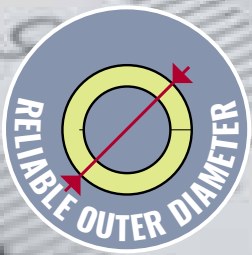


# PAROC® PRO PIPE SECTIONS

DIMENSION GUIDE



**PAROC®**

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## Looking for product data?

Click here



to find all product data sheets  
for industrial applications

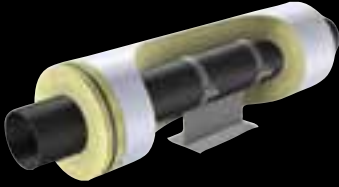


The performance of PAROC Pro  
insulation products for industrial  
applications is documented according  
to both ASTM and EN standards

**Quick access: Click on the desired product or content page to immediately navigate to it.  
Clicking on 'Table of Contents' will direct you back to the index page.  
Hyperlinks will take you to relevant additional pages or research sources.**

# INSULATION SOLUTIONS FOR DIFFERENT OPERATING TEMPERATURES

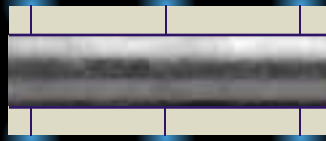
## One layer pipe insulation



PAROC Pro Section (WR)



Pipe temperature during application: 20 °C



Pipe operating temperature: >250 °C



Pipe insulation is often applied during down time of the pipe. If this not considered carefully, it can lead to significant gaps in the insulation system, caused by the thermal expansion, when the pipe is being heated to it's operating temperature.

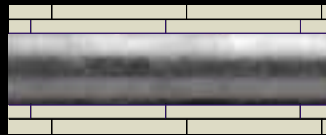
## Double layer pipe insulation



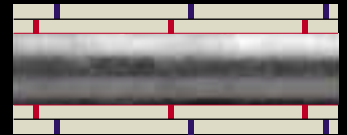
PAROC Pro Section (WR) DL



Pipe temperature during application: 20 °C

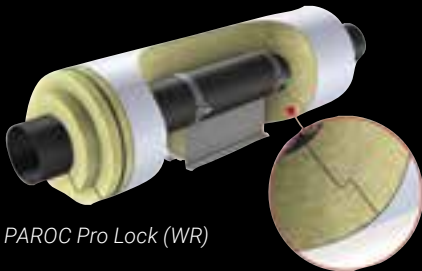


Pipe operating temperature: >250 °C



Pipe sections applied in double layers with staggered joints can support eliminate openings caused by thermal expansion of the pipe. In this example energy losses will be reduced by approx. 10%

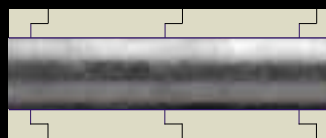
## PAROC Pro Lock (WR)



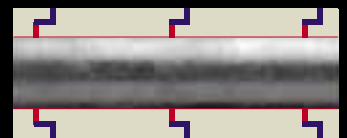
PAROC Pro Lock (WR)



Pipe temperature during application: 20 °C



Pipe operating temperature: >250 °C



Due the unique Z-lock joints, PAROC Pro Lock system is providing the benefits of a two-layer system in a one-layer application. Saving installation time and energy.

### INSULATION AT HIGH TEMPERATURES:

- At operating temperatures above 250 °C, we recommend at least two insulation layers or PAROC Pro Lock solution
- If the total insulation thickness is > 80 mm, the insulation should be carried out without risk of opening joints, for example by using 2 layers or z-joints (PAROC Pro Lock)
- At operating temperatures above 350 °C, we recommend pipe sections with a density of 140 kg/m<sup>3</sup>

# OUTER PIPE DIMENSIONS

## NOMINAL DIMENSIONS AND OUTSIDE DIAMETERS

Nominal diameter DN	Inch	Outer diameter mm
6	1/8	10.3
8	1/4	13.7
10	3/8	17.1
15	1/2	21.3
20	3/4	26.7
25	1	33.4
32	1 1/4	42.2
40	1 1/2	48.3
50	2	60.3
65	2 1/2	73.0
80	3	88.9
90	3 1/2	101.6
100	4	114.3
115	4 1/2	127.0
125	5	141.3
150	6	168.3
200	8	219.1

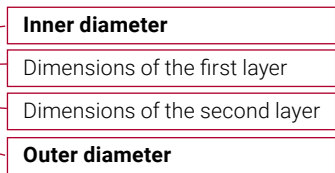
Nominal diameter DN	Inch	Outer diameter mm
250	10	273.1
300	12	323.9
350	14	355.6
400	16	406.4
450	18	457.2
500	20	508.0
550	22	558.8
600	24	609.6
650	26	660.4
700	28	711.2
750	30	762.0
800	32	812.8
850	34	863.6
900	36	914.0
950	38	950.0
1000	40	1016.0

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## HOW TO READ THE TABLES FOR DOUBLE LAYER SOLUTIONS

### DOUBLE LAYER SOLUTION WITH TWO SEPARATE PRODUCTS INSULATION THICKNESS 80–200 mm

35	35-80-193 + 194-60-310	35-80-193 194-70-
42	42-80-206 + 208-60-323	42-80-206 208-70-
48	48-80-206 208-60-323	48-80-206 208-70-
54	54-80-219 219-60-336	54-80-219 219-70-



PAROC PRO SECTION (WR) 100 / PAROC PRO SECTION (WR) 140  
Delivered as two separate products.

### 2 LAYER SOLUTION WITH DOUBLE LAYER SOLUTION (DL) INSULATION THICKNESS 80–300 mm

295	295-80+60-570	295-
305	305-70+70-583	305-
324	324-80+60-609	324-
356	356-90+50-635	356-
371	371-70+70-648	371-
406	406-60+80-687	406-
426	426-60+80-700	426-
457	457-50+90-739	457-
479	479-70+70-765	479-



PAROC PRO SECTION (WR) 100 DL / PAROC PRO SECTION (WR) 140 DL  
Delivered as one product.  
Space-saving at the construction site and during transport.



# RECOMMENDED PRODUCTS FOR INDUSTRIAL PIPEWORK INSULATION

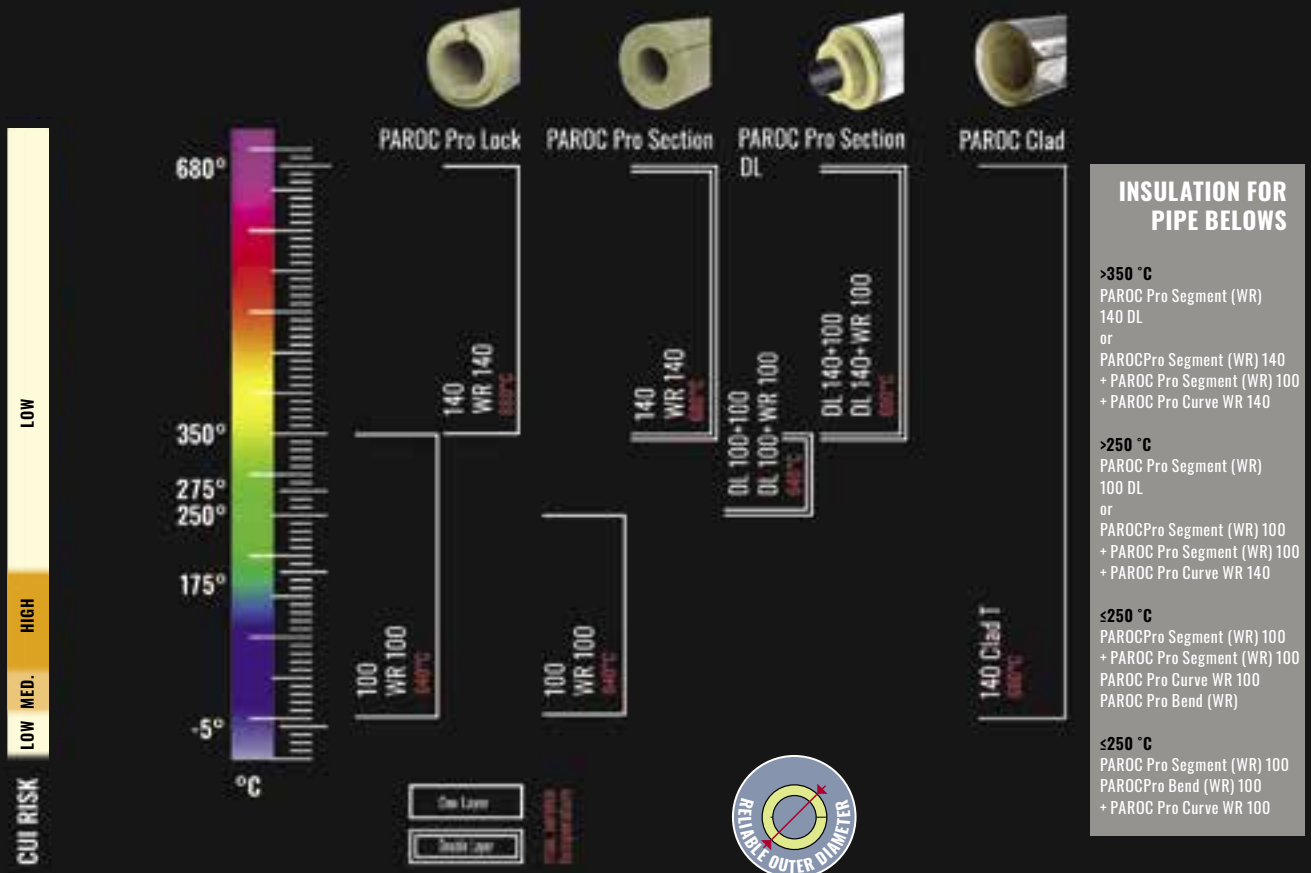


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## PAROC WR PRODUCTS:

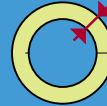
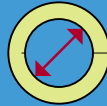
- Significantly less water absorption than the requirements of the toughest standard (EN13472/24h)
- Elevated temperature range
- Safe to use during painting operations and certified according to the requirements of the coating compatibility standard VDMA 24364
- More than 20 years' experience with WR mineral wool products for industrial applications
- Broad WR offering range on the market including pipe sections, wired mats, mats and slabs



Watch video about saving energy and costs for industrial insulation!

# ONE LAYER PIPE SECTIONS

PAROC PRO SECTION WR 100  
 PAROC PRO SECTION 100  
 PAROC PRO SECTION WR 120  
 PAROC PRO SECTION 120



\* Combi version

Inner diameter mm	Outer diameter mm															
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9															
	20	25	30	40	50	60	70	80	90	100	110	120	130	140	150	160
12/15*	52	62	72	92	115											
18	62	72	82	102	115	141	154									
22	62	72	82	102	128	141	167	180								
28	72	82	92	102	128	154	167	193								
35	72	82	92	115	141	154	180	193	219	232	258					
42	82	92	102	128	141	167	180	206	219	245	258					
48	92	102	115	128	154	167	193	206	232	245	271					
54	92	102	115	128	154	180	193	219	232	258	271					
57	102	102	115	141	154	180	193	219	232	258						
60	102	115	115	141	154	180	206	219	245	258	284					
64	102	115	128	141	167	180	206	219	245	258	284	310				
70	115	115	128	154	167	193	206	232	245	271	284	310				
76	115	128	141	154	180	193	219	232	258	271	297	310				
84			141	167	180	206	219	245	258	284	310	323				
89	128	141	154	167	193	206	232	245	271	284	310	323				
102	141	154	167	180	206	219	245	258	284	297	323	336				
108		154	167	193	206	232	245	271	284	310	323	349				
114		167	180	193	219	232	258	271	297	310	336	349				
121		167	180	206	219	245	258	284	297	323	336	362				
127		180	193	206	232	245	271	284	310	323	349	362				
133		180	193	219	232	258	271	297	310	336	349	375				
140		193	206	219	245	258	284	297	323	336	362	375				
156		206	219	232	258	271	297	310	336	362	375	401				
159		206	219	245	258	284	297	323	336	362	375	401				
162		206	219	245	258	284	297	323	336	362	388	401				
168		219	232	245	271	284	310	323	349	362	388	414	427	453	466	492
178		232	232	258	284	297	323	336	362	375	401	414				
194		245	258	271	297	310	336	349	375	388	414	440	453	479	492	518
208			271	284	310	323	349	362	388	414	427	453	466	492	505	531
219			284	297	323	336	362	375	401	414	440	453	479	505	518	544
230			284	310	336	349	375	388	414	427	453	466	492	505	531	544
240			297	323	336	362	375	401	414	440	466	479	505	518	544	557
245			310	323	349	362	388	401	427	440	466	479	505	531	544	570
259			323	336	362	375	401	414	440	453	479	505	518	544	557	583
273			336	349	375	388	414	427	453	479	492	518	531	557	570	596
289			349	375	388	414	427	453	466	492	505	531	544	570	583	609
295			349	375	401	414	440	453	479	492	518	531	557	570	596	609
305			362	388	401	427	440	466	479	505	531	544	570	583	609	622
324			388	401	427	440	466	479	505	518	544	570	583	609	622	648
356			414	440	453	479	492	518	531	557	570	596	622	635	661	674
371			427	453	466	492	505	531	557	570	596	609	635	648	674	687
377			440	453	479	492	518	531	557	583	596	622	635	661	674	700
406			466	492	505	531	544	570	583	609	622	648	661	687	700	726
426			492	505	531	544	570	583	609	622	648	661	687	700	726	752
457			518	531	557	583	596	622	635	661	674	700	713	739	752	778
479			544	557	583	596	622	635	661	674	700	713	739	765	778	804
490			544	570	596	609	635	648	674	687	713	726	752	765	791	804
508			570	583	609	622	648	674	687	713	726	752	765	791	804	830
533				609	635	648	674	687	713	739	752	778	791	817	830	856
558				635	661	674	700	713	739	752	778	804	817	843	856	882
612				687	713	726	752	778	791	817	830	856	869	895	908	934
630				713	726	752	765	791	804	830	856	869	895	908	934	947
665					765	791	804	830	843	869	882	908	921	947	960	986
714					817	830	856	869	895	908	934	960	973	999	1012	1038
720					817	843	856	882	895	921	934	960	986	999	1025	1038
762					856	882	908	921	947	960	986	999	1025	1038	1064	1077
813					908	934	947	973	999	1012	1038	1051	1077	1090	1116	1129
822					921	947	960	986	999	1025	1038	1064	1077	1103	1116	1142
914					1012	1038	1051	1077	1090	1116	1129	1155	1168	1194	1220	1233
1016					1116	1142	1155	1181	1194	1220	1233	1259	1272	1298	1311	

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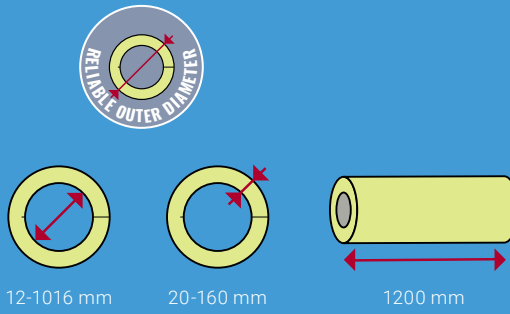
Deliveries from Hällekis (SE) and Trzemeszno (PL)

Deliveries from Hällekis (SE)

Deliveries from Trzemeszno (PL)

# ONE LAYER PIPE SECTIONS

PAROC PRO SECTION WR 140  
PAROC PRO SECTION 140



\* Combi version

Applies factory TRZ(P1): Can't be produce with density 140 kg/m<sup>3</sup>

Applies factory TRZ(P1): Not possible as PSWR 140

Inner diameter mm	Outer diameter mm															
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9															
	20	25	30	40	50	60	70	80	90	100	110	120	130	140	150	160
12/15	52	62	72	92	115											
18	62	72	82	102	115	141	154									
22	62	72	82	102	128	141	167	180								
28	72	82	92	102	128	154	167	193								
35	72	82	92	115	141	154	180	193	219	232	258					
42	82	92	102	128	141	167	180	206	219	245	258					
48	92	102	115	128	154	167	193	206	232	245	271					
54	92	102	115	128	154	180	193	219	232	258	271					
57	102	102	115	141	154	180	193	219	232	258	271					
60	102	115	115	141	154	180	206	219	245	258	284					
64	102	115	128	141	167	180	206	219	245	258	284	310				
70	115	115	128	154	167	193	206	232	245	271	284	310				
76	115	128	141	154	180	193	219	232	258	271	297	310				
84			141	167	180	206	219	245	258	284	310	323				
89	128	141	154	167	193	206	232	245	271	284	310	323				
102	141	154	167	180	206	219	245	258	284	297	323	336				
108		154	167	193	206	232	245	271	284	310	323	349				
114		167	180	193	219	232	258	271	297	310	336	349				
121		167	180	206	219	245	258	284	297	323	336	362				
127		180	193	206	232	245	271	284	310	323	349	362				
133		180	193	219	232	258	271	297	310	336	349	375				
140		193	206	219	245	258	284	297	323	336	362	375				
156		206	219	232	258	271	297	310	336	362	375	401				
159		206	219	245	258	284	297	323	336	362	375	401				
162		206	219	245	258	284	297	323	336	362	388	401				
168		219	232	245	271	284	310	323	349	362	388	414	427	453	466	492
178		232	232	258	284	297	323	336	362	375	401	414				
194		245	258	271	297	310	336	349	375	388	414	440	453	479	492	518
208			271	284	310	323	349	362	388	414	427	453	466	492	505	531
219			284	297	323	336	362	375	401	414	440	453	479	505	518	544
230			284	310	336	349	375	388	414	427	453	466	492	505	531	544
240			297	323	336	362	375	401	414	440	466	479	505	518	544	557
245			310	323	349	362	388	401	427	440	466	479	505	531	544	570
259			323	336	362	375	401	414	440	453	479	505	518	544	557	583
273			336	349	375	388	414	427	453	479	492	518	531	557	570	596
289			349	375	388	414	427	453	466	492	505	531	544	570	583	609
295			349	375	401	414	440	453	479	492	518	531	557	570	596	609
305			362	388	401	427	440	466	479	505	531	544	570	583	609	622
324			388	401	427	440	466	479	505	518	544	570	583	609	622	648
356			414	440	453	479	492	518	531	557	570	596	622	635	661	674
371			427	453	466	492	505	531	557	570	596	609	635	648	674	687
377			440	453	479	492	518	531	557	583	596	622	635	661	674	700
406			466	492	505	531	544	570	583	609	622	648	661	687	700	726
426			492	505	531	544	570	583	609	622	648	661	687	700	726	752
457			518	531	557	583	596	622	635	661	674	700	713	739	752	778
479			544	557	583	596	622	635	661	674	700	713	739	765	778	804
490			544	570	596	609	635	648	674	687	713	726	752	765	791	804
508			570	583	609	622	648	674	687	713	726	752	765	791	804	830
533				609	635	648	674	687	713	739	752	778	791	817	830	856
558				635	661	674	700	713	739	752	778	804	817	843	856	882
612				687	713	726	752	778	791	817	830	856	869	895	908	934
630				713	726	752	765	791	804	830	856	869	895	908	934	947
665					765	791	804	830	843	869	882	908	921	947	960	986
714					817	830	856	869	895	908	934	960	973	999	1012	1038
720					817	843	856	882	895	921	934	960	986	999	1025	1038
762					856	882	908	921	947	960	986	999	1025	1038	1064	1077
813					908	934	947	973	999	1012	1038	1051	1077	1090	1116	1129
822					921	947	960	986	999	1025	1038	1064	1077	1103	1116	1142
914					1012	1038	1051	1077	1090	1116	1129	1155	1168	1194	1220	1233
1016					1116	1142	1155	1181	1194	1220	1233	1259	1272	1298	1311	

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Deliveries from Hällekis (SE) and Trzemeszno (PL)

Deliveries from Hällekis (SE)

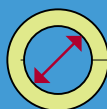
Deliveries from Trzemeszno (PL)

not available as PAROC Pro Section 140 and WR 140 and PAROC Pro Segment 140 and WR 140

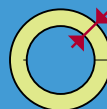
# SINGLE-LAYER PIPE ELBOWS

SMALL AND MEDIUM-SIZED PIPE BENDS.

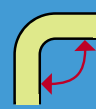
- PAROC PRO BEND WR 100
- PAROC PRO BEND 100
- PAROC PRO BEND WR 120
- PAROC PRO BEND 120



15-168 mm



30-120 mm



1.5D



Inner diameter mm	Outer diameter mm									
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9									
	30	40	50	60	70	80	90	100	110	120
15	72	92								
18	82	102								
22	82	102	128	141	167	180				
28	92	102	128	154	167	193				
35	92	115	141	154	180	193	219	232		
42	102	128	141	167	180	206	219	245		
48	115	128	154	167	193	206	232	245		
54	115	128	154	180	193	219	232	258		
57	115	141	154	180	193	219	232	258		
60	115	141	154	180	206	219	245	258		
64	128	141	167	180	206	219	245	258		
70	128	154	167	193	206	232	245	271		
76	141	154	180	193	219	232	258	271		
89	154	167	193	206	232	245	271	284	310	323
102	167	180	206	219	245	258	284	297	323	336
108	167	193	206	232	245	271	284	310	323	349
114	180	193	219	232	258	271	297	310	336	349
121	180	206	219	245	258	284	297	323	336	362
127	193	206	232	245	271	284	310	323	349	362
133	193	219	232	258	271	297	310	336	349	
140	206	219	245	258	284	297	323	336		
156	219	232	258	271	297	310	336			
159	219	245	258	284	297	323	336			
168	232	245	271	284	310					

The table above shows dimensions of PAROC Pro Bend (WR).  
 PAROC Pro Bend (WR) is adapted for use in combination for most dimensions of PAROC Pro Pipe Section (WR).  
 Actual insulation thickness may deviate from nominal.

 Deliveries from Hällekis (SE) and Trzmeszno (PL)

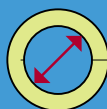
 Deliveries from Hällekis (SE)

 Deliveries from Trzmeszno (PL)

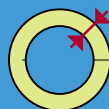
# SINGLE-LAYER PIPE ELBOWS

SMALL AND MEDIUM-SIZED PIPE BENDS.

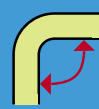
**PAROC PRO BEND WR 140**  
**PAROC PRO BEND 140**



15-168 mm



30-120 mm



1.5D



Inner diameter mm	Outer diameter mm									
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9									
	30	40	50	60	70	80	90	100	110	120
15										
18										
22										
28	92	102	128							
35	92	115	141							
42	102	128	141							
48	115	128	154							
54	115	128	154							
57	115	141	154							
60	115	141	154							
64	128	141	167							
70	128	154	167							
76	141	154	180							
89	154	167	193							
102	167	180	206							
108	167	193	206							
114	180	193	219							
121	180	206	219							
127	193	206	232							
133	193	219	232							
140	206	219	245							
156	219	232	258							
159	219	245	258							
168	232	245	271							

The table above shows dimensions of PAROC Pro Bend (WR).

PAROC Pro Bend (WR) is adapted for use in combination for most dimensions of PAROC Pro Pipe Section (WR).

Actual insulation thickness may deviate from nominal.

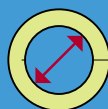
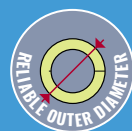
  
Deliveries from Hällekis (SE) and Trzmeszno (PL)

  
Deliveries from Hällekis (SE)

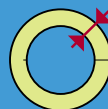
  
Deliveries from Trzmeszno (PL)

# SINGLE-LAYER PIPE ELBOWS

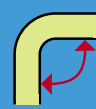
PAROC PRO SEGMENT WR 100  
 PAROC PRO SEGMENT 100  
 PAROC PRO SECTION WR 120  
 PAROC PRO SECTION 120



114-1016 mm



50-160 mm



1.50 (and others)



Inner diameter mm	Outer diameter mm													
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9													
	30	40	50	60	70	80	90	100	110	120	130	140	150	160
114	180	193	219	232	258	271	297							
121	180	206	219	245	258	284	297	323						
127	193	206	232	245	271	284	310	323						
133	193	219	232	258	271	297	310	336						
140	206	219	245	258	284	297	323	336						
156	219	232	258	271	297	310	336	362	375					
159	219	245	258	284	297	323	336	362	375	401				
162		245	258	284	297	323	336	362	388	401				
168	232	245	271	284	310	323	349	362	388	414				
178		258	284	297	323	336	362	375	401	414				
194		271	297	310	336	349	375	388	414	440	453	479	492	
208	271	284	310	323	349	362	388	414	427	453	466	492	505	531
219	284	297	323	336	362	375	401	414	440	453	479	505	518	544
230	284	310	336	349	375	388	414	427	453	466	492	505	531	544
240	297	323	336	362	375	401	414	440	466	479	505	518	544	557
245	310	323	349	362	388	401	427	440	466	479	505	531	544	570
259	323	336	362	375	401	414	440	453	479	505	518	544	557	583
273	336	349	375	388	414	427	453	479	492	518	531	557	570	596
289		375	388	414	427	453	466	492	505	531	544	570	583	609
295		375	401	414	440	453	479	492	518	531	557	570	596	609
305		388	401	427	440	466	479	505	531	544	570	583	609	622
324		401	427	440	466	479	505	518	544	570	583	609	622	648
356			453	479	492	518	531	557	570	596	622	635	661	674
371			466	492	505	531	557	570	596	609	635	648	674	687
377			479	492	518	531	557	583	596	622	635	661	674	700
406			505	531	544	570	583	609	622	648	661	687	700	726
426			531	544	570	583	609	622	648	661	687	700	726	752
457			557	583	596	622	635	661	674	700	713	739	752	778
479			583	596	622	635	661	674	700	713	739	765	778	804
490			596	609	635	648	674	687	713	726	752	765	791	804
508			609	622	648	674	687	713	726	752	765	791	804	830
533			635	648	674	687	713	739	752	778	791	817	830	856
558			661	674	700	713	739	752	778	804	817	843	856	882
612			713	726	752	778	791	817	830	856	869	895	908	934
630			726	752	765	791	804	830	856	869	895	908	934	947
714			817	830	856	869	895	908	934	960	973	999	1012	1038
762			856	882	908	921	947	960	986	999	1025	1038	1064	1077
813			908	934	947	973	999	1012	1038	1051	1077	1090	1116	1129
822			921	947	960	986	999	1025	1038	1064	1077	1103	1116	1142
914			1012	1038	1051	1077	1090	1116	1129	1155	1168	1194	1220	1233
1016			1116	1142	1155	1181	1194	1220	1233	1259	1272	1298	1311	

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Deliveries from Hällekis (SE) and Trzemeszno (PL)

Deliveries from Hällekis (SE)

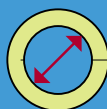
Deliveries from Trzemeszno (PL)

10 The table above shows dimensions of the PAROC Pro Segment (WR).  
 PAROC Pro Segment (WR) is adapted for use with PAROC Pro Section (WR).  
 PAROC Pro Segment (WR) can also be manufactured for bending radii other than 1.5D (3S). Actual insulation thickness may deviate from nominal.

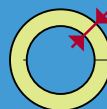


# SINGLE-LAYER PIPE ELBOWS

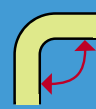
PAROC PRO SEGMENT WR 140  
PAROC PRO SEGMENT 140



114-1016 mm



50-160 mm



1.50 (and others)



Inner diameter mm	Outer diameter mm													
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9													
	30	40	50	60	70	80	90	100	110	120	130	140	150	160
114	180	193	219	232	258	271	297							
121	180	206	219	245	258	284	297	323						
127	193	206	232	245	271	284	310	323						
133	193	219	232	258	271	297	310	336						
140	206	219	245	258	284	297	323	336						
156	219	232	258	271	297	310	336	362	375					
159	219	245	258	284	297	323	336	362	375	401				
162		245	258	284	297	323	336	362	388	401				
168	232	245	271	284	310	323	349	362	388	414				
178		258	284	297	323	336	362	375	401	414				
194		271	297	310	336	349	375	388	414	440	453	479	492	
208	271	284	310	323	349	362	388	414	427	453	466	492	505	531
219	284	297	323	336	362	375	401	414	440	453	479	505	518	544
230	284	310	336	349	375	388	414	427	453	466	492	505	531	544
240	297	323	336	362	375	401	414	440	466	479	505	518	544	557
245	310	323	349	362	388	401	427	440	466	479	505	531	544	570
259	323	336	362	375	401	414	440	453	479	505	518	544	557	583
273	336	349	375	388	414	427	453	479	492	518	531	557	570	596
289		375	388	414	427	453	466	492	505	531	544	570	583	609
295		375	401	414	440	453	479	492	518	531	557	570	596	609
305		388	401	427	440	466	479	505	531	544	570	583	609	622
324		401	427	440	466	479	505	518	544	570	583	609	622	648
356			453	479	492	518	531	557	570	596	622	635	661	674
371			466	492	505	531	557	570	596	609	635	648	674	687
377			479	492	518	531	557	583	596	622	635	661	674	700
406			505	531	544	570	583	609	622	648	661	687	700	726
426			531	544	570	583	609	622	648	661	687	700	726	752
457			557	583	596	622	635	661	674	700	713	739	752	778
479			583	596	622	635	661	674	700	713	739	765	778	804
490			596	609	635	648	674	687	713	726	752	765	791	804
508			609	622	648	674	687	713	726	752	765	791	804	830
533			635	648	674	687	713	739	752	778	791	817	830	856
558			661	674	700	713	739	752	778	804	817	843	856	882
612			713	726	752	778	791	817	830	856	869	895	908	934
630			726	752	765	791	804	830	856	869	895	908	934	947
714			817	830	856	869	895	908	934	960	973	999	1012	1038
762			856	882	908	921	947	960	986	999	1025	1038	1064	1077
813			908	934	947	973	999	1012	1038	1051	1077	1090	1116	1129
822			921	947	960	986	999	1025	1038	1064	1077	1103	1116	1142
914			1012	1038	1051	1077	1090	1116	1129	1155	1168	1194	1220	1233
1016			1116	1142	1155	1181	1194	1220	1233	1259	1272	1298	1311	

Applies factory TRZ(PL): Not possible as PSSWR140

Applies factory TRZ(PL): Can't be produce with density 140 kg/m<sup>3</sup>

The table above shows dimensions of the PAROC Pro Segment (WR).  
PAROC Pro Segment (WR) is adapted for use with PAROC Pro Section (WR).  
PAROC Pro Segment (WR) can also be manufactured for bending radii other than 1.5D (3S). Actual insulation thickness may deviate from nominal.

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Deliveries from Hällekis (SE) and Trzemesno (PL)

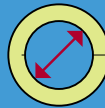
Deliveries from Hällekis (SE)

Deliveries from Trzemesno (PL)

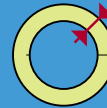


# DOUBLE LAYER SOLUTION WITH 2 SEPARATE PRODUCTS

PAROC PRO SECTION WR 100  
PAROC PRO SECTION 100  
PAROC PRO SECTION WR 120  
PAROC PRO SECTION 120  
PAROC PRO SECTION WR 140  
PAROC PRO SECTION 140



12-168 mm



60-200 mm



1200 mm



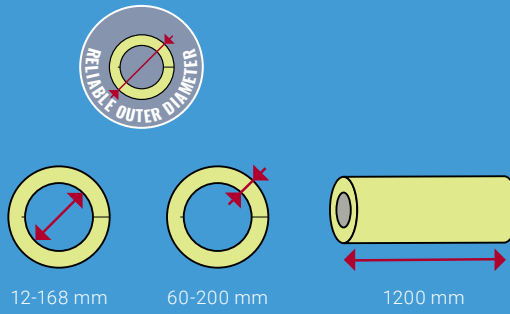
Inner diameter mm	Outer diameter mm							
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9							
	60	70	80	90	100	110	120	130
12/15	12/15-30-72 + 76-30-141	12/15-30-72 + 76-40-154	12/15-30-72 + 76-50-180	12/15-50-115 + 121-40-206	12/15-50-115 + 121-50-219	12/15-50-115 + 121-60-245	12/15-50-115 + 121-70-258	12/15-50-115 + 121-80-284
18			18-40-102 + 108-40-193	18-40-102 + 108-50-206	18-40-102 + 108-60-232	18-70-154 + 159-40-245	18-70-154 + 156-50-258	18-70-154 + 156-60-271
22			22-40-102 + 108-40-193	22-50-128 + 133-40-219	22-50-128 + 133-50-232	22-50-128 + 133-60-258	22-70-167 + 168-50-271	22-70-167 + 168-60-284
28			28-40-102 + 108-40-193	28-50-128 + 133-40-219	28-50-128 + 133-50-232	28-50-128 + 133-60-258	28-50-128 + 133-70-271	28-70-154 + 159-60-284
35			35-40-115 + 121-40-206	35-40-115 + 121-50-219	35-60-154 + 156-40-232	35-60-154 + 156-50-258	35-60-154 + 159-60-284	35-60-154 + 156-70-297
42			42-40-128 + 133-40-219	42-40-128 + 133-50-232	42-60-167 + 168-40-245	42-60-167 + 168-50-271	42-60-167 + 168-60-284	42-60-167 + 168-70-310
48			48-50-154 + 156-30-219	48-50-154 + 156-40-232	48-60-167 + 168-40-245	48-60-167 + 168-50-271	48-60-167 + 168-60-284	48-60-167 + 168-70-310
54			54-50-154 + 156-30-219	54-50-154 + 156-40-232	54-60-167 + 168-40-245	54-60-167 + 168-50-271	54-70-193 + 194-50-297	54-70-193 + 194-60-310
60			60-50-154 + 156-30-219	60-50-154 + 156-40-232	60-50-154 + 156-50-258	60-50-154 + 156-60-271	60-70-206 + 208-50-310	60-70-206 + 208-60-323
64			64-50-167 + 168-30-232	64-50-167 + 168-40-245	64-50-167 + 168-50-271	64-50-167 + 168-60-284	64-70-206 + 208-50-310	64-70-206 + 208-60-323
70			70-40-154 + 156-40-232	70-50-167 + 168-40-245	70-50-167 + 168-50-271	70-50-167 + 168-60-284	70-60-193 + 194-60-310	70-60-193 + 194-70-336
76			76-40-154 + 156-40-232	76-40-154 + 156-50-258	76-60-193 + 194-40-271	76-60-193 + 194-50-297	76-60-193 + 194-60-310	76-60-193 + 194-70-336
89			89-40-167 + 168-40-245	89-40-167 + 168-50-271	89-50-193 + 194-50-297	89-50-193 + 194-60-310	89-60-206 + 208-60-323	89-60-206 + 208-70-349
102			102-30-167 + 168-50-271	102-50-206 + 208-40-284	102-50-206 + 208-50-310	102-50-206 + 208-60-323	102-50-206 + 208-70-349	102-80-258 + 259-50-362
108			108-40-193 + 194-40-271	108-50-206 + 208-40-284	108-50-206 + 208-50-310	108-50-206 + 208-60-323	108-50-206 + 208-70-349	108-80-271 + 273-50-375
114			114-40-193 + 194-40-271	114-50-219 + 230-40-310	114-50-219 + 230-50-336	114-60-232 + 240-50-336	114-60-232 + 240-60-362	114-60-232 + 240-70-375
121			121-40-206 + 208-40-284	121-50-219 + 230-40-310	121-50-219 + 230-50-336	121-50-219 + 230-60-349	121-70-258 + 259-50-362	121-70-258 + 259-60-375
127			127-40-206 + 208-40-284	127-40-206 + 208-50-310	127-50-232 + 240-50-336	127-50-232 + 240-60-362	127-70-271 + 273-50-375	127-70-271 + 273-60-388
133			133-40-219 + 230-40-310	133-40-219 + 230-50-336	133-60-258 + 259-40-336	133-60-258 + 259-50-362	133-60-258 + 259-60-375	133-70-271 + 273-60-388
140			140-40-219 + 230-40-310	140-50-245 + 259-40-336	140-60-258 + 259-40-336	140-60-258 + 259-50-362	140-60-258 + 259-60-375	140-70-284 + 289-60-414
156			156-50-258 + 259-30-323	156-50-258 + 259-40-336	156-50-258 + 259-50-362	156-50-258 + 259-60-375	156-60-271 + 273-60-388	156-70-297 + 305-60-427
159			159-50-258 + 259-30-323	159-50-258 + 259-40-336	159-50-258 + 259-50-362	159-50-258 + 259-60-375	159-60-284 + 289-60-414	159-70-297 + 305-60-427
162			162-50-258 + 259-30-323	162-50-258 + 259-40-336	162-50-258 + 259-50-362	162-50-258 + 259-60-375	162-60-284 + 289-60-414	162-70-297 + 305-60-427
168			168-50-271 + 273-30-336 <sup>1</sup>	168-50-271 + 273-40-349	168-50-271 + 273-50-375 <sup>2</sup>	168-50-271 + 273-60-388	168-60-284 + 289-60-414	168-60-284 + 289-70-427

<sup>1</sup> - Insulation thickness 84 mm  
<sup>2</sup> - Insulation thickness 103,5 mm



# DOUBLE LAYER SOLUTION WITH 2 SEPARATE PRODUCTS

PAROC PRO SECTION WR 100  
PAROC PRO SECTION 100  
PAROC PRO SECTION WR 120  
PAROC PRO SECTION 120  
PAROC PRO SECTION WR 140  
PAROC PRO SECTION 140



Inner diameter mm	Outer diameter mm						
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9						
	140	150	160	170	180	190	200
12/15	12/15-50-115 + 121-90-297						
18	18-70-154 + 159-70-297	18-70-154 + 159-80-323	18-70-154 + 159-90-336				
22	22-70-167 + 168-70-310	22-70-167 + 168-80-323	22-70-167 + 168-90-349	22-70-167 + 168-100-362	22-70-167 + 168-110-388		
28	28-70-167 + 168-70-310	28-80-193 + 194-70-336	28-80-193 + 194-80-349	28-80-193 + 194-90-375	28-80-193 + 194-100-388		
35	35-80-193 + 194-60-310	35-80-193 + 194-70-336	35-80-193 + 194-80-349	35-80-193 + 194-90-375	35-80-193 + 194-100-388	35-80-193 + 194-110-414	35-80-193 + 194-120-440
42	42-80-206 + 208-60-323	42-80-206 + 208-70-349	42-80-206 + 208-80-362	42-80-206 + 208-90-388	42-80-206 + 208-100-414	42-80-206 + 208-110-427	42-80-206 + 208-120-453
48	48-80-206 208-60-323	48-80-206 208-70-349	48-80-206 208-80-362	48-80-206 208-90-388	48-80-206 208-100-414	48-80-206 208-110-427	48-80-206 208-120-453
54	54-100-258 + 259-40-323	54-70-193 + 194-80-349	54-100-258 + 259-60-375	54-100-258 + 259-70-401	54-110-271 + 273-70-414	54-110-271 + 273-80-427	54-110-271 + 273-90-453
60	60-70-206 + 208-70-349	60-70-206 + 208-80-362	60-100-258 + 259-60-375	60-100-258 + 259-70-401	60-100-258 + 259-80-414	60-100-258 + 259-90-440	60-100-258 + 259-100-453
64	64-70-206 + 208-70-349	64-70-206 + 208-80-362	64-100-258 + 259-60-375	64-100-258 + 259-70-401	64-100-258 + 259-80-414	64-100-258 + 259-90-440	64-100-258 + 259-100-453
70	70-70-206 + 208-70-349	70-70-206 + 208-80-362	70-100-271 + 273-60-388	70-100-271 + 273-70-414	70-100-271 + 273-80-427	70-100-271 + 273-90-453	70-100-271 + 273-100-479
76	76-80-232 + 240-60-362	76-80-232 + 240-70-375	76-80-232 + 240-80-401	76-90-258 + 259-80-414	76-90-258 + 259-90-440	76-100-271 + 273-90-453	76-100-271 + 273-100-479
89	89-90-271 + 273-50-375	89-90-271 + 273-60-388	89-90-271 + 273-70-414	89-90-271 + 273-80-427	89-90-271 + 273-90-453	89-100-284 + 289-90-466	89-100-284 + 289-100-492
102	102-80-258 + 259-60-375	102-80-258 + 259-70-401	102-80-258 + 259-80-414	102-90-284 + 289-80-453	102-90-284 + 289-90-466	102-100-297 + 305-90-479	102-100-297 + 305-100-505
108	108-80-271 + 273-60-388	108-80-271 + 273-70-414	108-80-271 + 273-80-427	108-90-284 + 289-80-453	108-90-284 + 289-90-466	108-90-284 + 289-100-492	108-90-284 + 289-110-505
114	114-80-271 + 273-60-271	114-80-271 + 273-70-414	114-80-271 + 273-80-427	114-90-297 + 305-80-466	114-90-297 + 305-90-479	114-90-297 + 305-100-505	114-90-297 + 305-110-531
121	121-70-258 + 259-70-401	121-80-284 + 289-70-427	121-80-284 + 289-80-453	121-90-297 + 305-80-466	121-90-297 + 305-90-479	121-90-297 + 305-100-505	121-100-323 + 324-100-518
127	127-70-271 + 273-70-414	127-80-284 + 289-70-427	127-80-284 + 289-80-453	127-80-284 + 289-90-466	127-80-284 + 289-100-492	127-80-284 + 289-110-531	127-100-323 + 324-100-518
133	133-70-271 + 273-70-414	133-80-297 + 305-70-440	133-80-297 + 305-80-466	133-80-297 + 305-90-479	133-80-297 + 305-100-505	133-80-297 + 305-110-531	133-80-297 + 305-120-544
140	140-70-284 + 289-70-427	140-80-297 + 305-70-440	140-80-297 + 305-80-466	140-80-297 + 305-90-479	140-80-297 + 305-100-505	140-80-297 + 305-110-531	140-80-297 + 305-120-544
156	156-70-297 + 305-70-440	156-70-297 + 305-80-466	156-70-297 + 305-90-479	156-70-297 + 305-100-505	156-70-297 + 305-110-531	156-120-401 + 406-70-544	156-120-401 + 406-80-570
159	159-70-297 + 305-70-440	159-70-297 + 305-80-466	159-70-297 + 305-90-479	159-70-297 + 305-100-505	159-70-297 + 305-110-531	159-120-401 + 406-70-544	159-120-401 + 406-80-570
162	162-70-297 + 305-70-440	162-70-297 + 305-80-466	162-70-297 + 305-90-479	162-70-297 + 305-100-505	162-70-297 + 305-110-531	162-120-401 + 406-70-544	162-120-401 + 406-80-570
168	168-60-284 + 289-80-453	168-60-284 + 289-90-466	168-60-284 + 289-100-492	168-60-284 + 289-110-505	168-60-284 + 289-120-531	168-60-284 + 289-130-544	168-60-284 + 289-140-570

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Deliveries from Hällekis (SE) and Trzemeszno (PL)



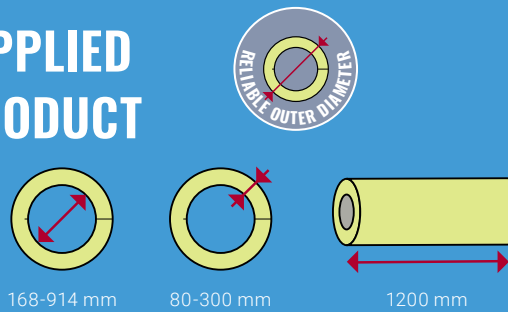
Deliveries from Hällekis (SE)



Deliveries from Trzemeszno (PL)

# DOUBLE LAYER SOLUTIONS SUPPLIED AS ONE DOUBLE LAYER (DL) PRODUCT

PAROC PRO SECTION WR DL 100  
 PAROC PRO SECTION DL 100  
 PAROC PRO SECTION WR 120  
 PAROC PRO SECTION 120  
 PAROC PRO SECTION WR DL 140  
 PAROC PAROC SECTION DL 140



Inner diameter mm	Outer diameter mm					
	Insulation thickness mm					
	80	90	100	110	120	130
168	168-40+40-323	168-50+40-349	168-50+50-362	168-60+50-388	168-60+60-414	168-60+70-427
194	194-40+40-349	194-40+50-375	194-40+60-388	194-50+60-414	194-50+70-440	194-60+70-453
208	208-40+40-362	208-40+50-388	208-60+40-414	208-60+50-427	208-60+60-453	208-70+60-466
219	219-40+40-375	219-50+40-401	219-50+50-414	219-50+60-440	219-50+70-453	219-50+80-479
230	230-40+40-388	230-40+50-414	230-40+60-427	230-60+50-453	230-60+60-466	230-60+70-492
240	240-40+40-401	240-40+50-414	240-40+60-440	240-60+50-466	240-60+60-479	240-60+70-505
245	245-40+40-401	245-40+50-427	245-40+60-440	245-60+50-466	245-60+60-479	245-60+70-505
259	259-30+50-414	259-30+60-440	259-60+40-453	259-50+60-479	259-70+50-505	259-70+60-518
273	273-40+40-427	273-40+50-453	273-50+50-479	273-60+50-492	273-60+60-518	273-70+60-531
289		289-40+50-466	289-50+50-492	289-60+50-505	289-60+60-531	289-60+70-544
295		295-40+50-479	295-50+50-492	295-50+60-518	295-50+70-531	295-60+70-557
305	305-50+30-466	305-40+50-479	305-50+50-505	305-50+60-531	305-50+70-544	305-70+60-570
324	324-40+40-479	324-40+50-505	324-40+60-518	324-50+60-544	324-50+70-570	324-80+50-583
356			356-50+50-557	356-60+50-570	356-60+60-596	356-60+70-622
371	371-40+40-531		371-40+60-570	371-40+70-596	371-70+50-609	371-70+60-635
377			377-40+60-583	377-50+60-596	377-50+70-622	377-50+80-635
406			406-50+50-609	406-50+60-622	406-60+60-648	406-60+70-661
426			426-50+50-622	426-60+50-648	426-60+60-661	426-60+70-687
457			457-50+50-661	457-50+60-674	457-50+70-700	457-70+60-713
479			479-40+60-674	479-60+50-700	479-70+50-713	479-70+60-739
490			490-60+40-687	490-60+50-713	490-60+60-726	490-60+70-752
508			508-50+50-713	508-60+50-726	508-60+60-752	508-60+70-765
533			533-50+50-739	533-50+60-752	533-70+70-778	533-50+80-791
558			558-50+50-757	558-50+60-778	558-70+50-804	558-80+50-817
612			612-50+50-817	612-50+60-830	612-50+70-856	612-50+80-869
630			630-40+60-817	630-60+50-856	630-60+60-869	630-60+70-895
665			665-50+50-869	665-50+60-882	665-70+50-908	665-70+60-921
714			714-50+50-908	714-50+60-934	714-50+70-960	714-50+80-973
762					762-70+50-999	762-70+60-1025
813			813-50+50-1012	813-50+60-1038	813-50+70-1051	813-50+80-1077
822			822-50+50-1025	822-50+60-1038	822-50+70-1064	822-50+80-1077
914			914-50+50-1116	914-50+60-1129	914-50+70-1155	914-50+80-1168

Applies factory TRZ(PL): Not possible as PSDLWR140

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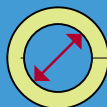
Deliveries from Hällekis (SE) and Trzemeszno (PL)

Deliveries from Hällekis (SE)

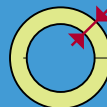
Deliveries from Trzemeszno (PL)

# DOUBLE LAYER SOLUTIONS SUPPLIED AS ONE DOUBLE LAYER (DL) PRODUCT

PAROC PRO SECTION WR DL 100  
 PAROC PRO SECTION DL 100  
 PAROC PRO SECTION WR 120  
 PAROC PRO SECTION 120  
 PAROC PRO SECTION WR DL 140  
 PAROC PAROC SECTION DL 140



168-914 mm



80-300 mm



1200 mm



Inner diameter mm	Outer diameter mm					
	Insulation thickness mm					
	140	150	160	170	180	190
168	168-80+60-453	168-80+70-466	168-80+80-492	168-80+90-505	168-100+80-531	168-100+90-544
194	194-80+60-479	194-80+70-492	194-80+80-518	194-80+90-531	194-90+90-557	194-90+100-570
208	208-70+70-492	208-70+80-505	208-70+90-531	208-80+90-544	208-100+80-570	208-100+90-583
219	219-70+70-505	219-50+100-518	219-90+70-544	219-90+80-557	219-90+90-583	219-90+100-596
230	230-70+70-505	230-70+80-531	230-70-90-544 230-60-100-544	230-90+80-570	230-90+90-596	230-100+90-609
240	240-70+70-518	240-80+70-544	240-80+80-557	240-80+90-583	240-80+100-596	240-110+80-622
245	245-60+80-531	245-80+70-544	245-80+80-570	245-80+90-583	245-80+100-609	245-100+90-622
259	259-70+70-544	259-70+80-557	259-70+90-583	259-80+90-569	259-100+80-622	259-100+90-635
273	273-70+70-557	273-70+80-570	273-90+70-596	273-80+90-609	273-90+90-635	273-90+100-648
289	289-80+60-570	289-80+70-583	289-80+80-609	289-80+90-635	289-80+100-648	289-90+100-674
295	295-80+60-570	295-80+70-596	295-80+80-609	295-80+90-635	295-80+100-661	295-90+100-674
305	305-70+70-583	305-80+70-609	305-80+80-622	305-80+90-648	305-90+90-661	305-90+100-687
324	324-80+60-609	324-80+70-622	324-80+80-648	324-80+90-661	324-90+90-687	324-90+100-700
356	356-90+50-635	356-60+90-661	356-90-70-674 356-100-60-674	356-90+80-700	356-90+90-713	356-100+90-739
371	371-70+70-648	371-70+80-674	371-80+80-687	371-90+80-713	371-90+90-726	371-90+100-752
377	377-80-60-661	377-80+70-674	377-80+80-700	377-80+90-713	377-90+90-739	377-90+100-752
406	406-60+80-687	406-70+80-700	406-100+60-726	406-100+70-752	406-100+80-765	406-100+90-791
426	426-60+80-700	426-90+60-726	426-90+70-752	426-90+80-765	426-90+90-791	426-100+90-804
457	457-50+90-739	457-80+70-752	457-80+80-778	457-90+80-791	457-90+90-817	457-80+110-843
479	479-70+70-765	479-80+70-778	479-80+80-804	479-80+90-817	479-80+100-843	479-80+110-856
490	490-70+70-765	490-70+80-791	490-70+90-804	490-70+100-830	490-110+70-856	490-110+80-869
508	508-60+80-791	508-60+90-804	508-100+60-830	508-100+70-843	508-100+80-869	508-100+90-882
533	533-90+50-817	533-90+60-830	533-90+70-856	533-90+80-869	533-90+90-895	533-90+100-908
558	558-80+60-843	558-70+70-856	558-80+80-882	558-80+90-895	558-100+80-921	558-100+90-934
612	612-90+50-895	612-70+80-908	612-100+60-934	612-100+70-947	612-100+80-973	612-100+90-986
630	630-60+80-908	630-90+60-934	630-90+70-947	630-90+80-973	630-90+90-986	630-90+100-1012
665	665-70+70-947	665-70+80-960	665-70+90-986	665-70+100-999	665-70+110-1025	665-70+120-1051
714	714-50+90-999	714-100+50-1012	714-100+60-1038	714-100+70-1051	714-100+80-1077	714-100+90-1090
762	762-70+70-1038	762-70+80-1064	762-70+90-1077	762-70+100-1103	762-70+110-1116	762-120+70-1142
813	813-50+90-1090	813-100+50-1116	813-50-110-1129 813-100-60-1129	813-50-120-1155 813-100-70-1155	813-100+80-1168	813-100+90-1194
822	822-90+50-1103	822-90+60-1116	822-90+70-1142	822-90+80-1168	822-90+90-1181	822-90+100-1207
914	914-50+90-1194	914-50+100-1220	914-50+110-1233	914-50+120-1259	914-50+130-1272	914-50+140-1298

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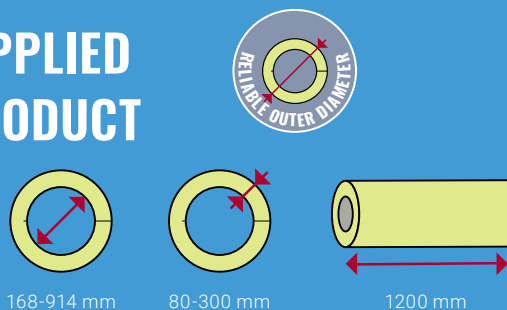
Deliveries from Hällekis (SE) and Trzemeszno (PL)

Deliveries from Hällekis (SE)

Deliveries from Trzemeszno (PL)

# DOUBLE LAYER SOLUTIONS SUPPLIED AS ONE DOUBLE LAYER (DL) PRODUCT

- PAROC PRO SECTION WR DL 100
- PAROC PRO SECTION DL 100
- PAROC PRO SECTION WR 120
- PAROC PRO SECTION 120
- PAROC PRO SECTION WR DL 140
- PAROC PAROC SECTION DL 140



Inner diameter mm	Outer diameter mm					
	Insulation thickness mm					
	200	210	220	230	240	250
168	168-100+100-570	168-100+110-583	168-100+120-609	168-130+100-622	168-140+100-648	168-130+120-674
194	194-110+90-596	194-110+100-609	194-110+110-635	194-130+100-648	194-130+110-674	194-130+120-700
208	208-100+100-596	208-120+90-622	208-120+100-648	208-120+110-674	208-120+120-687	208-130+120-713
219	219-100+100-622	219-120+90-635	219-120+100-661	219-120+110-674	219-120+120-700	219-140+110-713
230	230-100+100-635	230-110+100-648	230-110+110-674	230-120+110-687	230-120+120-713	230-140+110-726
240	240-100+100-635	240-120+90-661	240-110+110-674	240-120+100-700	240-120+120-726	240-130+120-739
245	245-100+100-648	245-110+100-661	245-110+110-687	245-120+110-700	245-120+120-726	245-130+120-739
259	259-100+100-661	259-110+100-674	259-110+110-700	259-120+110-713	259-120+120-739	259-130+120-765
273	273-100+100-674	273-130+80-687	273-130+90-713	273-120+110-739	273-120+120-752	273-130+120-778
289	289-110+90-687	289-110+100-713	289-110+110-726	289-120+110-752	289-120+120-765	289-130+120-791
295	295-100+100-700	295-110+100-713	295-120+100-739	295-120+110-752	295-120+120-778	295-130+120-791
305	305-100+100-700	305-100+110-726	305-110+110-739	305-120+110-765	305-120+120-791	305-120+130-804
324	324-100+100-726	324-110+100-739	324-110+110-765	324-110+120-778	324-140+100-804	324-140+110-830
356	356-100+100-752	356-120+90-778	356-120+100-817	356-120+110-817	356-130+110-830	356-130+120-856
371	371-90+110-765	371-120+90-791	371-120+100-817	371-120+110-830	371-120+120-856	371-120+130-869
377	377-90+110-778	377-130+80-791	377-120+100-817	377-120+110-843	377-120+12-856	377-120+130-882
406	406-100+100-804	406-110+100-830	406-110+110-843	406-110+120-869	406-110+130-882	406-110+140-908
426	426-100+100-830	426-100+110-843	426-100+120-869	426-100+130-882	426-140+100-908	426-140+110-921
457	457-90+110-856	457-130+80-882	457-130+90-895	457-130+100-921	457-130+110-934	457-130+120-960
479	479-120+80-882	479-120+90-895	479-120+100-921	479-120+110-934	479-120+120-960	479-140+110-973
490	490-110+90-895	490-110+100-908	490-110+110-934	490-110+120-947	490-110+130-973	490-130+120-986
508	508-100+100-908	508-100+110-934	508-100+120-960	508-120+110-973	508-120+120-999	508-120+130-1012
533	533-90+110-934	533-110+100-947	533-110+110-973	533-110+120-999	533-110+130-1012	533-110+140-1038
558	558-100+100-960	558-100+110-973	558-120+100-999	558-120+110-1012	558-120+120-1038	558-130+120-1064
612	612-100+100-1012	612-100+110-1038	612-100+120-1051	612-100+130-1077	612-150+90-1090	612-150+100-1116
630	630-90+110-1025	630-90+120-1051	630-90+130-1064	630-140+90-1090	630-140+100-1116	630-140+110-1129
665	665-120+80-1064	665-120+90-1090	665-120+100-1103	665-120+110-1129	665-120+120-1142	665-120+130-1168
714	714-100+100-1116	714-100+110-1129	714-100+120-1155	714-100+130-1181	714-100+140-1194	714-150+100-1220
762	762-120+80-1168	762-120+80-1168	762-120+100-1207	762-120+110-1220	762-120+120-1246	762-130+120-1259
813	813-100+100-1207	813-100+110-1233	813-100+120-1259	813-100+130-1272	813-100+140-1298	813-100+150-1311
822	822-90+110-1220	822-90+120-1246	822-90+130-1259	822-90+140-1285	822-90+150-1298	
914	914-50+150-1311					

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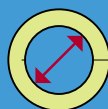
Deliveries from Hällekis (SE) and Trzemeszno (PL)

Deliveries from Hällekis (SE)

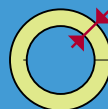
Deliveries from Trzemeszno (PL)

# DOUBLE LAYER SOLUTIONS SUPPLIED AS ONE DOUBLE LAYER (DL) PRODUCT

PAROC PRO SECTION WR DL 100  
 PAROC PRO SECTION DL 100  
 PAROC PRO SECTION WR 120  
 PAROC PRO SECTION 120  
 PAROC PRO SECTION WR DL 140  
 PAROC PAROC SECTION DL 140



168-914 mm



80-300 mm



1200 mm



Inner diameter mm	Outer diameter mm			
	Insulation thickness mm			
	260	270	280	300
168	168-140+120-700	168-140+130-713	168-140+140-739	168-160+140-765
194	194-130+130-713	194-140+130-739	194-140+140-752	194-150+150-791
208	208-130+130-726	208-130+140-752	208-150+130-765	208-150+150-804
219	219-140+120-752	219-140+130-765	219-140+140-791	219-140+160-817
230	230-140+120-752	230-140+130-765	230-140+140-791	230-150+150-830
240	240-130+130-765	240-150+120-778	240-140+140-804	240-160+140-843
245	245-130+130-765	245-140+130-791	245-140+140-804	245-150+150-843
259	259-130+130-778	259-140+130-804	259-150+130-817	259-150+150-856
273	273-140+120-804	273-140+130-817	273-140+140-843	273-170+130-869
289	289-130+130-804	289-130+140-830	289-130+150-843	289-160+140-895
295	295-130+130-817	295-130+140-830	295-130+150-856	295-160+140-895
305	305-120+140-830	305-120+150-843	305-150+130-869	305-150+150-908
324	324-140+120-856	324-140+130-869	324-140+140-895	324-150+150-934
356	356-130+130-869	356-130+140-895	356-130+150-921	356-180+120-960
371	371-130+130-895	371-130+140-908	371-130+150-934	371-150-150-973 371-170-130-973
377	377-120+140-895	377-120+150-921	377-170+110-934	377-170+130-973
406	406-150+110-934	406-150+120-947	406-150+130-973	406-150+150-1012
426	426-140+120-947	426-140+130-973	426-140+140-986	426-140+160-1025
457	457-130+130-973	457-130+140-999	457-150+130-1012	457-130+170-1051
479	479-140+120-999	479-140+130-1012	479-140+140-1038	479-140+160-1077
490	490-130+130-1012	490-130+140-1025	490-160+120-1051	490-160+140-1090
508	508-120+140-1025	508-150+120-1051	508-150+130-1077	508-150+150-1116
533	533-140+120-1051	533-140+130-1077	533-140+140-1090	533-140+160-1129
558	558-130+130-1077	558-130+140-1116	558-130+150-1116	
612	612-150+110-1129	612-150+120-1155	612-150+130-1168	612-150+150-1220
630	630-140+120-1155	630-140+130-1168	630-140+140-1194	630-140+160-1233
665	665-120+140-1181	665-120+150-1207		
714	714-150+110-1233	714-150+120-1259	714-150+130-1272	714-150+150-1311
762	762-120+140-1285	762-120+130-1259	762-120-150-1311	
813	813-100+160-1337			
822				
914				

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 Deliveries from Hällekis (SE) and Trzemeszno (PL)

 Deliveries from Hällekis (SE)

 Deliveries from Trzemeszno (PL)

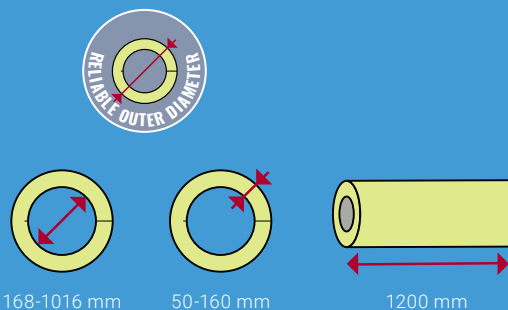
Applies factory TRZ(PL): Not possible as PSDLWR140

Applies factory TRZ(PL): Can't be produce with density 140 kg/m<sup>3</sup>



# PAROC PRO LOCK

- PAROC PRO LOCK WR 100
- PAROC PRO LOCK 100
- PAROC PRO LOCK WR 120
- PAROC PRO LOCK 120
- PAROC PRO SECTION WR DL 140
- PAROC PRO SECTION DL 140



Inner diameter mm	Outer diameter mm											
	Insulation thickness mm											
	50	60	70	80	90	100	110	120	130	140	150	160
168		284	310	323	349	362	388	414	427	453	466	492
178												
194	297	310	336	349	375	388	414	440	453	479	492	518
208	310	323	349	362	388	414	427	453	466	492	505	531
219	323	336	362	375	401	414	440	453	479	505	518	544
230	336	349	375	388	414	427	453	466	492	505	531	544
240	336	362	375	401	414	440	466	479	505	518	544	557
245	349	362	388	401	427	440	466	479	505	531	544	570
259	362	375	401	414	440	453	479	505	518	544	557	583
273	375	388	414	427	453	479	492	518	531	557	570	596
289	388	414	427	453	466	492	505	531	544	570	583	609
295	401	414	440	453	479	492	518	531	557	570	596	609
305	401	427	440	466	479	505	531	544	570	583	609	622
324	427	440	466	479	505	518	544	570	583	609	622	648
356	453	479	492	518	531	557	570	596	622	635	661	674
371	466	492	505	531	557	570	596	609	635	648	674	687
377				531	557	583	596	622	635	661	674	700
406	505	531	544	570	583	609	622	648	661	687	700	726
426	531	544	570	583	609	622	648	661	687	700	726	752
457	557	583	596	622	635	661	674	700	713	739	752	778
479	583	596	622	635	661	674	700	713	739	765	778	804
490				648	674	687	713	726	752	765	791	804
508	609	622	648	674	687	713	726	752	765	791	804	830
533	635	648	674	687	713	739	752	778	791	817	830	856
558	661	674	700	713	739	752	778	804	817	843	856	882
612	713	726	752	778	791	817	830	856	869	895	908	934
630	726	752	765	791	804	830	856	869	895	908	934	947
665				830	843	869	882	908	921	947	960	986
714	817	830	856	869	895	908	934	960	973	999	1012	1038
762	856	882	908	921	947	960	986	999	1025	1038	1064	1077
813	908	934	947	973	999	1012	1038	1051	1077	1090	1116	1129
822	921	947	960	986	999	1025	1038	1064	1077	1103	1116	1142
914	1012	1038	1051	1077	1090	1116	1129	1155	1168	1194	1220	
1016	1116	1142	1155									

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-  Deliveries from Hällekis (SE) and Trzemeszno (PL)
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-  Deliveries from Trzemeszno (PL)

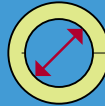
Applies factory TRZ(PL): Not possible as PSLWR140

Applies factory TRZ(PL): Can't be produce with density 140 kg/m<sup>3</sup>

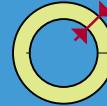


# BIG PIPE ELBOWS DL

- PAROC PRO SEGMENT WR DL 100
- PAROC PRO SEGMENT DL 100
- PAROC PRO SEGMENT WR DL 120
- PAROC PRO SEGMENT DL 120
- PAROC PRO SEGMENT WR DL 140
- PAROC PRO SEGMENT DL 140



168-914 mm



80-300 mm



Inner diameter mm	Outer diameter mm						
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9						
	80	90	100	110	120	130	140
168	168-40 + 40-323	168-50 + 40-349	168-50 + 50-362	168-60 + 50-388	168-60 + 60-414	168-60 + 70-427	168-80 + 60-453
194	194-40 + 40-349	194-40 + 50-375	194-40 + 60-388	194-50 + 60-414	194-50 + 70-440	194-60 + 70-453	194-80 + 60-479
208	208-40 + 40-362	208-40 + 50-388	208-60 + 40-414	208-60 + 50-427	208-60 + 60-453	208-70 + 60-466	208-70 + 70-492
219	219-40 + 40-375	219-50 + 40-401	219-50 + 50-414	219-50 + 60-440	219-50 + 70-453	219-50 + 80-479	219-70 + 70-505
230	230-40 + 40-388	230-40 + 50-414	230-40 + 60-427	230-60 + 50-453	230-60 + 60-466	230-60 + 70-492	230-70 + 70-505
240	240-40 + 40-401	240-40 + 50-414	240-40 + 60-440	240-60 + 50-466	240-60 + 60-479	240-60 + 70-505	240-70 + 70-518
245	245-40 + 40-401	245-40 + 50-427	245-40 + 60-440	245-60 + 50-466	245-60 + 60-479	245-60 + 70-505	245-60 + 80-531
259	259-30 + 50-414	259-30 + 60-440	259-60 + 40-453	259-50 + 60-479	259-70 + 50-505	259-70 + 60-518	259-70 + 70-544
273	273-40 + 40-427	273-40 + 50-453	273-50 + 50-479	273-60 + 50-492	273-60 + 60-518	273-70 + 60-531	273-70 + 70-557
289		289-40 + 50-466	289-50 + 50-492	289-60 + 50-505	289-60 + 60-531	289-60 + 70-544	289-80 + 60-570
295		295-40 + 50-479	295-50 + 50-492	295-50 + 60-518	295-50 + 70-531	295-60 + 70-557	295-80 + 60-570
305	305-50 + 30-466	305-40 + 50-479	305-50 + 50-505	305-50 + 60-531	305-50 + 70-544	305-70 + 60-570	305-70 + 70-583
324	324-40 + 40-479	324-40 + 50-505	324-40 + 60-518	324-50 + 60-544	324-50 + 70-570	324-80 + 50-583	324-80 + 60-609
356		356-50 + 40-531	356-50 + 50-557	356-60 + 50-570	356-60 + 60-596	356-60 + 70-622	356-90 + 50-635
371	371-40 + 40-531		371-40 + 60-570	371-40 + 70-596	371-70 + 50-609	371-70 + 60-635	371-70 + 70-648
377			377-40 + 60-583	377-50 + 60-596	377-50 + 70-622	377-50 + 80-635	377-80 + 60-661

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Deliveries from Hällekis (SE) and Trzemeszno (PL)

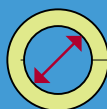
Deliveries from Hällekis (SE)

Deliveries from Trzemeszno (PL)

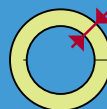
The table shows dimensions of PAROC Pro Segment (WR) DL.  
 PAROC Pro Segment (WR) DL is adapted for use with PAROC Pro Section (WR) DL and PAROC Pro Lock (WR).  
 PAROC Pro Segment (WR) DL can also be manufactured for bending radii other than 1.5D (3S), but not all combinations are possible.

# BIG PIPE ELBOWS DL

PAROC PRO SEGMENT WR DL 100  
 PAROC PRO SEGMENT DL 100  
 PAROC PRO SEGMENT WR DL 120  
 PAROC PRO SEGMENT DL 120  
 PAROC PRO SEGMENT WR DL 140  
 PAROC PRO SEGMENT DL 140



168-914 mm



80-300 mm



Inner diameter mm	Outer diameter mm						
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9						
	80	90	100	110	120	130	140
406			406-50 + 50-609	406-50 + 60-622	406-60 + 60-648	406-60 + 70-661	406-60 + 80-687
426			426-50 + 50-622	426-60 + 50-648	426-60 + 60-661	426-60 + 70-687	426-60 + 80-700
457			457-50 + 50-661	457-50 + 60-674	457-50 + 70-700	457-70 + 60-713	457-50 + 90-739
479			479-60 + 40-683	479-60 + 50-700	479-70 + 50-713	479-70 + 60-739	479-70 + 70-765
490			490-60 + 40-687	490-60 + 50-713	490-60 + 60-726	490-60 + 70-752	490-70 + 70-765
508			508-50 + 50-713	508-60 + 50-726	508-60 + 60-752	508-60 + 70-765	508-60 + 80-791
533			533-50 + 50-739	533-50 + 60-752	533-50 + 70-778	533-50 + 80-791	533-90 + 50-817
558			558-50 + 50-757	558-50 + 60-778	558-70 + 50-804	558-80 + 50-817	558-80 + 60-843
612			612-50 + 50-817	612-50 + 60-830	612-50 + 70-856	612-50 + 80-869	612-90 + 50-895
630			630-40 + 60-830	630-60 + 50-856	630-60 + 60-869	630-60 + 70-895	630-60 + 80-908
665			665-50 + 50-869	665-50 + 60-882	665-70 + 50-908	665-70 + 60-921	665-70 + 70-947
714			714-50 + 50-908	714-50 + 60-934	714-50 + 70-960	714-50 + 80-973	714-50 + 90-999
720			720-50 + 50-921				
762			714-50 + 50-908	714-50 + 60-934	762-70 + 50-999	762-70 + 60-1025	762-70 + 70-1038
813			813-50 + 50-1012	813-50 + 60-1038	813-50 + 70-1051	813-50 + 80-1077	813-50 + 90-1090
822			822-50 + 50-1025	822-50 + 60-1038	822-50 + 70-1064	822-50 + 80-1077	822-50 + 90-1103
914			914-50 + 50-1116	914-50 + 60-1129	914-50 + 70-1155	914-50 + 80-1168	914-50 + 90-1194

Applies factory TRZ(PL): Not possible as PSSDLWR140

The table shows dimensions of PAROC Pro Segment (WR) DL.  
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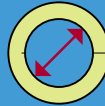
Deliveries from Hällekis (SE) and Trzemeszno (PL)

Deliveries from Hällekis (SE)

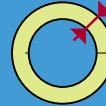
Deliveries from Trzemeszno (PL)

# BIG PIPE ELBOWS DL

- PAROC PRO SEGMENT WR DL 100
- PAROC PRO SEGMENT DL 100
- PAROC PRO SEGMENT WR DL 120
- PAROC PRO SEGMENT DL 120
- PAROC PRO SEGMENT WR DL 140
- PAROC PRO SEGMENT DL 140



168-914 mm



80-300 mm



Inner diameter mm	Outer diameter mm						
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9						
	150	160	170	180	190	200	210
168	168-80 + 70-466	168-80 + 80-492	168-80 + 90-505	168-100 + 80-531	168-100 + 90-544	168-100 + 100-570	168-100 + 110-583
194	194-80 + 70-492	194-80 + 80-518	194-80 + 90-531	194-90 + 90-557	194-90 + 100-570	194-110 + 90-596	194-110 + 100-609
208	208-70 + 80-505	208-70 + 90-531	208-80 + 90-544	208-100 + 80-570	208-100 + 90-583	208-100 + 100-596	208-120 + 90-622
219	219-50 + 100-518	219-90 + 70-544	219-90 + 80-557	219-90 + 90-583	219-90 + 100-596	219-100 + 100-622	219-120 + 90-635
230	230-70 + 80-531	230-70 + 90-544 230-60 + 100-544	230-90 + 80-570	230-90 + 90-596	230-100 + 90-609	230-100 + 100-635	230-110 + 100-648
240	240-80 + 70-544	240-80 + 80-557	240-80 + 90-583	240-80 + 100-596	240-110 + 80-622	240-100 + 100-635	240-120 + 90-661
245	245-80 + 70-544	245-80 + 80-570	245-80 + 90-583	245-80 + 100-609	245-100 + 90-622	245-100 + 100-648	245-120 + 90-661
259	259-70 + 80-557	259-70 + 90-583	259-80 + 90-596	259-100 + 80-622	259-100 + 90-635	259-100 + 100-661	259-110 + 100-674
273	273-70 + 80-570	273-90 + 70-596	273-80 + 90-609	273-90 + 90-635	273-90 + 100-648	273-100 + 100-674	273-130 + 80-687
289	289-80 + 70-583	289-80 + 80-609	289-80 + 90-635	289-80 + 100-648	289-90 + 100-674	289-110 + 90-687	289-110 + 100-713
295	295-80 + 70-596	295-80 + 80-609	295-80 + 90-635	295-80 + 100-661	295-90 + 100-674	295-100 + 100-700	295-120 + 90-713
305	305-80 + 70-609	305-80 + 80-622	305-80 + 90-648	305-90 + 90-661	305-90 + 100-687	305-100 + 100-700	305-110 + 100-726
324	324-80 + 70-622	324-80 + 80-648	324-80 + 90-661	324-90 + 90-687	324-90 + 100-700	324-100 + 100-726	324-120 + 90-739
356	356-60 + 90-661	356-90 + 70-674 356-100 + 60-674	356-90 + 80-700	356-90 + 90-713	356-100 + 90-739	356-100 + 100-752	356-120 + 90-778
371	371-70 + 80-674	371-80 + 80-687	371-90 + 80-713	371-90 + 90-726	371-90 + 100-752	371-90 + 110-765	371-120 + 90-791
377	377-80 + 70-674	377-80 + 80-700	377-80 + 90-713	377-90 + 90-739	377-90 + 100-752	377-90 + 110-778	377-130 + 80-791

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Deliveries from Hällekis (SE) and Trzemeszno (PL)

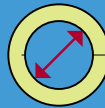
Deliveries from Hällekis (SE)

Deliveries from Trzemeszno (PL)

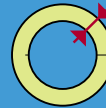
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# BIG PIPE ELBOWS DL

PAROC PRO SEGMENT WR DL 100  
 PAROC PRO SEGMENT DL 100  
 PAROC PRO SEGMENT WR DL 120  
 PAROC PRO SEGMENT DL 120  
 PAROC PRO SEGMENT WR DL 140  
 PAROC PRO SEGMENT DL 140



168-914 mm



80-300 mm



Inner diameter mm	Outer diameter mm						
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9						
	150	160	170	180	190	200	210
406	406-70 + 80-700	406-100 + 60-726	406-100 + 70-752	406-100 + 80-765	406-100 + 90-791	406-100 + 100-804	406-110 + 100-830
426	426-90 + 60-726	426-90 + 70-752	426-90 + 80-765	426-90 + 90-791	426-100 + 90-804	426-100 + 100-830	426-100 + 110-843
457	457-80 + 70-752	457-80 + 80-778	457-90 + 80-791	457-90 + 90-817	457-80 + 110-843	457-90 + 110-856	457-130 + 80-882
479	479-80 + 70-778	479-80 + 80-804	479-80 + 90-817	479-80 + 100-843	479-80 + 110-856	479-120 + 80-882	479-120 + 90-895
490	490-70 + 80-791	490-70 + 90-804	490-70 + 100-830	490-110 + 70-856	490-110 + 80-869	490-110- + 90-895	490-110 + 100-908
508	508-60 + 90-804	508-100 + 60-830	508-100 + 70-843	508-100 + 80-869	508-100 + 90-882	508-100 + 100-908	508-100 + 110-934
533	533-90 + 60-830	533-90 + 70-856	533-90 + 80-869	533-90 + 90-895	533-90 + 100-908	533-90 + 110-934	533-110 + 100-947
558	558-80 + 70-856	558-80 + 80-882	558-80 + 90-895	558-100 + 80-921	558-100 + 90-934	558-100 + 100-960	558-100 + 110-973
612	612-70 + 80-908	612-100 + 60-934	612-100 + 70-947	612-100 + 80-973	612-100 + 90-986	612-100 + 100-1012	612-100 + 110-1038
630	630-90 + 60-934	630-90 + 70-947	630-90 + 80-973	630-90 + 90-986	630-90 + 100-1012	630-90 + 110-1025	630-90 + 120-1051
665	665-70 + 80-960	665-70 + 90-986	665-70 + 100-999	665-70 + 110-1025	665-70 + 120-1051	665-120 80-1064	665-120 + 90-1090
714	714-100 + 50-1012	714-100 + 60-1038	714-100 + 70-1051	714-100 + 80-1077	714-100 + 90-1090	714-100 + 100-1116	714-100 + 110-1129
720							
762	762-70 + 80-1064	762-70 + 90-1077	762-70 + 100-1103	762-70 + 110-1129	762-70 + 120-1142	762-70 + 130-1168	762-70 + 140-1181
813	813-50 + 100-1116	813-50 + 110-1129 813-100 + 60-1129	813-50 + 120-1155 813-100 + 70-1155	813-100 + 80-1168	813-100 + 90-1194	813-100 + 100-1207	813-100 + 110-1233
822	822-50 + 100-1116	822-90 + 70-1142	822-90 + 80-1168	822-90 + 90-1181	822-90 + 100-1194	822-90 + 110-1220	822-90 + 120-1246
914	914-50 + 100-1220	914-50 + 110-1233	914-50 + 120-1259	914-50 + 130-1272	914-50 + 140-1298	914-50 + 150-1311	

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Deliveries from Hällekis (SE)

Deliveries from Trzemeszno (PL)

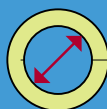
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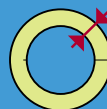
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# BIG PIPE ELBOWS DL

PAROC PRO SEGMENT WR DL 100  
 PAROC PRO SEGMENT DL 100  
 PAROC PRO SEGMENT WR DL 120  
 PAROC PRO SEGMENT DL 120  
 PAROC PRO SEGMENT WR DL 140  
 PAROC PRO SEGMENT DL 140



168-914 mm



80-300 mm



Inner diameter mm	Outer diameter mm							
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9							
	220	230	240	250	260	270	280	300
168	168-100 + 120-609	168-130 + 100-622	168-140 + 100-648	168-130 + 120-674	168-140 + 120-700	168-140 + 130-713	168-140 + 140-739	168-160 + 140-765
194	194-110 + 110-635	194-130 + 100-648	194-130 + 110-674	194-130 + 120-700	194-130 + 130-713	194-140 + 130-739	194-140 + 140-752	194-150 + 150-791
208	208-120 + 100-648	208-120 + 110-674	208-120 + 120-687	208-130 + 120-713	208-130 + 130-726	208-130 + 140-752	208-150 + 130-765	208-150 + 150-804
219	219-120 + 100-661	219-120 + 110-674	219-120 + 120-700	219-140 + 110-713	219-140 + 120-752	219-140 + 130-765	219-140 + 140-791	219-140 + 160-817
230	230-110 + 110-674	230-120 + 110-687	230-120 + 120-713	230-140 + 110-726	230-140 + 120-752	230-140 + 130-765	230-140 + 140-791	230-150 + 150-830
240	240-120 + 100-674	240-120 + 110-700	240-120 + 120-726	240-130 + 120-739	240-130 + 130-765	240-150 + 120-778	240-140 + 140-804	240-160 + 140-843
245	245-110 + 110-687	245-120 + 110-700	245-120 + 120-726	245-130 + 120-739	245-130 + 130-765	245-140 + 130-791	245-140 + 140-804	245-150 + 150-843
259	259-110 + 110-700	259-120 + 110-713	259-120 + 120-739	259-130 + 120-765	259-130 + 130-778	259-150 + 120-804	259-150 + 130-817	259-150 + 150-856
273	273-130 + 90-713	273-120 + 110-739	273-120 + 120-752	273-130 + 120-778	273-140 + 120-791	273-140 + 130-817	273-140 + 140-843	273-140 + 160-874
289	289-110 + 110-726	289-120 + 110-752	289-120 + 120-765	289-130 + 120-791	289-130 + 130-804	289-130 + 140-830	289-130 + 150-843	289-160 + 140-895
295	295-120 + 100-739	295-120 + 110-752	295-120 + 120-778	295-130 + 120-791	295-130 + 130-817	295-130 + 140-830	295-130 + 150-856	295-160 + 140-895
305	305-110 + 110-739	305-120 + 110-765	305-120 + 120-791	305-120 + 130-804	305-120 + 140-830	305-120 + 150-843	305-150 + 130-869	305-150 + 150-908
324	324-110 + 110-765	324-110 + 120-778	324-140 + 100-804	324-140 + 110-830	324-140 + 120-856	324-140 + 130-869	324-140 + 140-895	324-150 + 150-934
356	356-120 + 100-804	356-120 + 110-817	356-130 + 110-843	356-130 + 120-856	356-130 + 130-882	356-130 + 140-895	356-130 + 150-921	356-150 + 150-960
371	371-120 + 100-817	371-120 + 110-830	371-120 + 120-856	371-120 + 130-869	371-130 + 130-895	371-130 + 140-908	371-130 + 150-934	371-150 + 150-973 371-170 + 130-973
377	377-120 + 100-817	377-120 + 110-843	377-120 + 120-856	377-120 + 130-882	377-120 + 140-895	377-120 + 150-921	377-140 + 140-947	377-140 + 160-973

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Deliveries from Hällekis (SE) and Trzemeszno (PL)

Deliveries from Hällekis (SE)

Deliveries from Trzemeszno (PL)

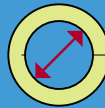
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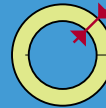
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# BIG PIPE ELBOWS DL

- PAROC PRO SEGMENT WR DL 100
- PAROC PRO SEGMENT DL 100
- PAROC PRO SEGMENT WR DL 120
- PAROC PRO SEGMENT DL 120
- PAROC PRO SEGMENT WR DL 140
- PAROC PRO SEGMENT DL 140



168-914 mm



80-300 mm



Inner diameter mm	Outer diameter mm							
	Nominal insulation thickness mm. Thickness tolerance: Class T8/T9							
	220	230	240	250	260	270	280	300
406	406-110 + 110-843	406-110 + 120-869	406-110 + 130-882	406-110 + 140-908	406-150 + 110-934	406-150 + 120-947	406-150 + 130-973	406-150 + 150-1012
426	426-100 + 120-869	426-100 + 130-882	426-140 + 100-908	426-140 + 110-921	426-140 + 120-947	426-140 + 130-973	426-140 + 140-986	426-140 + 160-1025
457	457-130 + 90-895	457-130 + 100-921	457-130 + 110-934	457-130 + 120-960	457-130 + 130-973	457-130 + 140-999	457-150 + 130-1012	457-150+150-1064 457-130+170-1051
479	479-120 + 100-921	479-120 + 110-934	479-120 + 120-960	479-140 + 110-973	479-140 + 120-999	479-140 + 130-1012	479-140 + 140-1038	479-140 + 160-1077
490	490-110 + 110-934	490-110 + 120-947	490-110 + 130-973	490-130 + 120-986	490-130 + 130-1012	490-130 + 140-1025	490-160 + 120-1051	490-160 + 140-1090
508	508-100 + 120-960	508-120 + 110-973	508-120 + 120-986	508-120 + 130-1012	508-120 + 140-1025	508-150 + 120-1051	508-150 + 130-1077	508-150 + 150-1116
533	533-110 + 110-973	533-110 + 120-999	533-110 + 130-1012	533-110 + 140-1038	533-140 + 120-1051	533-140 + 130-1077	533-140 + 140-1090	533-140 + 160-1129
558	558-120 + 100-999	558-120 + 110-1025	558-120 + 120-1038	558-130 + 120-1064	558-130 + 130-1077	558-130 + 140-1103	558-130 + 150-1116	558-130 + 170-1155
612	612-100 + 120-1051	612-100 + 130-1077	612-150 + 90-1090	612-150 + 100-1116	612-150 + 110-1129	612-150 + 120-1155	612-150 + 130-1168	612-150 + 150-1220
630	630-90 + 130-1077	630-140 + 90-1090	630-140 + 100-1116	630-140 + 110-1129	630-140 + 120-1155	630-140 + 130-1168	630-140 + 140-1194	630-140 + 160-1233
665	665-120 + 100-1103	665-120 + 110-1129	665-120 + 120-1142	665-120 + 130-1168	665-120 + 140-1181	665-120 + 150-1207		
714	714-100 + 120-1155	714-100 + 130-1181	714-100 + 140-1194	714-100 + 150-1220	714-150 + 110-1233	714-150 + 120-1259	714-150 + 130-1272	714-150 + 150-1311
720								
762	762-120 + 100-1207	762-120 + 110-1220	762-120 + 120-1246	762-120 + 130-1259	762-120 + 140-1285	762-120 + 130-1259	762-120 + 150-1311	
813	813-100 + 120-1259	813-100 + 130-1272	813-100 + 140-1298	813-100 + 150-1311	813-100 + 160-1337			
822	822-90 + 130-1259	822-90 + 140-1285	822-90 + 150-1298					
914								

Applies factory TRZ(PL): Not possible as PSSDLWR140

Applies factory TRZ(PL): Can't be produce with density 140 kg/m<sup>3</sup>

The table shows dimensions of PAROC Pro Segment (WR) DL.  
 PAROC Pro Segment (WR) DL is adapted for use with PAROC Pro Section (WR) DL and PAROC Pro Lock (WR).  
 PAROC Pro Segment (WR) DL can also be manufactured for bending radii other than 1.5D (3S), but not all combinations are possible.

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Deliveries from Hällekis (SE) and Trzemeszno (PL)

Deliveries from Hällekis (SE)

Deliveries from Trzemeszno (PL)

# MARKET-LEADING WATER ABSORPTION PROPERTIES FOR STONE WOOL INSULATION SUBSTANTIALLY BETTER THAN THE REQUIREMENTS OF THE TOUGHEST STANDARD AVAILABLE (EN13472)\*

\* Claims based on independent third party comparison involving products from major mineral wool manufacturers, conducted by Eurofins Lab 19036 on 16th of August 2019.

## NON-CONTACT INSULATION TO MINIMISE THE RISK OF CUI: PAROC CUI SPACERS + PAROC PRO CURVE (WR) + PAROC PRO SECTIONS (WR)



Corrosion under insulation (CUI) can dramatically the lifetime of piping and equipment, and increase the risk of leakages, shutdowns and potential injury to personnel in the area. A study by the National Association of Corrosion Engineers titled "Corrosion Costs and Preventive Strategies in the United States", commissioned by the American Congress in 2001, reported the direct national cost of corrosion to be US\$ 276 billion per year, and that is without consideration of indirect costs such as energy loss<sup>1</sup>

In addition to the existing WR product portfolio consisting of pipe sections, mats and slabs with leading water-repellent features, Paroc is now launching PAROC CUI Spacers and PAROC Pro Curve (WR) to meet a wider reach of insulation needs.

Corrosion under insulation refers to any type of corrosion that occurs due to moisture present on the external surface of insulated pipes and equipment. CUI is an issue for both onshore and offshore operations, including petrochemical, refining and power sectors, among many others.

PAROC Pro Curve (WR) products are delivered in two halves enabling an installation that is much faster than standard products. Combined with PAROC CUI Spacers, they are an extremely energy-efficient system (avoiding openings and thermal bridges) and a consistent high-performing insulation for the whole pipeline - guaranteeing a reliable, long-lasting insulation solution!

PAROC Pro Curve is available in 100, 120 and 140 kg/m<sup>3</sup>:

- PAROC Pro Curve (WR) 100
- PAROC Pro Curve (WR) 120
- PAROC Pro Curve (WR) 140

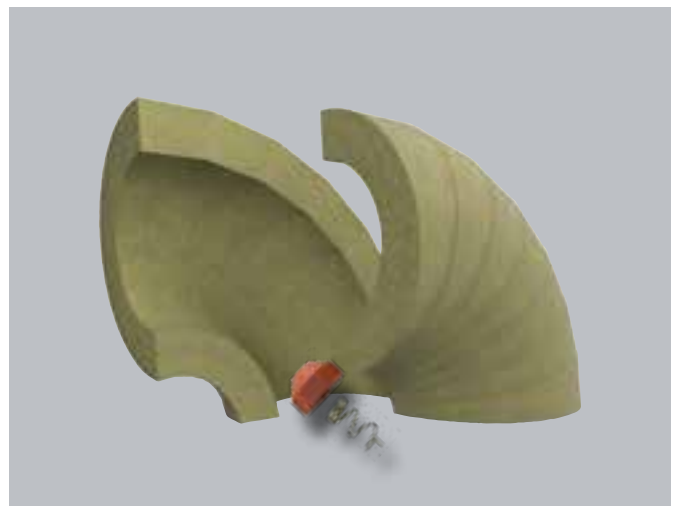
### HOW TO KEEP WATER AWAY FROM THE PIPE SURFACE?

When it comes to CUI, elbows are often seen as a weak point in the insulation system. Fortunately there is a solution for this problem:

**PAROC Pro Curve (WR)** and **PAROC CUI Spacers** form a strong alliance that can the risk of CUI and saves valuable installation time.

PAROC CUI Spacers can be considered one of the best solutions maintaining the distance between pipe and stonewool pipe insulation. Compared to other solutions on the market they offer a range of advantages.

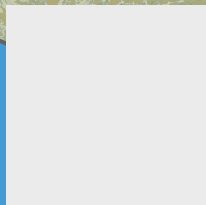
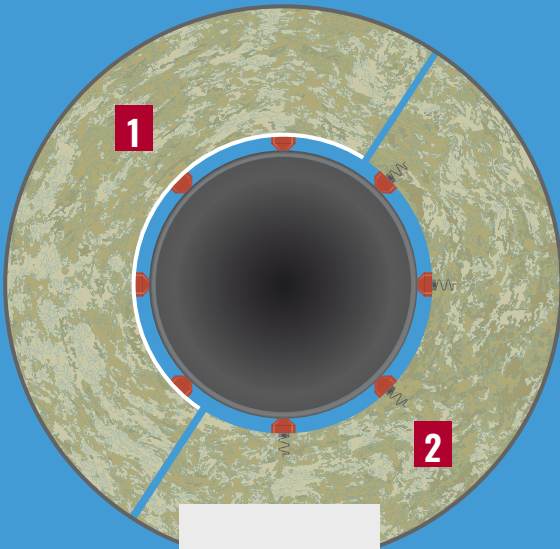
Thickness in mm	Available dimensions PAROC Pro Curve (WR)						
	114'	140'	168'	219'	273'	324'	356'
30	180	206	232	284	336	388	414
40	193	219	245	297	349	401	440
50	219	245	271	323	375	427	453
60		258	284	336	388	440	479
70		284	310	362	414	466	492
80			323	375	427	479	518
90			349	401	453	505	531
100			362	414	479	518	557
120			414				596



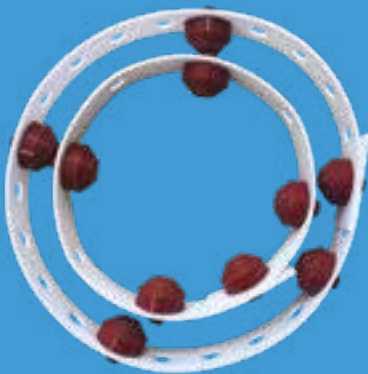
<sup>1</sup> <http://impact.nace.org/documents/ccsupp.pdf>



# INSTALLATION AND INSTRUCTIONS FOR PAROC CUI SPACERS



Installation Video



**Option 1: Mounted on a belt**  
Recommended for pipes >30 mm diameter



**Option 2: Single spacers with springs**  
recommended for pipes with  $\leq 30$  mm diameter and smaller areas of insulation (e. g. inspection hatches) as well as pipe elbows



## ADVANTAGES OF PAROC CUI SPACERS:

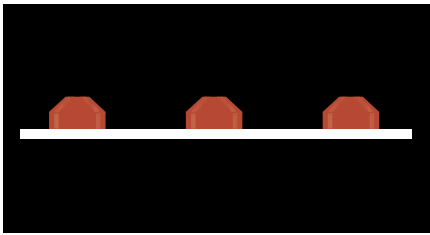
- No tools required for installation
- One size fits all; only one size needs to be stocked
- Easy and fast installation
- Provides space for electrical tracing
- No sharp edges
- Temperature range up to 200 °C

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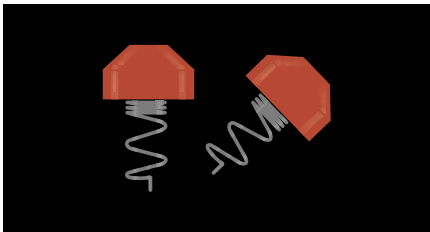


# INSTALLATION FOR PAROC CUI SPACERS

## 1. Spacers mounted on a belt



## 2. Single spacers with springs



# BELT LENGTH/NEEDED NUMBER OF SPACERS (RECOMMENDATIONS)

Nominal pipe size inch		Pipe Section inner diameter without spacers	Nominal diameter	Pipe Section inner diameter with spacers	Belt length mm	Suggested min. number of spacers	
A	B	C	D	E	F	G	
1/4	13.70	15	41	42	170	4	spacers with spring 26 mm high
3/8	17.10	18	44	48	180	4	
1/2	21.30	22	48	48	200	4	
3/4	26.70	28	54	54	220	4	
1	33.40	35	61	60	240	4	
1.25	42.20	42	68	70	260	4	
1.5	48.30	48	74	76	280	4	
		54	80	89	300	4	
		57	83	89	310	4	
2	60.30	60	86	89	320	4	spacers on the belt 42 mm high
		64	90	89	330	4	
		70	96	102	350	4	
		76	102	102	370	4	
3	88.90	89	115	114	410	4	
3.5	101.60	102	128	133	450	4	
		108	134	133	470	4	
4	114.30	114	140	140	490	4	
		121	147	159	510	5	
		127	153	159	530	5	
		133	159	159	550	5	
5	141.30	140	166	168	570	5	
		156	182	194	620	5	
		159	185	194	630	5	
6	168.30	168	194	194	660	5	
		194	220	219	740	6	
		208	234	240	780	6	
8	219.10	219	245	245	820	7	
		230	256	259	850	7	
		240	266	273	880	7	
		245	271	273	900	7	
		259	285	289	940	8	
10	273.10	273	299	305	980	8	
		289	315	324	1050	8	
		295	321	324	1050	8	
		305	331	356	1100	9	
12	323.80	324	350	356	1150	9	
14	355.60	356	382	406	1250	10	
		371	397	406	1300	10	
		377	403	406	1310	10	
16	406.40	406	432	457	1400	11	
		426	452	457	1470	12	
18	457.00	457	483	490	1570	13	
		479	505	508	1640	13	
		490	516	533	1670	13	
20	508.00	508	534	533	1730	14	
		533	559	558	1800	14	
		558	584	612	1890	15	
24	610.00	612	638	665	2060	16	
		630	656	665	2120	17	
28	711.00	714	740	762	2380	19	
30	762.00	762	788	813	2530	20	
32	813.00	813	839	914	2690	22	

# PAROC CALCULUS: DESIGN ENERGY-EFFICIENT INSULATION TAILORED TO YOUR PROJECT

PAROC® Calculus is a technical insulation calculation program for dimensioning thermal insulation for different HVAC, Process Industry and Marine applications e.g. pipes, ventilation ducts and process industry tanks. With PAROC Calculus it is also possible to calculate the heat loss for insulated and uninsulated valves and flanges, which usually increases the risk of heat loss. Additionally, the heat loss caused by thermal bridges in pipe and duct suspensions can be taken into account.

With PAROC Calculus you can design energy efficient and economical insulation solutions for different HVAC and process industry applications with PAROC products.

## PAROC Calculus features:

- Easy to use interface
- Works on pc, tablets and mobile phones
- Calculations for heat loss, surface temperature and temperature drop in pipes, ventilation ducts, process industry tanks, valves and flanges.
- Easy input of pipe diameters and duct dimensions (predefined)
- Thermal bridges of pipe and duct suspensions
- Print out your calculations to pdf
- All calculations are based on equations described in the EN ISO 12241 standard.

**Updated according to ISO 12241:2022**

### Step 1 Select application



### Step 2 Calculate with surface temperature display - cladding systems, suspensions and substructures can optionally be used for the calculation





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*Building Insulation offering covers a wide range of products and solutions for all traditional building insulation. The building insulation products are mainly used for the thermal, fire and sound insulation of exterior walls, roofs, floors and basements, intermediate floors and partitions. Sound absorbing ceilings and wall panels for interior acoustic control, as well as industrial noise control products, are available in the range.*

*Technical Insulation offering includes thermal, fire and sound insulation in HVAC systems, industrial processes and pipework, industrial equipment as well as shipbuilding and offshore industry.*

*For more information please visit [www.paroc.com](http://www.paroc.com)*

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