



# Other valves

**HFE 3**

## Description

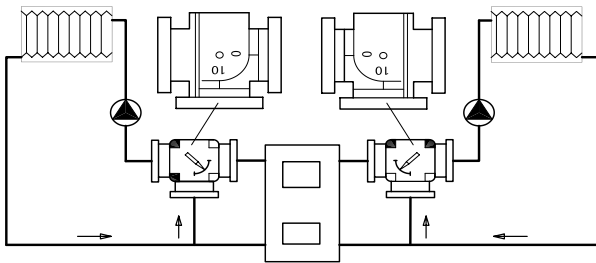
Danfoss HFE rotary valves are primarily designed for regulation of flow temperature in heating systems where a certain leakage can be accepted and where a defined control characteristic is not required.

HFE rotary valves can be used in combination with electric actuators AMB 162 and AMB 182.

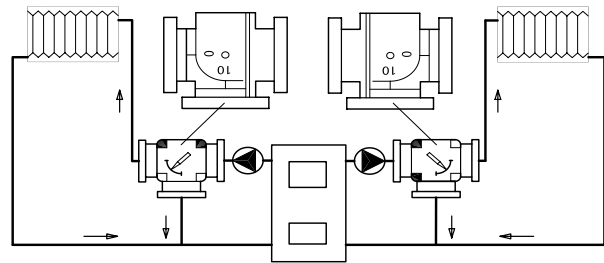
## Features & benefits

- Cast iron body with flange connection
- Lowest leakage in class
- Valve position indicator
- Ergonomic handle
- For mixing and diverting applications
- Flange PN 6 connection

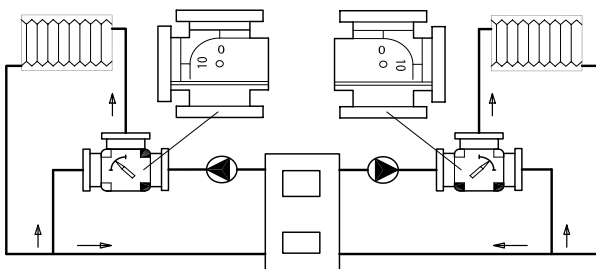
## Applications



*HFE 3 mixing function*



*HFE 3 diverting function*



*HFE 3 diverting function*





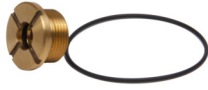



*Reverse function can be achieved by changing motor rotation direction (Valve label must also be turned round). See further details in valve and motor instructions.*

## Ordering

### Product code numbers

Type	Description	Diameter [mm]	Kvs values [m <sup>3</sup> /h]	Pressure nominal [bar]	Code number
HFE 3	HFE 3 PN6 20/12 rotary 3-way Flange	20	12.00	6	065Z0428
HFE 3	HFE 3 PN6 25/18 rotary 3-way Flange	25	18.00	6	065Z0429
HFE 3	HFE 3 PN6 32/28 rotary 3-way Flange	32	28.00	6	065Z0430
HFE 3	HFE 3 PN6 40/44 rotary 3-way Flange	40	44.00	6	065Z0431
HFE 3	HFE 3 PN6 50/60 rotary 3-way Flange	50	60.00	6	065Z0432
HFE 3	HFE 3 PN6 65/90 rotary 3-way Flange	65	90.00	6	065Z0433
HFE 3	HFE 3 PN6 80/150 rotary 3-way Flange	80	150.00	6	065Z0434
HFE 3	HFE 3 PN6 100/225 rotary 3-way Flange	100	225.00	6	065Z0435
HFE 3	HFE 3 PN6 125/280 rotary 3-way Flange	125	280.00	6	065Z0436
HFE 3	HFE 3 PN6 150/400 rotary 3-way Flange	150	400.00	6	065Z0437

### Accessories code numbers

 <p>082H0255</p> <p><b>AMB Linkage kit for Danfoss HRB,HRE,HFE</b></p> <p>AMB Linkage kit for Danfoss HRB,HRE,HFE</p>	 <p>065Z0456</p> <p><b>Stuffing box and sealing HFE DN50-65</b></p> <p>Stuffing box and sealing HFE DN50-65</p>	 <p>065Z0443</p> <p><b>Replacement handle HFE</b></p> <p>Replacement handle HFE</p>	 <p>065Z0458</p> <p><b>Stuffing box and sealing HFE DN100-125</b></p> <p>Stuffing box and sealing HFE DN100-125</p>
 <p>065Z0459</p> <p><b>Stuffing box and sealing HFE DN150</b></p> <p>Stuffing box and sealing HFE DN150</p>	 <p>065Z0454</p> <p><b>Stuffing box and sealing HFE DN20-25</b></p> <p>Stuffing box and sealing HFE DN20-25</p>	 <p>065Z0455</p> <p><b>Stuffing box and sealing HFE DN32-40</b></p> <p>Stuffing box and sealing HFE DN32-40</p>	 <p>065Z0457</p> <p><b>Stuffing box and sealing HFE DN80</b></p> <p>Stuffing box and sealing HFE DN80</p>

## Product details

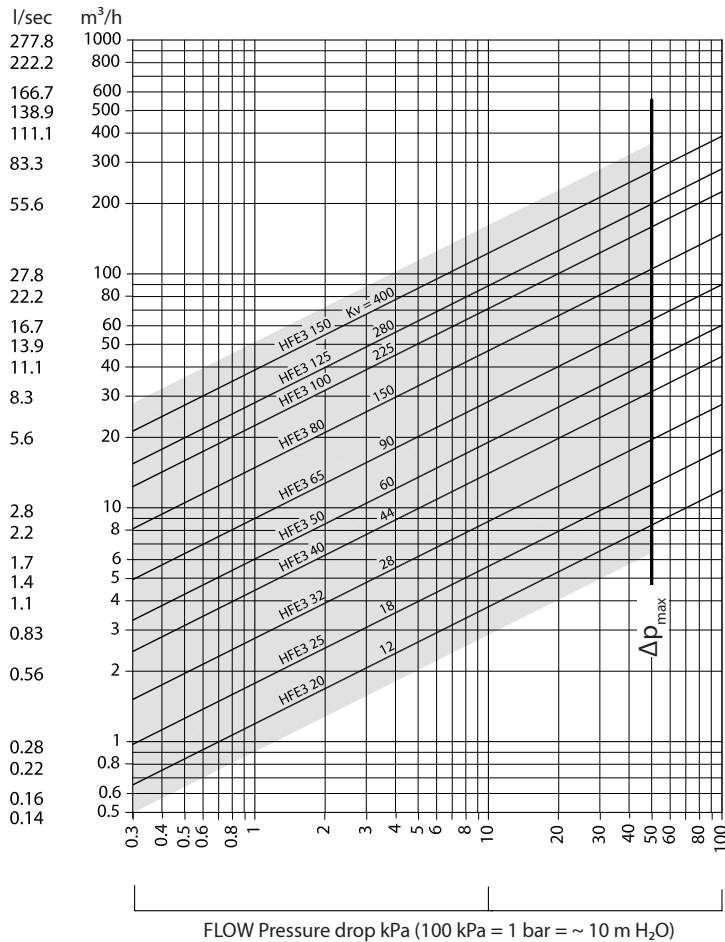
### General data

#### Technical data

Nominal diameter	DN	20	25	32	40	50	65	80	100	125	150	
$k_{VS}$	$m^3/h$	12	18	28	44	60	90	150	225	280	400	
Control characteristic	S characteristic											
Leakage	Diverting: max. 0.75% of $k_{VS}$ / Mixing: max. 1.5% of $k_{VS}$											
Nominal pressure	PN	6										
Max. closing pressure	bar	0.5										
Torque at PN	Nm	5					10			15		
Medium	Circulation water / glycolic mixture up to 50%											
Medium pH	Min. 7, max. 10											
Medium temperature	$^{\circ}C$	2 ... 110										
Connections	Flanges PN 6											

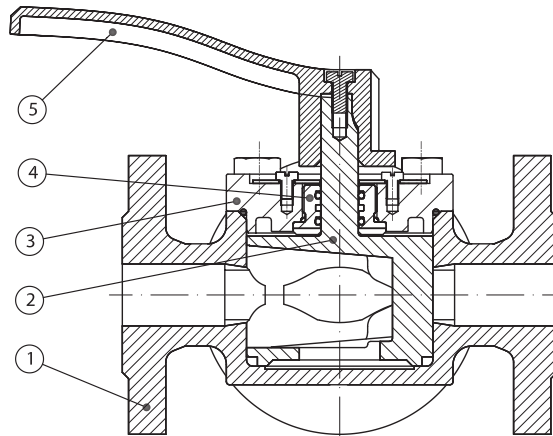
### Sizing

Flow Rate  
(liquid with specific gravity of 1)



## Design

1. Valve body
2. Slide shoe
3. Valve cover
4. Stuffing box
5. Handle

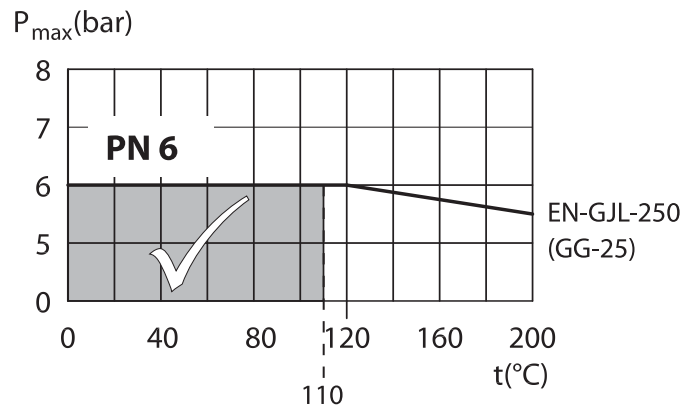


## Materials

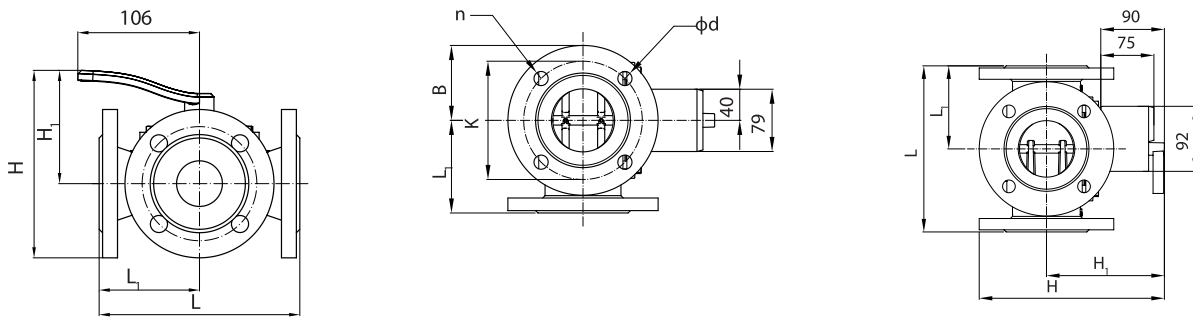
Valve body and cover	Grey cast iron EN-GJL-250 (GG25)	
Slide shoe	CuZn36Pb2As (BrassDZR, CW 602N)	Stainless steel, EN 1.4301 (304)
Stuffing box sealing	EPDM	

## Pressure and temperature data

### Pressure temperature diagram



## Dimensions



DN	H	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	L	L <sub>1</sub>	B	K	$\phi d$	n	Weight (kg)	Actuator
	mm											
20	137	92	140	131	140	70	45	65	11.5	4	3.5	AMB 162 AMB 182
25	142	92	140	136	150	75	50	75	11.5	4	4	
32	158	98	152	146	160	80	60	90	15	4	6.6	
40	163	98	157	146	175	88	65	100	15	4	7.2	
50	177	107	171	155	195	98	70	110	15	4	9.4	
65	187	107	181	155	200	100	80	130	15	4	11.5	
80	215	120	208	167	235	118	95	150	18	4	17	
100	233	128	228	177	265	133	105	170	18	4	22.5	
125	259	139	253	187	300	150	120	200	18	8	29.5	
150	277	145	271	192	350	175	133	225	18	8	40.2	

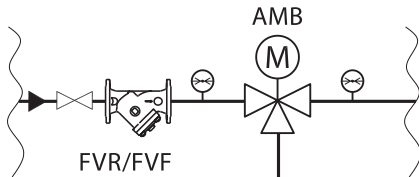
## Installation

### Valve mounting

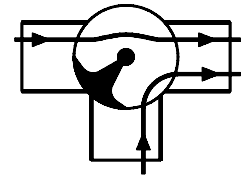
Before valve mounting pipes have to be cleaned and free from abrasion. Mechanical loads on valve body caused by the pipes are not allowed. It is recommended to install a strainer into application to avoid damaging controlling components.

### Connection

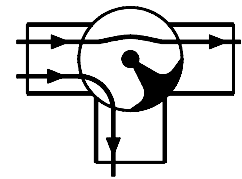
HFE 3 can be used as a mixing valve, diverting valve and in connection with heat exchangers where a certain leakage can be accepted.



**Note:** Install a strainer upstream of the valve (e.g. Danfoss FVR/FVF)



Mixing



Diverting

## Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
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UA Declaration	<a href="#">Danfoss UA 10.01.23 Heat</a> <a href="#">Control Valves</a>	Danfoss	
Export Control Declaration	<a href="#">Butterfly, other valves, Manual</a> <a href="#">balancing valves, one pipe</a> <a href="#">solution valves and hot water</a> <a href="#">balancing valves</a>	Danfoss	

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