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Guideline

Pipe classes
Specification PN 16

Pipe parts catalogue
Pipe class: ZB16C1

- 1 **Aim** Aim of this guideline is the specification of pipe parts at defined operating conditions under consideration of the requirements of the guideline 97/23/EC (pressure equipment guideline)
- 2 **Scope** Air Liquide Deutschland GmbH
- 3 **Material** 1.4541 (X 6 CrNiTi 18 10)
- 4 **Pipe class** Standard pipe class according to AD 2000 leaflet
- 5 **Thick form** Form B1 according to DIN EN 1092-1
- 6 **Corrosion surcharge**
- 7 **Screws** Hexagon head screw A2-70 or. A2-50
Hexagon nut A2-70 or. A2-50
- 8 **Permitted media** Argon, ethylene, dinitrogenoxide, compressed air, noble gases, natural gas, carbon dioxide, methane, oxygen, nitrogen, hydrogen and its mixtures in gaseous and liquid form, water and steam

- 9 **Operating pressure** 16 bar

- 10 **Operating temperature** 3 K (-270 °C) to 393 K (120 °C)

DN	15	20	25	32	40	50	65	80	100	125	150	200	250
d _a /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	1,6	1,6	2	2	2	2	2,3	2,3	2,6	2,6	2,6	2,9	2,9

DN	300	350	400	500	600	50	65	80	100	125	150	200	250
d _a /mm	323,9	355,6	406,4	508	610	60,3	76,1	88,9	114,3	139,7	168,3	219,1	273
s/mm	2,9	3,2	3,2	4	5	2	2,3	2,3	2,6	2,6	2,6	2,9	2,9

- 11 **Safety notice** Oxygen leading pipes must be cleaned of oil, grease, welding beads, processing shaving etc. inside and comply with the standard 06401 before putting into operation.

12 Additional notices

At operating temperatures of $-200\text{ °C} \leq TS < -10\text{ °C}$ the requirements to be met must be according to account 2000 leaflet W10 ad.

Additionally, when using LH2, the special requirements to the examination of the notched bar impact work have to be met according to notice 2000 leaflet W10, panel1. This is caused by the lowest application temperature of -253 °C .

At operating temperatures of $50\text{ °C} < TS \leq 120\text{ °C}$ 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 4002, 4007 and 4008 must be absolutely adhered to.

Screws from A2 -70 or A2-50 are allowed to be used according to AD 2000 leaflet W10 only to $TS = -200\text{ °C}$.

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 05401
Fibrous packings	15	600	FAD	DIN EN 1514-1, Standard 40007	2.1 according to DIN EN 1024 concerning purity in accordance with Standard 05401
Caps	15	600	KAP	DIN 2517, DIN 2609	3.1.B according to DIN EN 10204
Comb defined seals	15	600	KAD	DIN 2517, Standard 40008	2.1 according to DIN EN 1024 concerning purity in accordance with Standard 05401
Elbow 90° R=1,5 DA, welded	15	600	RB1,5DG	DIN 2605-1, DIN 2609	3.1.C or 3.2 according to DIN EN 10204
Elbow 90° R=2,5 DA, welded	15	600	RB2,5DG	DIN 2605-1, DIN 2609	3.1.C or 3.2 according to DIN EN 10204
Reducer, eccentric, welded	20	500	RZEG	DIN 2616-1, DIN 2609	3.1.C or 3.2 according to DIN EN 10204
Pipe, welded	15	600	RG	DIN EN ISO 1127, DIN 17457	3.1.C or 3.2 according to DIN EN 10204
Reducer, concentric, welded	20	500	RZKG	DIN 2616-1, DIN 2609	3.1.C or 3.2 according to DIN EN 10204
Tee made of welded pipe	15	600	TG	DIN 2615-1, DIN 2609	3.1.C or 3.2 according to DIN EN 10204
Welding neck flanges	15	600	VF	DIN EN 1092-1, DIN EN 1092-1	3.1.C or 3.2 according to DIN EN 10204
Blanks	15	600	BSS	Unde-Norm 3902-1, DIN 17440	3.1.C or 3.2 according to DIN EN 10204
Blind flanges	15	500	BF	DIN EN 1092-1, DIN EN 1092-1	3.1.C or 3.2 according to DIN EN 10204
Hexagon head screws	12	33	SKS	DIN EN ISO 4014, DIN EN ISO 3506	3.1.B according to DIN EN 10204
Hexagon nuts	12	33	SKM	DIN EN ISO 4032, DIN EN ISO 3506	3.1.B according to DIN EN 10204

13 Valid and listed documents

Standard 06401
Standard 40002
Standard 40007
Standard 40008
Standard 50001 App. 1 – 15
AD 2000-leaflet W10
DGRL 97/23/EG
DIN 2605-1
DIN 2609
DIN 2615-1
DIN 2616-1
DIN 2617
DIN 17440
DIN 17457
DIN EN 1092-1
DIN EN 1514-1
DIN EN 10204
DIN EN ISO 3506
DIN EN ISO 4014
DIN EN ISO 4032
Uhde-Norm 3902-1

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: ZB16C1
pipe, welded**

1	Pipe class	ZB16C1
2	Part identification	RG
3	Pipe class part	pipe, welded
4	Material	1.4541 (X 6 CrNiTi 18 10)
5	Dimension standard	DIN EN ISO 1127
6	Terms of delivery	DIN 17457
7	Certificate	3.1.C or 3.2 according to DIN EN 10204
8	Identification	DIN 17457, section 7 across the whole length
9	Ordering addition	<p>Pipes at fixed length of 6 m</p> <p>Tolerance class D2, T3 according to DIN EN ISO 1127</p> <p>Testing class 2 according to DIN 17457, AD 2000-leaf W2</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 W2 and W10, table 1, must be met</p> <p>At wall thicknesses ≤ 10 mm, an inspection certificate 3.1.B is sufficient, if the requirements according to AD 2000-leaf W2, section 6.2.1, are met.</p>

Ident-No.	nom. diameters	dimensions	weight
	ND	d _a x s	kg
14575	15	21,3 x 1,6	0,79
14576	20	26,9 x 1,6	1,01
14577	25	33, 7 x 2	1, 58
14578	32	42,4 x 2	2,02
14579	40	48,3 x 2	2,31
14580	50	60,3 x 2	2,92

Ident-No.	Nom. diameters	dimensions	weight
	ND	d _a x s	kg
14581	65	76,1 x 2,3	4,25
14582	80	88,9 x 2,3	4,98
14583	100	114,3 x 2,6	7,27
14584	125	139,7 x 2,6	8,92
14585	150	168,3 x 2,6	10,80
14586	200	219,1 x 2, 9	15, 70
14587	250	273 x 2,9	19,60
14588	300	323,9 x 2,9	23,30
14589	350	355,6 x 3,2	28,20
14590	400	406,4 x 3,2	32,30
14591	500	508 x 4	50,40
14592	600	610 x 5	75, 70

- 10 Valid and listed documents
- AD 2000-leaflet W2
 - AD 2000-leaflet W10
 - DIN 17457
 - DIN EN 10204
 - DIN EN ISO 1127

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: ZB16C1
Elbow 90° R = 1,5 DA**

1	Pipe class	ZB16C1
2	Part identification	RB1,5DG
3	Pipe class part	Elbow 90° R = 1,5 DA welded
4	Material	1.4541 (X 6 CrNiTi 18 10)
5	Dimension standard	DIN 2605-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.C or 3.2 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 17457</p> <p>Type d2 / k2 according to DIN 17457, table 6</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-3</p> <p>Testing class 2 according to DIN 17457, AD 2000-leaflet W2</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 W2 and W10, table 1, must be met</p> <p>At wall thicknesses ≤ 10 mm, an inspection certificate 3.1.B is sufficient, if the requirements according to AD 2000-leaflet W2, section 6.2.1, are met.</p>

Ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	s _R
14593	15	21,3 x 1,6	0,03	1,60
14594	20	26,9 x 1,6	0,05	1,60
14595	25	33,7 x 2	0,09	2,00
14596	32	42,4 x 2	0,15	2,00

Ident-No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	s _R
14597	40	48,3 x 2	0,21	2,00
14598	50	60,3 x 2	0,35	2,00
14599	65	76,1 x 2,3	0,63	2,30
14600	80	88,9 x 2,3	0,89	2,30
14601	100	114,3 x 2,6	1,74	2,60
14602	125	139,7 x 2,6	2,66	2,60
14603	150	168,3 x 2,6	3,88	2,60
14604	200	219,1 x 2,9	7,52	2,90
14605	250	273 x 2,9	11,73	2,90
14606	300	323,9 x 2,9	16,73	2,90
14607	350	355,6 x 3,2	23,61	3,20
14608	400	406,4 x 6,3	59,60	3,20
14609	500	508 x 6,3	94,68	4,00
14610	600	610 x 6,3	136,68	5,00

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: ZB16C1
Elbow 90° R = 2,5 DA**

1	Pipe class	ZB16C1
2	Part identification	RB2,5DG
3	Pipe class part	Elbow 90° R = 2,5 DA welded
4	Material	1.4541 (X 6 CrNiTi 18 10)
5	Dimension standard	DIN 2605-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.C or 3.2 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 17457</p> <p>Type d2 / k2 according to DIN 17457, table 6</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-3</p> <p>Testing class 2 according to DIN 17457, AD 2000-leaflet W2</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 W2 and W10, table 1, must be met</p> <p>At wall thicknesses ≤ 10 mm, an inspection certificate 3.1.B is sufficient, if the requirements according to AD 2000-sheet W2, section 6.2.1, are met.</p>

Ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	SR
14611	15	21,3 x 1,6	0,05	1,60
14612	20	26,9 x 1,6	0,09	1,60
14613	25	33, 7 x 2	0,18	2, 00
14614	32	42,4 x 2	0,29	2,00

Ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	DN	d _a x s	kg	SR
14615	40	48,3 x 2	0,39	2,00
14616	50	60,3 x 2	0,62	2,00
14617	65	76,1 x 2, 3	1,17	2, 30
14618	80	88,9 x 2,3	1,60	2,30
14619	100	114,3 x 2,6	3,08	2,60
14620	125	139,7 x 2,6	4,62	2,60
14621	150	168,3 x 2,6	6,62	2,60
14622	200	219,1 x 2,9	12,58	2,90
14623	250	273 x 2,9	20,01	2,90
14624	300	323,9 x 2,9	28,37	2,90
14625	350	355,6 x 3,2	37,65	3,20
14626	400	406,4 x 3,2	49,22	3,20
14627	500	508 x 4	98,57	4,00
14628	600	610 x 5	181,34	5,00

10 Valid and listed documents

AD 2000-leaflet W2
 AD 2000-leaflet W10
 DIN 2559-1
 DIN 2559-3
 DIN 2605-1
 DIN 2609
 DIN 17457
 DIN EN 10204

**Pipe Class
Specification PN 16**

pipe parts * pipe class: ZB16C1
Tee made of welded pipe

1	Pipe class	ZB16C1
2	Part identification	TG
3	Pipe class part	Tee made of welded pipe
4	Material	1.4541 (X 6 CrNiTi 18 10)
5	Dimension standard	DIN 2615-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.C or 3.2 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 17457</p> <p>Type d2 / k2 according to DIN 17457, table 6</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-3</p> <p>Testing class 2 according to DIN 17457, AD 2000-leaflet W2</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 W2 and W10, table 1, must be met</p> <p>At wall thicknesses ≤ 10 mm, an inspection certificate 3.1.B is sufficient, if the requirements according to AD 2000-leaflet W2, section 6.2.1, are met.</p>

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Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN ₁	DN ₂	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
14725	15	15	21,3 x 1,6	21,3 x 1,6	0,05	1,60	1,60
14726	20	15	26,9 x 1,6	21,3 x 1,6	0,07	1,60	1,60
14727	20	20	26,9 x 1,6	26,9 x 1,6	0,07	1,60	1,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN ₁	DN ₂	d ₁ x s ₁	d ₂ x s ₂	kg	DN ₁	DN ₂
14728	25	15	33,7 x 2	21,3 x 1,6	0,14	2,00	1,60
14729	25	20	33,7 x 2	26,9 x 1,6	0,15	2,00	1,60
14730	25	25	33,7 x 2	33,7 x 2	0,15	2,00	2,00
14731	32	15	42,4 x 2	21,3 x 1,6	0,22	2,00	1,60
14732	32	20	42,4 x 2	26,9 x 1,6	0,23	2,00	1,60
14733	32	25	42,4 x 2	33,7 x 2	0,24	2,00	2,00
14734	32	32	42,4 x 2	42,4 x 2	0,25	2,00	2,00
14735	40	20	48,3 x 2	26,9 x 1,6	0,30	2,00	1,60
14736	40	25	48,3 x 2	33,7 x 2	0,32	2,00	2,00
14737	40	32	48,3 x 2	42,4 x 2	0,33	2,00	2,00
14738	40	40	48,3 x 2	48,3 x 2	0,34	2,00	2,00
14739	50	20	60,3 x 2	26,9 x 1,6	0,40	2,00	1,60
14740	50	25	60,3 x 2	33,7 x 2	0,43	2,00	2,00
14741	50	32	60,3 x 2	42,4 x 2	0,45	2,00	2,00
14742	50	40	60,3 x 2	48,3 x 2	0,46	2,00	2,00
14743	50	50	60,3 x 2	60,3 x 2	0,47	2,00	2,00
14744	65	25	76,1 x 2,3	33,7 x 2	0,71	2,30	2,00
14745	65	32	76,1 x 2,3	42,4 x 2	0,73	2,30	2,00
14746	65	40	76,1 x 2,3	48,3 x 2	0,75	2,30	2,00
14747	65	50	76,1 x 2,3	60,3 x 2	0,76	2,30	2,00
14748	65	65	76,1 x 2,3	76,1 x 2,3	0,80	2,30	2,30
14749	80	32	88,9 x 2,3	42,4 x 2	0,96	2,30	2,00
14750	80	40	88,9 x 2,3	48,3 x 2	0,97	2,30	2,00
14751	80	50	88,9 x 2,3	60,3 x 2	1,00	2,30	2,00
14752	80	65	88,9 x 2,3	76,1 x 2,3	1,05	2,30	2,30
14753	80	80	88,9 x 2,3	88,9 x 2,3	1,06	2,30	2,30

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN ₁	DN ₂	d ₁ x s ₁	d ₂ x s ₂	kg	DN ₁	DN ₂
14754	100	40	114,3 x 2,6	48,3 x 2	1,67	2,60	2,00
14755	100	50	114,3 x 2,6	60,3 x 2	1,70	2,60	2,00
14756	100	65	114,3 x 2,6	76,1 x 2,3	1,77	2,60	2,30
14757	100	80	114,3 x 2,6	88,9 x 2,3	1,80	2,60	2,30
14758	100	100	114,3 x 2,6	114,3 x 2,6	1,87	2,60	2,60
14759	125	50	139,7 x 2,6	60,3 x 2	2,43	2,60	2,00
14760	125	65	139,7 x 2,6	76,1 x 2,3	2,51	2,60	2,30
14761	125	80	139,7 x 2,6	88,9 x 2,3	2,55	2,60	2,30
14762	125	100	139,7 x 2,6	114,3 x 2,6	2,65	2,60	2,60
14763	125	125	139, 7 x 4	139, 7 x 4	4,11	2, 60	2, 60
14764	150	65	168,3 x 4,5	76,1 x 2,9	5,73	2,60	2,30
14765	150	80	168,3 x 4,5	88,9 x 3,2	5,84	2,60	2,30
14766	150	100	168,3 x 4,5	114,3 x 3,6	6,02	2,60	2,60
14767	150	125	168,3 x 4,5	139,7 x 4	6,21	2,60	2,60
14768	150	150	168,3 x 4,5	168,3 x 4,5	6,38	2,60	2,60
14769	200	80	219,1 x 6,3	88,9 x 3,2	12,70	2,90	2,30
14770	200	100	219,1 x 6,3	114,3 x 3,6	12,95	2,90	2,60
14771	200	125	219,1 x 6,3	139,7 x 4	13,21	2,90	2,60
14772	200	150	219,1 x 6,3	168,3 x 4,5	13,51	2,90	2,60
14773	200	200	219,1 x 6,3	219,1 x 6,3	14,26	2,90	2,90
14774	250	100	273 x 6,3	114,3 x 3,6	19,40	2,90	2,60
14775	250	125	273 x 6,3	139,7 x 4	19,80	2,90	2,60
14776	250	150	273 x 6,3	168,3 x 4,5	20,20	2,90	2,60
14777	250	200	273 x 6,3	219,1 x 6,3	21,30	2,90	2,90
14778	250	250	273 x 6,3	273 x 6,3	21,50	2,90	2,90

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN ₁	DN ₂	d ₁ x s ₁	d ₂ x s ₂	kg	DN ₁	DN ₂
14779	300	125	323,9 x 7,1	139,7 x 4	30,60	2,90	2,60
14780	300	150	323,9 x 7,1	168,3 x 4,5	31,10	2,90	2,60
14781	300	200	323,9 x 7,1	219,1 x 6,3	33,62	2,90	2,90
14782	300	250	323,9 x 7,1	273 x 6,3	33,00	2,90	2,90
14783	300	300	323,9 x 7,1	323,9 x 7,1	33,80	2,90	2,90
14784	350	150	355,6 x 8	168,3 x 4,5	41,68	3,20	2,60
14785	350	200	355,6 x 8	219,1 x 6,3	43,50	3,20	2,90
14786	350	250	355,6 x 8	273 x 6,3	43,90	3,20	2,90
14787	350	300	355,6 x 8	323,9 x 7,1	44,92	3,20	2,90
14788	350	350	355,6 x 8	355,6 x 8	45,90	3,20	3,20
14789	400	150	406,4 x 8,8	168,3 x 4,5	56,77	3,20	2,60
14790	400	200	406,4 x 8,8	219,1 x 6,3	58,93	3,20	2,90
14791	400	250	406,4 x 8,8	273 x 6,3	59,60	3,20	2,90
14792	400	300	406,4 x 8,8	323,9 x 7,1	60,93	3,20	2,90
14793	400	350	406,4 x 8,8	355,6 x 8	62,30	3,20	3,20
14794	400	400	406,4 x 8,8	406,4 x 8,8	62,35	3,20	3,20
14795	500	200	508 x 11	219,1 x 6,3	111,60	4,00	2,90
14796	500	250	508 x 11	273 x 6,3	112,65	4,00	2,90
14797	500	300	508 x 11	323,9 x 7,1	114,76	4,00	2,90
14798	500	350	508 x 11	355,6 x 8	116,80	4,00	3,20
14799	500	400	508 x 11	406,4 x 8,8	117,80	4,00	3,20
14800	500	500	508 x 11	508 x 11	121,80	4,00	4,00
14801	600	250	610 x 12,5	273 x 6,3	171,96	5,00	2,90
14802	600	300	610 x 12,5	323,9 x 7,1	174,80	5,00	2,90
14803	600	350	610 x 12,5	355,6 x 8	177,45	5,00	3,20
14804	600	400	610 x 12,5	406,4 x 8,8	179,34	5,00	3,20
14805	600	500	610 x 12,5	508 x 11	185,96	5,00	4,00
14806	600	600	610 x 12,5	610 x 12,5	185,32	5,00	5,00

10 Valid and listed documents

AD 2000-leaflet W2
AD 2000-leaflet W10
DIN 2559-1
DIN 2559-3
DIN 2615-1
DIN 2609
DIN 17457
DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: ZB16C1
Reducer, concentric, welded**

1	Pipe class	ZB16C1
2	Part identification	RZKG
3	Pipe class part	Reducer, concentric, welded
4	Material	1.4541 (X 6 CrNiTi 18 10)
5	Dimension standard	DIN 2616-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.C or 3.2 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 17457</p> <p>Type d₂ / k₂ according to DIN 17457, table 6</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-3</p> <p>Testing class 2 according to DIN 17457, AD 2000-leaflet W2</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 W2 and W10, table 1, must be met</p> <p>At wall thicknesses ≤ 10 mm, an inspection certificate 3.1.B is sufficient, if the requirements according to AD 2000-leaflet W2, section 6.2.1, are met.</p>

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Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN1	DN2	d ₁ x s ₁	d ₂ x s ₂	kg	S _{R1}	S _{R2}
14511	20	15	26,9 x 1,6	21,3 x 1,6	0,03	1,60	1,60
14512	25	15	33,7 x 2	21,3 x 1,6	0,06	2,00	1,60
14513	25	20	33,7 x 2	26,9 x 1,6	0,07	2,00	1,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN1	DN2	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
14514	32	15	42,4 x 2	21,3 x 1,6	0,75	2,00	1,60
14515	32	20	42,4 x 2	26,9 x 1,6	0,08	2,00	1,60
14516	32	25	42,4 x 2	33,7 x 2	0,09	2,00	2,00
14517	40	20	48,3 x 2	26,9 x 1,6	0,12	2,00	1,60
14518	40	25	48,3 x 2	33,7 x 2	0,13	2,00	2,00
14519	40	32	48,3 x 2	42,4 x 2	0,14	2,00	2,00
14520	50	20	60,3 x 2	26,9 x 1,6	0,16	2,00	1,60
14521	50	25	60,3 x 2	33,7 x 2	0,17	2,00	2,00
14522	50	32	60,3 x 2	42,4 x 2	0,19	2,00	2,00
14523	50	40	60,3 x 2	48,3 x 2	0,20	2,00	2,00
14524	65	25	76,1 x 2,3	33,7 x 2	0,27	2,30	2,00
14525	65	32	76,1 x 2,3	42,4 x 2	0,30	2,30	2,00
14526	65	40	76,1 x 2,3	48,3 x 2	0,31	2,30	2,00
14527	65	50	76,1 x 2,3	60,3 x 2	0,34	2,30	2,00
14528	80	32	88,9 x 2,3	42,4 x 2	0,33	2,30	2,00
14529	80	40	88,9 x 2,3	48,3 x 2	0,35	2,30	2,00
14530	80	50	88,9 x 2,3	60,3 x 2	0,38	2,30	2,00
14531	80	65	88,9 x 2,3	76,1 x 2,3	0,42	2,30	2,30
14532	100	40	114,3 x 2,6	48,3 x 2	0,52	2,60	2,00
14533	100	50	114,3 x 2,6	60,3 x 2	0,55	2,60	2,00
14534	100	65	114,3 x 2,6	76,1 x 2,3	0,61	2,60	2,30
14535	100	80	114,3 x 2,6	88,9 x 2,3	0,65	2,60	2,30
14536	125	50	139,7 x 2,6	60,3 x 2	0,81	2,60	2,00
14537	125	65	139,7 x 2,6	76,1 x 2,3	0,87	2,60	2,30
14538	125	80	139,7 x 2,6	88,9 x 2,3	0,93	2,60	2,30
14539	125	100	139,7 x 2,6	114,3 x 2,6	1,03	2,60	2,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN1	DN2	d ₁ x s ₁	d ₂ x s ₂	kg	S _{R1}	S _{R2}
14540	150	65	168,3 x 2,6	76,1 x 2,3	1,10	2,60	2,30
14541	150	80	168,3 x 2,6	88,9 x 2,3	1,15	2,60	2,30
14542	150	100	168,3 x 2,6	114,3 x 2,6	1,27	2,60	2,60
14543	150	125	168,3 x 2,6	139,7 x 2,6	1,31	2,60	2,60
14544	200	80	219,1 x 2,9	88,9 x 2,3	1,67	2,90	2,30
14545	200	100	219,1 x 2,9	114,3 x 2,6	1,81	2,90	2,60
14546	200	125	219,1 x 2,9	139,7 x 2,6	1,95	2,90	2,60
14547	200	150	219,1 x 2,9	168,3 x 2,6	2,10	2,90	2,60
14548	250	100	273 x 5	114,3 x 3,6	4,22	2,90	2,60
14549	250	125	273 x 2,9	139,7 x 2,6	2,63	2,90	2,60
14550	250	150	273 x 2,9	168,3 x 2,6	2,82	2,90	2,60
14551	250	200	273 x 2,9	219,1 x 2,9	3,14	2,90	2,90
14552	300	125	323,9 x 5,6	139,7 x 4	6,46	2,90	2,60
14553	300	150	323,9 x 5,6	168,3 x 4	6,87	2,90	2,60
14554	300	200	323,9 x 2,9	219,1 x 2,9	3,96	2,90	2,90
14555	300	250	323,9 x 2,9	273 x 2,9	4,36	2,90	2,90
14556	350	150	355,6 x 3,2	168,3 x 2,6	6,85	3,20	2,60
14557	350	200	355,6 x 3,2	219,1 x 2,9	7,51	3,20	2,90
14558	350	250	355,6 x 3,2	273 x 2,9	8,23	3,20	2,90
14559	350	300	355,6 x 3,2	323,9 x 2,9	8,90	3,20	2,90
14560	400	150	406,4 x 6,3	168,3 x 4	15,80	3,20	2,60
14561	400	200	406,4 x 6,3	219,1 x 4,5	17,20	3,20	2,90
14562	400	250	406,4 x 3,2	273 x 2,9	9,58	3,20	2,90
14563	400	300	406,4 x 3,2	323,9 x 2,9	10,30	3,20	2,90
14564	400	350	406,4 x 3,2	355,6 x 3,2	10,75	3,20	3,20

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN1	DN2	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
14565	500	200	508 x 6,3	219,1 x 4,5	28,70	4,00	2,90
14566	500	250	508 x 6,3	273 x 5	30,84	4,00	2,90
14567	500	300	508 x 4	323,9 x 2,9	21,00	4,00	2,90
14568	500	350	508 x 4	355,6 x 3,2	21,80	4,00	3,20
14569	500	400	508 x 4	406,4 x 3,2	23,10	4,00	3,20
14570	600	250	610 x 6,3	273 x 5	34,93	5,00	2,90
14571	600	300	610 x 6,3	323,9 x 5,6	36,95	5,00	2,90
14572	600	350	610 x 6,3	355,6 x 5,6	38,21	5,00	3,20
14573	600	400	610 x 5	406,4 x 3,2	32,06	5,00	3,20
14574	600	500	610 x 5	508 x 4	35,26	5,00	4,00

- 10 Valid and listed documents
- AD 2000-leaflet W2
 - AD 2000-leaflet W10
 - DIN 2559-1
 - DIN 2559-3
 - DIN 2616-1
 - DIN 2609
 - DIN 17457
 - DIN EN 10204

**Pipe Class
Specification PN 16**

pipe parts * pipe class: ZB16C1
Reducer, eccentric, welded

1	Pipe class	ZB16C1
2	Part identification	RZEG
3	Pipe class part	Reducer, eccentric, welded
4	Material	1.4541 (X 6 CrNiTi 18 10)
5	Dimension standard	DIN 2616-1
6	Terms of delivery	DIN 2609
7	Certificate	3.1.C or 3.2 according to DIN EN 10204
8	Identification	DIN 2609, section 6
9	Ordering addition	<p>Reducer, eccentric, with decreased utilization factor, made of welded pipe according to DIN 17457</p> <p>Type d2 / k2 according to DIN 17457, table 6</p> <p>Weld preparation according to DIN 2559-1 and DIN 2559-3</p> <p>Testing class 2 according to DIN 17457, AD 2000-leaflet W2</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 W2 and W10, table 1, must be met</p> <p>At wall thicknesses ≤ 10 mm, an inspection certificate 3.1.B is sufficient, if the requirements according to AD 2000-leaflet W2, section 6.2.1, are met.</p>

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Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN ₁	DN ₂	d ₁ x s ₁	d ₂ x s ₂	kg	S _{R1}	S _{R2}
14447	20	15	26,9 x 1,6	21,3 x 1,6	0,03	1,60	1,60
14448	25	15	33,7 x 2	21,3 x 1,6	0,06	2,00	1,60
14449	25	20	33,7 x 2	26,9 x 1,6	0,07	2,00	1,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN ₁	DN ₂	d ₁ x s ₁	d ₂ x s ₂	kg	s _{R1}	s _{R2}
14450	32	15	42,4 x 2	21,3 x 1,6	0,75	2,00	1,60
14451	32	20	42,4 x 2	26,9 x 1,6	0,08	2,00	1,60
14452	32	25	42,4 x 2	33,7 x 2	0,09	2,00	2,00
14453	40	20	48,3 x 2	26,9 x 1,6	0,12	2,00	1,60
14454	40	25	48,3 x 2	33,7 x 2	0,13	2,00	2,00
14455	40	32	48,3 x 2	42,4 x 2	0,14	2,00	2,00
14456	50	20	60,3 x 2	26,9 x 1,6	0,16	2,00	1,60
14457	50	25	60,3 x 2	33,7 x 2	0,17	2,00	2,00
14458	50	32	60,3 x 2	42,4 x 2	0,19	2,00	2,00
14459	50	40	60,3 x 2	48,3 x 2	0,20	2,00	2,00
14460	65	25	76,1 x 2,3	33,7 x 2	0,27	2,30	2,00
14461	65	32	76,1 x 2,3	42,4 x 2	0,30	2,30	2,00
14462	65	40	76,1 x 2,3	48,3 x 2	0,31	2,30	2,00
14463	65	50	76,1 x 2,3	60,3 x 2	0,34	2,30	2,00
14464	80	32	88,9 x 2,3	42,4 x 2	0,33	2,30	2,00
14465	80	40	88,9 x 2,3	48,3 x 2	0,35	2,30	2,00
14466	80	50	88,9 x 2,3	60,3 x 2	0,38	2,30	2,00
14467	80	65	88,9 x 2,3	76,1 x 2,3	0,42	2,30	2,30
14468	100	40	114,3 x 2,6	48,3 x 2	0,51	2,60	2,00
14469	100	50	114,3 x 2,6	60,3 x 2	0,55	2,60	2,00
14470	100	65	114,3 x 2,6	76,1 x 2,3	0,61	2,60	2,30
14471	100	80	114,3 x 2,6	88,9 x 2,3	0,65	2,60	2,30
14472	125	50	139,7 x 2,6	60,3 x 2	0,81	2,60	2,00
14473	125	65	139,7 x 2,6	76,1 x 2,3	0,87	2,60	2,30
14474	125	80	139,7 x 2,6	88,9 x 2,3	0,93	2,60	2,30
14475	125	100	139,7 x 2,6	114,3 x 2,6	1,03	2,60	2,60

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN ₁	DN ₂	d ₁ x s ₁	d ₂ x s ₂	kg	S _{R1}	S _{R2}
14476	150	65	168,3 x 2,6	76,1 x 2,3	1,10	2,60	2,30
14477	150	80	168,3 x 2,6	88,9 x 2,3	1,15	2,60	2,30
14478	150	100	168,3 x 2,6	114,3 x 2,6	1,26	2,60	2,60
14479	150	125	168,3 x 2,6	139,7 x 2,6	1,31	2,60	2,60
14480	200	80	219,1 x 2,9	88,9 x 2,3	1,67	2,90	2,30
14481	200	100	219,1 x 2,9	114,3 x 2,6	1,81	2,90	2,60
14482	200	125	219,1 x 2,9	139,7 x 2,6	1,95	2,90	2,60
14483	200	150	219,1 x 2,9	168,3 x 2,6	2,10	2,90	2,60
14484	250	100	273 x 5	114,3 x 3,6	4,22	2,90	2,60
14485	250	125	273 x 2,9	139,7 x 2,6	2,63	2,90	2,60
14486	250	150	273 x 2,9	168,3 x 2,6	2,82	2,90	2,60
14487	250	200	273 x 2,9	219,1 x 2,9	3,14	2,90	2,90
14488	300	125	323,9 x 5,6	139,7 x 4	6,46	2,90	2,60
14489	300	150	323,9 x 5,6	168,3 x 4	6,87	2,90	2,60
14490	300	200	323,9 x 2,9	219,1 x 2,9	3,96	2,90	2,90
14491	300	250	323,9 x 2,9	273 x 2,9	4,36	2,90	2,90
14492	350	150	355,6 x 3,2	168,3 x 2,6	6,85	3,20	2,60
14493	350	200	355,6 x 3,2	219,1 x 2,9	7,51	3,20	2,90
14494	350	250	355,6 x 3,2	273 x 2,9	8,23	3,20	2,90
14495	350	300	355,6 x 3,2	323,9 x 2,9	8,90	3,20	2,90
14496	400	150	406,4 x 6,3	168,3 x 4	15,80	3,20	2,60
14497	400	200	406,4 x 6,3	219,1 x 4,5	17,20	3,20	2,90
14498	400	250	406,4 x 3,2	273 x 2,9	9,58	3,20	2,90
14499	400	300	406,4 x 3,2	323,9 x 2,9	10,30	3,20	2,90
14500	400	350	406,4 x 3,2	355,6 x 3,2	10,75	3,20	3,20

Ident-No.	nom. width		dimensions		weights	pipe connection wall thickness	
	DN ₁	DN ₂	d ₁ x s ₁	d ₂ x s ₂	kg	S _{R1}	S _{R2}
14501	500	200	508 x 6,3	219,1 x 4,5	28,70	4,00	2,90
14502	500	250	508 x 6,3	273 x 5	30,84	4,00	2,90
14503	500	300	508 x 4	323,9 x 2,9	21,00	4,00	2,90
14504	500	350	508 x 4	355,6 x 3,2	21,80	4,00	3,20
14505	500	400	508 x 4	406,4 x 3,2	23,10	4,00	3,20
14506	600	250	610 x 6,3	273 x 5	34,93	5,00	2,90
14507	600	300	610 x 6,3	323,9 x 5,6	36,95	5,00	2,90
14508	600	350	610 x 6,3	355,6 x 5,6	38,21	5,00	3,20
14509	600	400	610 x 5	406,4 x 3,2	32,06	5,00	3,20
14510	600	500	610 x 5	508 x 4	35,26	5,00	4,00

- 10 Valid and listed documents
- AD 2000-leaflet W2
 - AD 2000- leaflet W10
 - DIN 2559-1
 - DIN 2559-3
 - DIN 2616-1
 - DIN 2609
 - DIN 17457
 - DIN EN 10204

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: ZB16C1
caps**

1	Pipe class	ZB16C1
2	Part identification	KAP
3	Pipe class part	Caps
4	Material	1.4541 (X 6 CrNiTi 18 10)
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 sheet steel, forging or bar stock

Weld preparation according to DIN 2559-1

Inner surfaces free of oil, grease and slip additive
(max.: 300 mg/m²)

Ends closed

Requirements AD 2000-leaflet W2 and W10, table 1,
must be met

Ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _s x s	kg	s _R
14429	15	21,3 x 1,6	0,02	1,60
14430	20	26,9 x 1,6	0,03	1,60
14431	25	33,7 x 2	0,06	2,00
14432	32	42,4 x 2	0,08	2,00
14433	40	48,3 x 2	0,10	2,00
14434	50	60,3 x 2	0,12	2,00
14435	65	76,1 x 2,3	0,18	2,30
14436	80	88,9 x 2,3	0,29	2,30

Ident- No.	nom. diameter	dimensions	weights	pipe connection wall thickness
	ND	d _a x s	kg	s _R
14437	100	114,3 x 2,6	0,53	2,60
14438	125	139,7 x 2,6	0,77	2,60
14439	150	168,3 x 2,6	1,10	2,60
14440	200	219,1 x 2,9	1,88	2,90
14441	250	273 x 2,9	2,93	2,90
14442	300	323,9 x 2,9	4,17	2,90
14443	350	355,6 x 3,2	5,48	3,20
14444	400	406,4 x 3,2	6,84	3,20
14445	500	508 x 4	13,69	4,00
14446	600	610 x 5	24,05	5,00

10 Valid and listed documents

AD 2000-leaflet W2
 AD 2000-leaflet W10
 DIN 2559-1
 DIN 2609
 DIN 2617
 DIN EN 10204

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: ZB16C1
Blanks**

1	Pipe class	ZB16C1
2	Part identification	BSS
3	Pipe class part	Blanks
4	Material	1.4541 (X 6 CrNiTi 18 10)
5	Dimension standard	Uhde- Norm 3902-1
6	Terms of delivery	DIN 17440
7	Certificate	3.1.C or 3.2 according to DIN EN 10204
8	Identification	
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 W2 and W10, table 1, must be met</p> <p>At wall thicknesses ≤ 30 mm, an inspection certificate 3.1.B is sufficient</p>

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Ident-No.	nom. width	diameter	diameter	thickness	weights
	DN	d ₁	d ₂	s ₁	kg
14357	15	40,00	20,00	10	0,00
14358	20	60,00	25,00	10	0,00
14359	25	70,00	30,00	10	0,00
14360	32	81,00	40,00	10	0,00
14361	40	91,00	45,00	10	0,00
14362	50	106,00	57,00	10	0,00
14363	65	126,00	73,00	10	0,00

Ident- No.	nom. width	diameter	diameter	thickness	weights
	DN	d ₁	d ₂	s ₁	kg
14364	80	141,00	85,00	10	0,00
14365	100	161,00	110,00	10	0,00
14366	125	191,00	135,00	10	0,00
14367	150	217,00	160,00	12	0,00
14368	200	272,00	210,00	15	0,00
14369	250	328,00	262,00	20	0,00
14370	300	383,00	312,00	20	0,00
14371	350	443,00	342,00	25	0,00
14372	400	494,00	390,00	25	0,00
14373	500	616,00	498,00	40	0,00
14374	600	733,00	600,00	40	0,00

10 Valid and listed documents

AD 2000-leaflet W2
AD 2000-leaflet W10
DIN 17440
DIN EN 10029
DIN EN 10204
Uhde-Norm 3902-1

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: ZB16C1
Welding neck flanges**

1	Pipe class	ZB16C1
2	Part identification	VF
3	Pipe class part	Welding neck flanges
4	Material	1.4541 (X 6 CrNiTi 18 10)
5	Dimension standard	DIN EN 1092-1
6	Terms of delivery	DIN EN 1092-1
7	Certificate	3.1.C or 3.2 according to DIN EN 10204
8	Identification	AD 2000-leaflet W9, section 5
9	Ordering addition	<p>Forged welding neck flanges with flat seal (shape B1)</p> <p>free of oil, grease and slip additive (max.: 300 mg/m²)</p> <p>Ends closed with caps</p> <p>Requirements AD 2000-leaflet W2, W9 and W10, table 1, must be met</p> <p>At forged pieces with wall thicknesses ≤ 250 mm, an inspection certificate 3.1.B is sufficient according to AD 2000-leaf W2, table 6.2</p>

Ident-No.	nom. diameter	dimensions	weights
	DN	DN x ØA	kg
14807	15	15 x 21,3	1,00
14808	20	20 x 26,9	1,00
14809	25	25 x 33,7	1,00
14810	32	32 x 42,4	2,00
14811	40	40 x 48,3	2,00
14812	50	50 x 60,3	3,00

Ident-No.	nom. diameter	dimensions	weights
	DN	DN x ØA	kg
14813	65	65 x 76,1	3,50
14814	80	80 x 88,9	4,00
14815	100	100 x 114,3	4,50
14816	125	125 x 139,7	6,50
14817	150	150 x 168,3	7,50
14818	200	200 x 219,1	11,00
14819	250	250 x 273	16,50
14820	300	300 x 323,9	22,00
14821	350	350 x 355,6	32,00
14822	400	400 x 406,4	40,00
14823	500	500 x 508	74,00
14824	600	600 x 610	116,50

- 10 **Valid and listed documents**
- AD 2000-leaflet W2
 - AD 2000-leaflet W9
 - AD 2000-leaflet W10
 - DIN EN 1092-1
 - DIN EN 10204

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: ZB16C1
blind flanges**

1	Pipe class	ZB16C1
2	Part identification	BF
3	Pipe class part	Blind flanges
4	Material	1.4541 (X 6 CrNiTi 18 10)
5	Dimension standard	DIN EN 1092-1
6	Terms of delivery	DIN EN 1092-1
7	Certificate	3.1.C or 3.2 according to DIN EN 10204
8	Identification	AD 2000-sheet W9, section 5
9	Ordering addition	<p>blind flanges with flat seal (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 Requirements AD 2000-Merkblatt W2, W9 and W10, must be met</p>

At forged pieces with wall thicknesses ≤ 250 mm, an
inspection certificate 3.1.B is sufficient according to AD
2000-leaf W2, table 6.2

Ident-No.	nom. diameter	weights
	DN	kg
14339	15	1,00
14340	20	1,00
14341	25	1, 50
14342	32	2,00
14343	40	2,50
14344	50	3,00

Ident-No.	nom. diameter	weights
	DN	kg
14345	65	3,50
14346	80	4,50
14347	100	5,50
14348	125	8,00
14349	150	10,50
14350	200	16,50
14351	250	25,00
14352	300	35,00
14353	350	48,00
14354	400	63,50
14355	500	133,00
14356	600	226,50

10 Valid and listed documents

AD 2000-leaflet W2
AD 2000-leaflet W9
AD 2000-leaflet W10
DIN EN 1092-1
DIN EN 10204

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: ZB16C1
hexagon head screws**

1	Pipe class	ZB16C1
2	Part identification	SKS
3	Pipe class part	Hexagon head screws
4	Material	A2-70 respectively A2-50
5	Dimension standard	DIN EN ISO 4014
6	Terms of delivery	DIN EN ISO 3506
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN EN ISO 3506-1, section 3
9	Ordering addition	<p>Product class A (minimum value from thread \leq M24 or nominal length $>$ 10d or 150 mm)</p> <p>Product class B (minimum value from thread $>$ M24 or nominal length $>$ 10d or 150 mm)</p> <p>A2/A4-70 at diameters \leq M24</p> <p>A2/A4-50 at diameters $>$ M24</p> <p>Requirements AD 2000-leaflet W2 and W10, table 1, must be met</p>

Ident-No.	thread x length	weights
		kg
14668	M 12 x 50	0,06
14669	M 12 x 60	0,07
14670	M 16 x 55	0,12
14671	M 16 x 60	0,12
14672	M 16 x 65	0,13
14673	M 16 x 70	0,14
14674	M 16 x 80	0,16
14675	M 20 x 70	0,23
14676	M 20 x 80	0,26

Ident-No.	thread x length	weights
		kg
14677	M 20 x 90	0,28
14678	M 20 x 110	0,33
14679	M 24 x 90	0,43
14680	M 24 x 120	0,54
14681	M 27 x 100	0,60
14682	M 27 x 110	0,65
14683	M 27 x 120	0, 70
14684	M 27 x 150	0,81
14685	M 33 x 110	1, 02
14686	M 33 x 150	1,29

- 10 Valid and listed documents
- AD 2000-leaflet W2
 - AD 2000-leaflet W10
 - DIN EN ISO 3506
 - DIN EN ISO 3506-1
 - DIN EN ISO 4014
 - DIN EN 10204

**Pipe Class
Specification PN 16**

**pipe parts * pipe class: ZB16C1
hexagon nuts**

1	Pipe class	ZB16C1
2	Part identification	SKM
3	Pipe class part	Hexagon nuts
4	Material	A2-70 respectively A2-50
5	Dimension standard	DIN EN ISO 4032
6	Terms of delivery	DIN EN ISO 3506
7	Certificate	3.1.B according to DIN EN 10204
8	Identification	DIN EN ISO 3506-2, section 3
9	Ordering addition	Product class A (≤ M16) Product class B (> M16) A2/A4-70 at diameters ≤ M24 A2/A4-50 at diameters > M24 Requirements AD 2000-leaflet W2 and W10, table 1, must be met

Ident-No.	thread	weights
		kg
14647	M 12	0,02
14648	M 16	0,03
14649	M 20	0,06
14650	M 24	0,11
14651	M 27	0,17
14652	M 30	0,22
14653	M 33	0,29

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10 Valid and listed documents

AD 2000-leaflet W2
AD 2000-leaflet W10
DIN EN ISO 3506
DIN EN ISO 3506-2
DIN EN ISO 4032
DIN EN 10204

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: ZB16C1
Comb-defined seals**

1	Pipe class	ZB16C1
2	Part identification	KAD
3	Pipe class part	Comb-defined seals
4	Material	1.4541 (X 6 CrNiTi 18 10 – graphite)
5	Dimension standard	n
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	Type according to standard 40008

Ident-No.	nom. width	diameter	diameter	thickness	weights
	DN	d ₁	d ₂	s ₁	kg
14411	15	51,00	42,00	26,00	5,00
14412	20	61,00	47,00	31,00	5,00
14413	25	71,00	52,00	36,00	5,00
14414	32	82,00	62,00	46,00	5,00
14415	40	92,00	69,00	53,00	5,00
14416	50	107,00	81,00	65,00	5,00
14417	65	127,00	100,00	81,00	5,00
14418	80	142,00	115,00	95,00	5,00
14419	100	162,00	138,00	118,00	5,00
14420	125	192,00	162,00	142,00	5,00
14421	150	217,00	190,00	170,00	5,00
14422	200	272,00	240,00	220,00	5,00
14423	250	328,00	290,00	270,00	5,00

Ident-No.	nom. width	diameter	diameter	thickness	weights
	DN	d ₁	d ₂	s ₁	kg
14424	300	383,00	340,00	320,00	5,00
14425	350	443,00	395,00	375,00	5,00
14426	400	495,00	450,00	426,00	5,00
14427	500	617,00	560,00	530,00	5,00
14428	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: ZB16C1
flat packings**

1	Pipe class	ZB16C1
2	Part identification	FLD
3	Pipe class part	Flat packings
4	Material	Graphite with CrNi-insert
5	Dimension standard	DIN EN ISO 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
14393	15	50,00	22,00	2,00
14394	20	60,00	28,00	2,00
14395	25	70,00	35,00	2,00
14396	32	82,00	43,00	2,00
14397	40	92,00	49,00	2,00
14398	50	107,00	61,00	2,00
14399	65	127,00	77,00	2,00
14400	80	142,00	90,00	2,00
14401	100	162,00	115,00	2,00
14402	125	192, 00	141, 00	2, 00
14403	150	218,00	169,00	2,00
14404	200	273,00	220,00	2,00
14405	250	330,00	274,00	2,00

Ident-No.	nom. diameter	diameter	diameter	thickness
	ND	d ₂	d ₁	s
14406	300	385,00	325,00	2,00
14407	350	445,00	368,00	2,00
14408	400	497,00	420,00	2,00
14409	500	618,00	520,00	2,00
14410	600	735,00	620,00	2,00

10 Valid and listed documents Standard 06401
 Standard 40002
 DIN EN 1514-1
 DIN EN 10204

**Pipe Class
Specification PN 16**
**pipe parts * pipe class: ZB16C1
Fibrous packings**

1	Pipe class	ZB16C1
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 ISO 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
14375	15	50,00	22,00	2,00
14376	20	60,00	28,00	2,00
14377	25	70,00	35,00	2,00
14378	32	82,00	43,00	2,00
14379	40	92,00	49,00	2,00
14380	50	107,00	61,00	2,00
14381	65	127,00	77,00	2,00
14382	80	142,00	90,00	2,00
14383	100	162,00	115,00	2,00
14384	125	192, 00	141, 00	2, 00
14385	150	218,00	169,00	2,00
14386	200	273,00	220,00	2,00
14387	250	330,00	274,00	2,00

Ident-No.	nom. diameter	diameter	diameter	thickness
	ND	d ₂	d ₁	s
14388	300	385,00	325,00	2,00
14389	350	445,00	368,00	2,00
14390	400	497,00	420,00	2,00
14391	500	618,00	520,00	2,00
14392	600	735,00	620,00	2,00

10 **Valid and listed documents** Standard 06401
Standard 40007
DIN EN 1514-1
DIN EN 10204