

ANEXA 1

Utilajul, echipamentul tehnologic: **FITINGURI FONTA**

Nr. crt.	Specificatii tehnice impuse prin Caietul de sarcini	Correspondenta propunerii tehnice cu specificatiile tehnice impuse prin Caietul de sarcini	Producator
0	1	2	3
1	Parametrii tehnici si functionali: Utilizare generala: apa, apa uzata, tratarea apei, industria de productie a hartiei, industria chimica. – DN 65-80: minim 10 bar Temperatura maxima: -10°C / +80°C (etansare standard).	Parametrii tehnici si functionali: Utilizare generala: apa, apa uzata, tratarea apei, industria de productie a hartiei, industria chimica. – DN 65-80: minim 10 bar Temperatura maxima: -10°C / +80°C (etansare standard).	VONROLL HYDRO VONROLL HYDRO
2	Specificatii de performanta si conditii privind siguranta in exploatare: – Respectarea conditiilor de temperatura: -10°C / +80°C; – Amplasare: retea distributie apa potabila; – Lichid de lucru: apa potabila; Montarea se va face conform instructiunilor de montare date de producator.	Specificatii de performanta si conditii privind siguranta in exploatare: – Respectarea conditiilor de temperatura: -10°C / +80°C; – Amplasare: retea distributie apa potabila; – Lichid de lucru: apa potabila; Montarea se va face conform instructiunilor de montare date de producator.	
3	Conditii privind conformitatea cu standardele relevante: – Certificari obligatorii ale producatorului: ISO 9001 – Vopsire epoxy in acord cu EN 14901; – Emailare interioara si exterioara conform EN 11177; – Marcaj CE: – Flanse conform EN 1092-2:1999; – Executie conform EN 545:2006;	Conditii privind conformitatea cu standardele relevante: – Certificari obligatorii ale producatorului: ISO 9001 – Vopsire epoxy in acord cu EN 14901; – Emailare interioara si exterioara conform EN 11177; – Marcaj CE: – Flanse conform EN 1092-2:1999; Executie conform EN 545:2006;	
4	Conditii de garantie si post-garantie: – Minim 24 luni de la livrare; – Furnizorul va asigura service in perioada de garantie; - Furnizorul va asigura piese de schimb pe baza de comanda in perioada post- garantie.	Conditii de garantie si post-garantie: – Minim 24 luni de la livrare; – Vom asigura service in perioada de garantie; - Vom asigura piese de schimb pe baza de comanda in perioada post-garantie.	
5	Alte conditii cu caracter tehnic: – Fonta ductila GJS 500-7 EN 1563:2000;Vopsea epoxidica RAL5005 minim 250 µm*.	Alte conditii cu caracter tehnic: – Fonta ductila GJS 500-7 EN 1563:2000;Vopsea epoxidica RAL5005 minim 250 µm*.	



Pressure pipe fittings



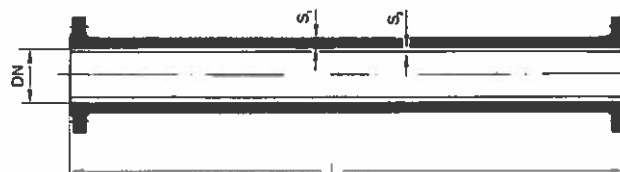
FFG**FGR 10****Pressure pipe**

With cast-on flanges

According to DIN EN 545

FFG made of ductile cast iron (SGCI)

Flanges according to DIN EN 1092-2 PN 10



Nominal size DN	Dimensions in mm		Weight in kg of a pipe section with the nominal length (l) in mm												
	S ₁	S ₂	100	150	200	250	300	400	500	600	700	800	900	1000	
40*	7.6	4.0	4.2	4.6	5.0	5.4	5.8	6.6	7.5	8.3	9.0	9.9	10.7	11.5	
50	7.7	4.0	5.2	5.7*	6.2	6.7*	7.2	8.2	9.2	10.2*	11.2*	12.2*	13.1*	14.1*	
65*	7.9	4.0	6.3	7.0	7.6	8.3	8.9	10.2	11.5	12.8	14.1	15.4	16.7	18.0	
80	7.0	4.0	7.0	8.0	8.7	9.4	10.1	11.5	13.0	14.4	15.8	17.3	18.7*	20.1	
100	7.2	4.0	8.4	9.3	10.2	11.1	12.0	13.8	15.6	17.4	19.1	20.9	22.7*	24.5	
125	7.5	4.0	10.2	11.4	12.5	13.6	14.7	16.9	19.2	21.4	23.6	25.9	28.1*	30.3	
150	7.8	4.0	12.6	14.1	15.5	16.9	18.3	21							

* On request

S₁ Wall thickness of the castingS₂ Thickness of the cement mortar lining**Surface protection:**

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Friezinc coating on request

Other lengths on request

FFG



FGR 10



Pressure pipe

With cast-on flanges

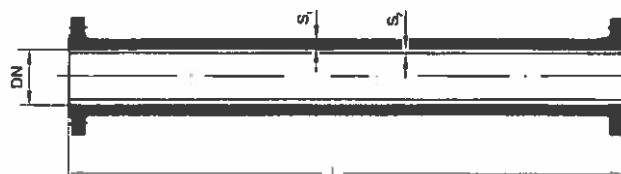
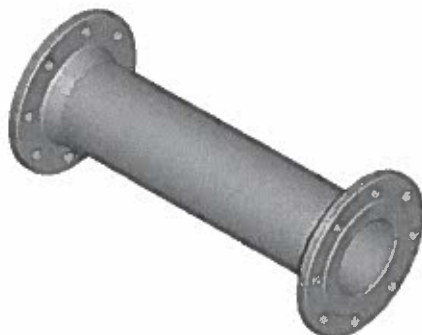
According to DIN EN 545

FFG made of ductile cast iron (SGCI)

Flanges according to DIN EN 1092-2 PN 16



EADIPS®
FGR®



Nominal size DN	Dimensions in mm		Weight in kg of a pipe section with the nominal length (l) in mm											
	S ₁	S ₂	100	150	200	250	300	400	500	600	700	800	900	1000
40*	7.6	4.0	4.2	4.6	5.0	5.4	5.8	6.6	7.5	8.3	9.0	9.9	10.7	11.5
50	7.7	4.0	5.2	5.7*	6.2	6.7*	7.3	8.2	9.2	10.2*	11.2*	12.2*	13.1*	14.1*
65*	7.9	4.0	6.3	7.0	7.6	8.3	8.9	10.2	11.5	12.8	14.1	15.4	16.7	18.0
80	7.0	4.0	7.2	8.0	8.7	9.4	10.1	11.5	13.0	14.4	15.8	17.3	18.7*	20.1
100	7.2	4.0	8.4	9.3	10.2	11.1	12.0	13.8	15.6	17.4	19.1	20.9	22.7*	24.5
125	7.5	4.0	10.2	11.4	12.5	13.6	14.7	16.9	19.2	21.4	23.6	25.9	28.1*	30.3
150	7.8	4.0	12.6	14.1	15.5	16.9	18.3	21.1	24.0	23.2	29.6	32.5	35.3*	38.1
200	8.4	4.0	17.2	19.2	21.2	23.2	25.2	29.1	33.1	37.1	41.1	45.1	49.0*	53.0
250	9.0	4.0	23.7	26.3*	29.0*	31.6*	34.3	39.5*	44.8	50.1*	55.4*	60.7	65.9*	71.2
300	9.6	4.0	31.8	35.2*	38.6	41.9*	45.3	52.1	58.9	65.6*	72.4*	79.2*	85.9*	92.7
350*	10.2	5.0			51.6*	55.7	59.9	68.2	76.5	84.8	95.1	101.4	109.7	118.0
400	10.8	5.0			64.0*	69.0*	74.0*	84.0*	94.0	104.0*	114.0*	124.0*	134.0*	144.0
500	12.0	5.0			101.7*	108.6*	115.6*	129.4*	143.3*	157.1*	171.0*	184.8*	198.7*	212.5
600	13.2	5.0			151.4*	160.5*	169.6*	187.8*	206.0	164.2	242.4	260.6	278.8*	297.0
700*	14.4	6.0					181.2	204.2	227.3	250.3	273.4	296.4	319.5	342.5
800	15.6	6.0					233.5*	262.0*	290.5	219.0*	347.5*	376.0*	404.5*	433.0
900*	16.8	6.0					280.7	315.2	349.9	384.3	418.9	453.4	488.0	522.5
1000	18.0	6.0					369.0*	410.0*	451.0	492.0	533.0*	574.0	615.0*	656.0
1200*	20.4	6.0					537.4	593.2	649.0	704.8	760.6	816.4	872.2	928.0

* On request

S₁ Wall thickness of the casting

S₂ Thickness of the cement mortar lining

Surface protection:

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Friezinc coating on request

Other pressure levels on request

Other lengths on request



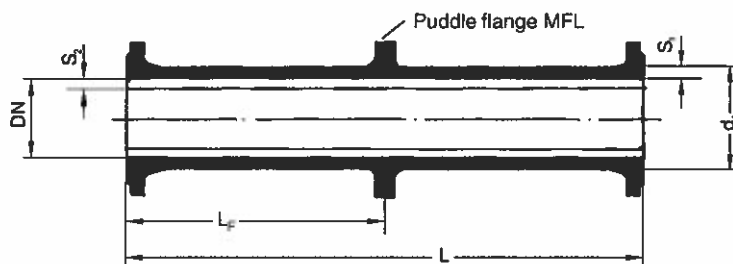
FFG with puddle flange

FGR 10



Pressure pipe

With cast-on flanges and puddle flange
According to DIN EN 545
FFG with puddle flange
Made of ductile cast iron (SGCI)
Flanges according to DIN EN 1092-2



Nominal size DN	Dimensions in mm		Weight in kg of a pipe section with the nominal length (l) in mm										
	S ₁	S ₂	200	250	300	400	500	600	700	800	900	1000	MFL
40*	7.6	4.0	5.0	5.4	5.8	6.6	7.5	8.3	9.0	9.9	10.7	11.5	0.7
50	7.7	4.0	6.2	6.7*	7.3	8.2	9.2	10.2*	11.2*	12.2*	13.1*	14.1*	0.9
65*	7.9	4.0	7.6	8.3	8.9	10.2	11.5	12.8	14.1	15.4	16.7	18.0	1.0
80	7.0	4.0	8.7	9.4	10.1	11.5	13.0	14.4	15.8	17.3	18.7*	20.1	1.4
100	7.2	4.0	10.2	11.1	12.0	13.8	15.6	17.4	19.1	20.9	22.7*	24.5	1.6
125	7.5	4.0	12.5	13.6	14.7	16.9	19.2	21.4	23.6	25.9	28.1*	30.3	2.3
150	7.8	4.0	15.5	16.9	18.3	21.1	24.0	23.2	29.6	32.5	35.3*	38.1	2.8
200	8.4	4.0	21.2	23.2	25.2	29.1	33.1	37.1	41.1	45.1	49.0*	53.0	4.0
250	9.0	4.0	29.0*	31.6*	34.3	39.5*	44.8	50.1*	55.4*	60.7	65.9*	71.2	5.7
300	9.6	4.0	38.6	41.9*	45.3	52.1	58.9	65.6*	72.4*	79.2*	85.9*	92.7	6.3
350*	10.2	5.0	51.6	55.7	59.9	68.2	76.5	84.8	95.1	101.4	109.7	118.0	8.1
400	10.8	5.0	64.0*	69.0*	74.0*	84.0*	94.0	104.0*	114.0*	124.0*	134.0*	144.0	10.7
500	12.0	5.0	101.7*	108.6*	115.6*	129.4*	143.3*	157.1*	171.0*	184.8*	198.7*	212.5	13.9
600	13.2	5.0	151.4*	160.5*	169.6*	187.8*	206.0	164.2	242.4	260.6	278.8*	297.0	18.2
700*	14.4	6.0			181.2	204.2	227.3	250.3	273.4	296.4	319.5	342.5	26.2
800	15.6	6.0			233.5*	262.0*	290.5	219.0*	347.5*	376.0*	404.5*	433.0	34.7
900*	16.8	6.0			280.7	315.2	349.9	384.3	418.9	453.4	488.0	522.5	41.0
1000	18.0	6.0			369.0*	410.0*	451.0	492.0	533.0*	574.0	615.0*	656.0	51.7
1200*	20.4	6.0			537.4	593.2	649.0	704.8	760.6	816.4	872.2	928.0	77.1

* On request

S₁ Wall thickness of the casting

S₂ Thickness of the cement mortar lining

Surface protection:

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Friezinc coating on request

Fitting dimensions according to DIN 2501

Specify L and, if necessary, L_p in your order

Length tolerance ± 10 mm

Different designs on request

FFK 11



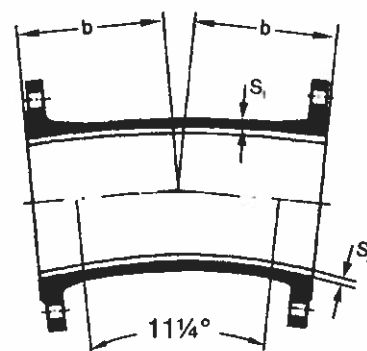
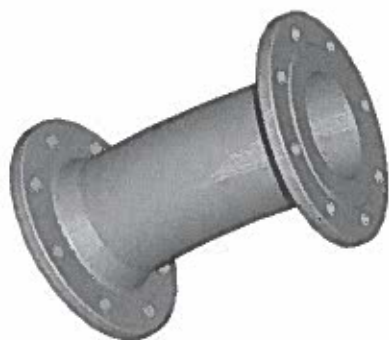
FGR 10

**11¼° double-flanged bend**

According to DIN EN 545

FFK 11¼°

Made of ductile cast iron (SGCI)



Dimensions in mm

Weight of the casting in kg ≈

DN	b	S ₁	S ₂	PN 10	PN 16	PN 25	PN 40
40*	140			7.0	6.0	7.0	7.0
50*	150			9.0	9.0	9.0	9.0
65*	165			12.0	12.0	12.0	12.0
80	130	7.0	4.0	9.5	9.5	9.5*	9.5*
100	140	7.2	4.0	11.9	11.9	12.9*	12.9*
125	150	7.5	4.0	15.3	15.3	17.3	20.5
150	160	7.8	4.0	19.0	19.0	21.5*	25.5*
200	180	8.4	4.0	26.0	25.0	29.5	39.0
250	210	9.0	4.0	41.5	41.0	48.0*	65.5*
300	255	9.6	4.0	60.0	59.5	69.5*	96.5*
350*	105	10.2	5.0	56.0	61.5	77.0	
400	113	10.8	5.0	58.0	67.5	90.0	
500	135	12.0	5.0	85.0	113.0	134.0*	
600	174	13.2	5.0	157.0	202.0	223.0*	
700*	194	14.4	6.0	243.0	269.0	299.0	
800	213	15.6	6.0	330.0	366.0	333.0*	
900*	280	16.8	6.0	368.0	363.0	485.0	
1000*	310	18.0	6.0	488.0	482.0	542.0	
1200*	300	20.4	6.0	684.0	774.0		

* On request

S₁ Wall thickness of the castingS₂ Thickness of the cement mortar lining**Surface protection:**

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Fiazinc coating on request



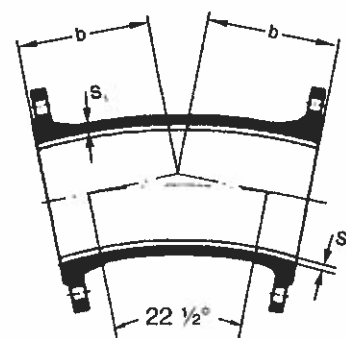
FFK 22



FGR 10



22½° double-flanged bend
According to DIN EN 545
FFK 22½°
Made of ductile cast iron (SGCI)



Dimensions in mm				Weight of the casting in kg ≈			
DN	b	S ₁	S ₂	PN 10	PN 16	PN 25	PN 40
40*	140			7.0	7.0	7.0	7.0
50*	150			9.0	9.0	9.0	9.0
65*	165			12.0	12.0	12.0	12.0
80	130	7.0	4.0	9.5	9.5	9.5*	9.5*
100	140	7.5	4.0	11.9	11.9	12.9*	12.9*
125	150	7.5	4.0	15.3	15.3	17.8	20.5
150	160	7.8	4.0	19.7	19.7	21.5*	25.5*
200	180	8.4	4.0	29.0	27.5	32.5	42.0
250	210	9.0	4.0	41.5	41.0	48.0*	65.5*
300	255	9.6	4.0	60.0	59.0	69.5*	96.5*
350*	140	10.2	5.0	58.0	64.0	81.0	
400	153	10.8	5.0	67.0	75.5	98.0	
500	185	12.0	5.0	99.0	127.0	148.0*	
600	254	13.2	5.0	182.0	227.0	248.0*	
700*	284	14.4	6.0	313.0	339.0	334.0	
800*	314	15.6	6.0	428.0	464.0	445.0	
900*	375	16.8	6.0	442.0	437.0	554.0	
1000*	410	18.0	6.0	587.0	581.0	758.0	
1200*	393	20.4	6.0	785.0	875.0		

* On request

S₁ Wall thickness of the casting

S₂ Thickness of the cement mortar lining

Surface protection:

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Friezinc coating on request

FFK 30



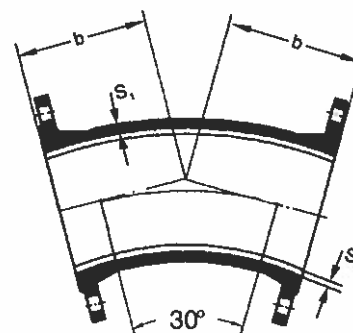
FGR 10

**30° double-flanged bend**

According to factory standard

FFK 30°

Made of ductile cast iron (SGCI)



Dimensions in mm

Weight of the casting in kg ≈

DN	b	S ₁	S ₂	PN 10	PN 16	PN 25	PN 40
40*	140			7.0	7.0	7.0	7.0
50*	150			9.0	9.0	9.0	9.0
65*	165			12.0	12.0	12.0	12.0
80	130	7.0	4.0	9.5	9.5	9.5*	9.5*
100	140	7.2	4.0	11.9	11.9	12.9*	12.9*
125	150	7.5	4.0	15.3	15.3	17.8*	20.5*
150	160	7.8	4.0	19.5	19.5	19.5*	25.0*
200	180	8.4	4.0	29.0	27.5	32.5	42.0
250	210	9.0	4.0	41.5	40.5	48.0*	65.0*
300	255	9.6	4.0	59.5	59.0	69.0*	96.0*
350*	165	10.2	5.0	65.0	71.0	88.0	
400	183	10.8	5.0	73.0	82.5	106.0	
500	220	12.0	5.0	109.0	137.0	158.0*	
600	309	13.2	5.0	212.0	257.0	278.0*	
700*	346	14.4	6.0	360.0	386.0	430.0	
800	383	15.6	6.0	493.0	529.0	674.0*	
900*	420	16.8	6.0	693.0	741.0	862.0	
1000*	455	18.0	6.0	896.0	979.0	1126.0	
1200*	530	20.4	6.0	1402.0	1531.0		

* On request

S₁ Wall thickness of the castingS₂ Thickness of the cement mortar lining**Surface protection:**

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Fria zinc coating on request



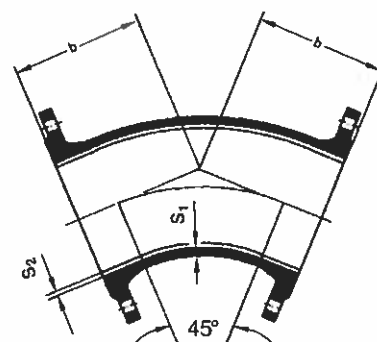
FFK 45



FGR 10



45° double-flanged bend
According to DIN EN 545
FFK 45°
Made of ductile cast iron (SGCI)



Dimensions in mm				Weight of the casting in kg ≈			
DN	b	S ₁	S ₂	PN 10	PN 16	PN 25	PN 40
40*	140			7.0	7.0	7.0	7.0
50*	150			9.0	9.0	9.0	9.0
65*	165			12.0	12.0	12.0	12.0
80	130	7.0	4.0	9.2	9.2	9.4*	9.4*
100	140	7.2	4.0	11.3	11.3	12.3	12.3
125	150	7.5	4.0	14.5	14.5	15.7*	18.3*
150	160	7.8	4.0	18.4	18.4	20.5	24.5
200	180	8.4	4.0	27.5	27.0	31.0	41.5
250	350	9.0	4.0	54.5	54.0	61.5*	82.0*
300	400	9.6	4.0	77.2	76.2	87.7*	118.2*
350*	298	10.2	5.0	75.5	82.0	99.0	141.0
400	324	10.8	5.0	94.4	106.4	128.4	196.4*
500	375	12.0	5.0	143.5	173.5	196.5*	264.5*
600	426	13.2	5.0	210.0	263.0	292.0*	397.0*
700*	478	14.4	6.0	292.5	322.5	392.5	
800	529	15.6	6.0	399.5	437.5	535.5*	
900*	581	16.8	6.0	513.0	561.0	682.0	
1000*	632	18.0	6.0	661.0	744.0	899.0	
1200*	735	20.4	6.0	1028.0	1157.0	1356.0	

* On request

S₁ Wall thickness of the casting

S₂ Thickness of the cement mortar lining

Surface protection:

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Friezinc coating on request

FFR 

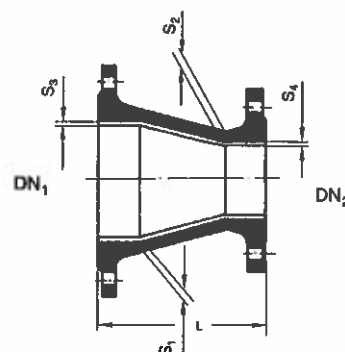
FGR 10

**Double-flanged taper**

According to DIN EN 545

FFR

Made of ductile cast iron (SGCI)



Weight of the casting in kg ≈

DN	DN ₂	L mm	S ₁	S ₂	S ₃	S ₄	PN 10	PN 16	PN 25	PN 40
50* **	40	200					7.0	7.0	7.0	7.0
65* **	40	200					8.0	8.0	8.0	8.0
	50	200					9.0	9.0	9.0	9.0
80	40*	200	7.0	7.0	4.0	4.0	6.6	6.7	6.7	6.7
	50	200	7.0	7.0	4.0	4.0	7.2	7.3	7.3	7.3
	65	200	7.0	7.0	4.0	4.0	7.9	8.0	7.9	7.9
100	40*	200	7.2	7.0	4.0	4.0	11.5	11.5	12.1	12.1
	50	200	7.2	7.0	4.0	4.0	8.1	8.1	8.6*	8.6*
	65	200	7.2	7.0	4.0	4.0	8.7	8.7	9.1*	9.1*
	80	200	7.2	7.0	4.0	4.0	9.3	9.4	9.9*	9.9*
125	40*	280	7.5	7.0	4.0	4.0	19.0	19.0	19.9	19.9
	50*	290	7.5	7.0	4.0	4.0	12.3	12.3	13.2	13.2
	65*	305	7.5	7.0	4.0	4.0	13.2	13.2	14.2	14.2
	80	200	7.5	7.0	4.0	4.0	10.5	10.6	11.2*	12.5*
	100	200	7.5	7.2	4.0	4.0	11.3	11.3	12.4*	13.7*
150	40*	331	7.8	7.0	4.0	4.0	15.2	15.2	16.2	16.2
	50*	341	7.8	7.0	4.0	4.0	15.8	15.8	16.8	16.8
	80	200	7.8	7.0	4.0	4.0	12.0	12.0	13.0	15.1
	100	200	7.8	7.2	4.0	4.0	12.8	12.8	14.3	16.4
	125	200	7.8	7.5	4.0	4.0	14.0	14.0	15.6	19.0
200	80	300	8.4	7.0	4.0	4.0	17.9	17.7	19.8*	25.1*
	100	300	8.4	7.2	4.0	4.0	18.9	18.6	21.5	26.5
	125	300	8.4	7.5	4.0	4.0	20.5	20.0	23.0*	29.5*
	150	300	8.4	7.8	4.0	4.0	21.9	21.9	24.9	32.4
250	80	300	9.0	7.0	4.0	4.0	26.4	26.0	29.8	40.3
	100	300	9.0	7.2	4.0	4.0	28.5	28.1	32.4	42.9
	125**	300	9.0	7.5	4.0	4.0	41.0	40.5	45.0	56.5
	150	300	9.0	7.8	4.0	4.0	44.0	43.5	48.5*	60.5*
	200	300	9.0	8.4	4.0	4.0	30.6	30.1	36.1	51.5

* On request

** According to factory standard

S₁, S₂ Wall thickness of the castingS₃, S₄ Thickness of the cement mortar lining**Surface protection:**

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 55129
- Friazinc coating on request

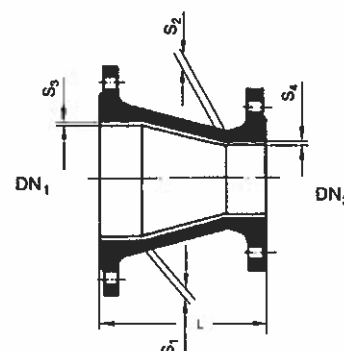


FFR 

FGR 10



Double-flanged taper
According to DIN EN 545
FFR
Made of ductile cast iron (SGCI)



Weight of the casting in kg ≈

DN	DN ₂	L mm	S ₁	S ₂	S ₃	S ₄	PN 10	PN 16	PN 25	PN 40
300	100	300	9.6	7.2	4.0	4.0	36.2	35.2	41.7	57.2
	150	300	9.6	7.8	4.0	4.0	33.0	32.5	38.0*	55.0*
	200	300	9.6	8.4	4.0	4.0	35.9	35.4	42.9*	63.9*
	250	300	9.6	9.0	4.0	4.0	40.8	39.8	49.3*	74.8*
350*	200**	300	10.2	8.4	5.0	4.0	51.0	69.0	103.0*	127.0*
	250	300	10.2	9.0	5.0	4.0	44.4	46.9	59.4	90.4
	300	300	10.2	9.6	5.0	4.0	49.7	52.2	66.2	103.2
400	200* **	300	10.8	8.4	5.0	4.0	45.6	50.5	63.5	98.0
	250	300	10.8	9.0	5.0	4.0	49.1	54.6	69.6	113.1*
	300	300	10.8	9.6	5.0	4.0	54.4	59.4	76.4	125.9*
	350*	300	10.8	10.2	5.0	5.0	58.1	66.6	86.1	141.1
500	300	600	12.0	9.6	5.0	5.0	150.0	163.0	181.0*	229.5*
	350* **	600	12.0	10.2	5.0	5.0	160.0	178.0	198.0	253.0
	400	600	12.0	10.8	5.0	5.0	109.6	130.6	153.6*	220.6*
600	400	600	13.2	10.8	5.0	5.0	210.0	242.0	268.0	354.0*
	500*	600	13.2	12.0	5.0	5.0	148.5	189.5	216.5	302.5
700*	500**	600	14.4	12.0	6.0	5.0	281.0	311.0	358.0	
	600	600	14.4	13.2	6.0	5.0	195.4	236.4	285.4	
800*	600**	600	15.6	13.2	6.0	5.0	368.0	414.0	477.0	
	700	600	15.6	14.4	6.0	5.0	250.3	284.3	368.3	
900*	700**	600	16.8	14.4	6.0	6.0	458.0	497.0	592.0	
	800**	600	16.8	15.6	6.0	6.0	308.2	352.2	461.2	
1000*	800**	600	18.0	15.6	6.0	6.0	570.0	631.0	758.0	
	900	600	18.0	16.8	6.0	6.0	373.2	438.2	576.2	
1200*	1000	600	20.4	18.0	6.0	6.0	494.0	600.0	777.0	

* On request

** According to factory standard

S₁, S₂ Wall thickness of the castingS₃, S₄ Thickness of the cement mortar lining**Surface protection:**

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Friezinc coating on request

N



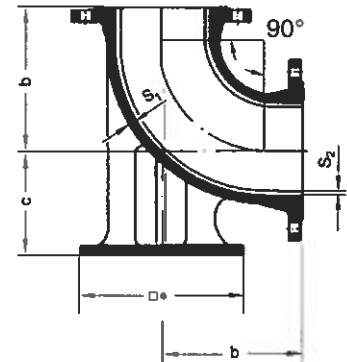
FGR 10

**90° double-flanged duckfoot bend**

According to DIN 545

N

Made of ductile cast iron (SGCI)



DN	Dimensions in mm				Weight of the casting in kg ≈				
	b	c	e	S ₁	S ₂	PN 10	PN 16	PN 25	PN 40
40*	140	84	160			10.5	10.5	10.5	10.5
50	150	90	160			13.5	13.5	13.5	13.5
65*	165	99	160			17.5	17.5	17.4	17.4
80	165	110	180	7.0	4.0	13.0	13.2	13.2	13.2
100	180	125	200	7.2	4.0	16.9	16.9	17.9*	17.9*
125	200	140	225	7.5	4.0	22.1	22.1	23.1*	26.1*
150	220	160	250	7.8	4.0	28.8	28.8	30.8*	35.3*
200	260	190	300	8.4	4.0	46.2	45.2	49.7	60.2
250	350	225	350	9.0	4.0	73.5	72.5	80.5*	101.0*
300	400	255	400	9.6	4.0	103.9	102.9	113.9*	144.9*
350*	450	290	450	10.2	5.0	136.0	142.0	158.0	201.0
400	500	320	500	10.8	5.0	176.4	186.4	209.4	277.4*
500	600	385	600	12.0	5.0	281.0	311.0	335.0*	402.0*
600	700	450	700	13.2	5.0	425.0	478.0	506.0*	612.0*

* On request

S₁ Wall thickness of the castingS₂ Thickness of the cement mortar lining

Optional: Tapped holes at up to 3 additionally provided hubs

DN 80: Thread up to 2"

DN 100: Thread up to 1 1/2"

Other nominal sizes on request

Surface protection:

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Friezinc coating on request



Q 

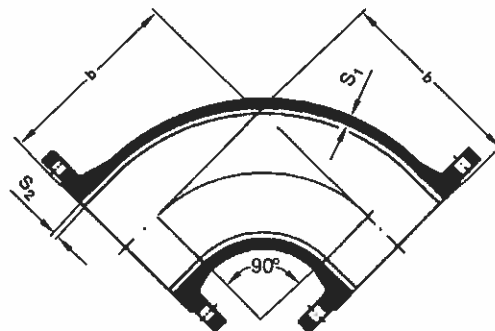
FGR 10

**90° double-flanged bend**

According to DIN EN 545

Q

Made of ductile cast iron (SGCI)



Dimensions in mm

Weight of the casting in kg ≈

DN	b	S ₁	S ₂	PN 10	PN 16	PN 25	PN 40
40* **	140			6.5	6.5	6.5	6.5
50	150			8.5	8.5	8.5	8.5
65* **	165			11.0	11.0	11.0	11.0
80	165	7.0	4.0	9.5	9.7	9.7*	9.7*
100	180	7.2	4.0	12.0	12.0	13.0*	13.0*
125	200	7.5	4.0	15.6	15.6	16.8*	19.6*
150	220	7.8	4.0	19.8	19.8	21.8*	26.3*
200	260	8.4	4.0	31.2	30.2	34.7	45.2
250	350	9.0	4.0	50.0	49.0	57.0*	77.0*
300	400	9.6	4.0	69.9	68.9	80.4*	110.9*
350*	450	10.2	5.0	89.5	96.0	112.0	155.0
400	500	10.8	5.0	114.5	125.5	148.5	215.5*
500	600	12.0	5.0	179.0	209.0	233.0*	300.0*
600	700	13.2	5.0	269.0	322.0	350.0*	455.0*
700*	800	14.4	6.0	381.5	411.5	481.5	
800	900	15.6	6.0	527.5	565.5	664.5*	
900*	1000	16.8	6.0	690.0	737.0	858.0	
1000*	1100	18.0	6.0	896.0	979.0	1135.0	
1200* **	1300	20.4	6.0	1418.0	1547.0	1746.0	

* On request

** According to factory standard

S₁ Wall thickness of the castingS₂ Thickness of the cement mortar lining**Surface protection:**

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Frazinc coating on request



FGR 10

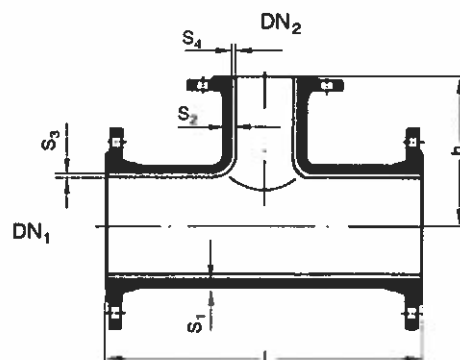


All-flanged tee

According to DIN EN 545

T

Made of ductile cast iron (SGCI)



DN ₁	DN ₂	Dimensions in mm						Weight of the casting in kg ≈			
		S ₁	S ₂	S ₃	S ₄	L	h	PN 10	PN 16	PN 25	PN 40
40*	40					280	140	10.5	10.5	10.5	10.5
50	40*					300	145	12.0	12.0	12.0	12.0
	50					300	150	12.5	12.5	12.5	12.5
65*	40					330	153	15.0	15.0	15.0	15.0
	50					330	158	15.5	15.5	15.5	15.5
	65					330	165	16.5	16.5	16.5	16.5
80	40*	7.0	7.0	4.0	4.0	330	160	14.5	14.5	14.5	14.5
	50	7.0	7.0	4.0	4.0	330	160	14.2	14.2	14.2	14.2
	65	7.0	7.0	4.0	4.0	330	160	16.0	16.0	16.0	16.0
	80	7.0	7.0	4.0	4.0	330	165	15.6	15.6	15.6	15.6
100	40*	7.2	7.0	4.0	4.0	360	170	18.0	18.0	19.0	19.0
	50	7.2	7.0	4.0	4.0	360	170	17.1	17.1	18.1	18.1
	65	7.2	7.0	4.0	4.0	360	170	19.0	19.0	19.7	19.7
	80	7.2	7.0	4.0	4.0	360	175	18.4	18.4	19.6	19.6
	100	7.2	7.2	4.0	4.0	360	180	19.0	19.0	20.5	20.5
125	40*	7.5	7.0	4.0	4.0	400	185	22.0	22.0	23.0	26.0
	50*	7.5	7.0	4.0	4.0	400	185	23.0	23.0	24.0	27.0
	80	7.5	7.0	4.0	4.0	400	190	22.8	22.8	24.3*	26.8*
	100	7.5	7.2	4.0	4.0	400	195	23.8	23.8	25.8*	28.3*
	125	7.5	7.5	4.0	4.0	400	200	25.2	25.2	26.7	30.7
150	40*	7.8	7.0	4.0	4.0	500	194	38.0	38.0	40.0	44.0
	50	7.8	7.0	4.0	4.0	440	200	30.5	30.5	32.5	36.5
	80	7.8	7.0	4.0	4.0	440	205	28.5	28.5	30.5	35.0
	100	7.8	7.2	4.0	4.0	440	210	29.4	29.4	31.9	35.9
	125	7.8	7.5	4.0	4.0	440	215	30.9	30.9	33.4*	38.9*
	150	7.8	7.8	4.0	4.0	440	220	32.3	32.3	35.3	41.9

* On request

S₁, S₂ Wall thickness of the casting

S₃, S₄ Thickness of the cement mortar lining





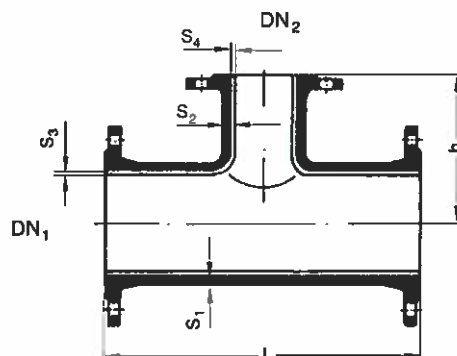
FGR 10



All-flanged tee

According to DIN EN 545

T
Made of ductile cast iron (SGCI)



DN ₁	DN ₂	Dimensions in mm						Weight of the casting in kg ≈			
		S ₁	S ₂	S ₃	S ₄	L	h	PN 10	PN 16	PN 25	PN 40
200	50*	8.4	7.0	4.0	4.0	600	225	60.0	59.5	64.0	74.0
	80	8.4	7.0	4.0	4.0	520	235	42.2	41.7	45.7	56.7
	100	8.4	7.2	4.0	4.0	520	240	43.1	42.6	47.1	57.6
	125	8.4	7.5	4.0	4.0	520	245	51.0	51.0	55.0	58.0
	150	8.4	7.8	4.0	4.0	520	250	46.0	45.5	50.5	63.0
	200	8.4	8.4	4.0	4.0	520	260	49.5	48.5	55.0	70.5
250	50*	9.0	7.0	4.0	4.0	700	275	85.0	84.0	92.0	111.0
	80	9.0	7.0	4.0	4.0	700	265	66.5	66.0	74.0	95.0
	100	9.0	7.2	4.0	4.0	700	275	67.6	66.6	75.1	95.2
	125*	9.0	7.5	4.0	4.0	700	275	92.0	91.0	100.0	121.0
	150	9.0	7.8	4.0	4.0	700	300	72.0	71.5	79.5	100.5
	200	9.0	8.4	4.0	4.0	700	325	76.0	75.5	83.5	104.5
300	250	9.0	9.0	4.0	4.0	700	350	81.0	80.5	88.5	109.5
	50*	9.6	7.0	4.0	4.0	800	300	120.0	119.0	130.0	161.0
	80	9.6	7.0	4.0	4.0	800	290	96.5	95.5	108.0*	142.0*
	100	9.6	7.2	4.0	4.0	800	300	98.5	97.5	104.8*	135.8*
	125*	9.6	7.5	4.0	4.0	800	300	125.0	124.0	136.0	167.0
	150	9.6	7.8	4.0	4.0	800	325	101.0	100.0	112.0*	145.0*
350*	200	9.6	8.4	4.0	4.0	800	350	102.4	101.4	114.4*	151.4*
	250	9.6	9.0	4.0	4.0	800	400	113.9	112.9	128.9*	175.9*
	300	9.6	9.6	4.0	4.0	800	375	114.0	113.0	128.0*	168.0*
	80	10.2	7.0	5.0	4.0	850	325	159.0	165.0	182.0	224.0
	100	10.2	7.2	5.0	4.0	850	325	115.5	121.5	138.5	181.5
	150	10.2	7.8	5.0	4.0	850	325	164.0	170.0	188.0	232.0
350*	200	10.2	8.4	5.0	4.0	850	325	120.5	126.5	145.5	193.5
	250	10.2	9.0	5.0	4.0	850	325	173.0	179.0	199.0	258.0
	300	10.2	9.6	5.0	4.0	850	425	188.0	194.0	218.0	274.0
	350	10.2	10.2	5.0	5.0	850	425	138.8	147.8	172.8	236.8

* On request

S₁, S₂ Wall thickness of the casting

S₃, S₄ Thickness of the cement mortar lining



FGR 10

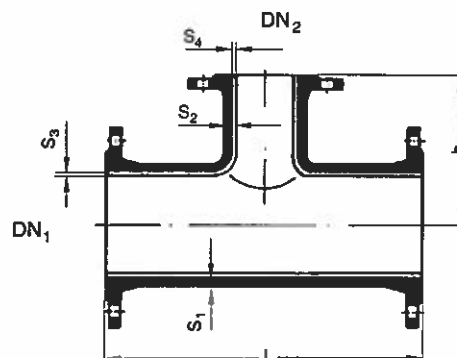


All-flanged tee

According to DIN EN 545

T

Made of ductile cast iron (SGCI)



DN ₁	DN ₂	Dimensions in mm						Weight of the casting in kg ≈			
		S ₁	S ₂	S ₃	S ₄	L	h	PN 10	PN 16	PN 25	PN 40
400	80	10.8	7.0	5.0	4.0	900	350	141.0	153.0	235.0*	302.0*
	100	10.8	7.2	5.0	4.0	900	350	143.0	155.0	176.4*	244.4*
	150	10.8	7.8	5.0	4.0	900	350	145.0	157.0	241.0*	310.0*
	200	10.8	8.4	5.0	4.0	900	350	165.0	177.0	183.3*	255.3*
	250*	10.8	9.0	5.0	4.0	900	350	215.0	226.0	252.0	330.0
	300	10.8	9.6	5.0	4.0	900	450	177.0	191.0	271.0*	354.0*
	350*	10.8	10.2	5.0	5.0	900	450	329.0	343.0	374.0	464.0
	400	10.8	10.8	5.0	5.0	900	450	191.5	210.0	219.5	320.5*
500	80	12.0	7.0	5.0	4.0	1000	400	200.0	228.0	260.0*	328.0*
	100	12.0	7.2	5.0	4.0	1000	400	208.0	238.0	264.5*	331.5*
	150	12.0	7.8	5.0	4.0	1000	400	216.0	252.0	359.0*	428.0*
	200	12.0	8.4	5.0	4.0	1000	400	224.0	266.0	269.5*	342.5*
	250	12.0	9.0	5.0	4.0	1000	400	234.0	280.0	372.0*	450.0*
	300	12.0	9.6	5.0	4.0	1000	500	245.0	294.0	393.0	476.0*
	350*	12.0	10.2	5.0	5.0	1000	500	342.0	376.0	407.0	496.0
	400*	12.0	10.8	5.0	5.0	1000	500	234.7	270.7	305.7	406.7
600	500	12.0	12.0	5.0	5.0	1000	500	302.5	350.0	324.6*	425.6*
	80*	13.2	7.0	5.0	4.0	1100	450	304.0	353.0	374.0	478.0
	100	13.2	7.2	5.0	4.0	1100	450	334.0	369.0	518.0*	623.0*
	150	13.2	7.8	5.0	4.0	1100	450	336.0	372.0	522.0*	630.0*
	200	13.2	8.4	5.0	4.0	1100	450	342.0	378.0	387.0*	497.0*
	250	13.2	9.0	5.0	4.0	1100	450	350.0	403.0	533.0*	648.0*
	300	13.2	9.6	5.0	4.0	1100	550	360.0	413.0	553.0*	673.0*
	350*	13.2	10.2	5.0	5.0	1100	550	475.0	531.0	568.0	695.0
	400	13.2	10.8	5.0	5.0	1100	550	374.0	432.0	422.0*	561.0*
	500	13.2	12.0	5.0	5.0	1100	550	390.0	456.0	697.0*	746.0*
	600	13.2	13.2	5.0	5.0	1100	550	440.0	518.0	465.0*	623.0*

* On request

S₁, S₂ Wall thickness of the casting

S₃, S₄ Thickness of the cement mortar lining





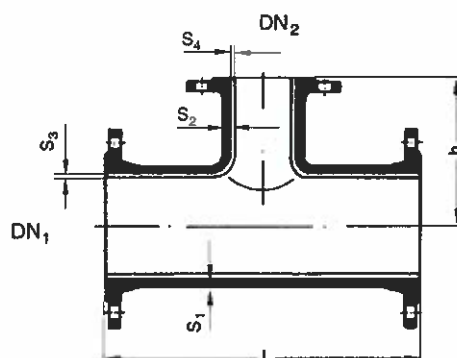
FGR 10



All-flanged tee

According to DIN EN 545

T
Made of ductile cast iron (SGCI)



DN ₁	DN ₂	Dimensions in mm						Weight of the casting in kg ≈			
		S ₁	S ₂	S ₃	S ₄	L	h	PN 10	PN 16	PN 25	PN 40
700*	100	14.4	7.2	6.0	4.0	650	510	270.0	296.0	366.0	
	150	14.4	7.8	6.0	4.0	1200	500	608.0	638.0	659.0	
	200	14.4	8.4	6.0	4.0	650	525	265.9	295.9	366.9	
	250	14.4	9.0	6.0	4.0	1200	500	615.0	645.0	719.0	
	300	14.4	9.6	6.0	4.0	870	540	344.0	370.0	444.0	
	350	14.4	10.2	6.0	5.0	1200	600	642.0	675.0	753.0	
	400	14.4	10.8	6.0	5.0	870	555	337.5	372.5	453.5	
	500	14.4	12.0	6.0	5.0	1200	570	669.0	714.0	796.0	
	600	14.4	13.2	6.0	5.0	1200	585	686.0	743.0	827.0	
800	700	14.4	14.4	6.0	6.0	1200	600	459.0	504.0	609.0	
	100	15.6	7.0	6.0	4.0	690	570	354.0	390.0	528.0*	
	150	15.6	7.2	6.0	4.0	690	580	370.0	392.0	476.0*	
	200	15.6	7.8	6.0	4.0	690	585	349.5	387.5	487.5*	
	250	15.6	8.4	6.0	4.0	690	585	379.0	401.0	486.0*	
	300	15.6	9.0	6.0	4.0	690**	600	443.0	478.0	620.0*	
	350*	15.6	9.6	6.0	5.0	1300	650	849.0	849.0	987.0	
	400	15.6	10.2	6.0	5.0	910	615	434.0	478.0	588.0*	
	500	15.6	10.8	6.0	5.0	1350	630	607.0	657.0	795.0*	
900*	600	15.6	12.0	6.0	5.0	1350	645	599.5	663.5	776.5*	
	700*	15.6	13.2	6.0	6.0	1300	650	916.0	916.0	1054.0	
	800	15.6	14.4	6.0	6.0	1350	675	631.5	689.5	836.5*	
	100	16.8	7.2	6.0	4.0	730	640	445.0	488.0	730.0	
	200	16.8	8.4	6.0	4.0	730	645	432.0	480.0	603.0	
	250	16.8	9.0	6.0	4.0	730	635	461.0	482.0	581.0	
	300	16.8	9.6	6.0	4.0	950	660	544.0	588.0	690.0	
	400	16.8	10.8	6.0	5.0	950	675	532.5	585.5	717.5	
	500	16.8	12.0	6.0	5.0	1500	690	784.0	842.0	960.0	
	600	16.8	13.2	6.0	5.0	1500	705	771.0	846.0	981.0	
	900	16.8	16.8	6.0	5.0	1500	750	818.0	890.0	1071.0	

* On request

** Face-to-face length according to factory standard

S₁, S₂ Wall thickness of the casting
S₃, S₄ Thickness of the cement mortar lining



FGR 10

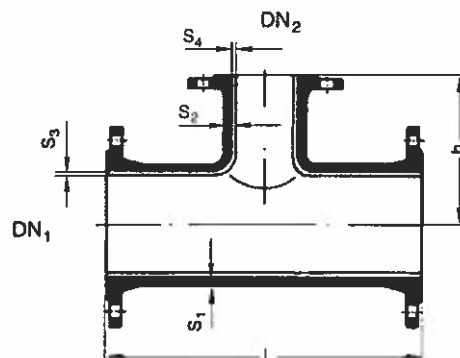


All-flanged tee

According to DIN EN 545

T

Made of ductile cast iron (SGCI)



DN ₁	DN ₂	Dimensions in mm						Weight of the casting in kg ≈			
		S ₁	S ₂	S ₃	S ₄	L	h	PN 10	PN 16	PN 25	PN 40
1000	200*	18.0	8.4	6.0	4.0	770	705	541.0	624.0	782.0	
	250*	18.0	9.0	6.0	4.0	770	705	590.0	695.0	763.0	
	300*	18.0	9.6	6.0	4.0	1500	750	1363.0	1360.0	1516.0	
	400	18.0	10.8	6.0	5.0	990	735	658.0	746.0	913.0	
	500	18.0	12.0	6.0	5.0	1500	750	1396.0	1395.0	1551.0	
	600	18.0	13.2	6.0	5.0	1650	765	990.5	1099.5	1269.5	
	700*	18.0	14.4	6.0	6.0	1500	750	1446.0	1445.0	1601.0	
	800	18.0	15.6	6.0	6.0	1500	750	1468.0	1465.0	1621.0*	
	900*	18.0	16.8	6.0	6.0	1500	750	1464.0	1460.0	1616.0	
1200*	1000	18.0	18.0	6.0	6.0	1650	825	1058.5	1183.5	1416.5*	
	200	20.4	8.4	6.0	4.0	850	825	804.0	932.0	1133.0	
	250	20.4	9.0	6.0	4.0	1215	875	1187.0	1276.0	1440.0	
	400	20.4	10.8	6.0	5.0	1070	855	957.5	1091.5	1301.5	
	600	20.4	13.2	6.0	5.0	1950	885	1544.0	1699.0	1913.0	
	1000	20.4	18.0	6.0	6.0	1700	945	1600.0	1705.0	1882.0	
	1200	20.4	20.4	6.0	6.0	1950	975	1662.0	1855.0	2153.0	

* On request

S₁, S₂ Wall thickness of the casting

S₃, S₄ Thickness of the cement mortar lining

Surface protection:

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Friezinc coating on request

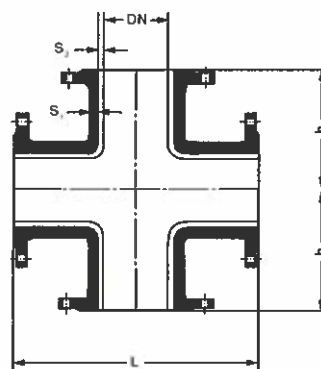




FGR 10



All-flanged cross piece
According to DIN EN 545
TT
Made of ductile cast iron (SGCI)



DN	S ₁	Dimensions in mm			Weight of the casting in kg ≈	
		S ₂	L	h	PN 10	PN 16
80/80	8.1	4.0	330	165	20	20
100/100	8.4	4.0	360	180	26	26
150/150	9.1	4.0	440	220	39	39
200/200	9.8	4.0	520	260	58	58
300/300	11.2	4.0	800	400	155	160
400/400	12.6	6.0	900	450	218	225

Other nominal sizes on request

S₁ Wall thickness of the casting

S₂ Thickness of the cement mortar lining

Surface protection:

- Epoxy resin powder coating according to DIN EN 14901 with a minimum layer thickness of 300 µm
- Cement mortar lining
- Internal and external enamelling according to DIN 51178
- Friezinc coating on request

ZERTIFIKAT

für das Managementsystem nach

DIN EN ISO 9001:2015

Der Nachweis der regelkonformen Anwendung wurde erbracht



Zertifikatsinhaber:

vR production (DUKTUS) gmbh
Sophienstraße 52-54
D-35576 Wetzlar

mit dem Standort bei:



vonRoll hydro (deutschland) gmbh & co. kg
Sophienstraße 52-54
D-35576 Wetzlar

Geltungsbereich:

Vertrieb von Rohrleitungssystemen aus duktilem Gusseisen
für den Transport von Wasser und Abwasser einschließlich spezieller Anwendungen
für Wasserkraftwerke, Beschneigungsanlagen und Feuerlöschsysteme
sowie für grabenlose Verlegetechniken und Pfahlsysteme für den Spezialtiefbau,
Armaturen, Hydranten, Messtechnik und Entwässerungstechnik.

Zertifikat-Registrier-Nr. **73 100 954-2**

Zertifikat gültig von 2019-12-20 bis **2022-12-19**

Auditbericht-Nr. 4355 7131



o. J. H. H. H.
Darmstadt, 2019-12-07
Zertifizierungsstelle des TÜV
- Der Zertifizierungsstellenleiter



CERTIFICATE

Management system as per

DIN EN ISO 9001:2015

Evidence of conformity with the above standard(s) has been furnished



Certificate holder:

vR production (DUKTUS) gmbh
Sophienstraße 52-54
35576 Wetzlar / Germany

with the location at:



vonRoll hydro (deutschland) gmbh & co. kg
Sophienstraße 52-54
35576 Wetzlar / Germany

scope:

The sale of pipework systems made from ductile cast iron for the conveyance of water and sewage including special applications for hydroelectric power stations, snow-making equipment and fire extinguishing systems as well as for non-disruptive pipe installation techniques and piling systems for special foundation engineering works, fittings, hydrants, metrology and drainage engineering.

Certificate registration No. **73 100 954-2**

Certificate valid from 2019-12-20 to **2022-12-19**

Audit report No. 4355 7131



O. Maier

Darmstadt, 2019-12-02
Certification body of TÜV Hessen
– Head of Certification body –

CERTIFICATO

per il sistema di gestione secondo

EN ISO 9001:2015

La prova della conformità alla norma sopra indicata è stata fornita



Licenziatario Certificato:

vR production (DUKTUS) gmbh
Sophienstraße 52-54
35576 Wetzlar / Germania

con la posizione a:



vonRoll hydro (deutschland) gmbh & co. kg
Sophienstraße 52-54
35576 Wetzlar / Germania

Campo di applicazione:

Vendita di sistemi di tubature in ghisa duttile per il trasporto di acqua e acqua di scarico e per utilizzi speciali per centrali idroelettriche, impianti di innevamento e sistemi antincendio nonché per tecniche di posa trenchless e sistemi di pilastri per opere di costruzione sotterranee speciali, rubinetterie, idranti, tecnica di misurazione e di drenaggio.

NO registrazione certificato **73 100 954-2**

Certificato valido da 2019-12-20 a **2022-12-19**

Rapporto di Audit 4355 7131



O. Maier
Darmstadt, 2019-12-03
Organismo di Certificazione del TÜV Hessen
- Responsabile della certificazione -



CERTIFICAT

Pour le système de management selon

EN ISO 9001:2015

La preuve de l'utilisation conforme aux règles a été démontrée



Titulaire de la certification:
vR production (DUKTUS) gmbh
Sophienstraße 52-54
35576 Wetzlar / Allemagne

avec l'emplacement à:



vonRoll hydro (deutschland) gmbh & co. kg
Sophienstraße 52-54
35576 Wetzlar / Allemagne

Domaine d'application:

Distribution de tuyaux en fonte ductile pour le transport de l'eau et des eaux usées, y compris les applications spéciales pour des centrales hydroélectriques, des systèmes d'enneigement et des installations d'extinction d'incendie, ainsi que pour les techniques de pose sans tranchée et systèmes de pieux pour des fondations, robinetterie, poteaux d'incendie, technique de mesure et d'évacuation des eaux.

Certificat enregistré sous le n° **73 100 954-2**

Certificat valable du 2019-12-20 au **2022-12-19**

Rapport-Audit n° 4355 7131



O. Maier
Darmstadt, 2019-12-02
Organisme de certification du TÜV Hessen
- Le chef de service de la certification -



Duktus (Production) GmbH
Sophienstraße 52–54
35576 Wetzlar
Germany

T + 49 (0) 6441 49-01
Fax +49 (0) 6441 49-1303
www.duktus.com

Konformitätserklärung

Declaration of Conformity

Gemäß EG-Bauproduktenrichtlinie 89/106/EWG
In accordance with EU Construction Products Directive 89/106/EEC

Hersteller
Manufacturer

Duktus (Production) GmbH,
Sophienstraße 52 – 54, D-35576 Wetzlar

erklärt, dass die Produkte
declare that the products

Bezeichnung
Description

Rohre, Formstücke und Zubehörteile aus duktilem
Gusseisen für die Abwasser-Entsorgung
Ductile iron pipes, fittings and accessories for sewerage applications

Nennweiten
nominal dimension

DN 80-1000

den Bestimmungen der EN 598 entsprechen und die Voraussetzungen für die CE
Kennzeichnung gemäß EN 598 erfüllen. Für Handelsware liegt die CE-Konformitätserklärung
der Hersteller vor.

comply with the specifications of EN 598 and fulfill the requirements for CE marking according to EN 598.
Merchandise traded: Suppliers' declarations of CE conformity are available.

Angewandtes Regelwerk: EN 598
Applied standard

Konformitätsbewertung nach: EN 598
Assessment of conformity according to



Die Produkte wurden einer Erstprüfung unterzogen und unterliegen der werkseigenen Produktionskontrolle gemäß
EN 598. Jegliche nachträgliche Veränderung an den Produkten, die Auswirkungen auf die technische Ausführung
und/oder auf die bestimmungsgemäße Verwendung entsprechend der Betriebsanleitung hat, macht diese
Erklärung nichtig.

The products passed the initial type-testing and the manufacturer carries out tests in accordance with EN 598. Any modification of the
products which changes the technical layout and/or the field of application as specified in the operating instructions
invalidates this declaration.

Ort, Datum
Place, date

Stefan Weber

Wetzlar, 11.10.2016

Geschäftsführung Wetzlar
Executive board Wetzlar





VERLEIHUNGSURKUNDE

Herstellung Schwerer Korrosionsschutz von Armaturen und Formstücken

Die Gütegemeinschaft Schwerer Korrosionsschutz von Armaturen und Formstücken durch Pulverbeschichtung e.V. (GSK) verleiht aufgrund des Güteausschuss vorliegenden Prüfberichts der fremdüberwachenden Stelle und dem Beschluss des Vorstandes der GSK für das Beschichtungsverfahren zur Herstellung von Schwerem Korrosionsschutz für Armaturen und Formstücke und für die im Anhang genannten Produktfamilien, dem Betrieb

vonRoll hydro (suisse) ag
VonRoll-Straße 24, 4702 Oensingen

das Recht das Gütezeichen mit dem leistungsbezogenen Zusatz RAL-GZ 662/2 zu führen.

Das Gütezeichen ist vom Institut für Gütesicherung und Kennzeichnung e.V. (RAL) anerkannt und durch Eintragung beim deutschen Patent- und Markenamt als Kollektivmarke (EU-Marke 009300138) geschützt.



Die Produkte, die nach den Voraussetzungen der Güte- und Prüfbestimmungen (GPB) der GSK gefertigt wurden, sind als Produktfamilien vom Unternehmen der Geschäftsstelle benannt, und im Anhang und auf der GSK-Homepage (www.gsk-online.de) aufgeführt. Sie erhalten folgende Kennzeichnung:



GSK-ID:

(vierstellige von der GSK vergebene Nummer)

Diese Urkunde ist gültig bis: 31. Dezember 2021

Schwäbisch Gmünd, den 31. Dezember 2020


Geschäftsführer

Anhang nicht gültig

Die Produktfamilien müssen in der Bescheinigung aufgeführt sein. Der Verwender des Qualitätszeichens informiert GSK über die Aufnahme neuer Produkte oder Änderungen an bestehenden Produkten in die Produktzulassung, und GSK informiert seinerseits die Prüfinstitute. Die aktuelle Liste der in GSK-Qualität hergestellten Produktfamilien ist auf der GSK-Website (www.gsk-online.de) zu finden.

Gütegemeinschaft Schwerer Korrosionsschutz
von Armaturen und Formstücken durch
Pulverbeschichtung e.V.

Quality Assurance Association for Heavy-Duty
Corrosion Protection of Valves and Fittings
with Powder Coating (GSK e.V.)

Alexander-von-Humboldt-Str. 19
D-73529 Schwäbisch Gmünd

Geschäftsführer/
Managing Director:
RA Lars Walther

GSK: +49 7171 1040-840
Fax: +49 7171 1040-850

Mail: info@gsk-online.de
Web: www.gsk-online.de

Commerzbank
IBAN: DE 51 7604 1061 0516 6855 00
BIC: COBADE33XXX

Ust.IdNr. DE 262541992
Steuer-Nr. 241 108 80789



Anhang zur Urkunde vom 31. Dezember 2020

Die Urkunde der Firma

vonRoll hydro (suisse) ag
VonRoll-Straße 24, 4702 Oensingen

ist für folgende Produktfamilien gültig

Nr.	Produkt	Nennweite
1	Hausanschlussarmatur CLICK	DN 25 - 50
2	Unterteil vario 2.0 / Unterteil vario H2L	100 / 125
3	Hydrant hy classic Fig. 5522	100 / 125
4	Hydrant hy 5000s Fig. 5414	100 / 125
5	Hydrant hy plus Fig 5704	100 / 125
6	Schieber VS 5000	DN 20 - 300
7	Schieber SWD 5000 plus	DN 20 - 300
8	Anbohrschelle 5000	DN 65 - 500
9	Rückschlagklappe 5000	DN 50 - 150
10	Kipprückschlagklappe 5000	DN 200 - 500
11	Seiher Fig. 7895	DN 65 - 300
12	Zwischenseiher Fig. 7931	DN 80 - 300
13	Hauptventil Fig. 9921	DN 20 - 50
14	Reservoirarmaturen	DN 65-200
15	Universal 1- 3 und Vollschutz Uni's	DN 80 - 300
16	Rückflussverhinderer Fig 5200	DN50-DN150



AWARD CERTIFICATE

Production heavy corrosion protection of valves and fittings

The Quality Association for Heavy Duty Corrosion Protection of Valves and Fittings by Powder Coating e.V. (GSK) awards on the basis of the quality committee present test report of the externally supervising body and the resolution of the board of GSK for the coating procedure for the production of heavy corrosion protection for valves and fittings and for the product families mentioned in the appendix, the company:

vonRoll hydro (suisse) ag
VonRoll-Straße 24, 4702 Oensingen

the right to use the quality mark with the performance-related addition RAL-GZ 662/2.

The quality mark is certified by the Institute for Quality Assurance and Labelling e.V. (RAL) and protected by registration at the German Patent and Trademark Office as a collective trademark (EU trademark 009300138).



The products, which were manufactured after the conditions of the quality and test regulations (GPB) of the GSK, are designated as product families by the enterprise of the office, and in the appendix and on the GSK homepage (www.gsk-online.de) listed. They receive the following marking:



RAL GSK

GSK-ID:

(four-digit number assigned by the GSK)

This certificate is valid until 31st Dec. 2021

Schwäbisch Gmünd, the 31st December 2020

Managing Director

Not valid without annex

The product families must be listed in the certificate. The user of the quality mark informs GSK about the inclusion of new products or changes to existing products in the product approval, and GSK in turn informs the testing institutes. The current list of product families manufactured in GSK quality can be found on the GSK website (www.gsk-online.de).





Annex to the certificate of 31st December 2020

The certificate of the company

vonRoll hydro (suisse) ag
VonRoll-Straße 24, 4702 Oensingen

is valid for the following product families

No.	Product	Nominal size
1	Hausanschlussarmatur CLICK	DN 25 - 50
2	Unterteil vario 2.0 / Unterteil vario H2L	100 / 125
3	Hydrant hy classic Fig. 5522	100 / 125
4	Hydrant hy 5000s Fig. 5414	100 / 125
5	Hydrant hy plus Fig 5704	100 / 125
6	Schieber VS 5000	DN 20 - 300
7	Schieber SWD 5000 plus	DN 20 - 300
8	Anbohrschelle 5000	DN 65 - 500
9	Rückschlagklappe 5000	DN 50 - 150
10	Kipprückschlagklappe 5000	DN 200 - 500
11	Seiher Fig. 7895	DN 65 - 300
12	Zwischenseiher Fig. 7931	DN 80 - 300
13	Hauptventil Fig. 9921	DN 20 - 50
14	Reservoirarmaturen	DN 65-200
15	Universal 1- 3 und Vollschutz Uni's	DN 80 - 300
16	Rückflussverhinderer Fig 5200	DN50-DN150