FLOOR HEATING

DISTRIBUTORS

These floor heating distributor manifolds are of size G1, and are supplied in pairs, i.e. as a supply and a return distributor. They are available with 2, 3 or 4 G3/4 branch connectors. Identification washers are supplied with each set.
The end of each distributor is fitted with venting and drain valves, together with a connection for a bypass pipe. Shut-off ball valves are available in straight or angled versions. Joints in ball valves, distributors and end blocks are sealed with O-rings.

TECHNICAL DESCRIPTION

Application:
Floor heating systems

Function:
The distributors form a very important part of a floor heating system: it is from and to them that the actual floor heating coils start and return. The return distributors incorporate balancing return valves that establish the flow and pressure drop in each floor coil: these valves are set using a 4 mm Allen key. The total number of floor heating coils in a system must not exceed twelve.

Pressure class:
PN 10

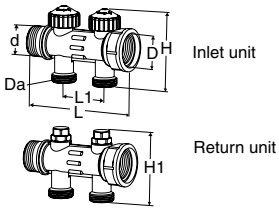
Temperature:
Max. working temperature: 120°C
Min. working temperature: -10°C

Material:
Distributors:
AMETAL®
Seat seal, supply valve and O-ring: EPDM rubber
Return seal: Brass
End unit:
Body: AMETAL®
Disc and cover: Brass
O-ring: EPDM rubber
Ball valve:
Body and ball: Dezincification resistant metal
Seat: PTFE
Connections:
AMETAL® for parts in contact with water

AMETAL® is the dezincification resistant alloy of TA.

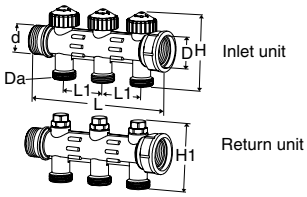
PAIR OF DISTRIBUTORS INLET AND RETURN

2 Loops
Without connection set



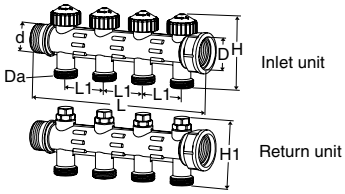
TA No	d	D	Da	L	L1	H	H1
50 222-101	G1	G1	G3/4	123	50	86	76

3 Loops
Without connection set



TA No	d	D	Da	L	L1	H	H1
50 223-101	G1	G1	G3/4	173	50	86	76

4 Loops
Without connection set

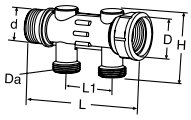


TA No	d	D	Da	L	L1	H	H1
50 224-101	G1	G1	G3/4	223	50	86	76

Kv-values, see diagram

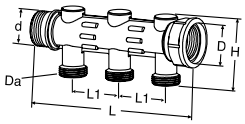
PIPE DISTRIBUTORS

2 Loops
Without connection set



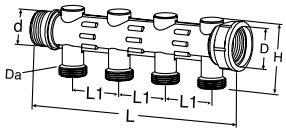
TA No	d	D	Da	L	L1	H	Kvs
50 222-100	G1	G1	G3/4	123	50	62	5,2

3 Loops
Without connection set



TA No	d	D	Da	L	L1	H	Kvs
50 223-100	G1	G1	G3/4	173	50	62	5,2

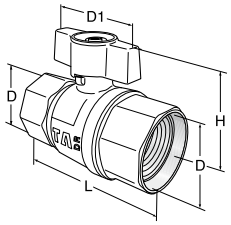
4 Loops
Without connection set



TA No	d	D	Da	L	L1	H	Kvs
50 224-100	G1	G1	G3/4	223	50	62	5,2

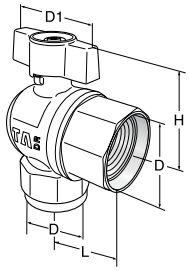
BALL VALVES

Straight



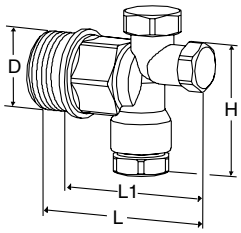
TA No	DN	D	D1	L	H
58 126-025	25	Rp 1	55	88	50

Angle



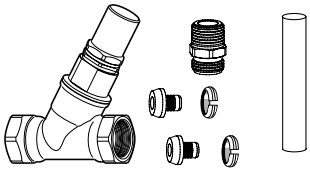
TA No	DN	D	D1	L	H
58 136-025	25	Rp1	55	44	50

END UNIT



TA No	D	L	D1	H
50 201-300	G1	77	58	74

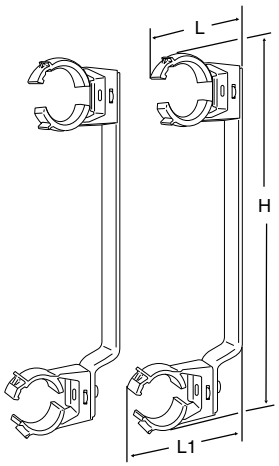
BYPASS PIPE SET



TA No
50 206-100

Delivered in separate parts

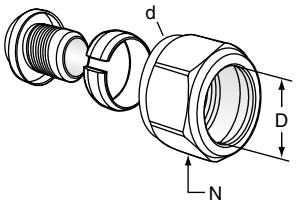
BRACKET



TA No	L	L1	H
50 205-025	60	80	270

CONNECTION SET AND CONNECTION BODIES

Connection set



Non-plated (yellow)

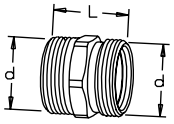
TA No	d	L[1]	For PEX-pipe D	N
53 641-312	G3/4	12	12x2,0	30
53 641-415	G3/4	14	15x2,5	30
53 641-316	G3/4	14	16x2,0	30
53 641-317	G3/4	18	17x2,0	30
53 641-618	G3/4	16	18x2,5	30
53 641-320	G3/4	16	20x2,3	30
53 641-420	G3/4	16	20x2,0	30
53 641-422	G3/4	16	22x3,0	30

Nickel plated

TA No	d	L[1]	For PEX-pipe D	N
53 641-616	G3/4	14	16x2,2	30
53 641-620	G3/4	16	20x2,8	30

1) Over all length

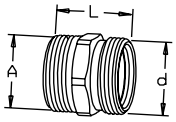
Straight



Non-plated (yellow)

TA No	d	L
53 351-618	G3/4	31

Straight, male

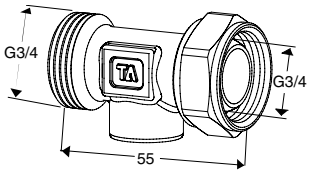


Non-plated (yellow)

TA No	Axd	L
53 358-318	R1/2xG3/4	34
53 351-618	G3/4xG3/4	31

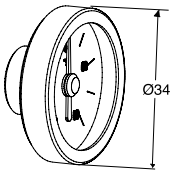
ACCESSORIES

Temperature intermediary section
With swivelling nut



TA No
50 205-601

Thermometer for control unit



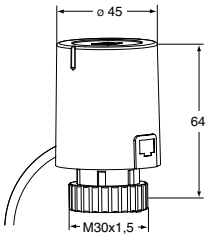
TA No
50 205-002

Handwheel

TA No
50 399-003

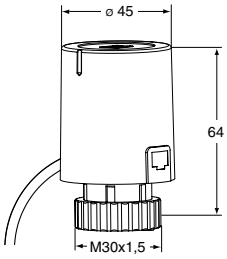
ACTUATORS

24V AC/DC



TA No	Cable length
TSE, NO (Normally open)	
50 358-001	2 m
50 358-011	5 m
TSE, NC (Normally closed)	
50 358-002	2 m
50 358-012	5 m

230V AC



TA No	Cable length
TSE, NO (Normally open)	
50 358-201	2 m
50 358-211	5 m
TSE, NC (Normally closed)	
50 358-202	2 m
50 358-212	5 m

For more information on TSE, see catalogue leaflet “TSE”.

DIAGRAM

The valve diagram for the floor heating distributor calculates the pressure drop in the inlet and return valves on pipe distributors. The diagram shows the pressure drop balancing values with the inlet and return valves fully open.

The loop length and the required heat output give the flow in l/s and the pressure drop (Δp) in kPa.

To achieve this distribution of flow from the distributor pipes, each loop must be balanced with the help of the return valve.
Balancing is carried out using an Allen key (4 mm), and is counted from the valve in the closed position.

Example:
The longest loop has flow F = 0.05 l/s and the pipe pressure drop Δpr = 4.5 kPa.
From the diagram, for a flow of 0.05 l/s, the pressure drop across the valves in the completely open position (5 turns on the return valve), is 1.4 kPa.
The total pressure drop over the longest loop and the distribution valves then becomes Δp = 4.5 + 1.4 = 5.9 kPa.
The next loop connected to the distributor has flow F = 0.04 l/s, and the pipe pressure drop Δpr of 2.3 kPa.
For the same total pressure drop, the valves must have a pressure drop of 5.9 - 2.3 = 3.6 kPa.
From the diagram, for flow 0.04 l/s and pressure drop 3.6 kPa, the return valve for this loop should be balanced at 3.25 turns (counted from the valve closed position).

If there are several floor heating distributors in the same floor heating installation, the pressure drop in the feed pipes and valves must also be counted in the total pressure drop. This allows the various distributors to be balanced.

Number of turns counted from valve closed