





borougenajd PP-RCT

# **ABOUT US**

Borouge Najd is a leading Saudi Arabian plastic pipe manufacturer since our establishment in 2020 we have constantly evolved to meet the requirements of our most demanding customers. Our aim is to provide sophisticated and diverse pipe solutions for hot and cold water applications, telecommunication networks, sewage and drainage systems together with water and gas infrastructure.

We are a certified to ISO Quality Management Systems organization and all our products comply with the appropriate World International (ISO) Standards.

Our products are tested extensively in our state-of-the-art laboratory, to ensure that the quality and performance are continuously maintained.

Our success is the result of the company's persistent commitment to continuous innovation and investment in technology, in the relentless pursuit of providing quality products and services. Today, we are pleased to offer a wide range of plastic products, divided into four categories:

WE DESIGN, DEVELOP, MANUFACTURE
AND PROVIDE INNOVATIVE PIPE
SOLUTIONS THAT BEST MEET THE
NEEDS OF OUR CUSTOMERS

# CHARACTERISTICS OF PP-RCT SYSTEMS

#### Installation

inside and outside buildings

#### Area of applications

- Potable Hot and Cold water supply
- Chilled water systems
- District cooling and heating
- Compressed air systems
- Rainwater and agriculture systems
- Industrial applications
- Outdoor water transport systems

#### Colors

**RAL 6024** 

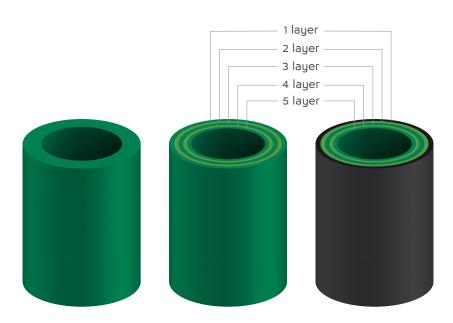
#### Pipe Technologies

1-layer technology

5-layers technology

- Exterior layer (1): PP-R with improved impact resistant and reliable welding. The exterior layer also protects the pipe against UV rays for outdoor application.
- Second layer (2): Glass fiber reinforced PP-R layer with improve mechanical strength and dimensional stability.
- Third layer (3): PP-RCT layer with modified crystalline structure for improved long term pressure resistance at high temperature.
- Forth layer (4): Glass fiber reinforced PP-R layer with improved mechanical strength and dimensional stability.
- Fifth layer (5): PP-RCT layer with modified crystalline structure for improved long term pressure resistance at high temperature. Smooth pipe inner surfaces prevent sediments and incrustations.

#### Pipe Structure



#### Raw Material Characteristics

 $\mbox{PP-R}$  and  $\mbox{PP-RCT}$  pipes and fittings are manufactured of raw materials with the following properties:

Properties	Measuring method	Unit	PP-R	PP-RCT	PP-RCT GF
Density	ISO 1183	kg/m³	0.900	0.905	0.977
Melt Flow Rate 230°C/2.16kg	ISO 1133	g/10min.	0.3	0.3	0.3
Modulus of Elasticity in Tension (1mm/min)	ISO 527	MPa	900	900	1080
Tensile Stress at Yield (50 mm/min)	ISO 527	MPa	28	25	33.6
Charpy Impact Strength, notched (+23°C)	ISO 179	KJ/m²	25	40	N/B
Coefficient of linear expansion	DIN 53752	mm/mK	0.15	0.15	0.05
Thermal conductivity	DIN 52612	W/mK	0.24	0.24	0.24
Pipe surface roughness k	-	mm	0.007	0.007	0.007
Specific heat at 20℃	Calorimeter	KJ/kg K	2.0	2.0	2.0

#### Pressure Resistance

For the same diameter PP-RCT can operate at higher pressure at high temperatures.





Temperature (°C)	Service life (y)	PP-R S 3.2 SDR 7.4 Service pro	PP-RCT S 3.2 SDR 7.4 essure (bar)
60°C	50	10.2	12.8
70°C	50	6.7	10.7
80°C	25	5.1	9.1

#### Welding Technologies

Parameters for welding PPR pipes and PP-RCT pipes are identical.

- Socket welding with hand-held welding device
- Socket welding with stationary welding device
- Welding saddle
- Electrical socket welding
- Repair plugs

#### **Application classes**

PP-R and PP-RCT systems application classes according to EN ISO 15874 are summarized below.

- Class 1 delivery of hot water 60°C, lifespan 50 years.
- Class 2 delivery of hot water 70°C, lifespan 50 years.
- Class 4 floor heating, low-temperature radiators, lifespan 50 years, with the stipulation that 20 years are expected (overall, during the entire lifespan) for operation temperature of 40°C, 25 years for 60°C and 2.5 years for 70°C.
- Class 5 high-temperature radiators, lifespan 50 years, with the stipulation that 14 years are expected (overall, during the entire lifespan) for operation temperature of 20°C, 25 years for 60°C, 10 years for 80°C, and 1 year for 90°C.

Class of application	Design temperature T <sub>D</sub> (°C)	Duration of operation at T <sub>D</sub> (years)	T <sub>max</sub>	Duration of operation at $T_{max}$ (°C)	T <sub>max</sub> (°C)	Duration of operation at T <sub>times</sub> (hours)	Typical field of application
1 <sup>a</sup>	60	49	80	1	95	100	Hot water supply (60°C)
2ª	70	49	80	1	95	100	Hot water supply (70°C)
4 <sup>b</sup>	20 40 60	2,5 20 25	70	2,5	100	100	Underfloor heating and low-temperature radiator connection
5 <sup>b</sup>	20 60 80	14 25 10	90	1	100	100	High-temperature radiator connection

 $\textbf{Note:} \ \text{This international standard is usable only for enclosed systems, in which the $T_D$, $T_{max}$ and $T_{times}$ do not exceed the values specified for class 5.}$ 

 $<sup>\</sup>ensuremath{^{\mathbf{a}}}$  Pursuant to national regulations either class 1 or class 2 may be selected.

b The temperature range for any class should consist of individual time sections (for example, the range of operation temperatures for the period of 50 years for class 5 is: 20°C for 14 years, 60°C for 25 years, 80°C for 10 years, 90°C for 1 year and 100 °C for 100 hours).

#### Operating conditions

Recommended pipe SDR for PP-R and PP-RCT for application Class 1 (hot water supply 60°C) & Class 2 (hot water supply 70°C)

Operating	Class	I (60°C)	Class 2 (70°C)		
Pressure	PP-R	PP-RCT	PP-R	PP-RCT	
6 bar	SDR 11	SDR 11	SDR 7.4	SDR 11	
8 bar	SDR 7.4	SDR 9	SDR 6	SDR 9	
10 bar	SDR 6	SDR 7.4	SDR 5	SDR 7.4	

Recommended pipe SDR for PP-R and PP-RCT for application Class 4 (under floor heating & low temperature radiators) & Class 5 (High temperature radiators)

Operating	Class 4	1 (60°C)	Class 5	5 (70°C)
Pressure	PP-R	PP-RCT	PP-R	PP-RCT
6 bar	SDR 11	SDR 11	SDR 7.4	SDR 9
8 bar	SDR 7.4	SDR 9	SDR 5	SDR 7.4
10 bar	SDR 6	SDR 7.4	-	SDR 6

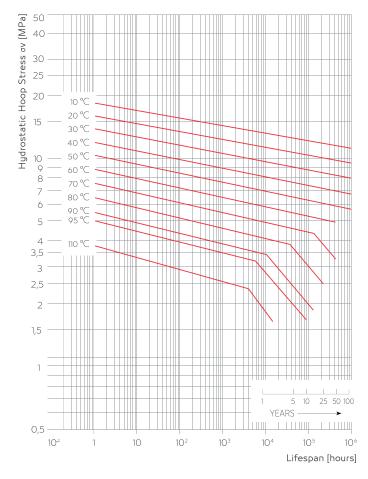
# Isothermal mechanical strength graphic for PP-RCT

Extrapolated strengths vales for for PP-R and PP-RCT

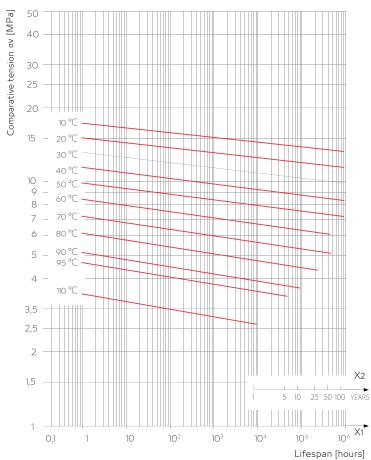
Temperature	Time (years)	PP-R	PP-RCT
20°C	50	9.7 MPa (97 bar)	11.5 MPa (115 bar)
60°C	50	4.9 MPa (49 bar)	6.1 MPa (61 bar)
70°C	50	3.2 MPa (32 bar)	5.1 MPa (51 bar)
95°€	5	1.9 MPa (19 bar)	3.3 MPa (33 bar)
110°C	1	1.9 MPa (19 bar)	2.6 MPa (26 bar)



Strenght isotherms of the PP-R materials



Strenght isotherms of the PP-RCT materials



# ADVANTAGES OF PP-R SYSTEMS







37% higher flow rate as compared to pipes made from PPR due to lower wall thickness High temperature and pressure resistance up to +95°C

Chlorine resistance at elevated temperature due to modified crystalline structure



Fast and easy installation due to advanced welding technologies



Low temperatures (0°C) operation and installation



Leak free due to advanced welding technologies



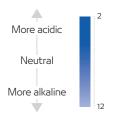
28% lighter as compared to pipe made from PP-R due superior pressure resistance at high temperature



Long-term hydrostatic strength due to unique crystalline structure



Free maintenance 50 years lifetime



Chemical resistance ranging from pH2 to pH12



Corrosion free system



100% recyclable and sustainable systems

# **PRODUCT RANGE**

# **Pipes**

We manufactures PP-RCT pipes ranging in size from 20mm to 160 mm. Additional pipe dimensions for single layer (up to 630mm) can be produced on request.

#### borougenjd pipe PP-RCT – S2.5, SDR6

Structure of pipe: Single layer PP-RCT

**Standard:** DIN 8077/78, EN ISO SASO 15874, ASTM F 2389, CSA B 137.11



		Pi	ре			
Part No.		Dimension	(mm)	Length	Packing/ Bag	Weight (kg/m)
	O.D.	I.D.	Т	(m)		(3, 7
20302	20	13,2	3,4	5,8	35	0,172
20304	25	16,6	4,2	5,8	25	0,266
20306	32	21,2	5,4	5,8	15	0,434
20308	40	26,6	6,7	5,8	10	0,671
20310	50	33,2	8,4	5,8	7	1,04
20355	63	42	10,5	4	4	1,65
20356	75	50	12,5	4	1	2,36
20357	90	60	15	4	1	3,36
20358	110	73,2	18,4	4	1	5,01
20359	125	83,2	20,9	4	1	6,25

#### borougenajf pipe PP-RCT (UV) - S2.5, SDR6

Structure of pipe: Single layer PP-RCT

Special feature: UV resistant

Standard: DIN 8077/78, EN ISO SASO 15874, ASTM F 2389, CSA B 137.11



		Pi	pe			
Part No.		Dimension	(mm)	Length	Packing/ Bag	Weight (kg/m)
	O.D.	I.D.	Т	(m)	, and the second	( 3, )
20302/UV	20	13,2	3,4	5,8	35	0,172
20304/UV	25	16,6	4,2	5,8	25	0,266
20306/UV	32	21,2	5,4	5,8	15	0,434
20308/UV	40	26,6	6,7	5,8	10	0,671
20310/UV	50	33,2	8,4	5,8	7	1,04
20355/UV	63	42	10,5	4	4	1,65
20356/UV	75	50	12,5	4	1	2,36
20357/UV	90	60	15	4	1	3,36
20358/UV	110	73,2	18,4	4	1	5,01
20359/UV	125	83,2	20,9	4	1	6,25

#### borougenajd pipe PP-R/PP-RCT/GF/PP-RCT – S2.5, SDR6

Structure of pipe: PP-RCT multilayer, with fiberglass reinforced Standard: DIN 8077/78, EN ISO SASO 15874, ASTM F 2389, CSA B 137.11, ISO 21003



		Pi	ре			
Part No.		Dimension	(mm)	Length	Packing/ Bag	Weight (kg/m)
	O.D.	I.D.	Т	(m)	3	(3, )
20332	20	13,2	3,4	5,8	35	0,166
20334	25	16,6	4,2	5,8	25	0,257
20336	32	21,2	5,4	5,8	15	0,423
20338	40	26,6	6,7	5,8	10	0,657
20340	50	33,2	8,4	5,8	7	1,029
20342	63	42	10,5	4	4	1,624
20344	75	50	12,5	4	1	2,301
20346	90	60	15	4	1	3,488
20348	110	73,2	18,4	4	1	4,943
20350	125	83,2	20,9	4	1	6,385

#### borougenajd pipe PP-R/PP-RCT/GF/PP-RCT (UV) - S2.5, SDR6

Structure of pipe: PP-RCT multilayer, with fiberglass reinforced

Special feature: UV resistant

Standard: DIN 8077/78, EN ISO SASO 15874, ASTM F 2389, CSA B 137.11,

ISO 21003

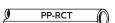


		Pi	ре			
Part No.		Dimension	(mm)	Length	Packing/ Bag	Weight (kg/m)
	O.D.	I.D.	Т	(m)	_	( 3, )
20332/UV	20	13,2	3,4	5,8	35	0,166
20334/UV	25	16,6	4,2	5,8	25	0,257
20336/UV	32	21,2	5,4	5,8	15	0,423
20338/UV	40	26,6	6,7	5,8	10	0,657
20340/UV	50	33,2	8,4	5,8	7	1,029
20342/UV	63	42	10,5	4	4	1,624
20344/UV	75	50	12,5	4	1	2,301
20346/UV	90	60	15	4	1	3,488
20348/UV	110	73,2	18,4	4	1	4,943
20350/UV	125	83,2	20,9	4	1	6,385

#### borougenajd pipe PP-RCT - S3.2, SDR7.4

Structure of pipe: Single layer PP-RCT

Standard: DIN 8077/78, EN ISO SASO 15874, ASTM F 2389, CSA B 137.11



		Pi				
Part No.		Dimension	(mm)	Length	Packing/ Bag	Weight (kg/m)
	O.D.	I.D.	т	(m)	3	(3)
20101	20	14,4	2,8	5,8	35	0,138
20103	25	18	3,5	5,8	25	0,215
20105	32	23,2	4,4	5,8	15	0,347
20107	40	29	5,5	5,8	10	0,542
20109	50	36,2	6,9	5,8	7	1,849
20111	63	45,8	8,6	4	4	1,336
20113	75	54,8	10,3	4	1	1,903
20115	90	65,8	12,3	4	1	2,729
20117	110	79,8	15,1	4	1	4,092
20119	125	90,8	17,1	4	1	5,269
20121	160	116,2	21,9	4	1	8,637

#### borougenajd pipe PP-RCT (UV) - S3.2, SDR7.4

Structure of pipe: Single layer PP-RCT

Special feature: UV resistant

Standard: DIN 8077/78, EN ISO SASO 15874, ASTM F 2389, CSA B 137.11



		Pi	ре			
Part No.		Dimension	(mm)	Length	Packing/ Bag	Weight (kg/m)
	O.D.	I.D.	т	(m)		(-13) )
20101/UV	20	14,4	2,8	5,8	35	0,138
20103/UV	25	18	3,5	5,8	25	0,215
20105/UV	32	23,2	4,4	5,8	15	0,347
20107/UV	40	29	5,5	5,8	10	0,542
20109/UV	50	36,2	6,9	5,8	7	0,849
20111/UV	63	45,8	8,6	4	4	1,336
20113/UV	75	54,4	10,3	4	1	1,903
20115/UV	90	65,4	12,3	4	1	2,729
20117/UV	110	79,8	15,1	4	1	4,092
20119/UV	125	90,8	17,1	4	1	5,269
20121/UV	160	116,2	21,9	4	1	8,637

# borougenajd pipe PP-R/PP-RCT/GF/PP-RCT – S3.2, SDR7.4

Structure of pipe: PP-RCT multilayer, with fiberglass reinforced Standard: DIN 8077/78, EN ISO SASO 15874, ASTM F 2389, CSA B 137.11, ISO 21003



		Pi	pe			
Part No.		Dimension	(mm)	Length	Packing/ Bag	Weight (kg/m)
	O.D.	I.D.	Т	(m)	3	(3)
20102	20	14,4	2,8	5,8	35	0,142
20104	25	18	3,5	5,8	25	0,222
20106	32	23,2	4,4	5,8	15	0,358
20108	40	29	5,5	5,8	10	0,559
20110	50	36,2	6,9	5,8	7	0,876
20112	63	45,8	8,6	4	4	1,378
20114	75	54,4	10,3	4	1	1,963
20116	90	65,4	12,3	4	1	2,815
20118	110	79,8	15,1	4	1	4,221
20120	125	90,8	17,1	4	1	5,435
20122	160	116,2	21,9	4	1	8,909

# borougenajd pipe PP-R/PP-RCT/GF/PP-RCT (UV) – S3.2, SDR7.4

Structure of pipe: PP-RCT multilayer, with fiberglass reinforced

Special feature: UV resistant

. Standard: DIN 8077/78, EN ISO SASO 15874, ASTM F 2389, CSA B 137.11,

ISO 21003



		Pi	ре			
Part No.		Dimension	(mm)	Length	Packing/ Bag	Weight (kg/m)
	O.D.	I.D.	Т	(m)	3	( 3,  )
20102/UV	20	14,4	2,8	5,8	35	0,142
20104/UV	25	18	3,5	5,8	25	0,222
20106/UV	32	23,2	4,4	5,8	15	0,358
20108/UV	40	29	5,5	5,8	10	0,559
20110/UV	50	36,2	6,9	5,8	7	0,876
20112/UV	63	45,8	8,6	4	4	1,378
20114/UV	75	54,4	10,3	4	1	1,963
20116/UV	90	65,4	12,3	4	1	2,815
20118/UV	110	79,8	15,1	4	1	4,221
20120/UV	125	90,8	17,1	4	1	5,435
20122/UV	160	116,2	21,9	4	1	8,909

# Fittings

borougenajd manufactures a variety of PP-RCT fittings, reducers and accessories, presented below:

# borougenajd coupling, S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
20402	20	50	9
20404	25	30	15
20406	32	25	27
20408	40	10	49
20410	50	6	84
20412	63	6	154
20414	75	3	254
20416	90	2	418
20418	110	1	581

# borougenajd Saddle, S2.0, SDR 5



Part No.	Dimension (mm)	Packing	Weight (g)
20420	40-25	10	17
20422	50-25	6	19
20424	63-25	6	19
20426	63-32	6	28
20428	75-25	3	19
20430	75-32	3	28
20432	90-25	2	20
20434	90-32	2	28
20436	110-25	1	20
20438	110-32	1	30

# borougenajd reducer S2.0, SDR 5

standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
20504	25-20	50	11
20506	32-20	40	15
20508	32-25	30	17
20511	40-25	20	32
20512	40-32	15	35
20514	50-32	10	52
20520	50-40	10	62
20522	63-25	5	109
20524	63-32	8	102
20526	63-40	8	89
20528	63-50	5	93
20530	75-50	6	147
20532	75-63	4	163
20534	90-63	2	256
20535	90-75	2	252
20536	110-75	1	516
20537	110-90	1	520

# borougenajd elbow 90oS2.0, SDR 5



Part No.	Dimension (mm)	Packing	Weight (g)
20602	20	50	14
20604	25	30	25
20606	32	15	47
20608	40	8	86
20610	50	6	158
20612	63	2	295
20614	75	2	501
20616	90	1	811
20618	110	1	1292

# borougenajd elbow 45o S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
20624	20	50	12
20626	25	25	19
20628	32	15	32
20630	40	10	72
20632	50	6	133
20634	63	4	245
20636	75	2	387
20638	90	1	659
20640	110	1	1025

# borougenajd Tee S2.0, SDR 5



Part No.	Dimension (mm)	Packing	Weight (g)
20702	20	25	18
20704	25	20	20
20706	32	10	58
20708	40	6	104
20710	50	4	198
20712	63	2	357
20714	75	1	582
20716	90	1	981
20718	110	1	1598





# borougenajd Tee reducer S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
20730	20-25-20	20	39
20732	25-20-25	20	36
20734	20-32-20	10	72
20736	25-32-25	10	63
20738	32-20-32	10	57
20740	32-25-32	10	55
20742	40-20-40	6	125
20744	40-25-40	6	125
20746	40-32-40	6	115
20750	50-32-50	4	231
20752	50-40-50	4	222
20753	63-40-63	2	419
20754	63-50-63	2	418

# borougenajd end cap S2.0, SDR 5



Part No.	Dimension (mm)	Packing	Weight (g)
20802	20	100	5
20804	25	50	10
20806	32	30	16
20808	40	20	25
20810	50	15	46
20812	63	10	101
20814	75	4	168
20816	90	2	296
20818	110	1	440

#### borougenajd adaptor female S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21202	20 (1/2")	25	57
21204	20 (3/4")	25	79
21206	25 (3/4")	20	81
21208	25 (1/2")	20	59
21209	32 (3/4")	10	93
21210	32 (1")	10	190

# borougenajd adaptor female (hexagon) S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21211	32 (1")	10	227
21212	40 (1,1/4")	5	227
21214	50 (1,1/2")	4	413
21216	63 (2")	3	567
21218	75 (2,1/2")	2	890
21220	90 (3")	1	1185
21222	110 (4")	1	1510

# borougenajd adaptor male S2.0, SDR 5



Part No.	Dimension (mm)	Packing	Weight (g)
21402	20 (1/2")	25	64
21404	20 (3/4")	20	94
21406	25 (3/4")	15	99
21408	25 (1/2")	15	65
21409	32 (3/4")	10	108
21410	32 (1")	10	200

#### borougenajd adaptor male (hexagon) S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21411	32 (1")	10	245
21412	40 (1,1/4")	4	300
21414	50 (1,1/4")	4	455
21416	63 (2")	2	654
21418	75 (2,1/2")	1	1013
21420	90 (3")	1	1508
21422	110 (4")	1	2730

# borougenajd saddle adaptor female S2.0, SDR 5



Part No.	Dimension (mm)	Packing	Weight (g)
21230	40 (1/2")	4	88
21232	50 (1/2")	4	90
21234	63 (1/2")	2	95
21236	63 (3/4")	2	109
21238	75 (1/2")	1	100
21240	75 (3/4")	1	109
21242	90 (1/2")	1	90
21244	90 (3/4")	1	110
21246	110 (1/2")	1	95
21248	110 (3/4")	1	110



# borougenajd saddle adaptor male S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21430	40 (1/2")	4	88
21432	50 (1/2")	4	90
21434	63 (1/2")	2	95
21436	63 (3/4")	2	109
21438	75 (1/2")	1	100
21440	75 (3/4")	1	109
21442	90 (1/2")	1	90
21444	90 (3/4")	1	110
21446	110 (1/2")	1	95
21448	110 (3/4")	1	110

# borougenajd union female S2.0, SDR 5



Part No.	Dimension (mm)	Packing	Weight (g)
21302	20 (1/2")	20	123
21304	25 (1/2")	15	157
21305	25 (3/4")	15	157
21306	32 (1")	8	225
21307	32 (3/4")	8	225
21314	40 (1,1/4")	6	303
21316	50 (1,1/4")	4	404
21318	63 (2")	2	924



#### borougenajd union male S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21502	20 (1/2")	20	121
21503	25 (1/2")	15	166
21504	25 (3/4")	15	166
21508	32 (1")	8	227
21509	32 (3/4")	8	227
21516	40 (1,1/4")	6	365
21518	50 (1,1/4")	4	461
21520	63 (2")	2	1045

# borougenajd union two side socket S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21522	20	20	205
21524	25	15	345
21526	32	8	481
21528	40	6	617
21530	50	4	559

# borougenajd elbow 90ofemale S2.0, SDR 5



Part No.	Dimension (mm)	Packing	Weight (g)
21602	20 (1/2")	20	67
21604	20 (3/4")	12	81
21606	25 (1/2")	15	77
21608	25 (3/4")	15	93
21610	32 (3/4")	5	110
21612	32 (1")	8	251

#### borougenajd elbow 90o male S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21616	20 (1/2")	15	74
21618	20 (3/4")	12	89
21620	25 (1/2")	10	99
21622	25 (3/4")	10	82
21624	32 (3/4")	6	133
21626	32 (1")	8	266

#### borougenajd elbow 90oFemale with clamp S2.0, SDR 5

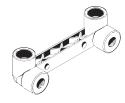
Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21614	20 (1/2")	15	80
21615	25 (1/2")	12	90

#### borougenajd wall elbows with holder S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21614	20 (1/2")	15	80
21615	25 (1/2")	12	90

#### borougenajd tee adaptor female S2.0, SDR 5



Part No.	Dimension (mm)	Packing	Weight (g)
21702	20 (1/2")	15	74
21704	20 (3/4")	12	89
21706	25 (1/2")	10	116
21708	25 (3/4")	10	85
21710	32 (3/4")	6	118
21712	32 (1")	6	272

#### borougenajd tee adaptor male \$2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21716	20 (1/2")	15	80
21714	20 (3/4")	12	98
21718	25 (1/2")	10	111
21720	25 (3/4")	10	92
21721	32 (3/4")	5	122
21722	32 (1")	5	288

#### borougenajd butterfly valve S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21804	20	5	205
21806	25	5	211
21808	32	5	351

# borougenajd chrome coated valve S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21810	20	1	323
21811	25	1	438
21812	32	1	351

# borougenajd valve body S2.0, SDR 5



Part No.	Dimension (mm)	Packing	Weight (g)
20720	20	1	53
20722	25	1	85
20724	32	1	135

#### borougenajd spherical valve S2.0, SDR 5

Standards: : DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21826	20	10	105
21828	25	10	113
21830	32	6	179
21832	40	3	260
21834	50	2	517
21836	63	2	-
21838	75	2	-

#### borougenajd spherical valve with union S2.0, SDR 5

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21827	20	10	105
21829	25	10	113
21831	32	6	179

#### borougenajd crossover S2.5, SDR 6

Standards: DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
20902	20	1	52
20904	25	1	75
20006	37	1	153

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MATERIAL OF CHOICE FOR PLUMBING
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# Accessories

# borougenajd end piece (male)

Standards: : DIN 16962, EN ISO SASO 15874



Part No.	Dimension (mm)	Packing	Weight (g)
21890	20 (1/2")	100	7
21892	25 (3/4")	100	10

#### borougenajd chrome coated valve extension



Part No.	Dimension (mm)	Packing
11805	30	1

# borougenajd welding machine



Part No.	Dimension (mm)	Packing
12410	16-63	1
12411	50-125	1
12412	125-160	1

#### borougenajd welding sockets



Part No.	Dimension (mm)	Packing
12704	20	1
12706	25	1
12708	32	1
12710	40	1
12712	50	1
12714	63	1
12716	75	1
12718	90	1
12720	110	1
12722	125	1
12724	160	1

# borougenajd repair sockets tools



Part No.	Dimension (mm)	Packing
12726	9	1

# borougenajd repair sockets



Part No.	Dimension (mm)	Packing
22728	9	1

# borougenajd repair sockets



Part No.	Dimension (mm)	Packing
12800	16-40	1
12802	40-63	1









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