DHSZ Series

DESCRIPTION

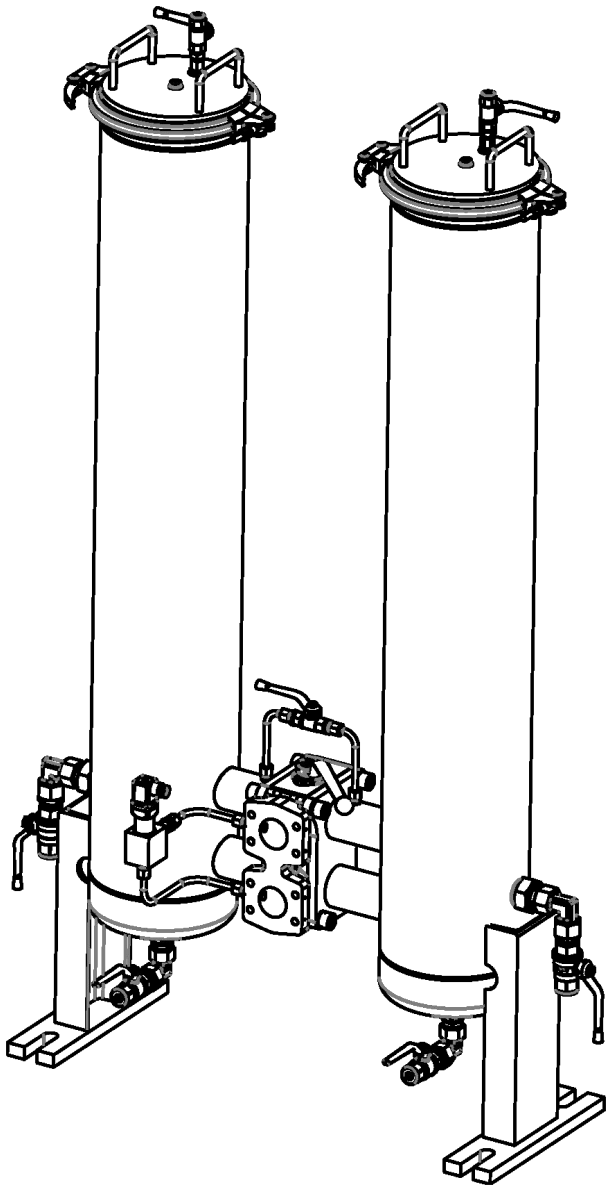
Multi-fluid dual-switching filter

Connection type and size:

SAE Flange connection: DN50 DN100

DIN Flange connection: DN100

Switch type: Stainless steel balls



TECHNICAL PARAMETER

Maximum working pressure: 16 bar

Transmitter opening pressure: 5 bar

Temperature range: -10℃ to +90℃

MATERIALS

Filter cover: Carbon steel

Filter cartridge: Carbon steel

Steering valve: Cast iron

Seals: NBR nitrile rubber (standard)

Or FKM fluororubber (customizable)

Filter element material: Polyamid, Polypropylen, Polyester, Glasfaser

Ordering Options Table

DHSZ 1040 L PP 10 N D B6

Filter model

Filter specification

1010 1040 1080

Connection type and size

Type	Connection port	Filter size		
		1010	1040	1080
L	SAE DN 50	●	●	
T	SAE/DIN DN 100			●

Filter element material

PA: Polyamide
PP: Polypropylene
PES: Polyester
GF: Fiberglass

Filter fineness(μm)

(PA): 01 03 05 10 20 30 40 50 70 90
(PP): 01 03 05 10 20 30 40 50 70 90
(PES): 01 03 05 10 20 30 40
(GF): 01 03 05 10 20

Seals

N: NBR V: FKM

Differential pressure transmitter

A: Steel blanking plug in indicator port
B: Visual (Automatic reset)
BM: Visual (Manual reset)
C: Electrical indicator
CM: Visual and electrical indicators
CL: Visual and electrical indicators
D: Electrical indicator
DM: Electrical indicator Plug DT 04-2P

Bypass valve opening pressure

B0 = Without bypass valve
B6 = 6 bar

Filter Element

DYSZ 1040 PP 10 N B0

Filter element type

Filter element specification

1010 1040

Filter element material

PA: Polyamide
PP: Polypropylene
PES: Polyester
GF: Fiberglass

Filtration fineness(μm)

(PA): 01 03 05 10 20 30 40 50 70 90
(PP): 01 03 05 10 20 30 40 50 70 90
(PES): 01 03 05 10 20 30 40
(GF): 01 03 05 10 20

Seals O-ring

N: NBR V: FKM

Bypass valve opening pressure

B0 = Without bypass valve
B6 = 6 bar

The number of filter elements assembled in the filter

DHSZ	The model and quantity of filter elements on each side
1010	7x1010
1040	7x1040
1080	7x1040

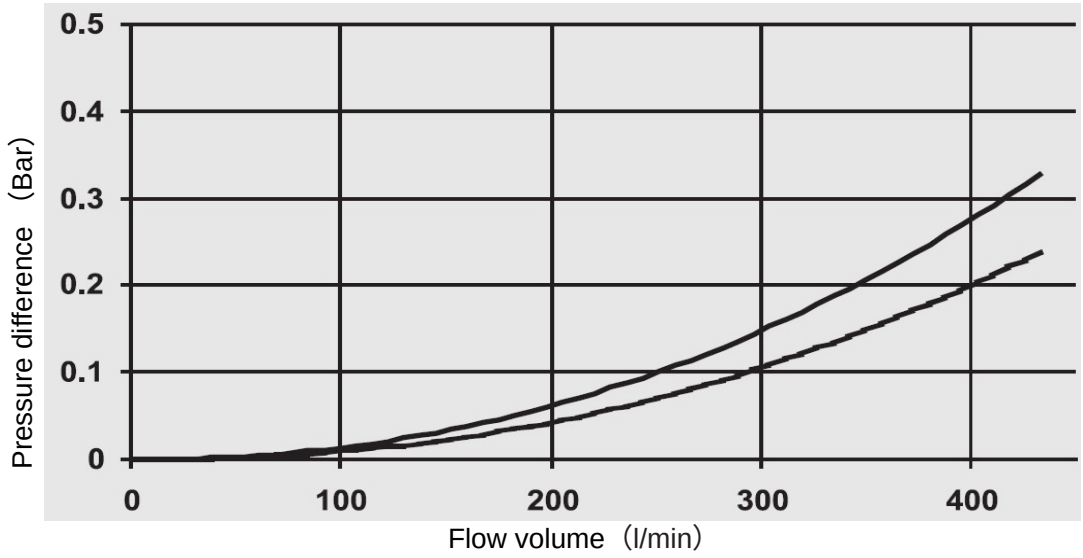
Maintenance Instructions

Filter housing must be grounded
When using electric plugging, please replace the filter element.
The system must be turned off before removing the clogging indicator light and power connector.

Calculate the pressure loss of the filter housing/filter element

At a specific volume flow rate, the total pressure drop of the filter consists of two parts: the shell pressure drop- Δp and the element pressure drop- Δp . The shell pressure drop can be calculated through the pressure drop characteristic curve provided subsequently, while the filter element pressure drop is cal culated through the R coefficient.

Housing - Δp : Housing pressure loss curve



The characteristic curve of the upper housing is applicable to mineral oil with a density of 0.86 kilograms per cubic decimeter and a kinematic viscosity of 30 millimeters ² per second. The characteristic curve of the lower housing is applicable to water temperature conditions of 20℃. Under turbulent conditions, the pressure difference varies directly with the density. Under laminar flow conditions, the pressure difference is directly proportional to both density and viscosity simultaneously. The flow rate of the oil at the filter inlet should not exceed 3 meters per second, and that of the water should not exceed 4 meters per second.

Filter element application: Pressure loss calculation filter element

The following calculations are based on clean filter elements

$$\Delta p\ (bar) = \frac{R \times V\ (mm^2/s) \times Q\ (l/\min)}{n \times L\ (inch) \times 1000}$$

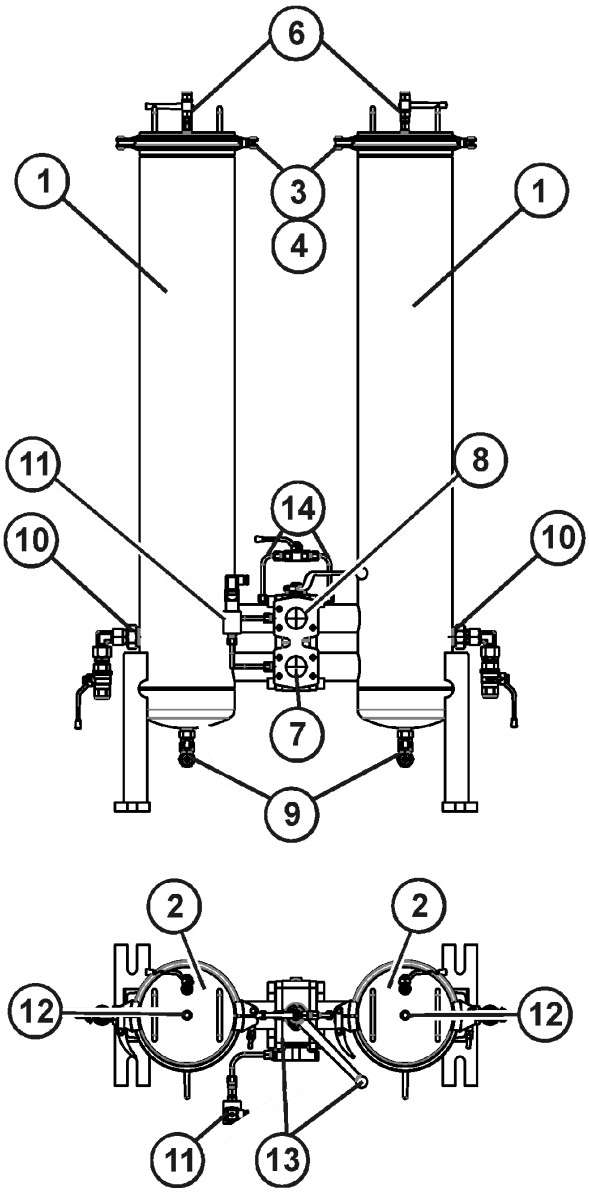
R = R-Coefficient
V = Viscosity (mm²/s)
Q = Flow volume (l/min)
N = Number of filter elements
L = Filter element length (inch)

The maximum pressure difference Δp_{max} and allowable temperature range of the filter as below

Fluid temperature	Filter material		
	PP	PA	PES
-10to-+30 °C	4 bar	7 bar	8 bar
-10 to-+60 °C	2 bar	5.5 bar	6.5 bar
-10to-+100 °C	-	3.5 bar	5 bar

Filter fineness (μm)	Oil		Water-based liquid		
	GF	PES	PES	PA	PP
1 μm	5.4	10.4	32.0	274	321
3 μm	-	7.5	24.0	116	186
5 μm	4.3	4.4	18.0	42	132
10 μm	3.2	1.8	17.0	15	99
20 μm	-	1.8	15.0	11	54
30 μm	-	0.9	14.0	6	16
40 μm	-	0.9	14.0	3.8	12
50 μm	-	-	-	1.9	10
70 μm	-	-	-	1.1	8
90 μm	-	-	-	0.6	6

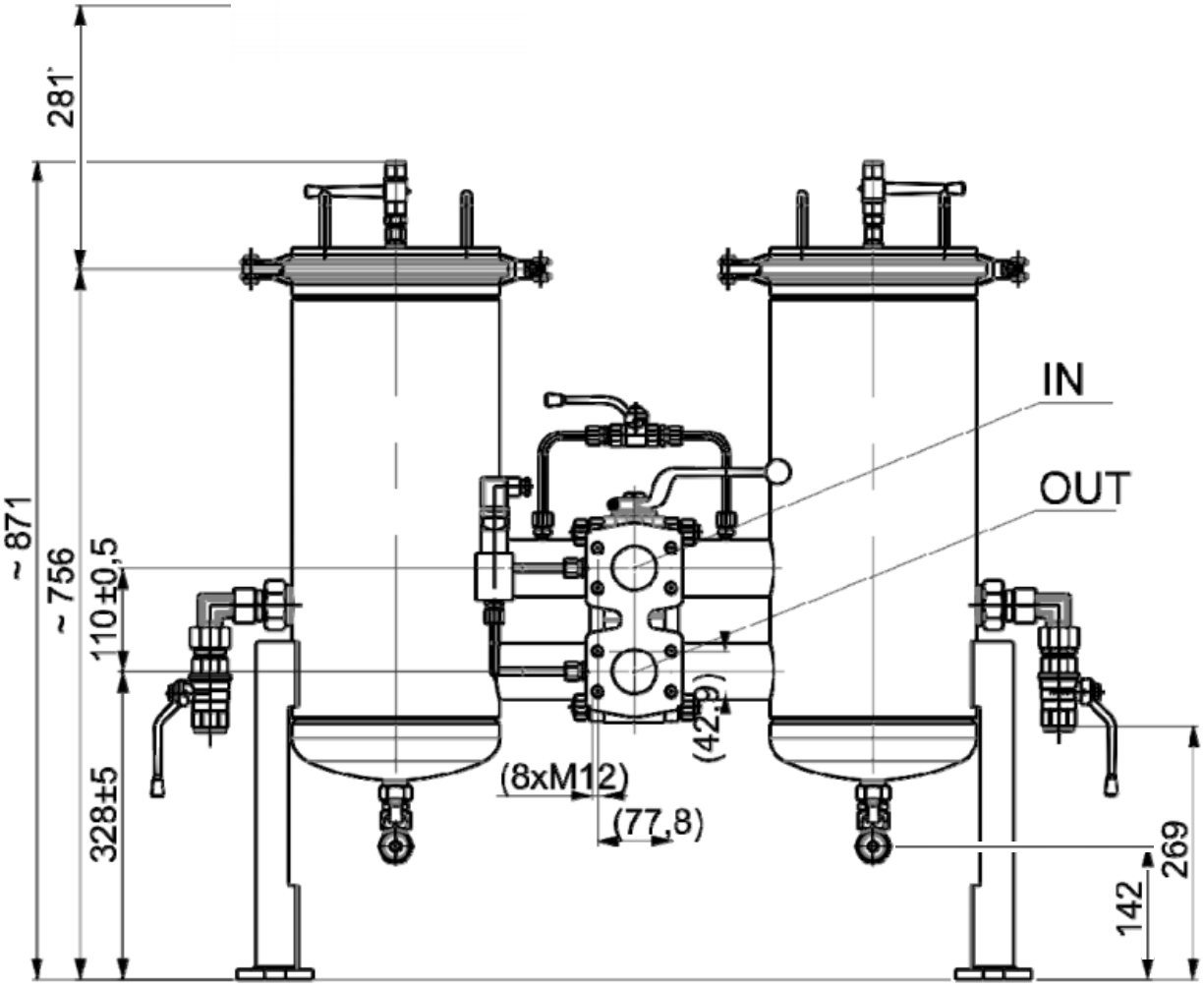
Components diagram

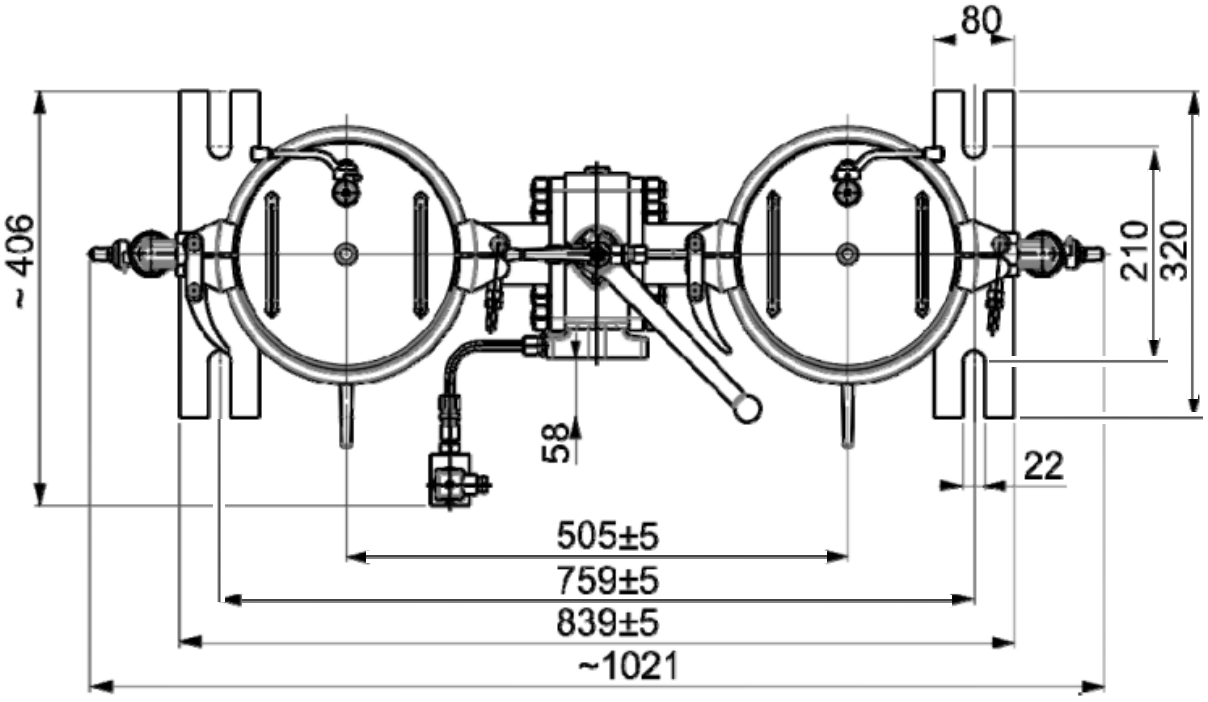


Serial number	Name
1	Filter cartridge
2	Cover plate
3	Fastening clamp with safety chain
4	O-ring sealing
6	Exhaust ball valve
7	Outlet flange
8	Inlet flange
9	Drain outlet
10	Contamination outlet
11	Contamination indicator light
12	Exhaust plug
13	Switch valve
14	Balance valve

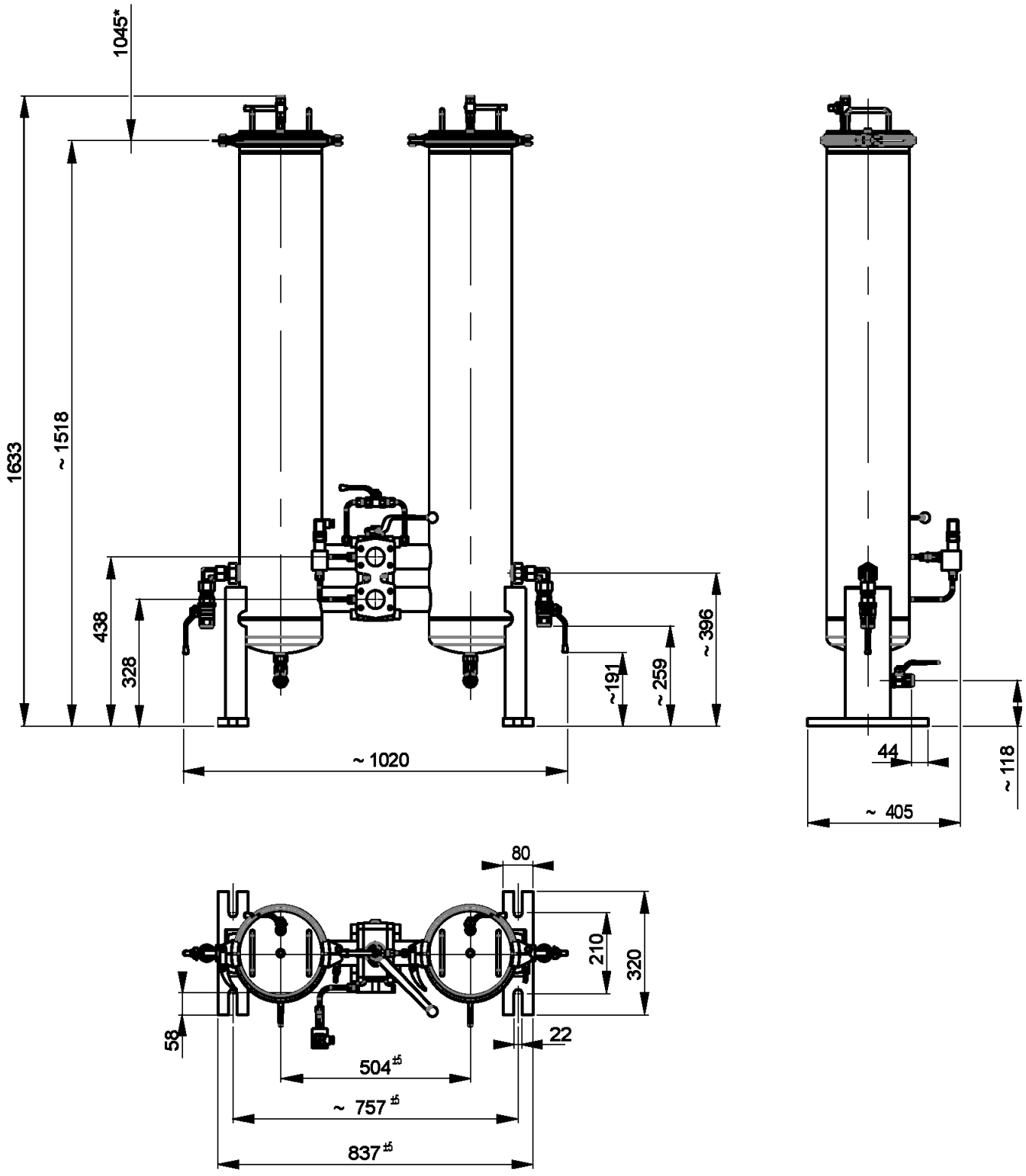
DIMENSIONS

DHSZ 1010

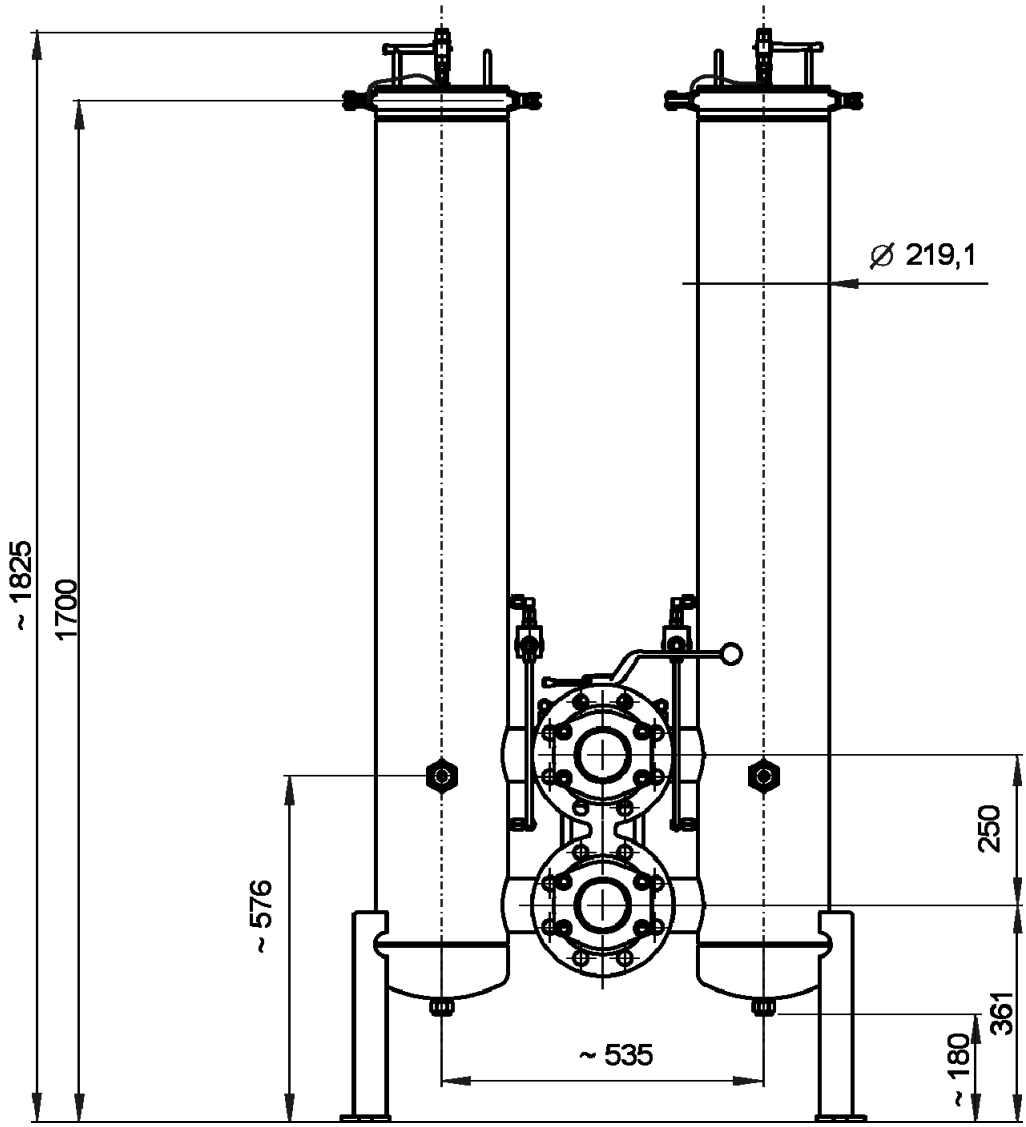


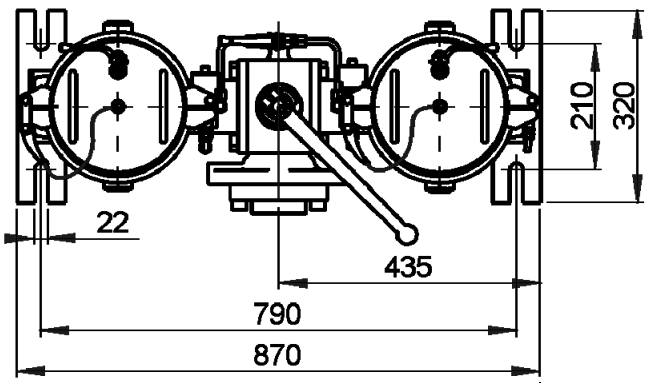


DHSZ 1040


1045*
1633
~ 1518
438
328
~ 396
~191
~ 259
~ 1020
44
~ 118
~ 405
80
210
320
58
22
504 ±5
~ 757 ±5
837 ±5

DHSZ 1080





Annotation

All information in this manual relates to the described working environment and application conditions.
For applications and working conditions that are not described, please contact the relevant technical department.
Technical modifications are possible.