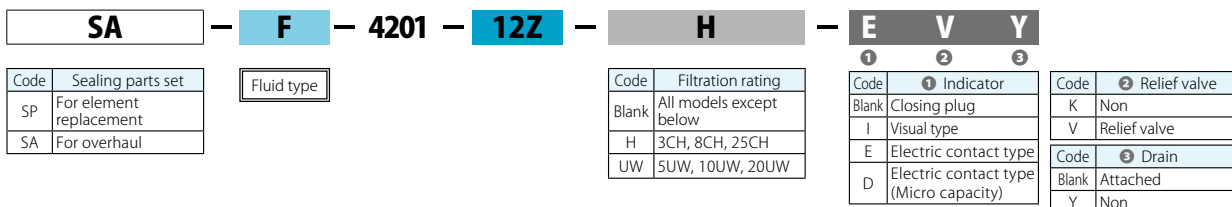
★ Model code of replacement element exists two types: "Individual code" and "Common code", however it represents same product.

"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 P.152 for "Common code".

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

Sealing parts set (Model code example)



* 1 Weight of "C-Fiberhigh pressure" element * 2 O-ring and backup ring for indicator block are included 4 pcs each. * 3 Standard for NBR. For other material, conform to the standard. * 4 Spec of O-ring is different for High mesh element (Filtration rating: 5UW, 10UW, 20UW). * 5 Backup ring is attached for high pressure element Filtration rating : 3CH, 8CH, 25CH * 6 Sealing parts are available as "Sealing parts set" only. We do not provide single part individually. * 7 Part #8 and #9 are only for the cover side.