

Guideline

Pipe Class Specification PN 16

Tube parts catalogue Pipe class: AA16C1

- 1 Aim** Aim of this guideline is the specification of tube parts under defined operating conditions under consideration of the requirements of guideline 97/23/EC (Pressure equipment guideline)
- 2 Scope** Air Liquide Deutschland GmbH
- 3 Material** 1.0254 (St 37.0)
- 4 Pipe class** Standard pipe class
- 5 Seal form** Form B1 according to DIN EN 1092-1
- 6 Corrosion surcharge** 1,00 mm
- 7 Screws** Hexagon head screw 5.6
Hexagon nut 5-2
- 8 Permitted media** argon, compressed air, rare gases, natural gas, carbon dioxide, oxygen, nitrogen, hydrogen, and its mixtures in gaseous form
- 9 Operating pressure** 16 bar
- 10 Operating temperature** from 263 K (-10°C) to 393 K (120°C)

ND	15	20	25	32	40	50	65	80	100	125	150	200	250
da/mm	21,3	26,9	33,7	42,4	48,3	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273
s/mm	2	2,3	2,6	2,6	2,6	2,9	2,9	3,2	3,6	4	4,5	4,5	5

ND	300	350	400	500	600								
da/mm	323,9	355,6	406,4	508	610								
s/mm	5,6	5,6	6,3	6,3	6,3								

- 11 Safety notices** The flow rate of conducting gaseous oxygen is not allowed to exceed 25 m/s in tubes of this class with operating pressures > 1 bar.

Vertical impacting gaseous oxygen to the tube wall must be avoided; therefore turns in branches are not allowed to occur in sharp kinks but only in bendings.

To avoid a weakening of the wall thickness at bending tubes, the bending radius must not fall below a value of 5 D.

When using Elbows according to DIN, the bending radius may fall below this value.

Tubes leading oxygen must be free of oil, grease, welding beads and processing shavings and comply with standard 06401.

12 Additional notices

At operating temperatures $50\text{ °C} < TS \leq 120\text{ °C}$ flanges of the next higher pressure level must be used.

When using hydrogen, comb defined seals only must be provided for flange joints.

The application fields (medium, pressure, temperature) defined in the standards 40002, 40007 and 40008 must be absolutely adhered to.

Tube part	nom. width		iden- tifica- tion	dimension standard / terms of delivery	certificate
	from	to			
Flat packings	15	600	FLD	DIN EN 1514-1, Standard 40002	2.1 according to DIN EN 1024 concerning purity in accordance with Standard 06401
Fibrous packings	15	600	FAD	DIN EN 1514-1, Standard 40007	2.1 according to DIN EN 1024 concerning purity in accordance with Standard 06401
Caps	15	600	KAP	DIN 2617, DIN 2609	3.1.B according to DIN EN 10204
Comb defined seals	15	600	KAD	DIN 2617, Standard 40008	2.1 according to DIN EN 1024 concerning purity in accordance with Standard 06401
Elbow 90° R=1,5 DA, welded	200	600	RB1,5DG	DIN 2605-1, DIN 2609	3.1.B according to DIN EN 10204
Elbow 90° R=2,5 DA, welded	200	600	RB2,5DG	DIN 2605-1, DIN 2609	3.1.B according to DIN EN 10204
Reducer, eccentric, welded	400	500	RZEG	DIN 2616-1, DIN 2609	3.1.B according to DIN EN 10204
Pipe, welded	200	600	RG	DIN EN 10220, DIN 1626	3.1.B according to DIN EN 10204
Reducer, concentric, welded	400	500	RZKG	DIN 2616-1, DIN 2609	3.1.B according to DIN EN 10204
Pipe, seamless	15	150	RN	DIN EN 10220, DIN 1629	3.1.B according to DIN EN 10204
Tee made of welded pipe	400	600	TG	DIN 2615-1, DIN 2609	3.1.B according to DIN EN 10204
Welding neck flanges	15	600	VF	DIN EN 1092-1, DIN EN 1092-1	3.1.B according to DIN EN 10204
Reducer, eccentric, seamless	20	300	RZEN	DIN 2616-1, DIN 2609	3.1.B according to DIN EN 10204
Reducer, concentric, seamless	20	300	RZKN	DIN 2616-1, DIN 2609	3.1.B according to DIN EN 10204
Tee made of seamless pipe	15	350	TN	DIN 2615-1, DIN 2609	3.1.B according to DIN EN 10204
Elbow 90° R=1,5 DA, seamless	15	150	RB1,5DN	DIN 2605-1, DIN 2609	3.1.B according to DIN EN 10204
Elbow 90° R=2,5 DA, seamless	15	150	RB2,5DN	DIN 2605-1, DIN 2609	3.1.B according to DIN EN 10204
Blanks	15	600	BSS	Uhde-Norm 3902-1, DIN EN 10025	3.1.B according to DIN EN 10204
Blind flanges	15	500	BF	DIN EN 1092-1, DIN EN 1092-1	3.1.B according to DIN EN 10204
Hexagon head screws	12	33	SKS	DIN EN ISO 4014, DIN EN ISO 898-1 / DIN EN ISO 4014	3.1.B according to DIN EN 10204
Hexagon nuts	12	33	SKM	DIN EN ISO 4032, DIN EN ISO 898-2 / DIN EN ISO 4032	3.1.B according to DIN EN 10204

13	Valid and listed documents	Standard 06401 Standard 40002 Standard 40007 Standard 40008 AD 2000-leaflet DGRL 97/23/EG DIN 1626 DIN 1629 DIN 2605-1 DIN 2609 DIN 2615-1 DIN 2616-1 DIN 2617 DIN EN 1092-1 DIN EN 1514-1 DIN EN 10025 DIN EN 10204 DIN EN 10220 DIN EN ISO 898-1 DIN EN ISO 898-2 DIN EN ISO 4014 DIN EN ISO 4032 Uhde-Norm 3902-1
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**Pipe Class
Specification PN 16**
**pipe parts * pipe class: AA16C1
pipe, seamless**

1	Pipe class	AA16C1
2	Part identification	RN
3	Pipe class part	pipe, seamless
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN EN 10220
6	Terms of delivery	DIN 1629
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 1629, section 6
9	Ordering addition	<p>Pipes at fixed length of 6 m</p> <p>Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W4, especially section 5, must be met</p>

Ident-No.	nom. diameter	dimensions	weights
	ND	d _a x s	kg
16059	15	21, 3 x 2	0, 95
16060	20	26,9 x 2,3	1,40
16061	25	33,7 x 2,6	1,99
16062	32	42,4 x 2,6	2,55
16063	40	48,3 x 2,6	2,93
16064	50	60,3 x 2,9	4,11
16065	65	76,1 x 2,9	5,24
16066	80	88,9 x 3,2	6,76
16067	100	114,3 x 3,6	9,83
16068	125	139,7 x 4	13,40
16069	150	168,3 x 4,5	18,20

13 Valid and listed documents

AD 2000-leaflet W4
DIN 1629
DIN EN 10204
DIN EN 1020

Pipe Class
Specification PN 16

pipe parts * pipe class: AA16C1
pipe, welded

1	Pipe class	AA16C1
2	Part identification	RG
3	Pipe class part	pipe, welded
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN EN 10220
6	Terms of delivery	DIN 1626
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 1626, section 6
9	Ordering addition	<p>Pipes at fixed length of 6 m</p> <p>Calculation stress: 100%</p> <p>Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W4, especially section 5, must be met</p> <p>An inspection certificate 3.1.C is required as proof, if the manufacturer does not meet the requirements according to AD 2000-leaflet W4, section 2.2</p>

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Ident- No.	nom. diameter	dimensions	weights
	ND	d _a x s	kg
1605	200	219,1 x 4,5	23,80
1605	250	273 x 5	33,00
1605	300	323,9 x 5,6	44,00
1605	350	355,6 x 5,6	48,30
1605	400	406,4 x 6,3	62,20
1605	500	508 x 6,3	77,90
1605	600	610 x 6,3	93,80

13 Valid and listed documents

AD 2000-leaflet W4
DIN 1626
DIN EN 10204
DIN EN 10220

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
Elbow 90° R=1,5 DA, seamless**

1	Pipe class	AA16C1
2	Part identification	RB1,5DN
3	Pipe class part	Elbow 90° R=1,5 DA, seamless
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN 2605-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	<p>Elbow 90°, type 3, with decreased utilization factor, made of seamless pipe according to DIN 1629</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-2</p> <p>Inner surfaces free of oil, grease and slip additive</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W4, especially section 5, must be met</p>

Ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	s _R
16077	15	21,3 x 2	0,04	2,00
16078	20	26,9 x 2,3	0,06	2,30
16079	25	33,7 x 2,6	0,12	2,60
16080	32	42,4 x 2,6	0,19	2,60
16081	40	48,3 x 2,6	0,26	2,60
16082	50	60,3 x 2,9	0,49	2,90
16083	65	76,1 x 2,9	0,78	2,90
16084	80	88,9 x 3,2	1,21	3,20

Ident-No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	s _R
16085	100	114,3 x 3,6	2,35	3,60
16086	125	139,7 x 4	4,00	4,00
16087	150	168,3 x 4,5	6,55	4,50

10 Valid and listed documents

AD 2000-leaflet W4
DIN 2559-1
DIN 2559-2
DIN 2605-1
DIN 2609
DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
Elbow 90° R=1,5 DA, welded**

1	Pipe class	AA16C1
2	Part identification	RB1,5DG
3	Pipe class part	Elbow 90° R=1,5 DA, welded
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN 2605-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	<p>Elbow 90°, type 3, with decreased utilization factor, made of welded pipe according to DIN 1626</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-3</p> <p>Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W4, especially section 5, must be met</p>

An inspection certificate 3.1.C is required as proof, if the
manufacturer does not meet the requirements
according to AD 2000-leaflet W4, section 2.2

Ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	s _R
16070	200	219,1 x 4,5	11,40	4,50
16071	250	273 x 5	19,75	5,00
16072	300	323,9 x 5,6	31,59	5,60
16073	350	355,6 x 5,6	40,44	5,60
16074	400	406,4 x 6,3	59,60	6,30
16075	500	508 x 6,3	93,24	6,30
16076	600	610 x 12,5	264,17	6,30

10	Valid and listed documents	AD 2000-leaflet W4 DIN 2559-1 DIN 2559-3 DIN 2605-1 DIN 2609 DIN EN 10204
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Pipe Class
Specification PN 16

pipe parts * pipe class: AA16C1
Elbow 90° R=2,5 DA, seamless

1	Pipe class	AA16C1
2	Part identification	RB2,5DN
3	Pipe class part	Elbow 90° R=2,5 DA, seamless
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN 2605-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	<p>Elbow 90°, type 5, with decreased utilization factor, made of seamless pipe according to DIN 1629</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-2</p> <p>Inner surfaces free of oil, grease and slip additive</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W4, especially section 5, must be met</p>

Ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	s _R
16095	15	21,3 x 2	0,06	2,00
16096	20	26,9 x 2,3	0,13	2,30
16097	25	33,7 x 2,6	0,23	2,60
16098	32	42,4 x 2,6	0,37	2,60
16099	40	48,3 x 2,6	0,49	2,60
16100	50	60,3 x 2,9	0,87	2,90
16101	65	76,1 x 2,9	1,44	2,90
16102	80	88,9 x 3,2	2,18	3,20

Ident-No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	s _R
16103	100	114,3 x 3,6	4,17	3,60
16104	125	139,7 x 4	6,95	4,00
16105	150	168,3 x 4,5	11,15	4,50

- 10 Valid and listed documents
- AD 2000-leaflet W4
 - DIN 2559-1
 - DIN 2559-3
 - DIN 2605-1
 - DIN 2609
 - DIN EN 10204

Pipe Class
Specification PN 16

pipe parts * pipe class: AA16C1
Elbow 90° R=2,5 DA, welded

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|---|----------------------------|---|
| 1 | Pipe class | AA16C1 |
| 2 | Part identification | RB2,5DG |
| 3 | Pipe class part | Elbow 90° R=2,5 DA, welded |
| 4 | Material | 1.0254 (St 37.0) |
| 5 | Dimension standard | DIN 2605-1 |
| 6 | Terms of delivery | DIN 2609 |
| 7 | Certificate | 3.1.B according to DIN EN 10204 |
| 8 | Identification | DIN 2609, section 6 |
| 9 | Ordering addition | <p>Elbow 90°, type 5, with decreased utilization factor,
made of welded pipe according to DIN 1626</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-3</p> <p>Inner surfaces free of oil, grease and slip additive
(max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W4, especially section 5,
must be met</p> |

An inspection certificate 3.1.C is required as proof, if the
manufacturer does not meet the requirements
according to AD 2000-leaflet W4, section 2.2

Ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	s _R
16088	200	219,1 x 4,5	19,07	4,50
16089	250	273 x 5	33,69	5,00
16090	300	323,9 x 5,6	53,56	5,60
16091	350	355,6 x 5,6	64,49	5,60
16092	400	406,4 x 6,3	94,77	6,30
16093	500	508 x 6,3	152,34	6,30
16094	600	610 x 6,3	224,70	6,30

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- 10 **Valid and listed documents** AD 2000-leaflet W4
DIN 2559-1
DIN 2559-3
DIN 2605-1
DIN 2609
DIN 1626
DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
Tee made of seamless pipe**

1	Pipe class	AA16C1
2	Part identification	TN
3	Pipe class part	Tee made of seamless pipe
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN 2615-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	<p>Tee with decreased utilization factor, made of seamless pipe according to DIN 1629</p> <p>type A according to DIN 2615-1</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-2</p> <p>Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W4, especially section 5, must be met</p>

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Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	DN ₁	DN ₂
16168	15	15	21,3 x 2	21,3 x 2	0,06	2,00	2,00
16169	20	15	26,9 x 2,3	21,3 x 2	0,10	2,30	2,00
16170	20	20	26,9 x 2,3	26,9 x 2,3	0,10	2,30	2,30
16171	25	15	33,7 x 2,6	21,3 x 2	0,18	2,60	2,00
16172	25	20	33,7 x 2,6	26,9 x 2,3	0,19	2,60	2,30
16173	25	25	33,7 x 2,6	33,7 x 2,6	0,19	2,60	2,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	ND ₁	ND ₂
16174	32	15	42,4 x 2,6	21,3 x 2	0,28	2,60	2,00
16175	32	20	42,4 x 2,6	26,9 x 2,3	0,29	2,60	2,30
16176	32	25	42,4 x 2,6	33,7 x 2,6	0,31	2,60	2,60
16177	32	32	42,4 x 2,6	42,4 x 2,6	0,31	2,60	2,60
16178	40	20	48,3 x 2,6	26,9 x 2,3	0,40	2,60	2,30
16179	40	25	48,3 x 2,6	33,7 x 2,6	0,41	2,60	2,60
16180	40	32	48,3 x 2,6	42,4 x 2,6	0,43	2,60	2,60
16181	40	40	48,3 x 2,6	48,3 x 2,6	0,43	2,60	2,60
16182	50	20	60,3 x 2,9	26,9 x 2,3	0,57	2,90	2,30
16183	50	25	60,3 x 2,9	33,7 x 2,6	0,59	2,90	2,60
16184	50	32	60,3 x 2,9	42,4 x 2,6	0,62	2,90	2,60
16185	50	40	60,3 x 2,9	48,3 x 2,6	0,63	2,90	2,60
16186	50	50	60,3 x 2,9	60,3 x 2,9	0,67	2,90	2,90
16187	65	25	76,1 x 2,9	33,7 x 2,6	0,88	2,90	2,60
16188	65	32	76,1 x 2,9	42,4 x 2,6	0,91	2,90	2,60
16189	65	40	76,1 x 2,9	48,3 x 2,6	0,92	2,90	2,60
16190	65	50	76,1 x 2,9	60,3 x 2,9	0,96	2,90	2,90
16191	65	65	76,1 x 2,9	76,1 x 2,9	1,00	2,90	2,90
16192	80	32	88,9 x 3,2	42,4 x 2,6	1,29	3,20	2,60
16193	80	40	88,9 x 3,2	48,3 x 2,6	1,31	3,20	2,60
16194	80	50	88,9 x 3,2	60,3 x 2,9	1,35	3,20	2,90
16195	80	65	88,9 x 3,2	76,1 x 2,9	1,40	3,20	2,90
16196	80	80	88,9 x 3,2	88,9 x 3,2	1,44	3,20	3,20

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	ND ₁	ND ₂
16197	100	40	114,3 x 3,6	48,3 x 2,6	2,25	3,60	2,60
16198	100	50	114,3 x 3,6	60,3 x 2,9	2,31	3,60	2,90
16199	100	65	114,3 x 3,6	76,1 x 2,9	2,36	3,60	2,90
16200	100	80	114,3 x 3,6	88,9 x 3,2	2,43	3,60	3,20
16201	100	100	114,3 x 3,6	114,3 x 3,6	2,54	3,60	3,60
16202	125	50	139,7 x 4	60,3 x 2,9	3,63	4,00	2,90
16203	125	65	139,7 x 4	76,1 x 2,9	3,69	4,00	2,90
16204	125	80	139,7 x 4	88,9 x 3,2	3,77	4,00	3,20
16205	125	100	139,7 x 4	114,3 x 3,6	3,91	4,00	3,60
16206	125	125	139,7 x 4	139,7 x 4	4,05	4,00	4,00
16207	150	65	168,3 x 4,5	76,1 x 2,9	5,64	4,50	2,90
16208	150	80	168,3 x 4,5	88,9 x 3,2	5,74	4,50	3,20
16209	150	100	168,3 x 4,5	114,3 x 3,6	5,92	4,50	3,60
16210	150	125	168,3 x 4,5	139,7 x 4	6,11	4,50	4,00
16211	150	150	168,3 x 7,15	168,3 x 7,1	9,73	4,50	4,50
16212	200	80	219,1 x 6,3	88,9 x 3,2	12,51	4,50	3,20
16213	200	100	219,1 x 6,3	114,3 x 3,6	12,75	4,50	3,60
16214	200	125	219,1 x 6,3	139,7 x 4	13,02	4,50	4,00
16215	200	150	219,1 x 6,3	168,3 x 4,5	13,31	4,50	4,50
16216	200	200	219,1 x 6,3	219,1 x 6,3	14,05	4,50	4,50
16217	250	100	273 x 8,8	114,3 x 6,3	26,90	5,00	3,60
16218	250	125	273 x 8,8	139,7 x 6,3	27,26	5,00	4,00
16219	250	150	273 x 8,8	168,3 x 7,1	27,85	5,00	4,50
16220	250	200	273 x 8,8	219,1 x 8	28,64	5,00	4,50
16221	250	250	273 x 8,8	273 x 8,8	29,31	5,00	5,00

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	ND ₁	ND ₂
16222	300	125	323,9 x 10	139,7 x 6,3	42,35	5,60	4,00
16223	300	150	323,9 x 10	168,3 x 7,1	43,12	5,60	4,50
16224	300	200	323,9 x 10	219,1 x 8	44,29	5,60	4,50
16225	300	250	323,9 x 10	273 x 8,8	45,31	5,60	5,00
16226	300	300	323,9 x 10	323,9 x 10	46,44	5,60	5,60
16227	350	150	355,6 x 11	168,3 x 7,1	56,51	5,60	4,50
16228	350	200	355,6 x 11	219,1 x 8	57,93	5,60	4,50
16229	350	250	355,6 x 11	273 x 8,8	59,08	5,60	5,00
16230	350	300	355,6 x 11	323,9 x 10	60,54	5,60	5,60
16231	350	350	355, 6 x 11	355, 6 x 11	61, 64	5, 60	5, 60

- 10 Valid and listed documents
- AD 2000-leaflet W4
 - DIN 2559-1
 - DIN 2559-2
 - DIN 2605-1
 - DIN 2609
 - DIN 1629
 - DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
Tee made of welded pipe**

1	Pipe class	AA16C1
2	Part identification	TG
3	Pipe class part	Tee made of welded pipe
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN 2615-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	<p>Tee with decreased utilization factor, made of welded pipe according to DIN 1626</p> <p>Type A according to DIN 2615-1</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-3</p> <p>Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W4, especially section 5, must be met</p> <p>An inspection certificate 3.1.C is required as proof, if the manufacturer does not meet the requirements according to AD 2000-leaflet W4, section 2.2</p>

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Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
16150	400	150	406,4 x 8,8	168,3 x 4,5	55,92	6,30	4,50
16151	400	200	406,4 x 8,8	219,1 x 6,3	58,05	6,30	4,50
16152	400	250	406,4 x 8,8	273 x 6,3	58,71	6,30	5,00
16153	400	300	406,4 x 12,5	323,9 x 10	84,11	6,30	5,60
16154	400	350	406,4 x 8,8	355,6 x 8	61,37	6,30	5,60
16155	400	400	406,4 x 12,5	406,4 x 12,5	86,13	6,30	6,30

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	ND ₁	ND ₂
16156	500	200	508 x 11	219,1 x 6,3	107,97	6,30	4,50
16157	500	250	508 x 11	273 x 6,3	109,36	6,30	5,00
16158	500	300	508 x 11	323,9 x 7,1	110,97	6,30	5,60
16159	500	350	508 x 11	355,6 x 8	115,10	6,30	5,60
16160	500	400	508 x 11	406,4 x 8,8	116,06	6,30	6,30
16161	500	500	508 x 11	508 x 11	120,27	6,30	6,30
16162	600	250	610 x 12,5	273 x 6,3	169,22	6,30	5,00
16163	600	300	610 x 12,5	323,9 x 7,1	172,02	6,30	5,60
16164	600	350	610 x 12,5	355,6 x 8	174,63	6,30	5,60
16165	600	400	610 x 17,5	406,4 x 12,5	245,72	6,30	6,30
16166	600	500	610 x 17,5	508 x 16	255,72	6,30	6,30
16167	600	600	610 x 17,5	610 x 17,5	253,70	6,30	6,30

10 Valid and listed documents

AD 2000-leaflet W4
DIN 2559-1
DIN 2559-3
DIN 2605-1
DIN 2609
DIN 1626
DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
Reducer, concentric, seamless**

1	Pipe class	AA16C1
2	Part identification	RZKN
3	Pipe class part	Reducer, concentric, seamless
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN 2616-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	<p>Reducer, concentric, with decreased utilization factor, made of seamless pipe according to DIN 1629</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-2</p> <p>Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W4, especially section 5, must be met</p>

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
16003	20	15	26,9 x 2,3	21,3 x 2	0,05	2,30	2,00
16004	25	15	33,7 x 2,6	21,3 x 2	0,08	2,60	2,00
16005	25	20	33,7 x 2,6	26,9 x 2,3	0,09	2,60	2,30
16006	32	15	42,4 x 2,6	21,3 x 2	0,10	2,60	2,00
16007	32	20	42,4 x 2,6	26,9 x 2,3	0,10	2,60	2,30
16008	32	25	42,4 x 2,6	33,7 x 2,6	0,11	2,60	2,60

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Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	S _{R1}	S _{R2}
16009	40	20	48,3 x 2,6	26,9 x 2,3	0,14	2,60	2,30
16010	40	25	48,3 x 2,6	33,7 x 2,6	0,16	2,60	2,60
16011	40	32	48,3 x 2,6	42,4 x 2,6	0,18	2,60	2,60
16012	50	20	60,3 x 2,9	26,9 x 2,3	0,22	2,90	2,30
16013	50	25	60,3 x 2,9	33,7 x 2,6	0,24	2,90	2,60
16014	50	32	60,3 x 2,9	42,4 x 2,6	0,26	2,90	2,60
16015	50	40	60,3 x 2,9	48,3 x 2,6	0,28	2,90	2,60
16016	65	25	76,1 x 2,9	33,7 x 2,6	0,34	2,90	2,60
16017	65	32	76,1 x 2,9	42,4 x 2,6	0,36	2,90	2,60
16018	65	40	76,1 x 2,9	48,3 x 2,6	0,38	2,90	2,60
16019	65	50	76,1 x 2,9	60,3 x 2,9	0,42	2,90	2,90
16020	80	32	88,9 x 3,2	42,4 x 2,6	0,45	3,20	2,60
16021	80	40	88,9 x 3,2	48,3 x 2,6	0,47	3,20	2,60
16022	80	50	88,9 x 3,2	60,3 x 2,9	0,51	3,20	2,90
16023	80	65	88,9 x 3,2	76,1 x 2,9	0,56	3,20	2,90
16024	100	40	114,3 x 3,6	48,3 x 2,6	0,69	3,60	2,60
16025	100	50	114,3 x 3,6	60,3 x 2,9	0,75	3,60	2,90
16026	100	65	114,3 x 3,6	76,1 x 2,9	0,82	3,60	2,90
16027	100	80	114,3 x 3,6	88,9 x 3,2	0,87	3,60	3,20
16028	125	50	139,7 x 4	60,3 x 2,9	1,21	4,00	2,90
16029	125	65	139,7 x 4	76,1 x 2,9	1,31	4,00	2,90
16030	125	80	139,7 x 4	88,9 x 3,2	1,39	4,00	3,20
16031	125	100	139,7 x 4	114,3 x 3,6	1,54	4,00	3,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
16032	150	65	168,3 x 4,5	76,1 x 2,9	1,84	4,50	2,90
16033	150	80	168,3 x 4,5	88,9 x 3,2	1,94	4,50	3,20
16034	150	100	168,3 x 4,5	114,3 x 3,6	2,13	4,50	3,60
16035	150	125	168,3 x 4,5	139,7 x 4	2,33	4,50	4,00
16036	200	80	219,1 x 4,5	88,9 x 3,2	2,53	4,50	3,20
16037	200	100	219,1 x 4,5	114,3 x 3,6	2,74	4,50	3,60
16038	200	125	219,1 x 4,5	139,7 x 4	2,96	4,50	4,00
16039	200	150	219,1 x 4,5	168,3 x 4,5	3,19	4,50	4,50
16040	250	100	273 x 5	114,3 x 3,6	4,16	5,00	3,60
16041	250	125	273 x 5	139,7 x 4	4,43	5,00	4,00
16042	250	150	273 x 5	168,3 x 4,5	4,74	5,00	4,50
16043	250	200	273 x 5	219,1 x 4,5	5,30	5,00	4,50
16044	300	125	323,9 x 5,6	139,7 x 4	6,36	5,60	4,00
16045	300	150	323,9 x 5,6	168,3 x 4,5	6,76	5,60	4,50
16046	300	200	323,9 x 5,6	219,1 x 4,5	7,47	5,60	4,50
16047	300	250	323,9 x 5,6	273 x 5	8,22	5,60	5,00
16048	350	150	355,6 x 5,6	168,3 x 4,5	11,71	5,60	4,50
16049	350	200	355,6 x 5,6	219,1 x 4,5	12,87	5,60	4,50
16050	350	250	355,6 x 5,6	273 x 5	14,08	5,60	5,00
16051	350	300	355,6 x 5,6	323,9 x 5,6	15,23	5,60	5,60

10 Valid and listed documents

AD 2000-leaflet W4
DIN 2559-1
DIN 2559-2
DIN 2616-1
DIN 2609
DIN 1629
DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
Reducer, concentric, welded**

1	Pipe class	AA16C1
2	Part identification	RZKG
3	Pipe class part	Reducer, concentric, welded
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN 2616-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	<p>Reducer, concentric, with decreased utilization factor, made of welded pipe according to DIN 1626</p> <p>Weld preparation according to DIN 2559-3</p> <p>Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-sheet W4, especially section 5, must be met</p> <p>An inspection certificate 3.1.C is required as proof, if the manufacturer does not meet the requirements according to AD 2000-leaflet W4, section 2.2</p>

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Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
15988	400	150	406,4 x 6,3	168,3 x 4	15,57	6,30	4,50
15989	400	200	406,4 x 6,3	219,1 x 4,5	16,95	6,30	4,50
15990	400	250	406,4 x 6,3	273 x 5	18,43	6,30	5,00
15991	400	300	406,4 x 6,3	323,9 x 5,6	19,81	6,30	5,60
15992	400	350	406,4 x 6,3	355,6 x 5,6	20,69	6,30	5,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
15993	500	200	508 x 6,3	219,1 x 4,5	28,27	6,30	4,50
15994	500	250	508 x 6,3	273 x 5	30,38	6,30	5,00
15995	500	300	508 x 6,3	323,9 x 5,6	32,36	6,30	5,60
15996	500	350	508 x 6,3	355,6 x 5,6	33,61	6,30	5,60
15997	500	400	508 x 6,3	406,4 x 6,3	35,59	6,30	6,30
15998	600	250	610 x 12,5	273 x 6,3	67,67	6,30	5,00
15999	600	300	610 x 12,5	323,9 x 7,1	71,59	6,30	5,60
16000	600	350	610 x 12,5	355,6 x 8	74,00	6,30	5,60
16001	600	400	610 x 6,3	406,4 x 6,3	39,61	6,30	6,30
16002	600	500	610 x 6,3	508 x 6,3	43,62	6,30	6,30

10 Valid and listed documents

AD 2000-leaflet W4
DIN 2559-3
DIN 2616-1
DIN 2609
DIN 1629
DIN EN 10204

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: AA16C1
Reducer, eccentric, seamless**

1	Pipe class	AA16C1
2	Part identification	RZEN
3	Pipe class part	Reducer, eccentric, seamless
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN 2616-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	<p>Reducer, eccentric, with decreased utilization factor, made of seamless pipe according to DIN 1626</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-2</p> <p>Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W4, especially section 5, must be met</p>

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Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	S _{R1}	S _{R2}
15939	20	15	26,9 x 2,3	21,3 x 2	0,05	2,30	2,00
15940	25	15	33,7 x 2,6	21,3 x 2	0,08	2,60	2,00
15941	25	20	33,7 x 2,6	26,9 x 2,3	0,09	2,60	2,30
15942	32	15	42,4 x 2,6	21,3 x 2	0,10	2,60	2,00
15943	32	20	42,4 x 2,6	26,9 x 2,3	0,10	2,60	2,30
15944	32	25	42,4 x 2,6	33,7 x 2,6	0,11	2,60	2,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	S _{R1}	S _{R2}
15945	40	20	48,3 x 2,6	26,9 x 2,3	0,14	2,60	2,30
15946	40	25	48,3 x 2,6	33,7 x 2,6	0,16	2,60	2,60
15947	40	32	48,3 x 2,6	42,4 x 2,6	0,18	2,60	2,60
15948	50	20	60,3 x 2,9	26,9 x 2,3	0,22	2,90	2,30
15949	50	25	60,3 x 2,9	33,7 x 2,6	0,24	2,90	2,60
15950	50	32	60,3 x 2,9	42,4 x 2,6	0,26	2,90	2,60
15951	50	40	60,3 x 2,9	48,3 x 2,6	0,28	2,90	2,60
15952	65	25	76,1 x 2,9	33,7 x 2,6	0,34	2,90	2,60
15953	65	32	76,1 x 2,9	42,4 x 2,6	0,36	2,90	2,60
15954	65	40	76,1 x 2,9	48,3 x 2,6	0,38	2,90	2,60
15955	65	50	76,1 x 2,9	60,3 x 2,9	0,42	2,90	2,90
15956	80	32	88,9 x 3,2	42,4 x 2,6	0,45	3,20	2,60
15957	80	40	88,9 x 3,2	48,3 x 2,6	0,47	3,20	2,60
15958	80	50	88,9 x 3,2	60,3 x 2,9	0,51	3,20	2,90
15959	80	65	88,9 x 3,2	76,1 x 2,9	0,56	3,20	2,90
15960	100	40	114,3 x 3,6	48,3 x 2,6	0,69	3,60	2,60
15961	100	50	114,3 x 3,6	60,3 x 2,9	0,75	3,60	2,90
15962	100	65	114,3 x 3,6	76,1 x 2,9	0,82	3,60	2,90
15963	100	80	114,3 x 3,6	88,9 x 3,2	0,87	3,60	3,20
15964	125	50	139,7 x 4	60,3 x 2,9	1,21	4,00	2,90
15965	125	65	139,7 x 4	76,1 x 2,9	1,31	4,00	2,90
15966	125	80	139,7 x 4	88,9 x 3,2	1,39	4,00	3,20
15967	125	100	139,7 x 4	114,3 x 3,6	1,54	4,00	3,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
15968	150	65	168,3 x 4,5	76,1 x 2,9	1,84	4,50	2,90
15969	150	80	168,3 x 4,5	88,9 x 3,2	1,94	4,50	3,20
15970	150	100	168,3 x 4,5	114,3 x 3,6	2,13	4,50	3,60
15971	150	125	168,3 x 4,5	139,7 x 4	2,33	4,50	4,00
15972	200	80	219,1 x 4,5	88,9 x 3,2	2,53	4,50	3,20
15973	200	100	219,1 x 4,5	114,3 x 3,6	2,74	4,50	3,60
15974	200	125	219,1 x 4,5	139,7 x 4	2,96	4,50	4,00
15975	200	150	219,1 x 4,5	168,3 x 4,5	3,19	4,50	4,50
15976	250	100	273 x 5	114,3 x 3,6	4,16	5,00	3,60
15977	250	125	273 x 5	139,7 x 4	4,43	5,00	4,00
15978	250	150	273 x 5	168,3 x 4,5	4,74	5,00	4,50
15979	250	200	273 x 5	219,1 x 4,5	5,30	5,00	4,50
15980	300	125	323,9 x 5,6	139,7 x 4	6,36	5,60	4,00
15981	300	150	323,9 x 5,6	168,3 x 4,5	6,76	5,60	4,50
15982	300	200	323,9 x 5,6	219,1 x 4,5	7,47	5,60	4,50
15983	300	250	323,9 x 5,6	273 x 5	8,22	5,60	5,00
15984	350	150	355,6 x 5,6	168,3 x 4,5	11,71	5,60	4,50
15985	350	200	355,6 x 5,6	219,1 x 4,5	12,87	5,60	4,50
15986	350	250	355,6 x 5,6	273 x 5	14,08	5,60	5,00
15987	350	300	355,6 x 5,6	323,9 x 5,6	15,23	5,60	5,60

10 Valid and listed documents

AD 2000-leaflet W4
DIN 2559-1
DIN 2559-2
DIN 2616-1
DIN 2609
DIN 1629
DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
Reducer, eccentric, welded**

1	Pipe class	AA16C1
2	Part identification	RZEG
3	Pipe class part	Reducer, concentric, welded
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN 2616-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	<p>Reducer, concentric, with decreased utilization factor, made of welded pipe according to DIN 1626</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-3</p> <p>Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-sheet W4, especially section 5, must be met</p> <p>An inspection certificate 3.1.C is required as proof, if the manufacturer does not meet the requirements according to AD 2000-leaflet W4, section 2.2</p>

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Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
15924	400	150	406,4 x 6,3	168,3 x 4	15,57	6,30	4,50
15925	400	200	406,4 x 6,3	219,1 x 4,5	16,95	6,30	4,50
15926	400	250	406,4 x 6,3	273 x 5	18,43	6,30	5,00
15927	400	300	406,4 x 6,3	323,9 x 5,6	19,81	6,30	5,60
15928	400	350	406,4 x 6,3	355,6 x 5,6	20,69	6,30	5,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	ND ₁	ND ₂	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
15929	500	200	508 x 6,3	219,1 x 4,5	28,27	6,30	4,50
15930	500	250	508 x 6,3	273 x 5	30,38	6,30	5,00
15931	500	300	508 x 6,3	323,9 x 5,6	32,36	6,30	5,60
15932	500	350	508 x 6,3	355,6 x 5,6	33,61	6,30	5,60
15933	500	400	508 x 6,3	406,4 x 6,3	35,59	6,30	6,30
15934	600	250	610 x 12,5	273 x 6,3	67,67	6,30	5,00
15935	600	300	610 x 12,5	323,9 x 7,1	71,59	6,30	5,60
15936	600	350	610 x 12,5	355,6 x 8	74,00	6,30	5,60
15937	600	400	610 x 6,3	406,4 x 6,3	39,61	6,30	6,30
15938	600	500	610 x 6,3	508 x 6,3	43,63	6,30	6,30

10 Valid and listed documents

AD 2000-leaflet W4
DIN 2559-1
DIN 2559-3
DIN 2616-1
DIN 2609
DIN 1626
DIN EN 10204

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: AA16C1
caps**

1	Pipe class	AA16C1
2	Part identification	KAP
3	Pipe class part	Caps
4	Material	1.0254 (St 37.0)
5	Dimension standard	DIN 2617
6	Terms of delivery	DIN 2609
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	Cap to weld in, made of seamless or welded pipe Weld preparation according to DIN 2559 Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m ²) Ends closed Requirements AD 2000-leaflet W4 must be met

ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	S _R
15906	15	21,3 x 2	0,02	2,00
15907	20	26,9 x 2,3	0,04	2,30
15908	25	33,7 x 2,6	0,08	2,60
15909	32	42,4 x 2,6	0,10	2,60
15910	40	48,3 x 2,6	0,12	2,60
15911	50	60,3 x 2,9	0,17	2,90
15912	65	76,1 x 2,9	0,22	2,90
15913	80	88,9 x 3,2	0,38	3,20

ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	s _R
15914	100	114,3 x 3,6	0,70	3,60
15915	125	139,7 x 4	1,15	4,00
15916	150	168,3 x 4,5	1,83	4,50
15917	200	219,1 x 4,5	2,82	4,50
15918	250	273 x 5	4,88	5,00
15919	300	332,9 x 5,6	7,78	5,60
15920	350	355,6 x 5,6	9,31	5,60
15921	400	406,4 x 6,3	13,04	6,30
15922	500	508 x 6,3	21,02	6,30
15923	600	610 x 6,3	29,71	6,30

10 Valid and listed documents

AD 2000-leaflet W4

DIN 1626

DIN 1629

DIN 2559

DIN 2609

DIN 2617

DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
Blanks**

1	Pipe class	AA16C1
2	Part identification	BSS
3	Pipe class part	Blanks
4	Material	1.0038 (S235JRG2)
5	Dimension standard	Uhde- Norm 3902-1
6	Terms of delivery	DIN EN 10025
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	AD 2000-leaflet W1, section 4
9	Ordering addition	<p>Two-part figure-eight blank for DIN-flange with flat seal, made of hot-rolled flat steel according to DIN EN 10029, class A</p> <p>free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Packed in PE-bags, diameter 200 and above shrink- wrapped in PE-foil</p> <p>Requirements AD 2000-leaflet W1 must be met</p>

Ident-No.	nom. width	diameter	diameter	thickness	weights
	ND	d ₁	d ₂	s ₁	kg
15834	15	40,00	20,00	10	0,00
15835	20	60,00	25,00	10	0,00
15836	25	70,00	30,00	10	0,00
15837	32	81,00	40,00	10	0,00
15838	40	91,00	45,00	10	0,00
15839	50	106,00	57,00	10	0,00
15840	65	126,00	73,00	10	0,00

Ident-No.	nom. width	diameter	diameter	thickness	weights
	ND	d ₁	d ₂	s ₁	kg
15841	80	141,00	85,00	10	0,00
15842	100	161,00	110,00	10	0,00
15843	125	191,00	135,00	10	0,00
15844	150	217,00	160,00	12	0,00
15845	200	272,00	210,00	15	0,00
15846	250	328,00	262,00	20	0,00
15847	300	383,00	312,00	20	0,00
15848	350	443,00	342,00	25	0,00
15849	400	494,00	390,00	25	0,00
15850	500	616,00	498,00	40	0,00
15851	600	733,00	600,00	40	0,00

- 10 **Valid and listed documents**
- AD 2000-leaflet W1
 - DIN EN 10025
 - DIN EN 10029-A
 - DIN EN 10204
 - Uhde-Norm 3902-1

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: AA16C1
Welding neck flanges**

1	Pipe class	AA16C1
2	Part identification	VF
3	Pipe class part	Welding neck flanges
4	Material	1.0038 (S235JRG2)
5	Dimension standard	DIN EN 1092-1
6	Terms of delivery	DIN EN 1092-1
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	AD 2000-leaflet W9, section 5
9	Ordering addition	<p>Forged or seamless rolled welding neck flange with flat seal (shape B1)</p> <p>Surfaces free of rust and scale</p> <p>Inner surfaces free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W9 must be met</p>

Ident-Nr.	nom. diameter	dimensions	weights
	ND	ND x ØA	kg
16250	15	15 x 21,3	1,00
16251	20	20 x 26,9	1,00
16252	25	25 x 33,7	1,00
16253	32	32 x 42,4	2,00
16254	40	40 x 48,3	2,00
16255	50	50 x 60,3	3,00
16256	65	65 x 76,1	3,50
16257	80	80 x 88,9	4,00
16258	100	100 x 114,3	4,50

Ident-Nr.	nom. diameter	dimensions	weights
	ND	ND x ØA	kg
16259	125	125 x 139,7	6,50
16260	150	150 x 168,3	7,50
16261	200	200 x 219,1	11, 00
16262	250	250 x 273	16,50
16263	300	300 x 323,9	22,00
16264	350	350 x 355,6	32,00
16265	400	400 x 406,4	40,00
16266	500	500 x 508	74,00
16267	600	600 x 610	116,50

10 Valid and listed documents

AD 2000-leaflet W9
DIN EN 1092-1
DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
blind flanges**

1	Pipe class	AA16C1
2	Part identification	BF
3	Pipe class part	Blind flanges
4	Material	1.0038 (S235JRG2)
5	Dimension standard	DIN EN 1092-1
6	Terms of delivery	DIN EN 1092-1
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	AD 2000-leaflet W9, section 5
9	Ordering addition	<p>Forged, seamlessly rolled or blanked out of sheets blind flanges made by metal-cutting processing with flat seals (shape A)</p> <p>free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Packed in PE-bags, diameter 200 and above shrink-wrapped in PE-foil</p>

Requirements AD 2000-leaflet W1 and W9, must be met

Ident-Nr.	nom. diameter	weights
	ND	kg
15817	15	1,00
15818	20	1,00
15819	25	1,50
15820	32	2,00
15821	40	2,50
15822	50	3,00
15823	65	3,50
15824	80	4,50
15825	100	5,50

Ident-Nr.	nom. diameter	weights
	ND	kg
15826	125	8,80
15827	150	10,50
15828	200	16,50
15829	250	25,00
15830	300	35,00
15831	350	48,00
15832	400	63,50
15833	500	133,00

10 Valid and listed documents

AD 2000-leaflet W1
AD 2000-leaflet W9
DIN EN 1092-1
DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
hexagon head screws**

1	Pipe class	AA16C1
2	Part identification	SKS
3	Pipe class part	Hexagon head screws
4	Material	5.6
5	Dimension standard	DIN EN ISO 4014
6	Terms of delivery	DIN EN ISO 898-1 / DIN EN ISO 4014
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	AD 2000-leaflet W7, section 5
9	Ordering addition	<p>Product class A (minimum value from thread \leq M24 and nominal length \leq 10d or 150 mm)</p> <p>Product class B (minimum value from thread $>$ M24 or nominal length $>$ 10d or 150 mm)</p> <p>Surface galvanized according to DIN EN ISO 4042</p> <p>Requirements AD 2000-leaflet W7 must be met</p>

Ident-No.	thread x length	weights
		kg
16131	M 12 x 50	0,06
16132	M 12 x 60	0,07
16133	M 16 x 55	0,12
16134	M 16 x 60	0,12
16135	M 16 x 65	0,13
16136	M 16 x 70	0,14
16137	M 16 x 80	0,16
16138	M 20 x 70	0,23
16139	M 20 x 80	0,26

Ident-No.	thread x length	weights
		kg
16140	M 20 x 90	0,28
16141	M 20 x 110	0,33
16142	M 24 x 90	0,43
16143	M 24 x 120	0,54
16144	M 27 x 100	0,60
16145	M 27 x 110	0,65
16146	M 27 x 120	0,70
16147	M 27 x 150	0,81
16148	M 33 x 110	1,02
16149	M 33 x 150	1,29

10 Valid and listed documents

AD 2000-leaflet W7
DIN EN ISO 898-1
DIN EN ISO 4014
DIN EN ISO 4042
DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
hexagon nuts**

1	Pipe class	AA16C1
2	Part identification	SKM
3	Pipe class part	Hexagon nuts
4	Material	5-2
5	Dimension standard	DIN EN ISO 4032
6	Terms of delivery	DIN EN ISO 898-2 / DIN EN ISO 4032
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	AD 2000-leaflet W7. section 5
9	Ordering addition	Product class A (≤ M16) Product class B (> M16) Surface galvanized according to DIN EN ISO 4042 Requirements AD 2000-leaflet W7 must be met

Ident-No.	thread	weights
		kg
16124	M 12	0,02
16125	M 16	0,03
16126	M 20	0,06
16127	M 24	0,11
16128	M 27	0,17
16129	M 30	0,22
16130	M 33	0,29

10 Valid and listed documents

AD 2000-leaflet W7
DIN EN ISO 898-2
DIN EN ISO 4032
DIN EN ISO 4042
DIN EN 10204

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**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
Comb-defined seals**

1	Pipe class	AA16C1
2	Part identification	KAD
3	Pipe class part	Comb-defined seals
4	Material	1.4541 (X 6 CrNiTi 18 10 - Graphite)
5	Dimension standard	
6	Terms of delivery	Standard 40008
7	Certificate	2.1 according to DIN EN 10204 concerning purity in accordance with Standard 06401
8	Identification	According to Standard 40008
9	Ordering addition	Qualification certificate according to standard 40008

Ident-No.	nom. width	diameter	diameter	thickness	weights
	ND	d ₁	d ₂	s ₁	kg
15888	15	51,00	42,00	26,00	5,00
15889	20	61,00	47,00	31,00	5,00
15890	25	71,00	52,00	36,00	5,00
15891	32	82,00	62,00	46,00	5,00
15892	40	92,00	69,00	53,00	5,00
15893	50	107,00	81,00	65,00	5,00
15894	65	127,00	100,00	81,00	5,00
15895	80	142,00	115,00	95,00	5,00
15896	100	162,00	138,00	118,00	5,00
15897	125	192,00	162,00	142,00	5,00
15898	150	217,00	190,00	170,00	5,00
15899	200	272,00	240,00	220,00	5,00
15900	250	328,00	290,00	270,00	5,00

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Ident-No.	nom. width	diameter	diameter	thickness	weights
	ND	d ₁	d ₂	s ₁	kg
15901	300	383,00	340,00	320,00	5,00
15902	350	443,00	395,00	375,00	5,00
15903	400	495,00	450,00	426,00	5,00
15904	500	617,00	560,00	530,00	5,00
15905	600	734,00	664,00	630,00	5,00

10 Valid and listed documents Standard 06401
 Standard 40008
 DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
flat packings**

1	Pipe class	AA16C1
2	Part identification	FLD
3	Pipe class part	Flat packings
4	Material	Graphite with CrNi-insert
5	Dimension standard	DIN EN 1514-1
6	Terms of delivery	Standard 40002
7	Certificate	2.1 according to DIN EN 10204 concerning purity in accordance with standard 06401
8	Identification	According to standard 40002
9	Ordering addition	Type according to standard 40002

Ident-No.	nom. diameter	diameter	diameter	thickness
	ND	d ₂	d ₁	s
15870	15	50,00	22,00	2,00
15871	20	60,00	28,00	2,00
15872	25	70,00	35,00	2,00
15873	32	82,00	43,00	2,00
15874	40	92,00	49,00	2,00
15875	50	107,00	61,00	2,00
15876	65	127,00	77,00	2,00
15877	80	142,00	90,00	2,00
15878	100	162,00	115,00	2,00
15879	125	192,00	141,00	2,00
15880	150	218,00	169,00	2,00
15881	200	273,00	220,00	2,00
15882	250	330,00	274,00	2,00

Ident- No.	nom. diameter	diameter	diameter	thickness
	ND	d ₂	d ₁	s
15883	300	385,00	325,00	2,00
15884	350	445,00	368,00	2,00
15885	400	497,00	420,00	2,00
15886	500	618,00	520,00	2,00
15887	600	735,00	620,00	2,00

10 Valid and listed documents

Standard 06401
Standard 40002
DIN EN ISO 1514-1
DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: AA16C1
fibrous packings**

1	Pipe class	AA16C1
2	Part identification	FAD
3	Pipe class part	fibrous packings
4	Material	asbestos-free laminate made of aramide fiber, bound with NBR
5	Dimension standard	DIN EN 1514-1
6	Terms of delivery	Standard 40007
7	Certificate	2.1 according to DIN EN 10204 concerning purity in accordance with standard 06401
8	Identification	
9	Ordering addition	Type according to standard 40007

Ident- No.	nom. diameter	diameter	diameter	thickness
	ND	d ₂	d ₁	s
15852	15	50,00	22,00	2,00
15853	20	60,00	28,00	2,00
15854	25	70,00	35,00	2,00
15855	32	82,00	43,00	2,00
15856	40	92,00	49,00	2,00
15857	50	107,00	61,00	2,00
15858	65	127,00	77,00	2,00
15859	80	142,00	90,00	2,00
15860	100	162,00	115,00	2,00
15861	125	192, 00	141, 00	2, 00
15862	150	218,00	169,00	2,00
15863	200	273,00	220,00	2,00
15864	250	330,00	274,00	2,00

Ident- No.	nom. diameter	diameter	diameter	thickness
	ND	d ₂	d ₁	s
15865	300	385,00	325,00	2,00
15866	350	445,00	368,00	2,00
15867	400	497,00	420,00	2,00
15868	500	618,00	520,00	2,00
15869	600	735,00	620,00	2,00

10 Valid and listed documents

Standard 06401
Standard 40007
DIN EN ISO 1514-1
DIN EN 10204