



## Compressed Air Preparation - Stainless Steel

<b>Filters</b>	Type 692	<b>2</b>
<b>Filter pressure regulators</b>	Type 690	<b>3</b>
<b>Pressure regulators</b>	Type 691	<b>4</b>
<b>Couplings</b>	Safety coupling DN7,2	<b>5</b>
<b>Threaded connections</b>	Threaded fittings	<b>6 – 9</b>
<b>Valves</b>	Ball valves	<b>10</b>



## Filters type 692 - G<sup>1/4</sup> – G 1



Compressed air filters serve to remove solid and liquid impurities (condensation water, pipe scaling, rust particles) from the air in the working place. They protect the following components from dirt and abrasion. This filter has been developed specially for high-demanding applications. Filter with bowl without sight glass, completely made of stainless steel, therefore extremely robust. Suitable for compressed air, non-toxic gases and liquids.

**Application area:** Chemical industry, mineral oil processing, apparatus engineering.

### Standard version:

With manual drain valve, filter porosity 50µm

Size	Order No.				
	Connection thread				
I	G <sup>1/4</sup>	G <sup>3/8</sup>	G <sup>1/2</sup>	G <sup>3/4</sup>	G 1
II	692.221	692.231	-	-	-
III	-	-	692.261	692.281	-
	-	-	-	-	692.291

### Order key for all variants:

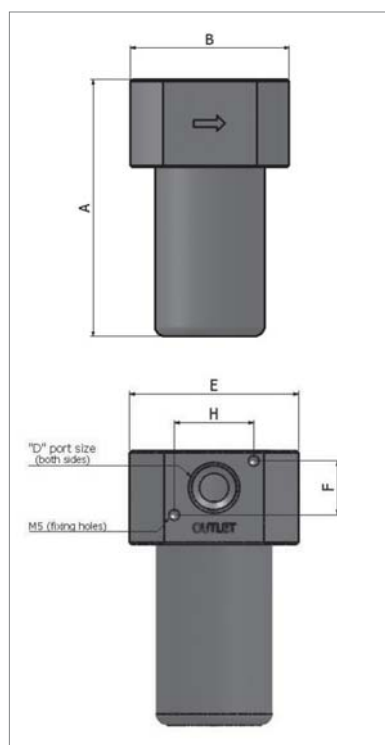
692.x x x

1	50 µm	} filter porosity
2	25 µm	
3	5 µm	
2	G <sup>1/4</sup> size I	} connection thread
3	G <sup>3/8</sup> size I	
6	G <sup>1/2</sup> size II	
8	G <sup>3/4</sup> size II	
9	G 1 size III	
0	without drain valve	} drain valve
2	manual drain valve	

for example:  
**692.221** = with manual drain valve,  
 G<sup>1/4</sup> with 50µm

### Accessories

Mounting bracket	Order No.
Suitable for size I	690-30
Suitable for size II	690-35
Suitable for size III	690-39



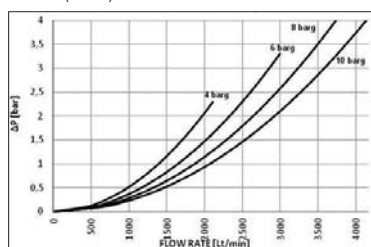
### Technical data

	Size				
	I	G <sup>3/8</sup>	II	G <sup>3/4</sup>	III
Connection thread	G <sup>1/4</sup>	G <sup>3/8</sup>	G <sup>1/2</sup>	G <sup>3/4</sup>	G 1
Nominal rates of flow (NI/min)*	2100		3600		3600
Media	compressed air, non-toxic gases, liquids				
Filter porosity	5, 25 oder 50µm				
Max. pre-pressure (p <sub>1</sub> )	60bar				
Temperature ranges	with NBR sealings -20 °C - +80 °C with EPDM sealings (optionally) -45 °C - +80 °C with silicone sealings (optionally) -60 °C - +200 °C				
Drain of condensate	manually operated drain valve				
Bowl capacity	0,11l				
Materials	- Body stainless steel No. 1.4404 (AISI 316L) - Bowl stainless steel No. 1.4404 (AISI 316L) - Inner parts stainless steel No. 1.4404 (AISI 316L) - Sealings NBR (for EPDM and silicone please indicate when ordering)				
Weight (kg)	1,6		2,3		3,3

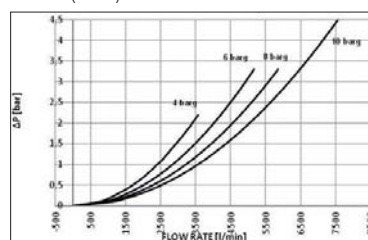
\* measured at 10bar, pre-pressure (p<sub>1</sub>) and Δp = 1 bar

### Rates of flow [NI/min]

Size I (G<sup>1/4</sup>)



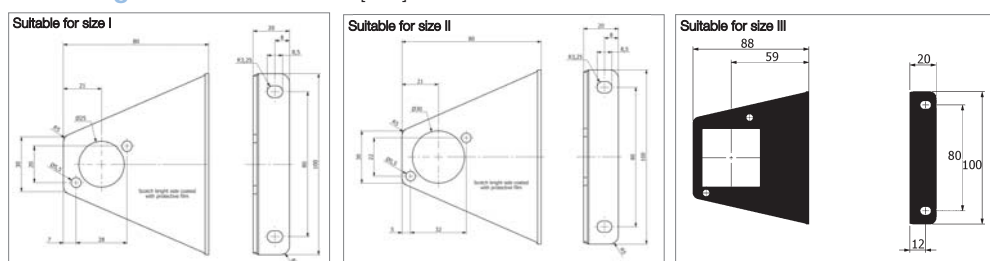
Size II (G<sup>1/2</sup>)



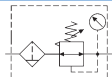
### Dimensions [mm]

Size	I	II	III
Connection thread	G <sup>1/4</sup> , G <sup>3/8</sup>	G <sup>1/2</sup> , G <sup>3/4</sup>	G <sup>3/4</sup> , G 1
A	112	111	145
B	62	68	114
C	97	114	123
D	G <sup>1/4</sup> , G <sup>3/8</sup>	G <sup>1/2</sup> , G <sup>3/4</sup>	G 1
E	62	68	88
F	20	22	36
H	28	32	34

### Mounting bracket Dimensions [mm]



## Filter pressure regulators type 690 - G<sup>1/4</sup> - G1



Filter and pressure regulator united in a space-saving model. This filter pressure regulator has been developed specially for high-demanding applications. Filter with bowl without sight glass, completely made of stainless steel, therefore extremely robust. Suitable for compressed air, non-toxic gases and liquids. Operating pressure from 0 to 15 bar.

**Application area:** Chemical industry, mineral oil processing, apparatus engineering.

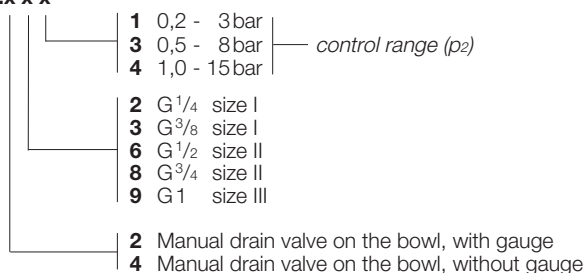
### Standard version:

With manual drain valve, control range 0,5-8 bar

Size	Order No.				
	Connection thread				
	G <sup>1/4</sup>	G <sup>3/8</sup>	G <sup>1/2</sup>	G <sup>3/4</sup>	G1
I	690.423	690.433	-	-	-
II	-	-	690.463	690.483	-
III	-	-	-	-	690.493

### Order key for all variants:

690.x x x



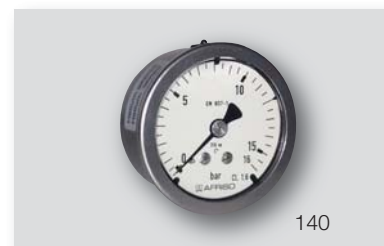
for example:

**690.231** = with manual drain valve on bowl, G<sup>3/8</sup> with gauge, 0,2-3 bar



### Accessories

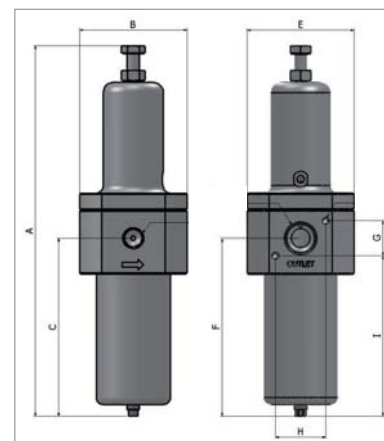
Gauge, ø50, G <sup>1/4</sup> female thread	Scale	Order No.
	0- 2,5 bar	140
	0- 6,0 bar	141
	0- 10,0 bar	142
	0- 16,0 bar	143
	0- 25,0 bar	144
	0- 40,0 bar	145
<b>Mounting bracket</b> , suitable for size I, dimensions see page 2		690-30
<b>Mounting bracket</b> , suitable for size II, dimensions see page 2		690-35
<b>Mounting bracket</b> , suitable for size III, dimensions see page 2		690-39



### Technical data

	Size				
	I		II		III
Connection thread (optional NPT)	G <sup>1/4</sup>	G <sup>3/8</sup>	G <sup>1/2</sup>	G <sup>3/4</sup>	G1
Nominal rates of flow (NI/min)*	4500		5500		5500
Regulating system	Diaphragm				
Adjustment	by screw (hexagon socket screw with locknut)				
Media	compressed air, non-toxic gases, liquids				
Relieving function	reversible (secondary venting) (optionally: non-reversible, without secondary venting, please indicate when ordering)				
Filter porosity	5, 25 or 50 µm				
Max. pre-pressure (p <sub>1</sub> )	60 bar				
Temperature ranges	with NBR sealings		-20 °C - +80 °C		
	with EPDM sealings (optionally)		-45 °C - +80 °C		
	with silicone sealings (optionally)		-60 °C - +200 °C		
Bowl capacity	0,11				
Drain of condensate	manually operated drain valve				
Material	- Body / bowl / inner parts / filter element Stainless steel No. 1.4404 (AISI 316L) - Sealings / diaphragm NBR (for EPDM and silicone please indicate when ordering)				
Weight (kg)	1,6		2,3		4,2

\* measured at 10 bar pre-pressure (p<sub>1</sub>), 6,3 bar secondary pressure (p<sub>2</sub>) and Δp = 1 bar

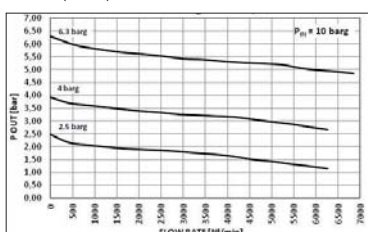


### Dimensions [mm]

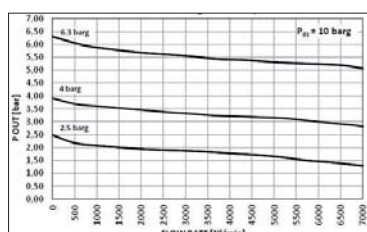
Size	I	II	III
Connection thread	G <sup>1/4</sup> , G <sup>3/8</sup>	G <sup>1/2</sup> , G <sup>3/4</sup>	G <sup>3/4</sup> , G1
A	223	242	267
B	62	68	114
C	97	114	123
D	G <sup>1/4</sup> , G <sup>3/8</sup>	G <sup>1/2</sup> , G <sup>3/4</sup>	G1
E	62	68	88
F	97	114	123
G	20	22	57
H	28	32	33
I	87	103	96

### Rates of flow [NI/min]

Size I (G<sup>1/4</sup>)



Size II (G<sup>1/2</sup>)





## Pressure regulator type 691 - G<sup>1/4</sup> – G 1



691.423

The system pressure in a compressed air system varies according to the compressor size. Pressure regulators are reducing this fluctuating line pressure (pressure  $p_1$ ) to the desired working pressure (outlet pressure  $p_2$ ) and maintain it largely constant. This pressure regulator has been developed specially for high-demanding applications. Operating pressure from 0 to 15 bar. The pressure gauge can be mounted on both sides. Note: To prevent the system from dirt or breakdown, a filter should be installed at first step.

**Application area:** Chemical industry, mineral oil processing, apparatus engineering.

### Standard version:

Without gauge, control range 0,5 – 8 bar

Size	Order No.				
	Connection thread				
	G <sup>1/4</sup>	G <sup>3/8</sup>	G <sup>1/2</sup>	G <sup>3/4</sup>	G 1
I	691.423	691.433	-	-	-
II	-	-	691.463	691.483	-
III	-	-	-	-	691.493

### Order key for all variants:

691.x x x

- 0 0,1 - 1,5 bar
  - 1 0,2 - 3,0 bar
  - 3 0,5 - 8,0 bar
  - 4 1,0 - 15,0 bar
- control range ( $p_2$ )
- 
- 2 G<sup>1/4</sup> size I
  - 3 G<sup>3/8</sup> size I
  - 6 G<sup>1/2</sup> size II
  - 8 G<sup>3/4</sup> size II
  - 9 G 1 size III
- 
- 2 with gauge
  - 4 without gauge

for example:

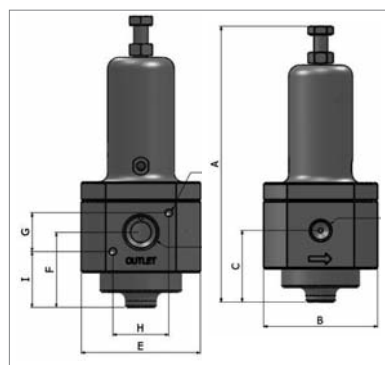
**691.231** = G<sup>3/8</sup> with gauge, 0,2-3 bar



140

### Accessories

Gauge, ø 50, G <sup>1/4</sup> female	Scale	Order No.
	0- 2,5 bar	140
	0- 6,0 bar	141
	0- 10,0 bar	142
	0- 16,0 bar	143
	0- 25,0 bar	144
	0- 40,0 bar	145
<b>Mounting bracket</b> , suitable for size I, dimensions see page 2		690-30
<b>Mounting bracket</b> , suitable for size II, dimensions see page 2		690-35
<b>Mounting bracket</b> , suitable for size III, dimensions see page 2		690-39



### Dimensions [mm]

size	I	II	III
<b>Connection thread</b>	G <sup>1/4</sup> , G <sup>3/8</sup>	G <sup>1/2</sup> , G <sup>3/4</sup>	G <sup>3/4</sup> , G 1
<b>A</b>	168	171	204
<b>B</b>	62	68	114
<b>C</b>	41	43	59
<b>D</b>	G <sup>1/4</sup> , G <sup>3/8</sup>	G <sup>1/2</sup> , G <sup>3/4</sup>	G 1
<b>E</b>	62	68	88
<b>F</b>	42	43	59
<b>G</b>	20	22	57
<b>H</b>	28	32	33
<b>I</b>	32	32	32

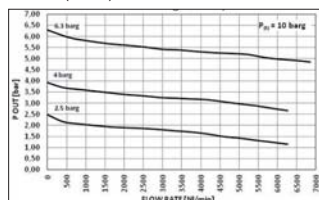
### Technical data

	Size				
	I	G <sup>3/8</sup>	II	G <sup>3/4</sup>	III
Connection thread (optional NPT)	G <sup>1/4</sup>	G <sup>3/8</sup>	G <sup>1/2</sup>	G <sup>3/4</sup>	G 1
Nominal rates of flow (NI/min)*	5000		6000		6000
Regulating system	Diaphragm				
Regulating range	0,3-3 / 0,5-8 / 0,5-17,2 bar or 4,4-44 / 7,2-116 / 7,2-250 psi				
Adjustment	by screw (hexagon socket screw with locknut)				
Media	compressed air, non-toxic gases, liquids				
Relieving function	reversible (secondary venting) (optionally: non-reversible, without secondary venting, please indicate when ordering)				
Filter porosity	5, 25 or 50 µm				
Max. pre-pressure ( $p_1$ )	60 bar				
Temperature ranges	with NBR sealings		-20 °C - +80 °C		
	with EPDM sealings (optionally)		-45 °C - +80 °C		
	with silicone sealings (optionally)		-60 °C - +200 °C		
Bowl capacity	0,11				
Drain of condensate	manually operated drain valve				
Materials - Body / bowl / inner parts / filter element	stainless steel No. 1.4404 (AISI 316L)				
- Sealings / diaphragm	NBR (for EPDM and silicone please indicate when ordering)				
Weight (kg)	1,6		2,3		3,5

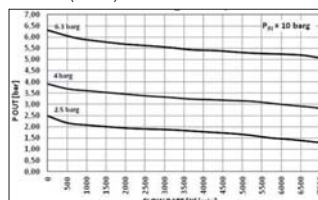
\* measured at 10 bar pre-pressure ( $p_1$ ) 6,3 bar and  $\Delta p = 1$  bar

### Rates of flow [Nl/min]

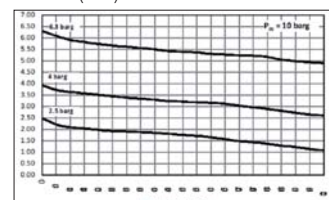
Size I (G<sup>1/4</sup>)



Size II (G<sup>1/2</sup>)



Size III (G 1)



## DN 7,4 Safety coupling with push-button, swivel connector

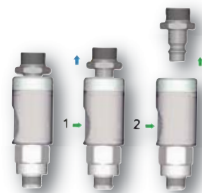


This safety coupling (silicone-free) according to ISO 4414 with a push-button avoids the so-called whip effect when the plug is decoupled. With the materials used, this high-quality coupling is characterized by stability and compactness. Safety Couplings with rotatable connector (swivel joint) allow for fixed-mounted clutches that the push-button operation can be placed on the ergonomically favorable position. Axis of rotation = 360°.

### Handling:

**Step 1:** By a single actuation of the push button, the coupling is vented, the plug is further secured in the sleeve.

**Step 2:** When the push button is pressed a second time, the connector is unlocked and can be removed safely.



Connection thread W	Dimensions (mm)			Order No.
	L	i	SW	

### Coupling

#### With male thread

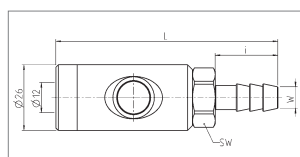
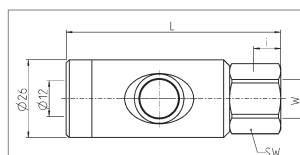
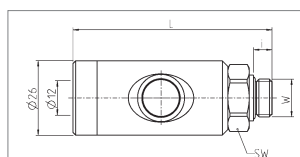
G <sup>1/4</sup>	70,5	6,5	21	<b>413.201</b>
G <sup>3/8</sup>	70,0	7	21	<b>413.221</b>
G <sup>1/2</sup>	72,5	8,5	25	<b>413.241</b>

#### With female thread

G <sup>1/4</sup>	71,5	9	21	<b>413.202</b>
G <sup>3/8</sup>	75,5	10	21	<b>413.222</b>
G <sup>1/2</sup>	77,5	11	24	<b>413.242</b>

#### With hose connection

LW6	88,5	25	21	<b>413.223</b>
LW9	88,5	25	21	<b>413.224</b>
LW13	88,5	25	21	<b>413.225</b>



413.221



413.222



413.224

Connection thread W	Dimensions (mm)			Order No.
	L	i	SW	

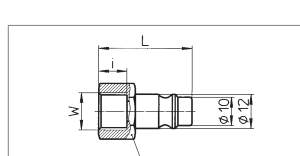
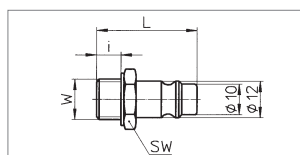
### Plug

#### With male thread

G <sup>1/4</sup>	33	17	<b>413-053</b>
G <sup>3/8</sup>	33	19	<b>413-054</b>

#### With female thread

G <sup>1/4</sup>	33	17	<b>413-055</b>
G <sup>3/8</sup>	33	19	<b>413-056</b>



413-054



413-056

### Technical data

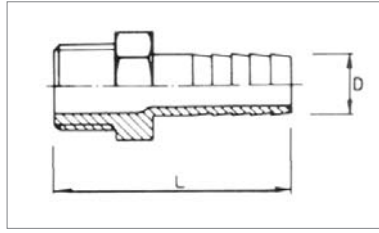
<b>Nominal rates of flow*</b>	1.800NI/min (measured at 6 bar pre-pressure (p <sub>1</sub> ) and Δp = 1 bar)
<b>Max. operating pressure (p<sub>1</sub>)</b>	10bar
<b>Fluid and operating temperature</b>	-20°C up to +150°C
<b>Mounting position</b>	any (coupling preferably before plug in the direction of flow)
<b>Direction of flow</b>	any
<b>Material</b>	stainless steel 1.4404
- Housing inlet	stainless steel
- Button and valve	stainless steel
- internal parts	stainless steel
- Thread	stainless steel
- Sealing material	FKM

### Remark

All DN 7,4 plugs are compatible with all DN 7,4, DN 7,2 and DN 7,8 couplings.

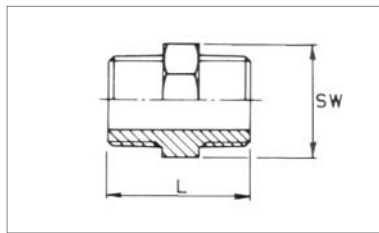
## Threaded fittings

Material: Stainless steel 316L, material no. 1.4571  
 Internal thread: Cylindrical according to DIN ISO 228  
 External thread: Conical according to ISO 7-1



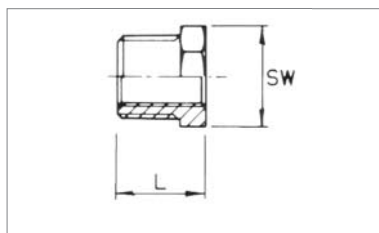
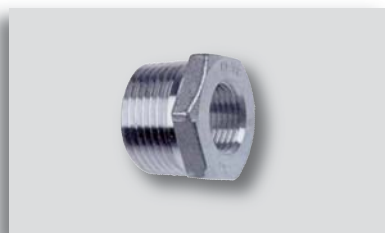
### Hose spout with thread

Connection thread	Dimensions [mm]			Order No.
	NW	D	L	
1/8	6	6,0	36,7	650.00
1/4	8	6,0	42,6	650.01
1/4	8	9,0	41,3	654.53
3/8	10	9,0	43,0	650.02
3/8	10	11,0	42,7	654.55
3/8	10	13,0	46,5	654.57
1/2	15	11,0	47,6	650.03
1/2	15	12,9	51,5	654.59
1/2	15	14,0	54,6	654.60
3/4	20	20,0	59,5	650.04
1	25	19,0	69,3	650.05
1	25	25,4	64,0	654.62
1 1/4	32	32,0	66,3	650.06
1 1/2	40	38,0	78,0	650.07
2	50	51,0	87,0	650.08



### Double nipple with hexagon nut (male)

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/8	6	29	12	650.09
1/4	8	32	17	650.10
3/8	10	36	12	650.11
1/2	15	42	26	650.12
3/4	20	46	32	650.13
1	25	52	38	650.14
1 1/4	32	56	46	650.15



### Reducer with hexagon nut (male)

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/4x1/8	8x 6	15	16	650.36
3/8x1/8	10x 6	17	18	650.37
3/8x1/4	10x 8	17	18	650.38
1/2x1/8	15x 6	21	26	650.39
1/2x1/4	15x 8	21	26	650.40
1/2x3/8	15x10	21	26	650.41
3/4x1/4	20x 8	24	30	650.42
3/4x3/8	20x10	24	30	650.43
3/4x1/2	20x15	24	30	650.44
1x1/4	25x 8	27	35	650.45
1x3/8	25x10	27	35	650.46
1x1/2	25x15	27	35	650.47
1x3/4	25x20	27	35	650.48
1 1/4x3/8	32x10	30	45	650.49
1 1/4x1/2	32x15	30	45	650.50
1 1/4x3/4	32x20	30	45	650.51
1 1/4x1	32x25	30	45	650.52
1 1/2x1/2	40x15	38	52	650.53
1 1/2x3/4	40x20	38	52	650.54
1 1/2x1	40x25	38	52	650.55
1 1/2x1 1/4	40x32	38	52	650.56
2x1/2	50x25	36	63	650.59
2x3/4	50x15	36	63	650.57
2x1	50x20	36	63	650.58
2x1 1/4	50x32	36	63	650.60
2x1 1/2	50x40	36	63	650.61

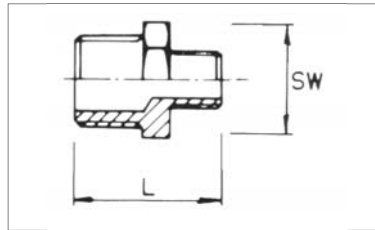


## Threaded fittings

Material: Stainless steel 316L, material no. 1.4571  
 Internal thread: Cylindrical according to DIN ISO 228  
 External thread: Conical according to ISO 7-1

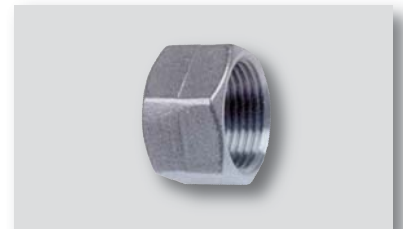
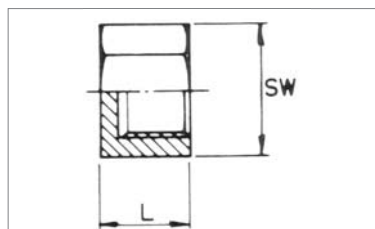
### Reducing nipple with hexagon nut (male)

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/4x1/8	8x 6	34	18	650.20
3/8x1/8	10x 6	36	21	650.21
3/8x1/4	10x 8	34	21	650.22
1/2x1/8	15x 6	34	25	650.23
1/2x1/4	15x 8	34	25	650.24
1/2x3/8	15x10	41	25	650.25
3/4x1/4	20x 8	37	31	650.26
3/4x3/8	20x10	38	31	650.27
3/4x1/2	20x15	45	31	650.28
1x1/4	25x 8	39	35	650.29
1x3/8	25x10	44	35	650.30
1x1/2	25x15	44	35	650.31
1x3/4	25x20	50	35	650.32
1 1/4x1/2	32x15	48	46	650.33
1 1/4x3/4	32x20	52	46	650.34
1 1/4x1	32x25	54	46	650.35
1 1/2x1/2	40x15	49	50	654.10
1 1/2x3/4	40x20	53	50	654.11
1 1/2x1	40x25	53	50	654.12
1 1/2x1 1/4	40x32	59	50	654.13
2x1/2	50x15	57	63	654.14
2x3/4	50x20	57	63	654.15
2x1	50x25	57	63	654.16
2x1 1/4	50x32	57	63	654.17
2x1 1/2	50x40	64	63	654.18



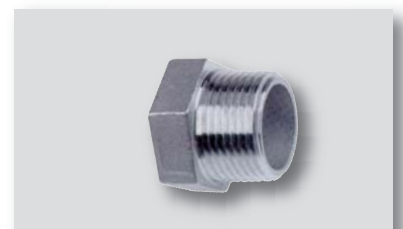
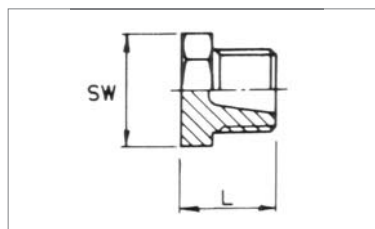
### Hexagon cap with female thread and hexagon (male)

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/8	6	13	15	650.69
1/4	8	17	18	650.70
3/8	10	19	21	650.71
1/2	15	20	27	650.72
3/4	20	24	30	650.73
1	25	25	38	650.74



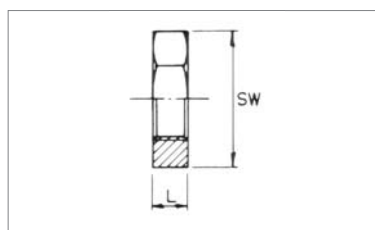
### Hexagon plug

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/8	6	21	12	650.80
1/4	8	21	16	650.81
3/8	10	22	20	650.82
1/2	15	28	24	650.83
3/4	20	30	30	650.84
1	25	32	38	650.85



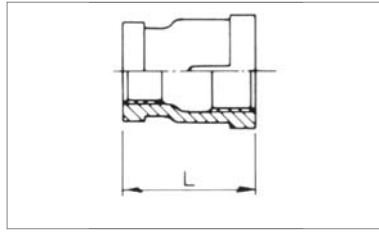
### Hexagon nut

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/8	6	6	23	651.11
1/4	8	8	23	651.12
3/8	10	7	27	651.13
1/2	15	8	32	651.14
3/4	20	10	35	651.15
1	25	10	46	651.16
1 1/4	32	11	55	651.17



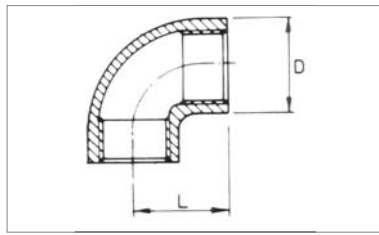
## Threaded fittings

Material: Stainless steel 316L, material no. 1.4571  
 Internal thread: Cylindrical according to DIN ISO 228  
 External thread: Conical according to ISO 7-1



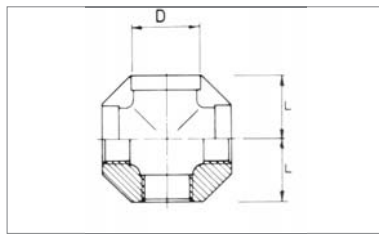
### Reducing socket with female thread

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/4x1/8	8x 6	26	-	651.22
3/8x1/8	10x 6	30	-	651.23
3/8x1/4	10x 8	30	-	651.24
1/2x1/8	15x 6	34	-	651.25
1/2x1/4	15x 8	34	-	651.26
1/2x3/8	15x10	34	-	651.27
3/4x1/4	20x 8	37	-	651.28
3/4x3/8	20x10	37	-	651.29
3/4x1/2	20x15	37	-	651.30
1x1/4	25x 8	43	-	651.31
1x3/8	25x10	43	-	651.32
1x1/2	25x15	43	-	651.33
1x3/4	25x20	43	-	651.34
1 1/4x1/2	32x15	48	-	651.35
1 1/4x3/4	32x20	48	-	651.36
1 1/4x1	32x25	53	-	651.37
1 1/2x1/2	40x15	53	-	651.38
1 1/2x3/4	40x20	53	-	651.39
1 1/2x1	40x25	53	-	651.40
1 1/2x1 1/4	40x32	53	-	651.41



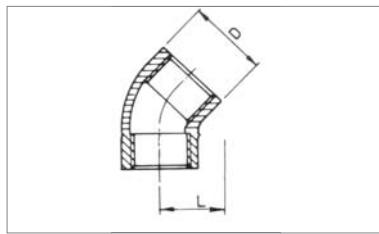
### Elbow 90° with female thread

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/8	6	8	15	651.55
1/4	8	14	18	651.56
3/8	10	20	22	651.57
1/2	15	26	27	651.58
3/4	20	32	35	651.59
1	25	38	42	651.60



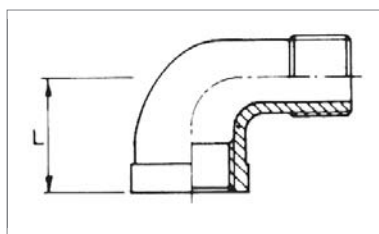
### Cross with female thread

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/4	8	38	18	651.66
3/8	10	46	21	651.67
1/2	15	54	27	651.68
3/4	20	64	33	651.69
1	25	76	42	651.70



### Elbow 45° with female thread

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/8	6	23	13	651.76
1/4	8	32	21	651.77
3/8	10	39	22	651.78
1/2	15	45	28	651.79
3/4	20	46	34	651.80
1	25	57	41	651.81



### Street elbow with female/male thread

Connection thread	Dimensions [mm]			Order No.
	NW	L	SW	
1/8	6	18	-	651.87
1/4	8	27	-	651.88
3/8	10	27	-	651.89
1/2	15	28	-	651.90
3/4	20	33	-	651.91
1	25	37	-	651.92

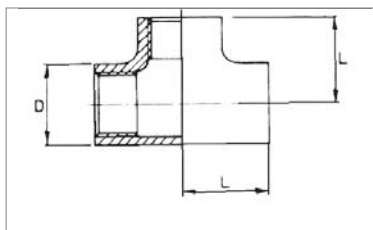


## Threaded fittings

Material: Stainless steel 316L, material no. 1.4571  
 Internal thread: Cylindrical according to DIN ISO 228  
 External thread: Conical according to ISO 7-1

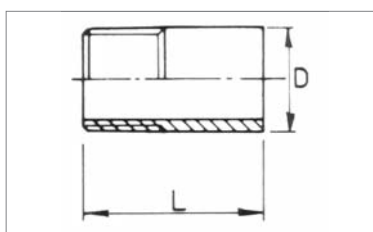
### Equal tee

Connection thread	Dimensions [mm]			Order No.
	NW	L	D	
1/8	6	14	14	651.98
1/4	8	19	19	651.99
3/8	10	22	22	652.00
1/2	15	28	28	652.01
3/4	20	35	35	652.02
1	25	42	42	652.03



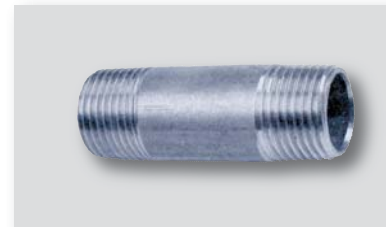
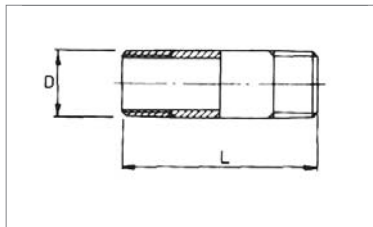
### Welding nipples

Connection thread	Dimensions [mm]			Order No.
	NW	L	D	
1/8	6	30	10	652.18
1/4	8	30	13	652.19
3/8	10	30	17	652.20
1/2	15	35	21	652.21
3/4	20	40	27	652.22
1	25	40	34	652.23
1 1/4	32	50	42	652.24
1 1/2	40	50	48	652.25
2	50	50	60	652.26



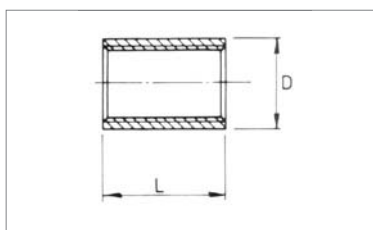
### Barrel nipples

Connection thread	Dimensions [mm]			Order No.
	NW	L	D	
1/8	6	40	10	652.40
1/4	8	40	13	652.41
3/8	10	40	17	652.42
1/2	15	60	21	652.43
3/4	20	60	27	652.44
1	25	60	34	652.45
1 1/4	32	80	42	652.46
1 1/2	40	80	48	652.47
2	50	100	60	652.48



### Sockets

Connection thread	Dimensions [mm]			Order No.
	NW	L	D	
1/8	6	17	14	652.62
1/4	8	25	17	652.63
3/8	10	26	21	652.64
1/2	15	34	26	652.65
3/4	20	36	32	652.66
1	25	43	39	652.67
1 1/4	32	48	48	652.68
1 1/2	40	48	54	652.69
2	50	56	66	652.70

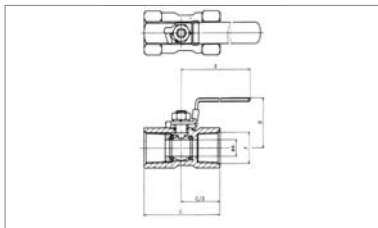


More threaded fittings made of brass see chapter 10, page 20 seq.



## Ball valves

Stainless steel ball valves are used in applications where aggressive liquid or gaseous media needs in a pipe or hose system, the line can be shut off. High general resistance to water and slightly polluted wastewater, food and organic acids.



### Ball valve, one-piece

Reduced bore.

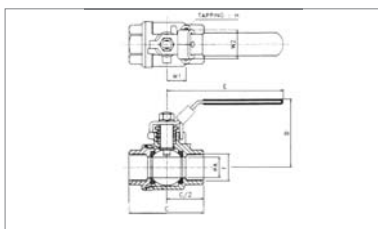
#### Max. operating pressure (p<sub>1</sub>):

G<sup>1/4</sup> - G<sup>1/4</sup> 70bar\*

G<sup>1/2</sup> - G2 50bar\*

\* Pressure declarations are valid if liquid / gas temperature corresponds to room temperature

AnschlussDimensions [mm]					Gewicht	Order No.
F	C	D	E	A	[kg]	
G <sup>1/4</sup>	39	35	66	5	0,070	<b>660.14</b>
G <sup>3/8</sup>	44	36	74	7	0,102	<b>660.15</b>
G <sup>1/2</sup>	57	41	89	9	0,166	<b>660.16</b>
G <sup>3/4</sup>	59	44	89	13	0,247	<b>660.17</b>
G1	71	51	105	16	0,412	<b>660.18</b>
G1 <sup>1/4</sup>	78	56	105	20	0,627	<b>660.19</b>
G1 <sup>1/2</sup>	83	64	130	24	0,838	<b>660.20</b>
G2	100	71	130	32	1,384	<b>660.21</b>



### Ball valve, two-piece

Full bore.

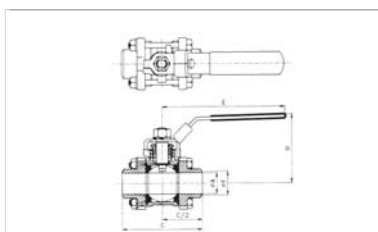
#### Max. operating pressure (p<sub>1</sub>):

G<sup>1/4</sup> - G1 95bar\*

G<sup>1/4</sup> - G2 70bar\*

\* Pressure declarations are valid if liquid / gas temperature corresponds to room temperature

AnschlussDimensions [mm]					Gewicht	Order No.
F	C	D	E	A	[kg]	
G <sup>1/4</sup>	49	51	95	12	0,250	<b>660.22</b>
G <sup>3/8</sup>	49	51	95	13	0,260	<b>660.23</b>
G <sup>1/2</sup>	57	53	95	15	0,450	<b>660.24</b>
G <sup>3/4</sup>	65	59	110	20	0,580	<b>660.25</b>
G1	78	73	135	25	1,000	<b>660.26</b>
G1 <sup>1/4</sup>	91	78	135	32	1,450	<b>660.27</b>
G1 <sup>1/2</sup>	105	91	165	38	2,150	<b>660.28</b>
G2	127	99	165	51	3,000	<b>660.29</b>



### Ball valve, three-piece

Full bore.

#### Max. operating pressure (p<sub>1</sub>):

G<sup>1/4</sup> - G1 95bar\*

\* Pressure declarations are valid if liquid / gas temperature corresponds to room temperature

Anschluss Dimensions [mm]					Gewicht	Order No.
F	C	D	E	A	[kg]	
<sup>1</sup> / <sub>4</sub>	59	51	95	12	0,326	<b>660.43</b>
<sup>3</sup> / <sub>8</sub>	59	51	95	13	0,306	<b>660.44</b>
<sup>1</sup> / <sub>2</sub>	64	55	95	15	0,450	<b>660.45</b>
<sup>3</sup> / <sub>4</sub>	75	59	110	20	0,646	<b>660.46</b>
1	86	73	135	25	0,948	<b>660.47</b>
1 <sup>1</sup> / <sub>4</sub>	100	80	140	32	1,530	<b>660.48</b>

### Technical data

<b>Connection thread:</b>	thread acc. to DIN 259/2999
<b>Media:</b>	compressed air, fluids (please note material resistance)
<b>Operating temperature:</b>	-20 °C bis +160 °C (pressure dependent)
<b>Mounting position:</b>	any
<b>Direction of flow:</b>	any
<b>Material:</b>	stainless steel No. 1.4408
- ball valve	PTFE 15%
- ball seat	PTFE
- seals	PVC
- lever protection	

More ball valves see chapter 11, page 8 seq.