

## GEMÜ 423

### Motorized butterfly valve



#### Features

- Low weight
- Adjustable end positions by means of microswitches
- Corrosion resistant plastic body
- Simple installation with union nut
- Compact design

#### Description

The GEMÜ 423 butterfly valve has a low maintenance motorized quarter turn actuator. A manual override and an optical position indicator are integrated as standard.

#### Technical specifications

- **Media temperature :** 0 to 60 °C
- **Ambient temperature:** -10 to 60 °C
- **Operating pressure :** 0 to 6 bar
- **Nominal sizes:** DN 15 to 50
- **Connection types:** Union end
- **Connection standards:** BS | DIN
- **Housing materials:** PVC-U, grey
- **Liner materials:** EPDM | FKM
- **Disc materials:** PP-H
- **Supply voltage:** 12 - 24 V AC/DC | 12 V DC | 24 - 240 V AC/DC | 24 V AC, 50/60 Hz | 24 V DC
- **Operating time 90°:** 4 to 100 s
- **Protection class:** IP 65. 66. 67. 68
- **Conformities:** CSA | EAC

Technical data depends on the respective configuration



## Product line



	GEMÜ K410	GEMÜ 417	GEMÜ 410	GEMÜ 423
<b>Operation</b>				
With bare shaft	●	-	-	-
Manual	-	●	-	-
Pneumatic	-	-	●	-
Motorized	-	-	-	●
<b>Nominal sizes</b>	DN 15 to 50			
<b>Media temperature</b>	0 to 60 °C			
<b>Operating pressure</b>	0 to 6 bar			
<b>Connection types</b>				
Union end	●	●	●	●
<b>Conformities</b>				
CSA	-	-	-	●
EAC	●	●	●	●

## Motorized actuators GEMÜ, J+J



GEMÜ 9428

GEMÜ J4C

	GEMÜ	J+J
<b>Manufacturer</b>	GEMÜ	J+J
<b>Manufacturer type</b>	9428	J4C
<b>Torques</b>	6 to 55 Nm	20 to 300 Nm
<b>Duty cycle</b>	100 %	75 %
<b>Heating</b>	No	Yes
<b>Voltage</b>		
12 V AC, 50/60 Hz	●	-
12 V DC	●	●
24 - 240 V AC/DC	-	●
24 V AC, 50/60 Hz	●	-
24 V DC	●	-
<b>Protection class</b>	IP 65, IP 67	IP 67
<b>Ambient temperature</b>	-10 to 60 °C	-20 to 70 °C
<b>Housing materials</b>		
Polyamide (PA6)	-	●
PP	●	-
<b>Versions</b>		
Limit switches	●	●
ON/OFF actuator	●	-
Optional battery pack	-	●
Optional positioner	-	●
Optional positioning actuator	-	●
Optionally 3 positions	-	●

## Comparison of actuator applications



	GEMÜ 9428	GEMÜ J4C
<b>Range of functions</b>		
Use in non-aggressive environment (up to C3)	●	●
Use in aggressive environment (C5)	●	●
Use in protected outdoor areas	●	●
Use in unprotected outdoor areas	●	●
Applications with many/frequent cycle duties	●	●
Fail-safe option	●	●
Positioning application	●	●
<b>Industrial sectors</b>		
Chemical processes	●	●
Surface finishing	●	●
Water treatment	●	●
Mechanical engineering	●	●
Power generation and environmental systems	●	●
Food processing technology	●	●
Semiconductor	●	●
Medical systems	●	●
Pharmaceutical industry	●	●

## Product description



Item	Name	Material
1	Valve body	PVC-U, grey
2	Pipe connections	PVC-U, grey
3	Housing base	Actuator versions 1006, 3006, 1015, 3015, 2015: PP + 30% glass fibre reinforced Actuator version 3035: PP + 20% glass bead reinforced
4	Connection for manual override	
5	Optical position indicator	PP-R natural
6	Housing cover	Actuator versions 1006, 3006, 1015, 3015, 2015: PPE + 30% glass fibre reinforced Actuator version 3035: PP + 20% glass bead reinforced

## Actuator range overviews

### GEMÜ 9428 range overviews

Actuator version Code <sup>1)</sup>	Control module Code <sup>2)</sup>	Voltage/Frequency			
		12 V DC (Code B1)	12 V AC (Code B4)	24 V DC (Code C1)	24 V AC (Code C4)
<b>1006, 3006</b>	<b>A0, AE</b>	X	X	X	X
<b>1015, 3015</b>	<b>A0, AE</b>	X	-	X	-
<b>2015</b>	<b>A0, AE</b>	-	X	-	X
<b>3035</b>	<b>A0, AE</b>	-	-	X	-

1) **Actuator version**

- Code 1006: Actuator, motorized, operating time 4s, torque 6Nm, GEMUE, size 1 supply voltage B1, C1, B4, C4
- Code 3006: Actuator, motorized, operating time 4s, torque 6Nm, GEMUE, size 3 supply voltage B1, C1, B4, C4
- Code 1015: Actuator, motorized, operating time 11s, torque 15Nm, GEMUE, size 1 supply voltage B1, C1
- Code 2015: Actuator, motorized, operating time 11s, torque 15Nm, GEMUE, size 2 supply voltage B4, C4
- Code 3015: Actuator, motorized, operating time 11s, torque 15Nm, GEMUE, size 3 supply voltage B1, C1
- Code 3035: Actuator, motorized, operating time 15s, torque 35Nm, GEMUE, size 3 supply voltage C1

2) **Control module**

- Code A0: ON/OFF actuator
- Code AE: OPEN/CLOSE control, 2 additional potential-free limit switches, Class A (EN15714-2)

### J4C actuators range overview

Actuator version Code <sup>1)</sup>	Control module Code <sup>2)</sup>	DN					
		15	20	25	32	40	50
<b>J4C20</b>	<b>AE, AE1, AE2, AP, E1, E2</b>	X	X	X	X	-	-
<b>J4C35</b>	<b>AE, AE1, AE2, AP, E1, E2</b>	-	-	-	-	X	X

1) **Actuator version**

- Code J4C20: Actuator, motorized, operating time 9 s, torque 20 Nm, J+J, type J4, heating, IP67
- Code J4C35: Actuator, motorized, operating time 9 s, torque 35 Nm, J+J, type J4, heating, IP67

2) **Control module**

- Code AE: Open/Close control with 2 additional, potential-free limit switches
- Code AE1: Open/Close control with 2 additional, potential-free limit switches, with BSR accupack (NC)
- Code AE2: Open/Close control with 2 additional, potential-free limit switches, with BSR accupack (NO)
- Code AP: Open/Close control, with 5 kOhm potentiometer output
- Code E1: Positioner DPS, 0 - 10 V
- Code E2: Positioner DPS 4 - 20 mA

## Order data

### Butterfly valve with GEMÜ actuator

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

### Order codes

1 Type	Code
Butterfly valve, motorized	423

2 DN	Code
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50

3 Body configuration	Code
2/2-way body	D

4 Connection type	Code
Union end with insert (socket) – DIN	7
Union end with inch insert – BS (socket)	33

5 Body material	Code
PVC-U, grey	1

6 Shut-off seal material	Code
FKM	4
EPDM	14

7 Voltage/Frequency	Code
12 VDC	B1
12 V, 50/60 Hz	B4
24 VDC	C1
24 V, 50/60 Hz	C4

8 Control module	Code
ON/OFF actuator	A0
ON/OFF actuator, two additional potential-free limit switches, Class A (EN15714-2)	AE

9 Actuator version	Code
Actuator, motorized, operating time 4 s, torque 6 Nm, GEMÜ, size 1 supply voltage B1, C1, B4, C4	1006
Actuator, motorized, operating time 4s, torque 6Nm, GEMUE, size 3 supply voltage B1, C1, B4, C4	3006
Actuator, motorized, operating time 11 s, torque 15 Nm, GEMÜ, size 1 supply voltage B1, C1	1015
Actuator, motorized, operating time 11 s, torque 15 Nm, GEMÜ, size 2 supply voltage B4, C4	2015

9 Actuator version	Code
Actuator, motorized, operating time 11s, torque 15Nm, GEMUE, size 3 supply voltage B1, C1	3015
Actuator, motorized, operating time 15 s, torque 35 Nm, GEMÜ, size 3 supply voltage C1	3035

10 Special specification	Code
Parallel operation of multiple actuators	6410
1 Hirschmann connector N6R	6598
2 Harting Han 7D connector	6722
Without	

**Order example**

Ordering option	Code	Description
1 Type	423	Butterfly valve, motorized
2 DN	25	DN 25
3 Body configuration	D	2/2-way body
4 Connection type	7	Union end with insert (socket) – DIN
5 Body material	1	PVC-U, grey
6 Shut-off seal material	14	EPDM
7 Voltage/Frequency	C1	24 VDC
8 Control module	A0	ON/OFF actuator
9 Actuator version	1006	Actuator, motorized, operating time 4 s, torque 6 Nm, GEMÜ, size 1 supply voltage B1, C1, B4, C4
10 Special specification		Without

## Butterfly valve with J+J actuator

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

### Order codes

1 Type	Code
Butterfly valve, motorized	423

2 DN	Code
DN 15	15
DN 20	20
DN 25	25
DN 32	32
DN 40	40
DN 50	50

3 Body configuration	Code
2/2-way body	D

4 Connection type	Code
Union end with insert (socket) – DIN	7
Union end with inch insert – BS (socket)	33

5 Body material	Code
PVC-U, grey	1

6 Shut-off seal material	Code
FKM	4
EPDM	14

7 Voltage/Frequency	Code
12 VDC	B1
24 V–240 V AC/DC for model 20, 35, 55, 85, 140, 300	U5

8 Control module	Code
ON/OFF actuator, two additional potential-free limit switches, Class A (EN15714-2)	AE
ON/OFF actuator, two additional potential-free limit switches, BSR battery pack (NC)	AE1
ON/OFF actuator, two additional potential-free limit switches, BSR battery pack (NO)	AE2
ON/OFF actuator, potentiometer output, Class A (EN15714-2)	AP
Control actuator, external set value 0–10 VDC	E1
Control actuator, external set value 0/4–20 mA	E2

9 Actuator version	Code
Actuator, motorized, operating time 9 s, torque 20 Nm, J+J, type J4, heating, IP67	J4C20
Actuator, motorized, operating time 9 s, torque 35 Nm, J+J, type J4, heating, IP67	J4C35

10 Special specification	Code
Without	
Media-wetted area cleaned to ensure suitability for paint applications, parts sealed in plastic bag	0101
Media-wetted parts cleaned for high purity media and packed in plastic bag	0104
Short insert, PE material, PN 10, (for butt welding)	1094
Insert made of PP, for butt welding	1146
K-no. 1060, K-no. 0101, 1060 – insert made of PP, 0101 – media-wetted area cleaned to ensure suitability for paint applications Parts sealed in plastic bag	1174

**Order example**

Ordering option	Code	Description
1 Type	423	Butterfly valve, motorized
2 DN	25	DN 25
3 Body configuration	D	2/2-way body
4 Connection type	7	Union end with insert (socket) – DIN
5 Body material	1	PVC-U, grey
6 Shut-off seal material	14	EPDM
7 Voltage/Frequency	U5	24 V–240 V AC/DC for model 20, 35, 55, 85, 140, 300
8 Control module	AE	ON/OFF actuator, two additional potential-free limit switches, Class A (EN15714-2)
9 Actuator version	J4C20	Actuator, motorized, operating time 9 s, torque 20 Nm, J+J, type J4, heating, IP67
10 Special specification		Without

## Butterfly valve technical data

### Medium

**Working medium:** Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the body, disc and seal material. The product is only suitable for use with fluids of group 2 according to the Pressure Equipment Directive.

### Temperature

**Media temperature:** 0 – 60 °C

**Ambient temperature:** -10 – 60 °C

**Storage temperature:** 0 – 40 °C

### Pressure

**Operating pressure:** 0 – 6 bar

**Cv values:**

DN	Cv values
15	7.0
20	13.0
25	17.0
32	33.0
40	53.0
50	74.0

Cv values in m<sup>3</sup>/h

**Pressure/temperature correlation:**

Material	Code	Temperature	Permissible operating pressure
PVC-U	1	10	10.0
		20	10.0
		25	10.0
		30	8.0
		40	6.0
		50	3.5
		60	1.5

Temperatures in °C

Pressures in bar

All pressures are gauge pressures.

The permissible operating pressure depends on the working medium temperature.

### Product compliance

**Machinery Directive:** 2006/42/EC

**EMC Directive:** 2014/30/EU

**Low Voltage Directive:** 2014/35/EU

**RoHS Directive:** 2011/65/EU (GEMÜ 9428)

## Mechanical data

Torques:	DN	Torques
	15	6.0
	20	6.0
	25	6.0
	32	8.0
	40	20.0
	50	21.0

Torques in Nm

Weight:	DN	Weight
	15	360
	20	390
	25	400
	32	700
	40	1072
	50	1200

Weight in g

## Technical data of actuator

### GEMÜ 9428 actuators

#### Mechanical data

Weight:	GEMÜ 9428	
	Supply voltage 12 V / 24 V:	1.0 kg
	Actuator version 3035:	2.4 kg

<b>Protection class:</b>	IP 65 acc. to EN 60529
<b>Nominal travel:</b>	90°
<b>Max. travel:</b>	93°
<b>Setting range:</b>	0 to 20° (limit switch Min.) 70 to 93° (limit switch Max.)

#### Electrical data

<b>Duty cycle:</b>	Continuous duty
<b>Electrical protection:</b>	Motor protective system by customer
<b>Electrical protection class:</b>	I (DIN EN 61140)

#### Electrical connection

<b>Electrical connection type:</b>	Cable connection PG 13.5 Binder RD24 flange plug series 693, number of poles: 6+PE, IP67 (GEMÜ 3006, 3015)
<b>Cable diameter:</b>	7.5 – 12.5 mm
<b>Max. cross section of wire:</b>	1.5 mm <sup>2</sup>

<b>Recommended motor protection:</b>	<b>Voltage</b>	<b>12 V DC</b>	<b>24 V DC</b>
	<b>Motor protection switch type</b>	Siemens 3RV 1011-1CA10	Siemens 3RV 1011-1BA10
	<b>Set current</b>	2.20	1.70

Current data in A

**Rated voltage:** 12 V / 24 V AC or DC ( $\pm 10\%$ )

**Rated frequency:** 50/60 Hz (at AC rated voltage)

<b>Power consumption:</b>	<b>Actuator version</b>	<b>12 V DC</b>	<b>12 V AC</b>	<b>24 V DC</b>	<b>24 V AC</b>
		<b>Code B1</b>	<b>Code B4</b>	<b>Code C1</b>	<b>Code C4</b>
	<b>1006, 3006</b>	30.0	30.0	30.0	30.0
	<b>1015, 3015</b>	30.0	-	30.0	-
	<b>2015</b>	-	30.0	-	30.0
	<b>3035</b>	-	-	30.0	-

Power consumption in W

<b>Current consumption:</b>	<b>Actuator version</b>	<b>12 V DC</b>	<b>12 V AC</b>	<b>24 V DC</b>	<b>24 V AC</b>
		<b>Code B1</b>	<b>Code B4</b>	<b>Code C1</b>	<b>Code C4</b>
	<b>1006, 3006</b>	2.2	2.0	1.20	1.5
	<b>1015, 3015</b>	2.2	-	1.20	-
	<b>2015</b>	-	2.0	-	1.2
	<b>3035</b>	-	-	1.30	-

Current data in A

<b>Max. current at start up:</b>	<b>Actuator version</b>	<b>12 V DC</b>	<b>12 V AC</b>	<b>24 V DC</b>	<b>24 V AC</b>
		<b>Code B1</b>	<b>Code B4</b>	<b>Code C1</b>	<b>Code C4</b>
	<b>1006, 3006</b>	6.3	2.4	4.0	1.8
	<b>1015, 3015</b>	9.2	-	3.8	-
	<b>2015</b>	-	2.3	-	1.8
	<b>3035</b>	-	-	3.3	-

Current data in A

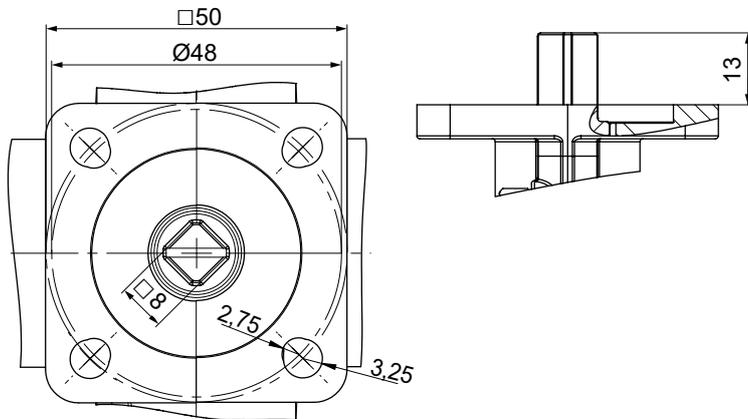
## **J+J actuators**

Note: For technical data see manufacturer's original datasheets

## Dimensions

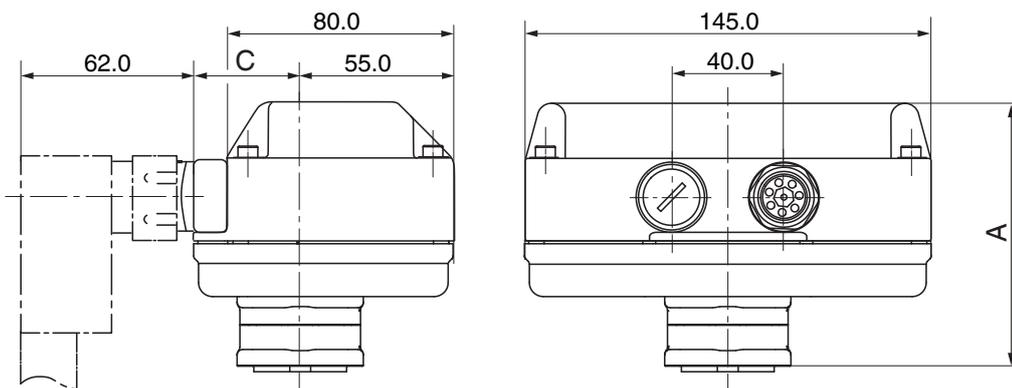
### Actuator

#### Actuator flange F05/G05



Dimensions in mm

#### Actuator version 1006, 1015, 2015

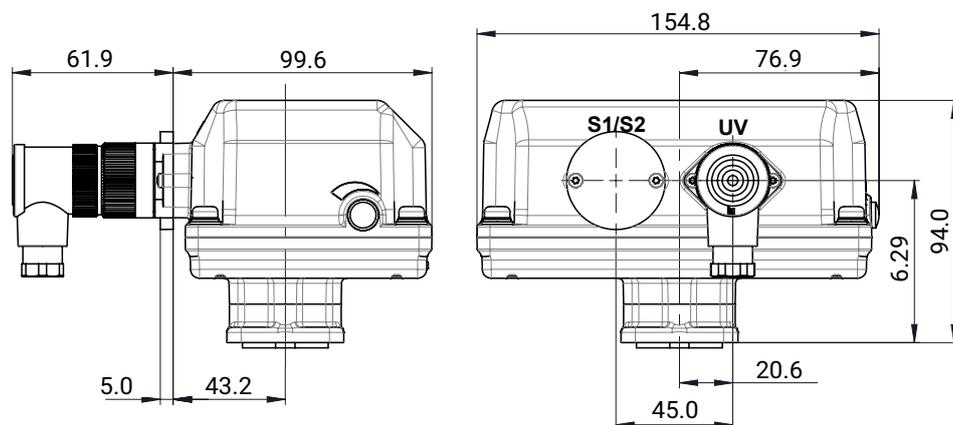


Actuator version	A	C
<b>1006, 1015</b>	94.0	49.0
<b>2015</b>	122.0	53.0

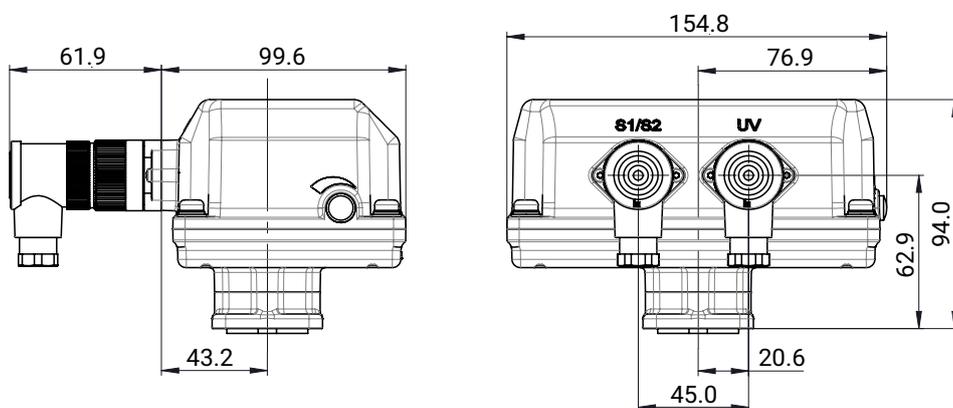
Dimensions in mm

**Actuator version 3006, 3015**

ON/OFF actuator (control module code A0)

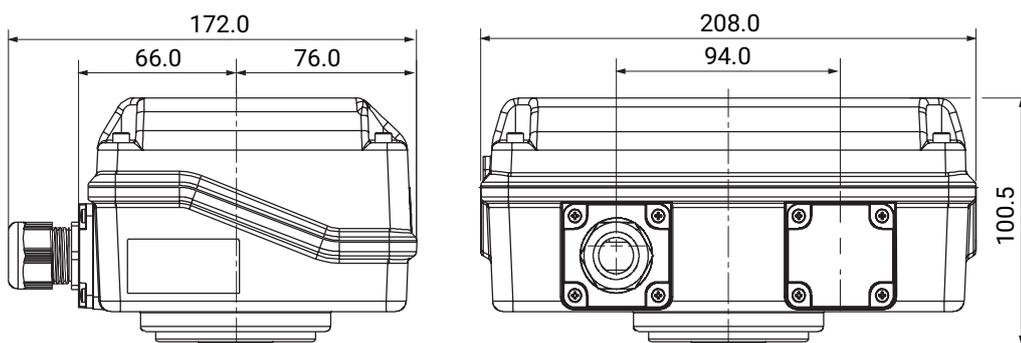


OPEN/CLOSE control, 2 additional potential-free limit switches (control module code AE)



Dimensions in mm

**Actuator version 3035**

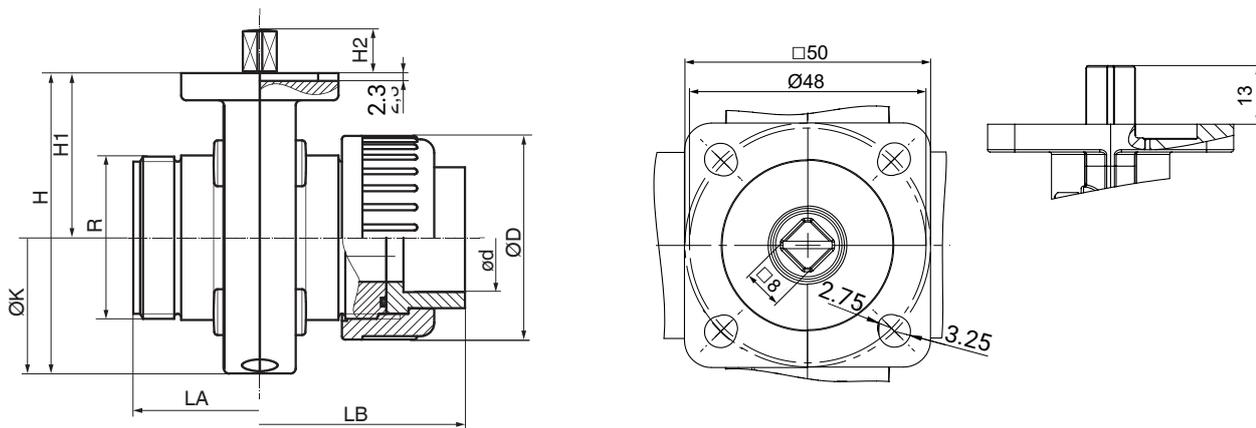


Dimensions in mm

**Third-party actuators**

For more detailed information on third-party actuators, refer to the manufacturers' documentation

**Body**



DN	LA	LB	H	H1	H2	øD	ød	R	øK
15	74.0	114.0	89.0	48.5	13.0	60.0	20.0	G 1 1/2	80.0
20	74.0	118.0	89.0	48.5	13.0	60.0	25.0	G 1 1/2	80.0
25	74.0	124.0	89.0	48.5	13.0	60.0	32.0	G 1 1/2	80.0
32	80.0	138.0	106.0	57.5	13.0	74.0	40.0	G 2	96.0
40	94.0	162.0	112.0	58.0	13.0	83.0	50.0	G 2 1/4	108.0
50	106.0	188.0	137.0	74.0	13.0	103.0	63.0	G 2 3/4	126.0

Dimensions in mm



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