

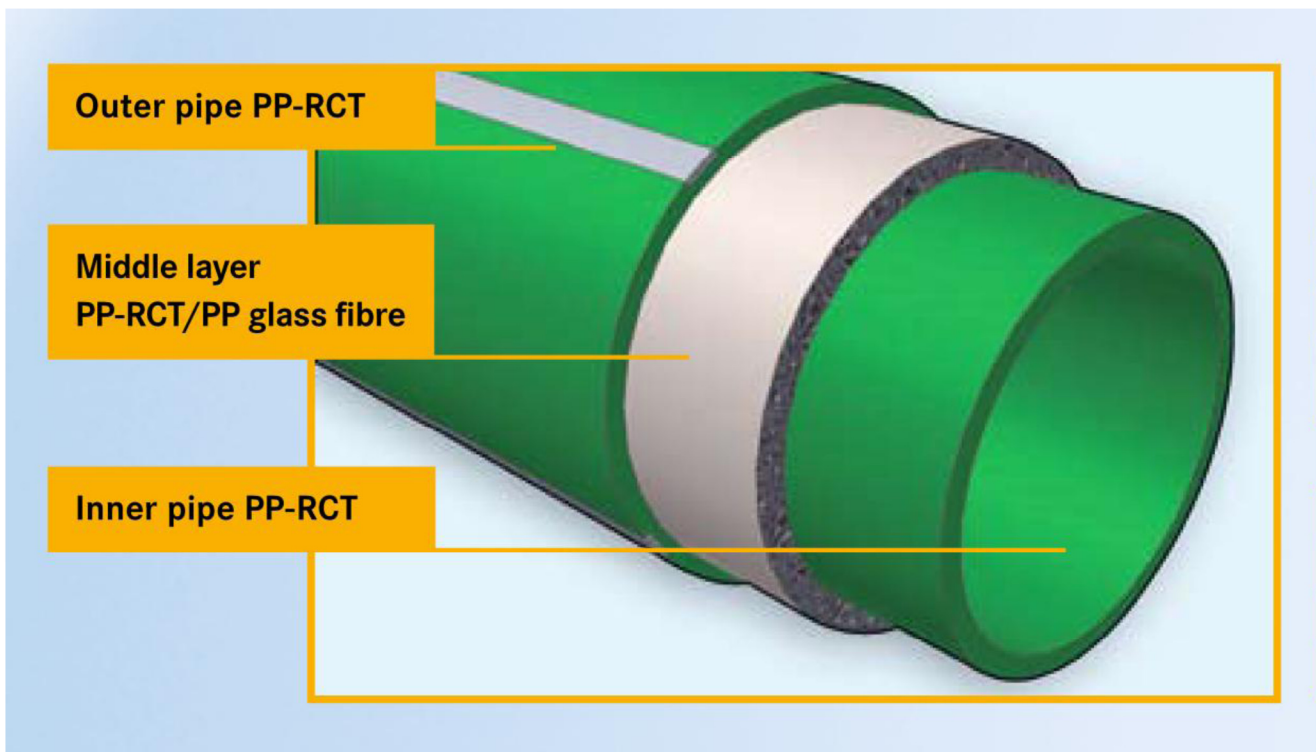


 **dynatherm**[®]
PP-R PIPE SYSTEMS



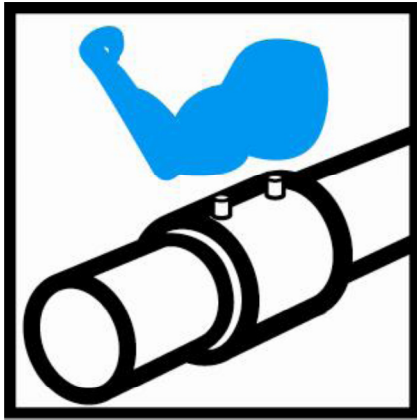
PP-RCT/Faser (Fibre) Composite Pipe System

What are the Advantages?



PP/GLASS FIBRE REINFORCED PIPE

- **MASSIVE REDUCTION IN THERMAL EXPANSION AND CONTRACTION: COEFFICIENT =0.035mm/m/°C**
- **GREATER RIGIDITY ALLOWING INCREASED SPACINGS BETWEEN SUPPORTS**



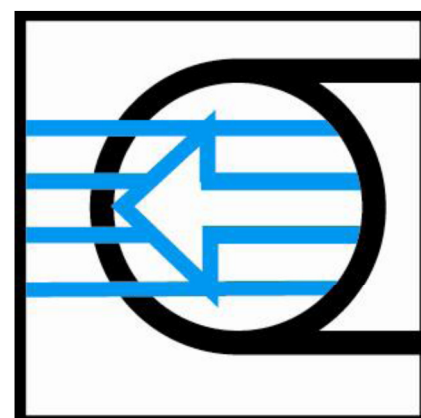
**FUSION WELDED
JOINT STRENGTH**



**EXTREME RESISTANCE TO
CORROSION, DEPOSITS
AND ABRASION**



COST EFFECTIVE



HIGH FLOW



**ADVANCED *PP-RCT*
RAW MATERIAL**



**50 YEAR DESIGN
LIFE**



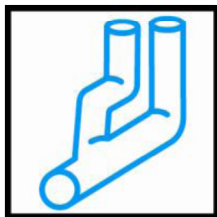
EASY TO INSTALL



LOW LIFE CYCLE COSTS



**HIGHEST QUALITY
-MADE IN GERMANY**



**WIDE RANGE OF
FITTINGS AND
FABRICATION OPTIONS**



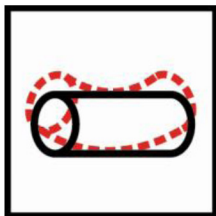
**SAFE FOOD GRADE
RAW MATERIAL**



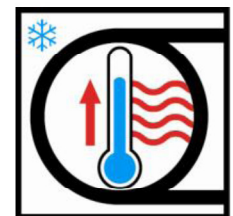
**HIGH CHEMICAL
RESISTANCE**



**NO THRUST
RESTRAINT REQUIRED**



**HIGH STRENGTH
& FLEXIBILITY**



**LOW THERMAL
CONDUCTIVITY**

Pipe Dimensions Chart



Climatec SDR 11 PP-RCT/ FIBRE COMPOSITE PIPE		Watertec SDR 9 PP-RCT/ FIBRE COMPOSITE PIPE		SDR 7.4 PP-RCT SOLID WALL PIPE	
Size mm	Internal Ø mm	Size mm	Internal Ø mm	Size mm	Internal Ø mm
20	15.4	20	14.4	20	14.4
25	19.4	25	18.0	25	18.0
32	26.2	32	24.8	32	23.2
40	32.6	40	31.0	40	29.0
50	40.8	50	38.4	50	36.2
63	51.4	63	48.8	63	45.8
75	61.4	75	58.2	75	54.4
90	73.6	90	69.8	90	65.4
110	90.0	110	85.4	110	79.8
125	102.2	125	97.0	125	90.8
160	130.8	-	-	160	116.2
180	147.2	-	-	180	-
200	163.6	-	-	200	145.2
225	184.0	-	-	225	-
250	204.6	-	-	250	181.6



**PP-RCT/ FIBRE COMPOSITE
PIPE**

PP-RCT SOLID WALL PIPE

Operating Pressures & Service Life



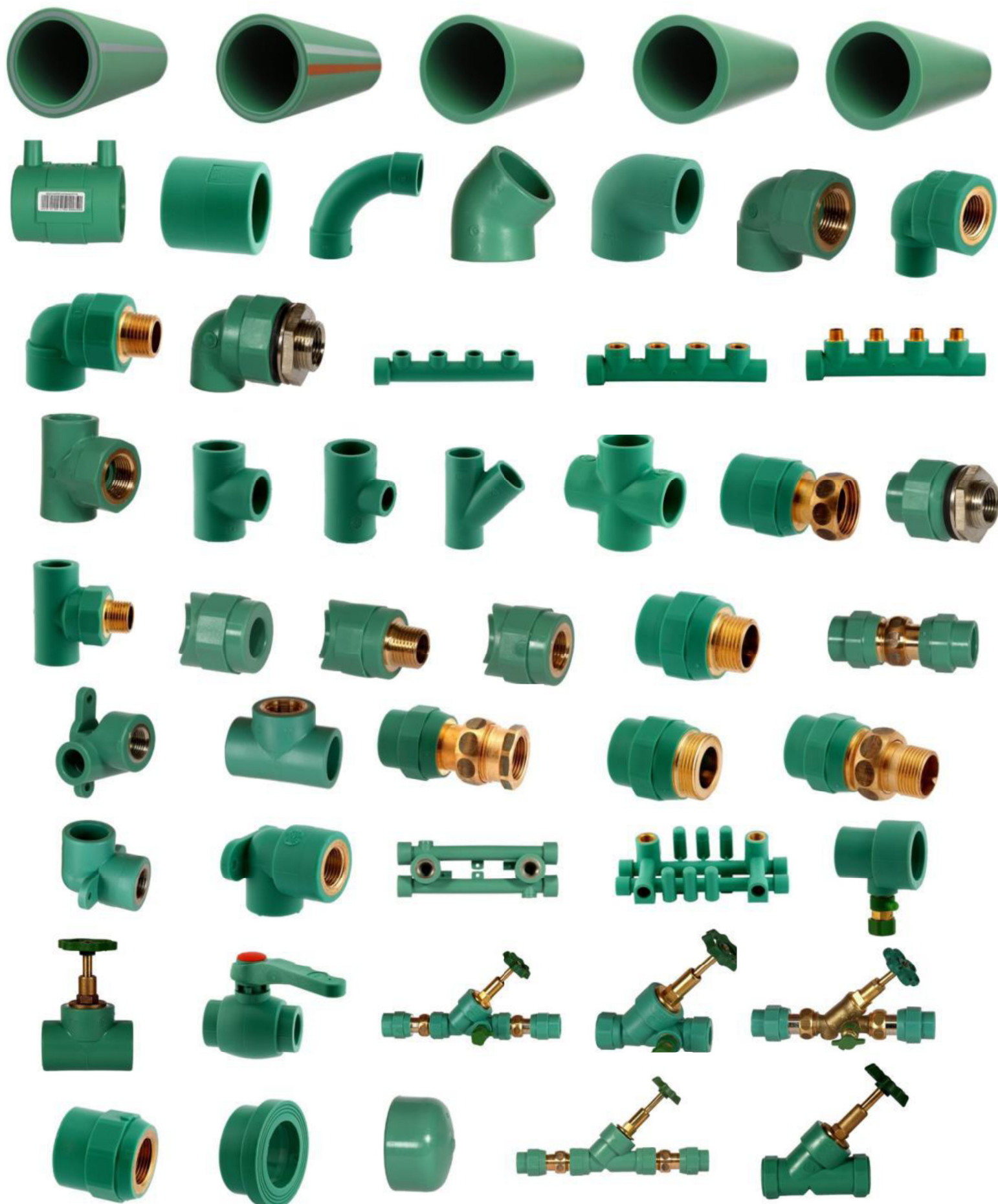
Extract from
DIN 8077:2008-09

Table 11 — Allowable operating pressures for PP-RCT pipes conveying water, safety factor (SF) = 1,25

Temperature	Service Life	Standard Dimension Ratio SDR		
		11	9	7,4
		PP-RCT		
Allowable operating pressure (Bar)				
20°C	1	19,9	25,0	31,5
	5	19,3	24,2	30,5
	10	19,0	23,9	30,1
	25	18,6	23,5	29,6
	50	18,4	23,1	29,2
	100	18,1	22,8	28,8
40°C	1	14,8	18,6	23,5
	5	14,3	18,0	22,6
	10	14,1	17,7	22,3
	25	13,8	17,3	21,8
	50	13,6	17,1	21,5
	100	13,3	16,8	21,2
60°C	1	10,7	13,5	17,0
	5	10,3	13,0	16,3
	10	10,1	12,7	16,0
	25	9,9	12,4	15,7
	50	9,7	12,2	15,4
70°C	1	9,0	11,3	14,3
	5	8,6	10,9	13,7
	10	8,5	10,7	13,5
	25	8,3	10,4	13,1
	50	8,1	10,2	12,9
80°C	1	7,5	9,5	11,9
	5	7,2	9,0	11,4
	10	7,0	8,9	11,2
	25	6,9	8,6	10,9
95°C	1	5,6	7,1	8,9
	5	5,3	6,7	8,5
	(10)a	(5,2)	(6,6)	(8,3)

a The values in brackets apply where testing can be shown to have been carried out for longer than one year at 110 °C.

COMPREHENSIVE PRODUCT RANGE





Made in Germany by Bänninger Kunststoff-Produkte GmbH

Headquarters, fittings
factory and
warehouse in
Reiskirchen



Pipe extrusion plant
and fittings factory
in
Stassfurt



www.baenninger.de

Introduction to Bänninger



Bänninger Kunststoff-Produkte GmbH in Reiskirchen was founded in 1970 by the copper fitting producer Bänninger Gießen and was sold in 1987 to the present owners.

Brief Overview

- 1969** Construction of a new factory for plastic pipe fittings as a part of the Bänninger Company, the largest producer of copper end fittings
- 1970** Opening of the factory in Reiskirchen for PVC-U, PE and PP fittings
- 1987** Takeover of Bänninger Kunststoff-Produkte GmbH by the Stamm family. Establishment of a large inventory – up to that stage Reiskirchen was only a production plant.
- 1990** Construction of a production plant in Stassfurt for PP-R pipes and fittings
- 2002** Construction of a new production hall in Reiskirchen
- 2006** Construction of a new production hall in Stassfurt
- 2008** Turnover 41.2 Million Euro. Employees: 100 in Reiskirchen, 75 in Stassfurt
- 2008** Warehousing and pipe storage expanded to 30,000 m² total area
- 2008** UPG Pipe Systems granted exclusive distribution for New Zealand



10 Year Written Guarantee



Guarantee certificate no. _____

Owner _____
Streethouse no. Postale code / city

Building site address _____

Installation Company _____

Start-up _____
Date

The **Bänninger Kunststoff-Produkte GmbH** grants for the **PP-R** installation system:

For your security we have effected a product liability insurance with a renowned German insurance company.

The compliance with the valid DIN-standards and our way of planning and processing as well as the professional installation by licensed specialized business are preconditions for an indemnification.

In the event of damage, as far as exclusive BR pipes and Fittings were used and the cause of damage is provably due to a defect of fabrication or faulty material, costs are assumed up to the following amounts:

- | | |
|----------------------------------------------|------------------------------------------------------------------------------------------------|
| 1. Product liability: | € 5.000.000,--
in case of personal injuries and damages
to machines and buildings |
| 2. Costs for building in and removal: | € 500.000,--
without costs for consequential damages |
| 3. Damages to the environment: | € 5.000.000,--
through products having impact on soil, air or water |

The guarantee begins on the day of initial operating and ends 10 years after start-up of the installation or after end of insurance contract (ulterior liability).

Bänninger Kunststoff-Produkte GmbH
D-35447 Reiskirchen

This certificate is only valid if the carrying-out company confirms with stamp and signature the duly effected installation and countersigned by BÄNNINGER.

✓ Highest Quality – Independently Tested and Certified



Bänninger takes pride in the numerous national and international certificates and seals of approval that it has been awarded. Strict internal quality control procedures, certified to **ISO 9001 : 2000**, ensure that every item leaving the factory is of the highest quality and integrity.



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