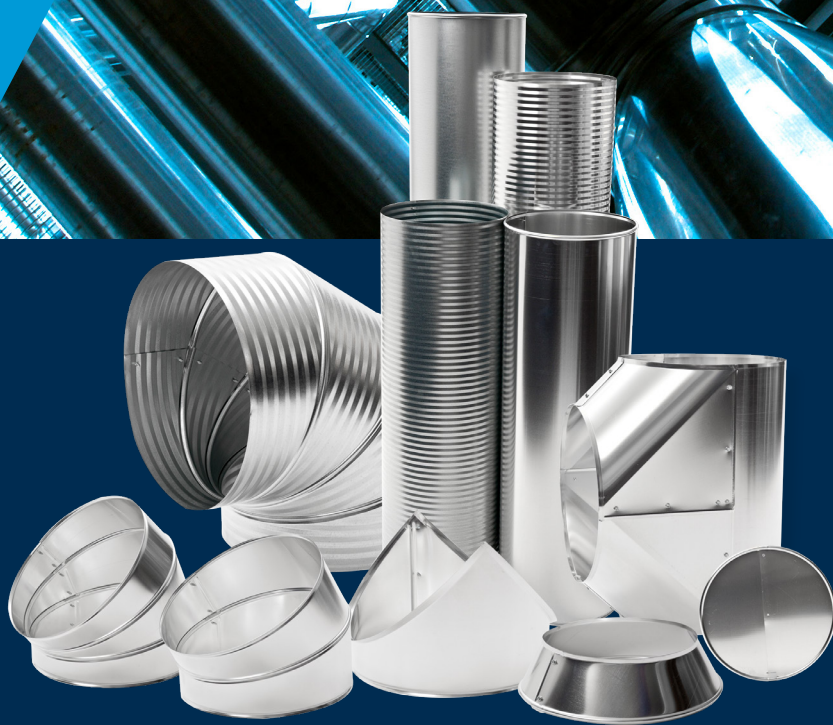
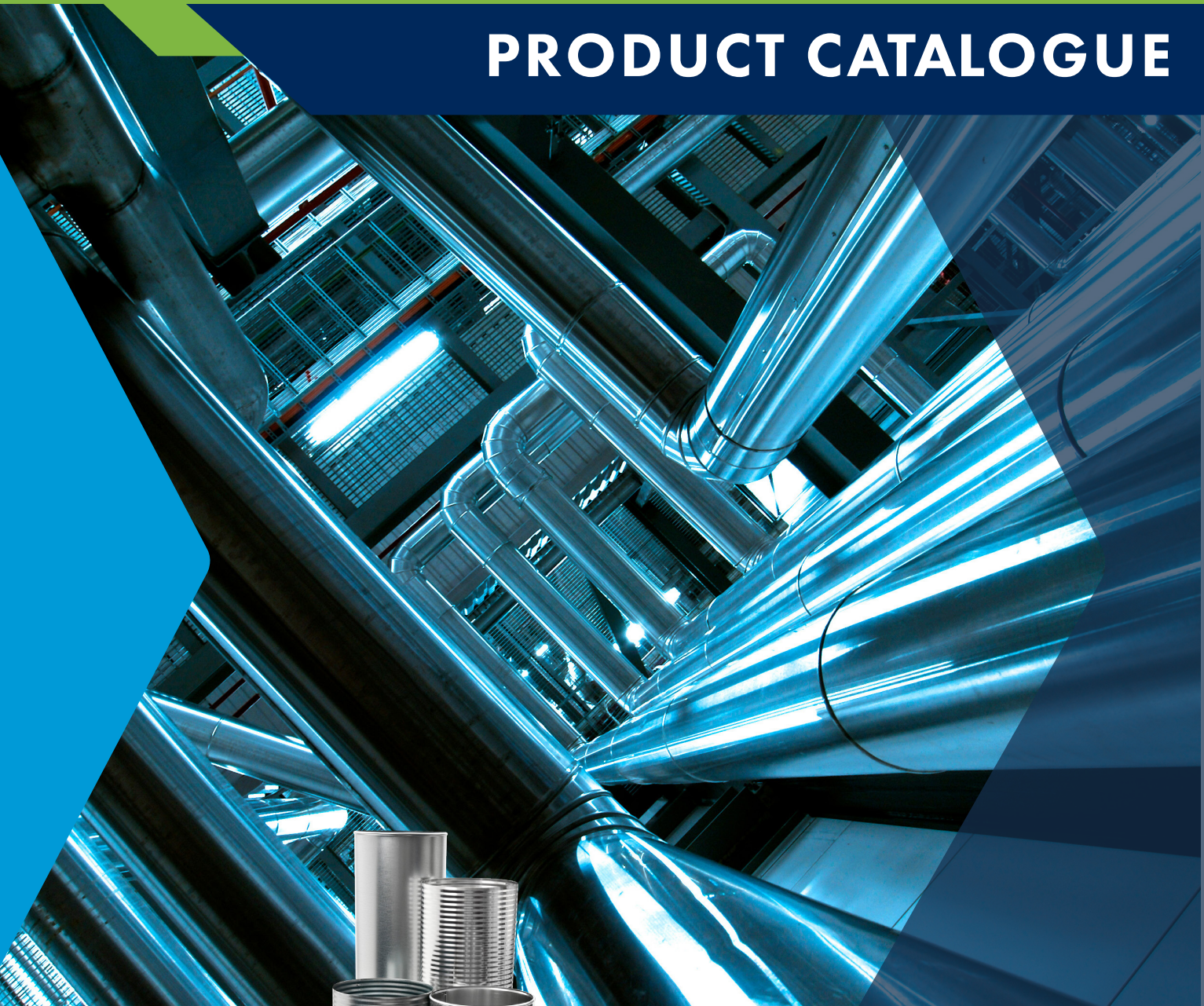


## PRODUCT CATALOGUE



**Sheet Metal Claddings**  
**Sheet Metal**  
**Raw Materials**  
**Corrugated Sheet Metals**  
**Base Structures**

**KESPET OY**  
*Cladding the future*



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**Kespets Oy is an international and leading Finnish company in the sale of HVAC and industrial insulation products and accessories.**

We have been manufacturing insulation products and projects since 1977. Today, we focus on the industrial manufacture of structural protective cladding and substructure systems, as well as the import, export and resale of various insulation and sheet metal equipment.

In 2021, Kespets Oy became part of the IPCOM Group, which is a European pioneer in the insulation industry. Starting cooperation supports our goals and brings benefits to our customers as well.

The manufacture, design, sales and marketing of Kespets products are certified in accordance with the ISO9001: 2015 and ISO14001: 2015 quality and environmental management systems. Our products are of high quality, comply with EU and Finnish building regulations and are competitively priced. As a custom work, we also manufacture products that meet the national standards of other countries.

In addition to our own production, we resell other technical insulation and cladding systems as well as tools and installation equipment. Our partners are long-established manufacturers in the field, such as Rockwool, Rohhe, SSAB, Armacell, Goebel, Ovako, Integrity Products, Alumeco and Tibnor.

Our production and head office are located in Vaajakoski, Jyväskylä. In addition, we serve customers in Helsinki, Tampere and Turku. Our sales units are well positioned to serve customers in Finland and abroad.

Quality and environmental management guide our operations at every level of our organization, and we want to offer our customers the best. We are a responsible company that takes care of customer satisfaction, its personnel and financial as well as environmental responsibility.



## **Savings and efficiency with the material service system**

As an expert in the field of HVAC and industrial insulation products, we supply our customers with all the materials needed for insulation work, but also with expert and solution services. Our customers can focus on their core business as we take care of the entire material supply; from design and dimensioning to site-specific material deliveries



# KESPET SHEET METAL CLADDING



## Kespet Sheet Metal Claddings for HVAC, process and ventilation pipings

Our ready-to-install cladding and base structures are an economical, high-quality solution. The products are manufactured in quality controlled, standardized processes with modern production lines. Automated production ensures the compatibility of sheet metal claddings and supporting base structure systems.

Our products are made of metal and they're therefore non-flammable. The most fireproof cladding solution for HVAC and industrial construction:

- No life-threatening smoke gases
- Nonflammable
- Impact resistant
- Easy to install
- Easy to recycle
- Maintains its value

**Attention!** The cladding dimensions in the catalogue are default values. We also manufacture claddings according to dimensions supplied by the customer, or according to different types of insulation materials and various insulation manufacturers products .

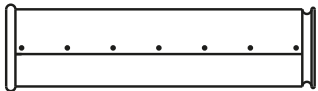
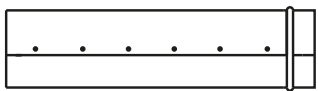
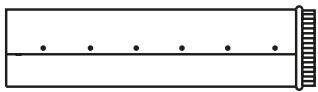
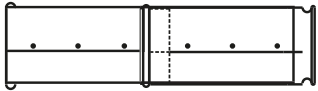
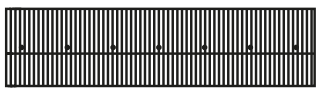
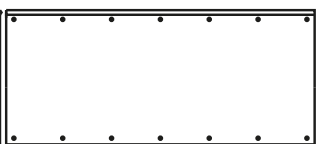


### Kespet sheet metal claddings include:






- Pipe cladding in standard lengths 1000 mm and 1250 mm.
- Segment elbows for HVAC and process piping.
- Segment elbows for ventilation piping.
- Formed pieces: reducers, t-connections, t-pieces and end caps.
- Insulation boxes.
- Vessel claddings.
- Base structures.



## Models

- A**  **A-model**, standard pipe cladding. Beading type P+A.
- B**  **B-model**, overlap pipe cladding. Overlap 50-100 mm. Beading type T. +/- 0 % standard pipe's price.
- C**  **C-model**, pipe cladding. Overlap 20-50 mm. Beading type T+R. +20% standard pipe's price.
- D**  **D-model**, expansion pipe cladding pair. Overlap 20-50 mm. Pair beading type P+T+A. Price 2 x standard pipe cladding + 5 %. Packing in pairs inside standard pipe claddings + 10%.
- E**  **E-model**, grooved pipe cladding. +/- 0% standard pipe's price.
- F**  **F-model** (made on request), without rounding and end beading. - 10 % standard pipe's price.

## Beadings

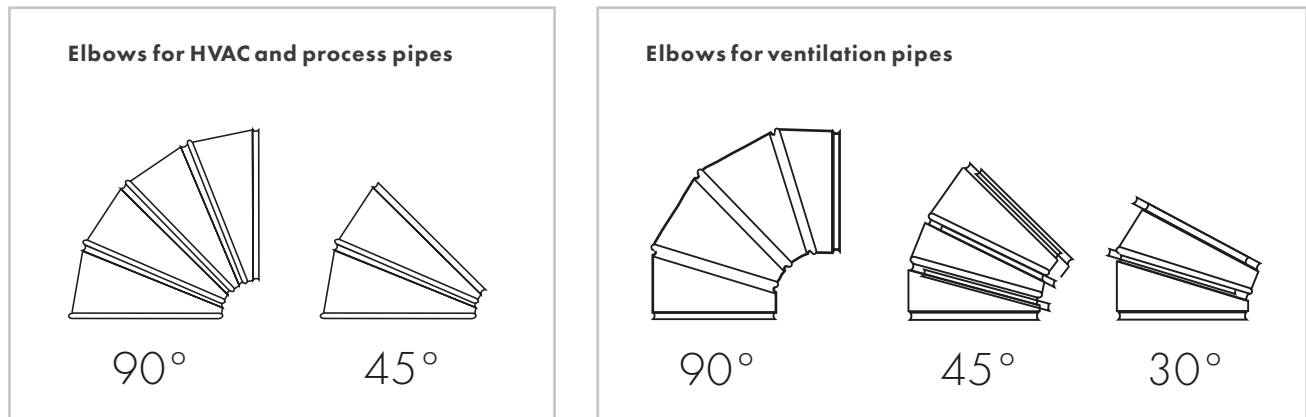
Beading type	
A = P+A standard type	
B = T overlap 50...100 mm	
C = T+Ruffle overlap 20...50 mm	
D = P+T+A overlap 20...50 mm	
G = Tank and round smoke and air duct overlap cladding, overlap 50...100 mm	

**No more useless stumps rolling all over the place!**

Save money with Kespert fixed size pipe cladding and special pieces.

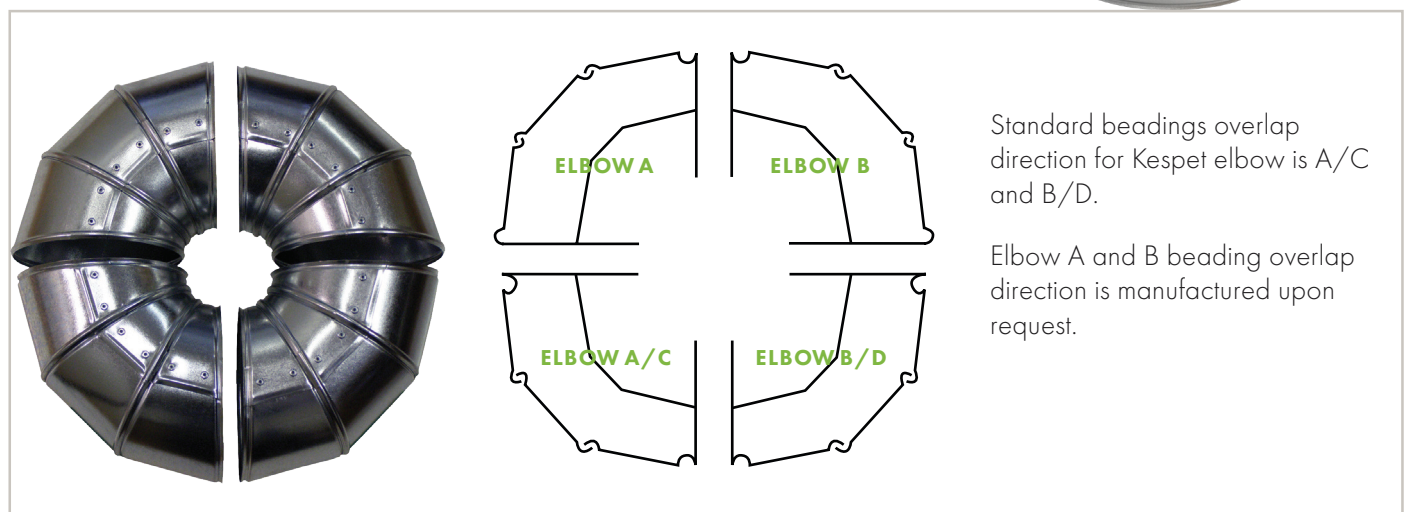


## Models

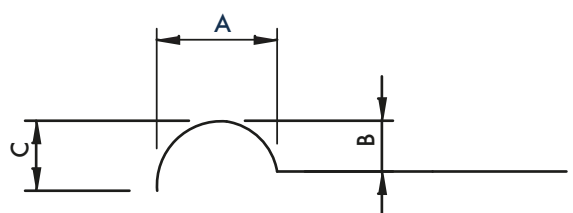


All pipe sizes of Kespel HVAC standard elbows are manufactured according to the models described above. Ventilation elbow manufacturing radius = 1xD. Non-standard amounts of segments or manufacturing radius must be indicated on orders. In such cases, pricing is negotiated separately.

## Beadings



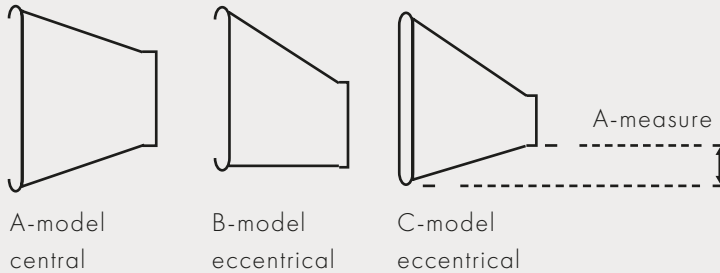
Beading furrow minimum measures			
Outer diameter	a	b	c
70...100	3	2	3
101...200	4	3	4.5
201...500	6	4	6
501...1000	10	4.5	7.5
over 1000	12	5	9





## Reducers

Reducers are used as a transforming piece, when the diameter of the cladding changes as the insulation and/or pipe changes. The standard model eccentric reducer is manufactured with one side being straight. If necessary, it can also be produced according to the indicated line deviation (model C).



Installed from the larger end to the joining of the cladding and from the smaller end with the connecting collar.

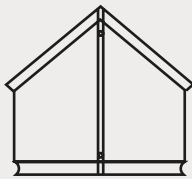
Under- or overlay beadings on both ends available on request.

## T-connections

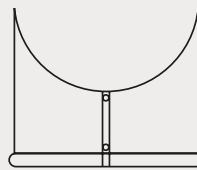
T-connections are used as a starting collar either from larger or equal sized pipe. In the standard model, the seam is on the long side. If necessary, it can also be manufactured with the seam on the short side. T-connections are also available as obliques, the degree of the inner corner must be indicated on the order.



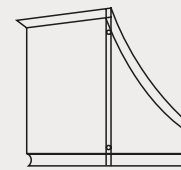
P-model



L-model



Oblique T-connection

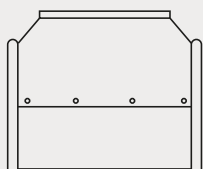


## T-pieces

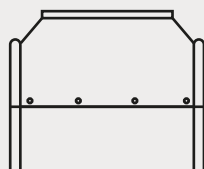
A t-piece is a cladding coupling specially intended for larger ventilation ducts. The t-piece is installed over the close brought claddings. Can also be manufactured without the cladding section (model B).



A-model



B-model



Installed over pipe claddings, connecting seam with over beading.

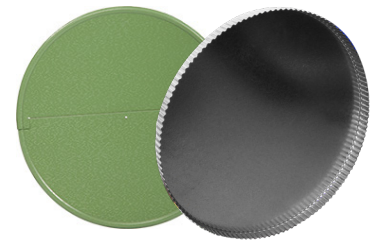
Also available as a special product with under beadings.



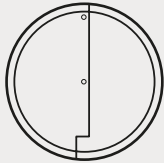
## End Caps, Notch and Expansion Joint

### End Caps

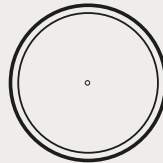
End caps are used for pipe ends. The standard model is delivered as a solid two-piece product. End caps can also be manufactured with a hole (suitable for a pipe). One-piece end cap and furrow edge end cap with edge turned about 20 mm over or under the cladding are also available on request.



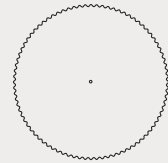
A-model, standard end cap



B-model, solid end cap

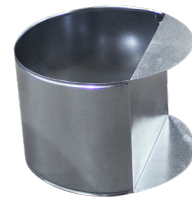


End cap with furrow edge

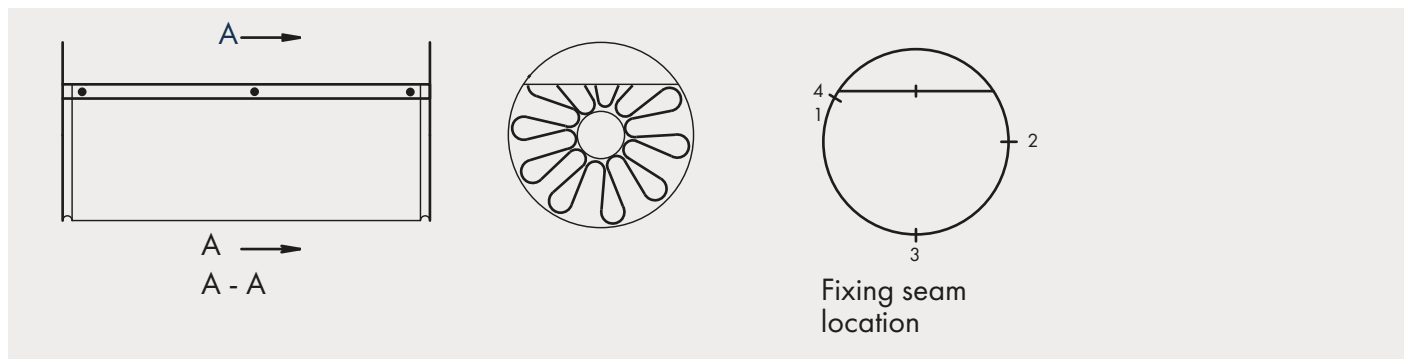


### Notch

A notch is used when insulation has to be thinned for some obstacle in part of the pipe. The obstacle is bypassed with the notch. The notch can be manufactured as an open ended version, or a closed version. The closed version has a flap

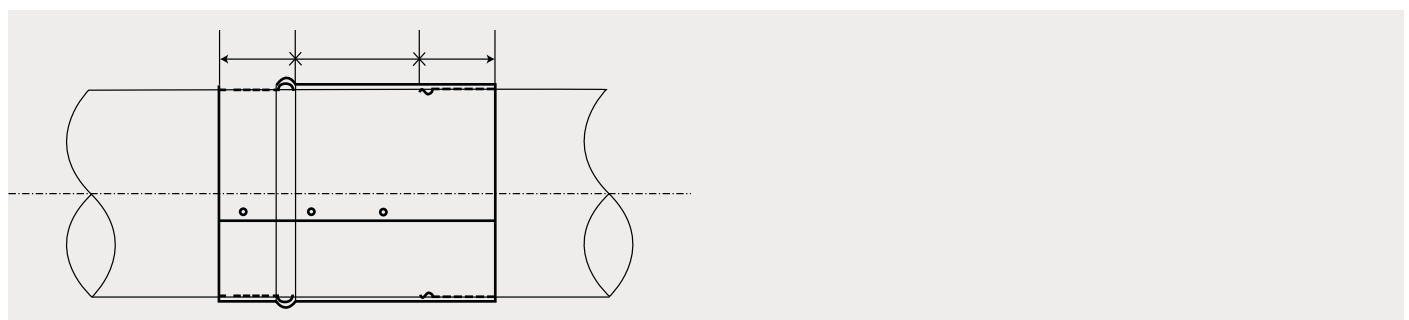


at the end, enabling a connection with a standard pipe cladding. Fixing seam location can be chosen from the options presented in the picture below.



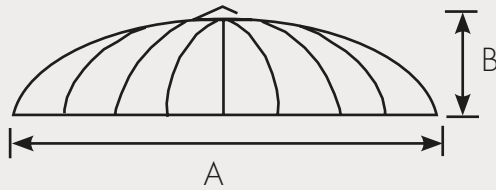
### Expansion Joint

An expansion joint is used in long straight pipes every 6 meters to remove the effect of thermal movement. The expansion joint can be installed directly between the standard claddings.

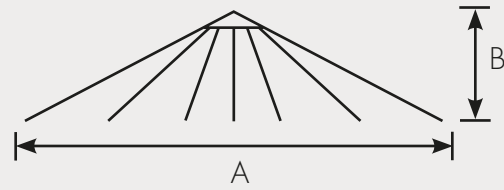




## Zeppelin Gable



## Cone Gable



## Gable seam options

Zeppelin gable		Cone gable		
A standard, inside	B inside	A standard, inside	B inside	E inside
C outside	D outside	D outside	C outside. 75 mm	F outside

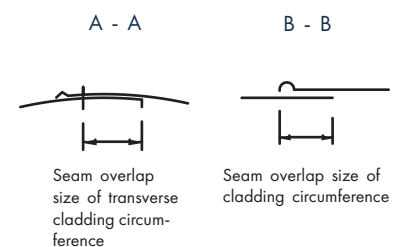
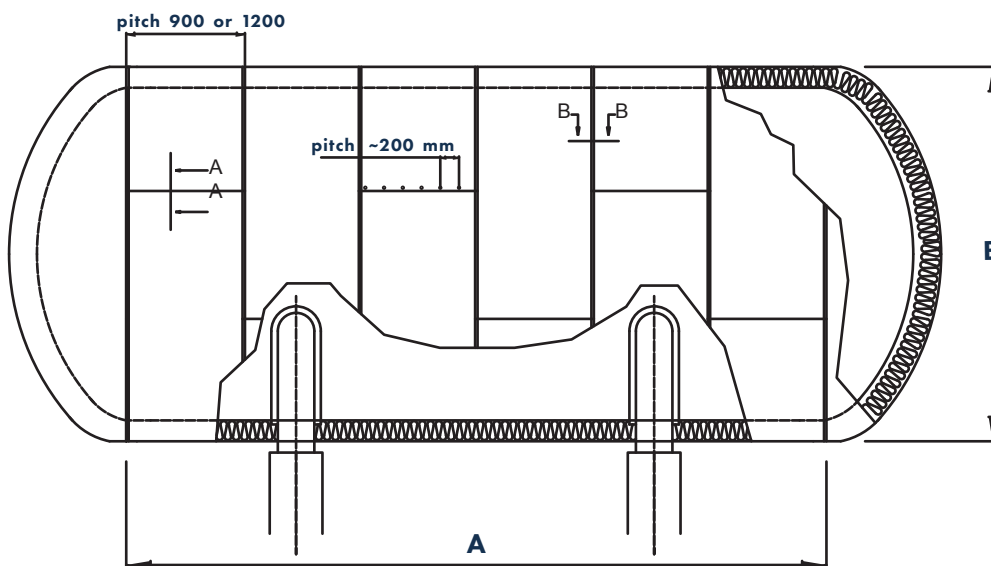
- Gable manufacturing according to standard PSK 3707.
- Assembled as ready-to-install sections or blocks.
- Also available according to the standard gable model.
- AB zeppelin gables and AB cone gables can also be manufactured according to measurements provided by the customer.

## Vessel Cladding

Cladding for sections in horizontal or vertical vessels. Manufacturing from all standard materials.

Manufactured as ready-perforated and with beadings according to the vessel measurements.

Standard overlap in the cladding's circumferential direction is 100 mm with a 30 mm circumference of the perimeter. Can be manufactured with other overlappings upon request. Circumference direction overlap size is freely selectable. Transverse seam 30,50 or 100 mm. Transverse seam is manufactured with 20 mm support edge when needed.





### Sheet Metal Cladding Materials

Materials	Steel Class
Hot galvanized steel sheet metal	EN 10346 Dx51 d+z275
Aluminium sheet metal	EN 3103H16
Stainless steel sheet metal	EN 10088-2-1.4301+2B
Acid proof sheet metal	EN 10088-2-1.4404+2B
PVDF 27 µm/10 µm colour coated hot galvanized steel sheet metal	EN 10346 S280GD+z275
PVC 200 µm/20 µm colour coated hot galvanized steel sheet metal	EN 10346 S280GD+z275
Aluminium galvanized steel sheet metal	EN 10346 Dx51 d+az150 or +az185
Stucco sheet metal	EN 3103H16
PURAL 50 µm/10 µm colour coated hot galvanized steel sheet metal	EN 10346 S280GD+z275

### Material thicknesses (HVAC and process pipes)

Outer diameter Ø...Ø	Aluminium sheet	Hot galvanized steel sheet	PVDF and PVC coated, hot galvanized steel sheet	Stainless and acid proof sheet
70...150	0,5	0,5	0,5	0,4
151...500	0,7	0,5	0,5	0,4
501...800	1,0	0,6	0,6	0,5
over 800	1,0	0,7	0,7	0,5

Kespet sheet metal cladding material thicknesses are based on standard PSK 3706 Pipe, tank and device insulations. Claddings and base structures.



Kespet pipe cladding markings indicate the pipe cladding diameter, material, material thickness and manufacturing date. The markings are made on the claddings inner surface with weatherproof ink.

The markings of Kespet segment elbows indicate their diameter, pipe size and insulation thickness (ventilation pipes) or manufacturing radius (HVAC pipes) and beading overlap direction (A/C, B/D, A or B). The markings are done with stickers or weatherproof stickers. Markings of other Kespet products indicate a products measurements and other specific information.

Product markings can also be done according to a customers specifications upon request.



# KESPET OY

*Cladding the future*

## SHEET METAL CLADDING SYSTEMS

- ✓ *No life-threatening smoke gases*
- ✓ *Nonflammable*
- ✓ *Good impact resistance*
- ✓ *Easy to install*
- ✓ *Easy to recycle*
- ✓ *Maintains its value*



## Pipe Cladding

Pipe DN mm	Insulation pipe inner diameter ø = mm	ø = pipe cladding outer diameter mm										
		RR = pipe cladding circle measurement (hole to hole measurement) mm										
		Insulation thicknesses mm										
			20	30	40	50	60	80	100	120	140	160
-	12/15	ø RR	<b>70</b> <b>220</b>	<b>86</b> <b>270</b>	<b>106</b> <b>333</b>	<b>122</b> <b>383</b>	<b>146</b> <b>458</b>	<b>185</b> <b>581</b>				
10	18	ø RR	<b>70</b> <b>220</b>	<b>86</b> <b>270</b>	<b>106</b> <b>333</b>	<b>133</b> <b>418</b>	<b>146</b> <b>458</b>	<b>185</b> <b>581</b>				
15	22	ø RR	<b>76</b> <b>239</b>	<b>96</b> <b>301</b>	<b>115</b> <b>361</b>	<b>133</b> <b>418</b>	<b>146</b> <b>458</b>	<b>199</b> <b>625</b>				
20	28	ø RR	<b>76</b> <b>239</b>	<b>96</b> <b>301</b>	<b>115</b> <b>361</b>	<b>133</b> <b>418</b>	<b>160</b> <b>502</b>	<b>199</b> <b>625</b>				
25	35	ø RR	<b>86</b> <b>270</b>	<b>106</b> <b>333</b>	<b>122</b> <b>383</b>	<b>146</b> <b>458</b>	<b>160</b> <b>502</b>	<b>199</b> <b>625</b>				
32	42	ø RR	<b>96</b> <b>301</b>	<b>115</b> <b>361</b>	<b>133</b> <b>418</b>	<b>160</b> <b>502</b>	<b>173</b> <b>543</b>	<b>213</b> <b>669</b>				
40	48	ø RR	<b>96</b> <b>301</b>	<b>115</b> <b>361</b>	<b>133</b> <b>418</b>	<b>160</b> <b>502</b>	<b>173</b> <b>543</b>	<b>213</b> <b>669</b>	<b>253</b> <b>794</b>			
-	54	ø RR	<b>106</b> <b>333</b>	<b>122</b> <b>383</b>	<b>146</b> <b>458</b>	<b>160</b> <b>502</b>	<b>185</b> <b>581</b>	<b>225</b> <b>707</b>	<b>266</b> <b>835</b>			
50	60	ø RR	<b>122</b> <b>383</b>	<b>122</b> <b>383</b>	<b>146</b> <b>458</b>	<b>173</b> <b>543</b>	<b>185</b> <b>581</b>	<b>225</b> <b>707</b>	<b>266</b> <b>835</b>			
-	64	ø RR	<b>122</b> <b>383</b>	<b>133</b> <b>418</b>	<b>146</b> <b>458</b>	<b>173</b> <b>543</b>	<b>199</b> <b>625</b>	<b>238</b> <b>747</b>	<b>278</b> <b>873</b>			
65	76	ø RR	<b>133</b> <b>418</b>	<b>146</b> <b>458</b>	<b>160</b> <b>502</b>	<b>185</b> <b>581</b>	<b>199</b> <b>625</b>	<b>253</b> <b>794</b>	<b>292</b> <b>917</b>			
80	89	ø RR	<b>146</b> <b>458</b>	<b>160</b> <b>502</b>	<b>173</b> <b>543</b>	<b>199</b> <b>625</b>	<b>213</b> <b>669</b>	<b>253</b> <b>794</b>	<b>304</b> <b>955</b>	<b>345</b> <b>1083</b>		
100	114	ø RR	<b>173</b> <b>543</b>	<b>185</b> <b>581</b>	<b>199</b> <b>625</b>	<b>225</b> <b>707</b>	<b>238</b> <b>747</b>	<b>292</b> <b>917</b>	<b>332</b> <b>1042</b>	<b>371</b> <b>1165</b>		
125	140	ø RR	<b>199</b> <b>625</b>	<b>213</b> <b>669</b>	<b>225</b> <b>707</b>	<b>253</b> <b>794</b>	<b>266</b> <b>835</b>	<b>318</b> <b>999</b>	<b>345</b> <b>1083</b>	<b>385</b> <b>1209</b>	<b>436</b> <b>1369</b>	
150	168	ø RR	<b>213</b> <b>669</b>	<b>238</b> <b>747</b>	<b>253</b> <b>794</b>	<b>278</b> <b>873</b>	<b>304</b> <b>955</b>	<b>345</b> <b>1083</b>	<b>385</b> <b>1209</b>	<b>424</b> <b>1331</b>	<b>464</b> <b>1457</b>	<b>504</b> <b>1583</b>
200	219	ø RR	<b>266</b> <b>835</b>	<b>292</b> <b>917</b>	<b>304</b> <b>955</b>	<b>332</b> <b>1042</b>	<b>345</b> <b>1083</b>	<b>385</b> <b>1209</b>	<b>424</b> <b>1331</b>	<b>464</b> <b>1457</b>	<b>517</b> <b>1623</b>	<b>556</b> <b>1746</b>
250	273	ø RR	<b>332</b> <b>1042</b>	<b>345</b> <b>1083</b>	<b>358</b> <b>1124</b>	<b>385</b> <b>1209</b>	<b>411</b> <b>1291</b>	<b>451</b> <b>1416</b>	<b>491</b> <b>1542</b>	<b>530</b> <b>1664</b>	<b>568</b> <b>1784</b>	<b>612</b> <b>1915</b>
300	324	ø RR	<b>385</b> <b>1209</b>	<b>396</b> <b>1243</b>	<b>411</b> <b>1291</b>	<b>436</b> <b>1369</b>	<b>451</b> <b>1416</b>	<b>491</b> <b>1542</b>	<b>530</b> <b>1664</b>	<b>582</b> <b>1827</b>	<b>622</b> <b>1953</b>	<b>661</b> <b>2076</b>
350	356	ø RR	<b>411</b> <b>1291</b>	<b>436</b> <b>1369</b>	<b>451</b> <b>1416</b>	<b>464</b> <b>1457</b>	<b>491</b> <b>1542</b>	<b>530</b> <b>1664</b>	<b>572</b> <b>1796</b>	<b>612</b> <b>1915</b>	<b>647</b> <b>2032</b>	<b>687</b> <b>2157</b>
400	406	ø RR	<b>464</b> <b>1457</b>	<b>491</b> <b>1542</b>	<b>504</b> <b>1583</b>	<b>517</b> <b>1623</b>	<b>542</b> <b>1705</b>	<b>582</b> <b>1827</b>	<b>622</b> <b>1953</b>	<b>661</b> <b>2076</b>	<b>702</b> <b>2198</b>	<b>742</b> <b>2324</b>
500	508	ø RR	<b>568</b> <b>1784</b>	<b>582</b> <b>1827</b>	<b>612</b> <b>1915</b>	<b>622</b> <b>1953</b>	<b>635</b> <b>1994</b>	<b>687</b> <b>2157</b>	<b>722</b> <b>2277</b>	<b>768</b> <b>2412</b>	<b>802</b> <b>2518</b>	<b>842</b> <b>2653</b>
600	612	ø RR	<b>672</b> <b>2110</b>	<b>687</b> <b>2157</b>	<b>702</b> <b>2198</b>	<b>722</b> <b>2277</b>	<b>742</b> <b>2324</b>	<b>792</b> <b>2487</b>	<b>831</b> <b>2609</b>	<b>872</b> <b>2735</b>	<b>912</b> <b>2857</b>	<b>940</b> <b>2983</b>
700	714	ø RR	<b>768</b> <b>2412</b>	<b>792</b> <b>2487</b>	<b>802</b> <b>2518</b>	<b>831</b> <b>2609</b>	<b>842</b> <b>2653</b>	<b>882</b> <b>2773</b>	<b>922</b> <b>2898</b>	<b>975</b> <b>3062</b>	<b>1012</b> <b>3187</b>	<b>1052</b> <b>3313</b>
800	813	ø RR	<b>872</b> <b>2735</b>	<b>882</b> <b>2773</b>	<b>912</b> <b>2857</b>	<b>922</b> <b>2898</b>	<b>940</b> <b>2983</b>	<b>986</b> <b>3096</b>	<b>1026</b> <b>3222</b>	<b>1067</b> <b>3350</b>	<b>1107</b> <b>3476</b>	<b>1147</b> <b>3602</b>
900	914	ø RR	<b>975</b> <b>3062</b>	<b>986</b> <b>3096</b>	<b>1012</b> <b>3187</b>	<b>1026</b> <b>3222</b>	<b>1052</b> <b>3313</b>	<b>1092</b> <b>3426</b>	<b>1132</b> <b>3551</b>	<b>1172</b> <b>3696</b>	<b>1212</b> <b>3806</b>	<b>1252</b> <b>3931</b>
1000	1016	ø RR	<b>1067</b> <b>3350</b>	<b>1092</b> <b>3426</b>	<b>1107</b> <b>3476</b>	<b>1132</b> <b>3551</b>	<b>1156</b> <b>3630</b>	<b>1196</b> <b>3755</b>	<b>1237</b> <b>3884</b>	<b>1277</b> <b>4010</b>	<b>1317</b> <b>4135</b>	<b>1360</b> <b>4270</b>



## Segment elbow 1,5 x D


Pipe DN mm	Insulation pipe inner diameter ø =mm	ø = elbow outer diameter mm										
		R = manufacturing radius mm										
		Insulation thicknesses mm										
			20	30	40	50	60	80	100	120	140	160
-	12 / 15	ø = R =	70 55	86 68	106 78							
10	18	ø = R =	70 55	86 68	106 78							
15	22	ø = R =	76 63	96 73	115 82	133 90						
20	28	ø = R =	76 63	96 73	115 82	133 90						
25	35	ø = R =	86 68	106 78	122 86	146 98	160 105	199 135				
32	42	ø = R =	96 73	115 82	133 90	160 105	173 115	213 145	253 160			
40	48	ø = R =	96 73	115 82	133 90	160 105	173 115	213 145	253 160			
-	54	ø = R =	106 78	122 86	146 98	160 105	185 125	225 160	266 175			
50	60	ø = R =		122 86	146 98	173 115	185 125	225 160	266 175			
-	64	ø = R =		133 90	146 98	173 115	199 135	238 165	278 180			
65	76	ø = R =		146 98	160 105	185 125	199 135	253 170	292 185			
80	89	ø = R =		160 105	173 115	199 135	213 145	253 170	304 200	345 230		
100	114	ø = R =		185 155	199 155	225 160	238 165	292 185	332 210	371 250		
125	140	ø = R =			225 190	253 190	266 190	318 210	345 230	385 250	436 280	
150	168	ø = R =			253 230	278 230	304 230	345 230	385 250	424 270	464 280	504 300
200	219	ø = R =			304 305	332 305	345 305	385 305	424 305	464 305	517 310	556 330
250	273	ø = R =			358 381	385 381	411 381	451 381	491 381	530 381	568 381	612 381
300	324	ø = R =			411 457	436 457	451 457	491 457	530 457	582 457	622 457	661 457
350	356	ø = R =				464 533	491 533	530 533	572 533	612 533	647 533	687 533
400	406	ø = R =				517 610	542 610	582 610	622 610	661 610	702 610	742 610
500	508	ø = R =				622 762	635 762	687 762	722 762	768 762	802 762	842 762
600	612	ø = R =				722 914	742 914	792 914	831 914	872 914	912 914	940 914
700	714	ø = R =				831 1070	842 1070	882 1070	922 1070	975 1070	1012 1070	1052 1070
800	813	ø = R =				922 1220	940 1220	986 1220	1026 1220	1067 1220	1107 1220	1147 1220
900	914	ø = R =				1026 1370	1052 1370	1092 1370	1132 1370	1172 1370	1212 1370	1252 1370
1000	1016	ø = R =				1132 1525	1156 1525	1196 1525	1237 1525	1277 1525	1317 1525	1360 1525

 = 3 segment pieces

 = 6 segment pieces

 = 10 segment pieces

 = 4 segment pieces


 = 8 segment pieces

 = 12 segment pieces


Aluminium and galvanized sheet metal storage sizes are inside the area with reinforced line.

## Segment elbow special sizes thermal procession pipes

Pipe DN mm	Insulation pipe inner diameter ø =mm	ø = elbow outer diameter mm									
		R = manufacturing radius mm									
		Insulation thicknesses mm									
			30	40	50	60	80	100	120	140	160
60	70	ø = R =	<b>133 90</b>	<b>160 105</b>	<b>173 115</b>	<b>199 135</b>	<b>238 160</b>				
89	102	ø = R =	<b>173 115</b>	<b>199 135</b>	<b>213 145</b>	<b>225 160</b>	<b>278 180</b>				
114	127	ø = R =	<b>199 155</b>	<b>213 160</b>	<b>238 165</b>	<b>253 170</b>	<b>292 185</b>	<b>332 210</b>			
169	178	ø = R =		<b>266 230</b>	<b>292 230</b>	<b>310 230</b>	<b>345 230</b>	<b>385 250</b>	<b>424 270</b>		
219	230	ø = R =		<b>318 305</b>	<b>345 305</b>	<b>358 305</b>	<b>396 305</b>	<b>436 305</b>	<b>478 305</b>		
273	289	ø = R =		<b>385 381</b>	<b>396 381</b>	<b>424 381</b>	<b>464 381</b>	<b>504 381</b>	<b>542 381</b>		
324	356	ø = R =		<b>451 457</b>	<b>464 457</b>	<b>491 457</b>	<b>530 457</b>	<b>572 457</b>	<b>612 457</b>	<b>647 457</b>	
356	371	ø = R =			<b>478 533</b>	<b>504 533</b>	<b>542 533</b>	<b>582 533</b>	<b>622 533</b>	<b>661 533</b>	
406	426	ø = R =			<b>542 610</b>	<b>556 610</b>	<b>592 610</b>	<b>635 610</b>	<b>675 610</b>	<b>712 610</b>	<b>768 610</b>
508	533	ø = R =			<b>647 762</b>	<b>661 762</b>	<b>702 762</b>	<b>752 762</b>	<b>792 762</b>	<b>831 762</b>	<b>872 762</b>
612	630	ø = R =			<b>742 914</b>	<b>768 914</b>	<b>802 914</b>	<b>842 914</b>	<b>882 914</b>	<b>922 914</b>	<b>962 914</b>

 = 3 segment pieces

 = 4 segment pieces

 = 6 segment pieces

 = 8 segment pieces







## Segment elbow 3 x D


Pipe DN mm	Insulation pipe inner diameter ø =mm	ø = pipe cladding outer diameter mm													
		R = manufacturing radius mm													
		Insulation thicknesses mm													
			30	40	50	60	80	100	120	140	160	180	200	220	240
25	35	ø = R =	106 95	122 104	146 120	160 125	199 140								
32	42	ø = R =	115 96	133 114	160 120	173 130	213 157	253 165							
40	48	ø = R =	115 120	133 120	160 120	173 130	213 157	253 165							
-	54	ø = R =	122 120	146 120	160 120	185 135	225 160	266 175							
50	60	ø = R =	122 150	133 150	173 150	185 150	225 160	266 175							
-	64	ø = R =	133 150	146 150	173 150	199 150	238 165	278 180							
65	76	ø = R =	146 195	160 195	185 195	199 195	253 195	292 210	332						
80	89	ø = R =	160 240	173 240	199 240	213 240	253 240	304 240	345 240	385 250	424 270				
100	114	ø = R =	185 300	199 300	225 300	238 300	292 300	332 300	371 300	411 300	451 300	491 300	530 320		
125	140	ø = R =	213 375	225 375	253 375	266 375	318 375	345 375	385 375	436 375	478 375	517 375	556 375	592 375	635 375
150	168	ø = R =	238 450	253 450	278 450	304 450	345 450	385 450	424 450	464 450	504 450	542 450	582 450	622 450	661 450
200	219	ø = R =	292 600	304 600	332 600	345 600	385 600	424 600	464 600	517 600	556 600	592 600	635 600	675 600	712 600
250	273	ø = R =	345 750	358 750	385 750	411 750	451 750	491 750	530 750	568 750	612 750	647 750	687 750	722 750	768 750
300	324	ø = R =	385 900	411 900	436 900	451 900	491 900	530 900	582 900	622 900	661 900	702 900	742 900	792 900	831 900
350	356	ø = R =	424 1050	451 1050	464 1050	491 1050	530 1050	572 1050	612 1050	647 1050	687 1050	722 1050	768 1050	802 1050	842 1050
400	406	ø = R =	470 1200	491 1200	517 1200	542 1200	582 1200	622 1200	661 1200	702 1200	742 1200	778 1200	831 1200	872 1200	912 1200
500	508	ø = R =	582 1500	612 1500	622 1500	635 1500	687 1500	722 1500	768 1500	802 1500	842 1500	882 1500	922 1500	962 1500	1012 1500
600	612	ø = R =	687 1800	702 1800	722 1800	742 1800	792 1800	831 1800	872 1800	912 1800	940 1800	986 1800	1026 1800	1067 1800	1112 1800
700	714	ø = R =	792 2100	802 2100	831 2100	842 2100	882 2100	922 2100	975 2100	1012 2100	1052 2100	1092 2100	1132 2100	1172 2100	1212 2100
800	813	ø = R =	882 2400	912 2400	922 2400	940 2400	986 2400	1026 2400	1067 2400	1107 2400	1147 2400	1196 2400	1237 2400	1277 2400	1317 2400
900	914	ø = R =	986 2700	986 2700	1026 2700	1052 2700	1092 2700	1132 2700	1172 2700	1212 2700	1252 2700	1294 2700	1334 2700	1374 2700	1422 2700
1000	1016	ø = R =	1092 3000	1107 3000	1132 3000	1156 3000	1196 3000	1237 3000	1277 3000	1317 3000	1360 3000	1396 3000	1436 3000	1476 3000	1516 3000

 = 14 segment pieces

 = 16 segment pieces

 = 18 segment pieces

 = 10 segment pieces

 = 12 segment pieces

 = 14 segment pieces

## Segment elbow 5 x D


Pipe DN mm	Insulation pipe inner diameter ø =mm	ø = elbow outer diameter mm													
		R = manufacturing radius mm													
		Insulation thicknesses mm													
			30	40	50	60	80	100	120	140	160	180	200	220	240
25	35	ø = R =	106 125	122 125	146 125	160 125	199 140								
32	42	ø = R =	115 160	133 160	160 160	173 160	213 160	253 160							
40	48	ø = R =	115 200	133 200	160 200	173 200	213 200	253 200							
-	54	ø = R =	122 200	146 200	160 200	185 200	225 200	266 200							
50	60	ø = R =	122 250	133 250	173 250	185 250	225 250	266 250							
-	64	ø = R =	133 250	146 250	173 250	199 250	238 250	278 250							
65	76	ø = R =	146 325	160 325	185 325	199 325	253 325	292 325	318 325						
80	89	ø = R =	160 400	173 400	199 400	213 400	253 400	304 400	345 400	385 400	424 400				
100	114	ø = R =	185 500	199 500	225 500	238 500	292 500	332 500	371 500	411 500	451 500	491 500	530 500		
125	140	ø = R =	213 625	225 625	253 625	266 625	318 625	345 625	385 625	436 625	478 625	517 625	556 625	592 625	635 625
150	168	ø = R =	238 750	253 750	278 750	304 750	345 750	385 750	424 750	464 750	504 750	542 750	582 750	622 750	661 750
200	219	ø = R =	292 1000	304 1000	332 1000	345 1000	385 1000	424 1000	464 1000	517 1000	556 1000	592 1000	635 1000	675 1000	712 1000
250	273	ø = R =	345 1250	358 1250	385 1250	411 1250	451 1250	491 1250	530 1250	568 1250	612 1250	647 1250	687 1250	722 1250	768 1250
300	324	ø = R =	385 1500	411 1500	436 1500	451 1500	491 1500	530 1500	582 1500	622 1500	661 1500	702 1500	742 1500	792 1500	831 1500
350	356	ø = R =	424 1750	451 1750	464 1750	491 1750	530 1750	572 1750	612 1750	647 1750	687 1750	722 1750	768 1750	802 1750	842 1750
400	406	ø = R =	470 2000	491 2000	517 2000	542 2000	582 2000	622 2000	661 2000	702 2000	742 2000	778 2000	831 2000	872 2000	912 2000
500	508	ø = R =	582 2500	612 2500	622 2500	635 2500	687 2500	722 2500	768 2500	802 2500	842 2500	882 2500	922 2500	962 2500	1012 2500
600	612	ø = R =	687 3000	702 3000	722 3000	742 3000	792 3000	831 3000	872 3000	912 3000	940 3000	986 3000	1026 3000	1067 3000	1112 3000
700	714	ø = R =	792 3500	802 3500	831 3500	842 3500	882 3500	922 3500	975 3500	1012 3500	1052 3500	1092 3500	1132 3500	1172 3500	1212 3500
800	813	ø = R =	882 4000	912 4000	922 4000	940 4000	986 4000	1026 4000	1067 4000	1107 4000	1147 4000	1196 4000	1237 4000	1277 4000	1317 4000
900	914	ø = R =	986 4500	986 4500	1026 4500	1052 4500	1092 4500	1132 4500	1172 4500	1212 4500	1252 4500	1294 4500	1334 4500	1374 4500	1422 4500
1000	1016	ø = R =	1092 5000	1107 5000	1132 5000	1156 5000	1196 5000	1237 5000	1277 5000	1317 5000	1360 5000	1396 5000	1436 5000	1476 5000	1516 5000

 = 4 segment pieces


 = 6 segment pieces


 = 8 segment pieces

 = 10 segment pieces


 = 12 segment pieces

 = 14 segment pieces

 = 16 segment pieces

 = 18 segment pieces

 = 20 segment pieces

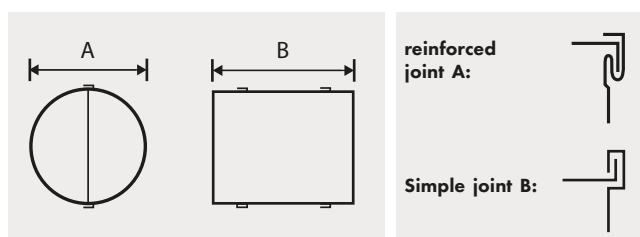
 = 22 segment pieces

## Ready-to-install insulation box for flanges

- Manufacturing according to standard PSK 3707. Joint standard connection B.
- Manufactured from all our materials.
- Pipe section insulation with 50 mm stone wool wired mat AL1 according to standard PSK 3707.  
(Note! Insulation and extra locks for box endings by request. Price according to the offer.)
- The pricing of insulation boxes with holes does not differ from the regular version in our price list.
- Also available as multipart box and vertical box with a cone head. Prices according to the offer.



### Flange Box (AB)

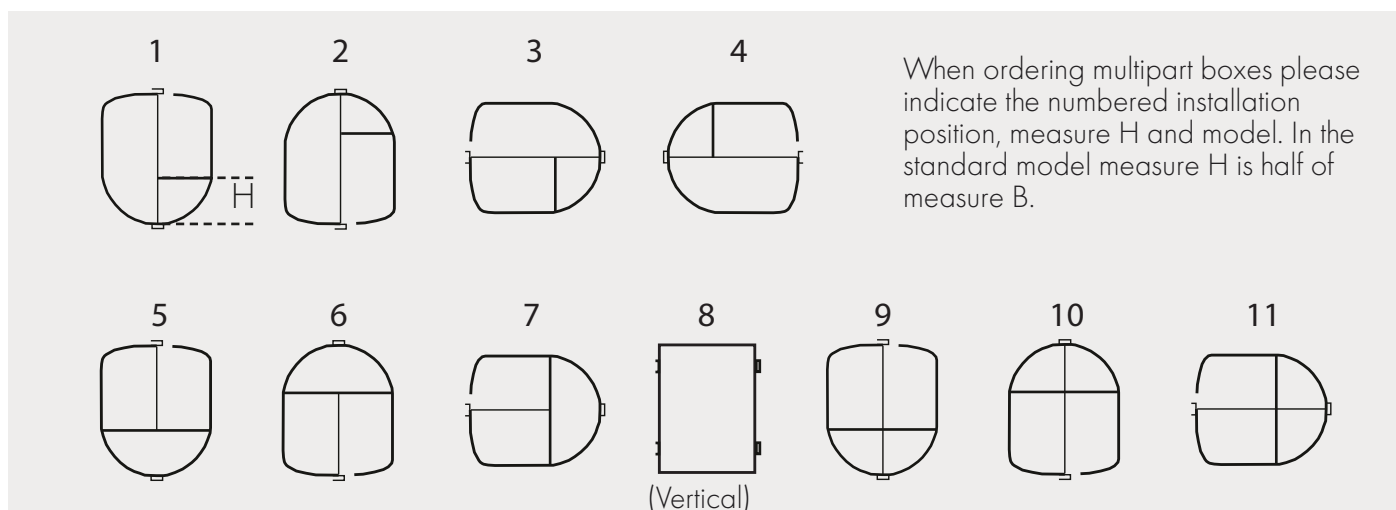
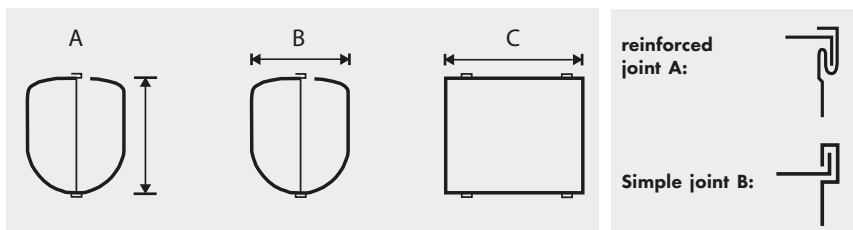


## Ready-to-install insulation box for valves

- Manufacturing according to standard PSK 3707. Joint standard connection B.
- Manufactured from all our materials.
- Pipe section insulation with 50 mm stone wool wired mat AL1 according to standard PSK 3707.  
(Note! Insulation and extra locks for box endings by request. Price according to the offer.)
- Also available as multipart box and vertical box with a cone head. Prices according to the offer.



### Valve Box(ABC)





## HVAC Pipe Cladding Dimensions

Duct outer diameter mm	ø = pipe cladding outer diameter mm										
	Insulation thicknesses mm										
		20	30	40	50	60	80	100	120	140	160
63	ø		133	160	173	199	238	278			
80	ø		160	173	199	213	253	292			
100	ø	160	173	199	213	238	278	318			
125	ø	173	199	225	238	266	304	345			
160	ø	213	238	253	278	292	332	371			
200	ø	253	270	292	318	332	371	411	451		
250	ø	304	318	345	364	385	424	464	502	542	
315	ø	364	385	411	424	451	491	527	567	607	
400	ø	451	470	491	512	532	572	612	652	692	
500	ø	567	572	592	612	642	672	712	752	792	
630	ø	692	702	722	742	762	802	842	882	922	962
800	ø	852	872	892	912	932	975	1012	1052	1092	1132
1000	ø	1052	1072	1092	1112	1132	1172	1212	1252	1292	1332
1250	ø	1302	1322	1342	1362	1382	1422	1462	1502	1542	1582



## Adaptors for air conditioning and ventilation insulations

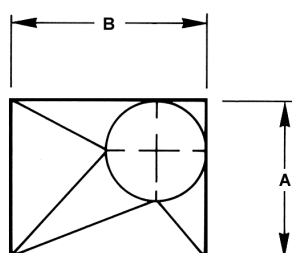
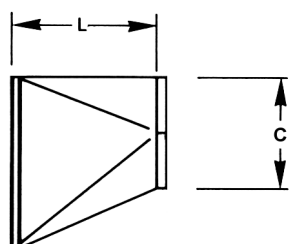
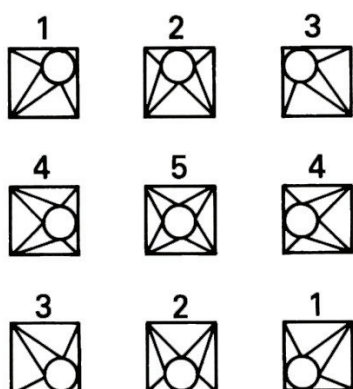
### Formula for calculating the adaptors surface area:

**Circumference length of the larger round or square end x height.**

Adaptors for rectangular ducts are dimensioned in the following way: the measurements of sides A and B have the desired insulation thickness and a 10 mm tolerance reserve added. The adaptors can also be manufactured with a round larger head at no extra cost.

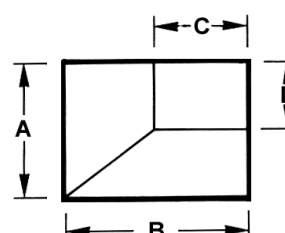
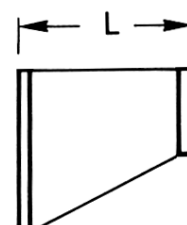
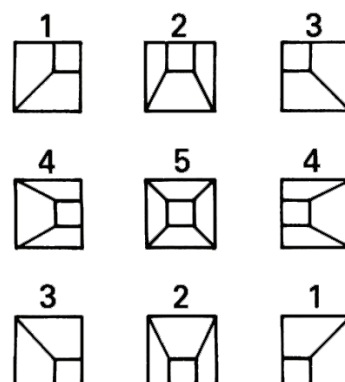
### From rectangle to round:

The outer diameter size C of the small round head must be indicated when ordering. Also indicate the desired position using the numbered pictures below.



### From rectangle to rectangle:

The C and D dimensions of the smaller head have to be indicated when ordering. Also indicate the desired position using the numbered pictures below.





# COILS AND SHEETS



## Kespets coils and sheets

We supply small and large coils and sheets from various sheet metal materials straight from our warehouse. Coil and sheet widths are 1000 mm and 1250 mm. Slit coil standard width is 610 mm.

Products are available from the following materials:

- Hot galvanized steel sheet metal for coatings PVDF and PURAL 50 µm/ 10 µm and PVC, 18 RR standard colours in stock
- Hot galvanized
- Aluminium galvanized
- Aluminium
- Stainless
- Acid-proof
- Stucco

Kespets coil and sheet materials have been selected as comprehensively as possible for different applications.

On order we also supply all other RR standard colours and RAL colours.

### Stock colour selection:




#### PVDF

	20 White
	21 Light gray
	22 Gray
	23 Dark gray
	24 Yellow
	29 Red
	30 Light brown
	31 Brown
	32 Dark brown
	33 Black
	35 Blue
	37 Green
	40 Silver
	41 Dark silver
	750 Brick red

#### PURAL

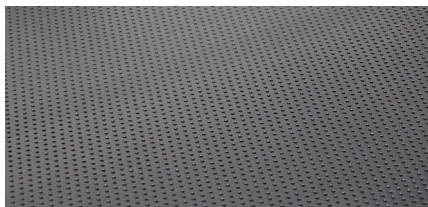
	20 White
	21 Light gray
	22 Gray
	23 Dark gray
	32 Dark brown
	33 Black

#### PVC

	Neste512/RAL 6028
	Neste 510/RAL 6019
	Neste 511/RAL 6021

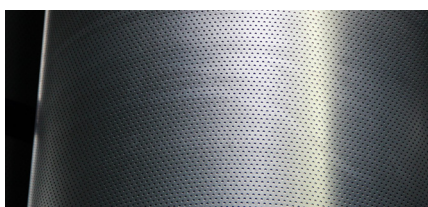
NB! For print-technical reasons, the colors do not exactly match the correct color tones.





### PERFORATED PLATES

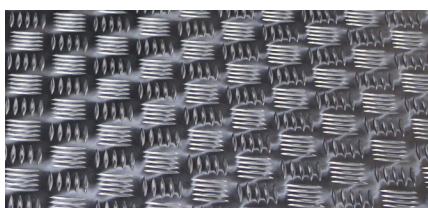
Material	Size mm	Perforated area	m <sup>2</sup> /plate
Aluminium EN AW 3103 H16	1,0 x 1000x2000	3mm 15%	2
Hot galvanized DX51D Z275	0,7x1250x2500	3mm 15%	3,125
Hot galvanized DX51D Z275	0,7x1250x2500	3mm 30%	3,125



### PERFORATED COILS

Material	Size mm	Perforated area	m <sup>2</sup> /coil
Aluminium EN AW 3103 H16	1,0 x 1000	3mm 15%	25
Hot galvanized DX51D Z275	0,7x1250	3mm 15%	25
Hot galvanized DX51D Z275	0,7x1250	3mm 30%	25

Perforated plates are also available with other perforation sizes and from other raw materials. Delivery time about two weeks from the order.



### CHECKERPLATES

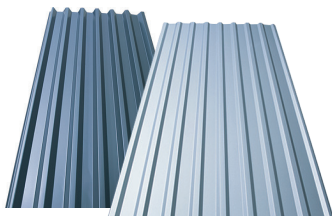
Size mm	Material	kg/plate
3 x 1250 x 2500	Aluminium	28,10
3 x 1250 x 2500	Stainless	84,40 - 93,75



### RICE GRAIN PLATES

Size mm	Material	kg/plate
1,5 x 1250 x 2500	Aluminium	13,6

# CORRUGATED SHEET METAL



## Kespel Industrial Corrugated Sheet Metals

From Kespel you can get ready-to-install corrugated sheet metal claddings for roof and wall structures. The products meet the requirements of PSK 3706 standard and CE qualifications. Our capable production technology enables us to manufacture products from thicker raw materials. Our selection for 20 and 45 corrugated sheets is the most comprehensive product range available in Finland.

We manufacture corrugated sheets from 1000 and 1250 mm wide raw materials. The sheets are also available with film, on both sides. The effective width of Kespel 20 model corrugated sheet is 825 mm or 1100 mm. For the 45 model sheet the effective width is either 600 mm, 750 mm or 900 mm. We also manufacture corrugated sheets from the customers own raw materials.

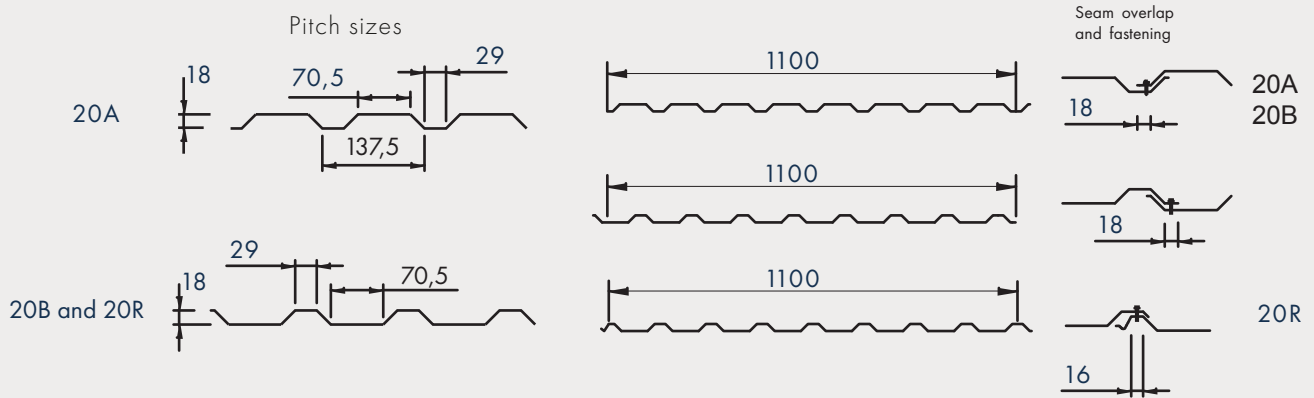
Material sheet thicknesses:

- Plain stainless steel sheet 0,40-0,80 mm
- Plain aluminium sheet 0,50-1,00 mm
- Stucco rolled aluminium sheet 0,50-1,00 mm
- Plain galvanized steel sheet 0,40-1,00 mm
- Plain galvanized and paint coated steel sheet 0,40-1,00 mm

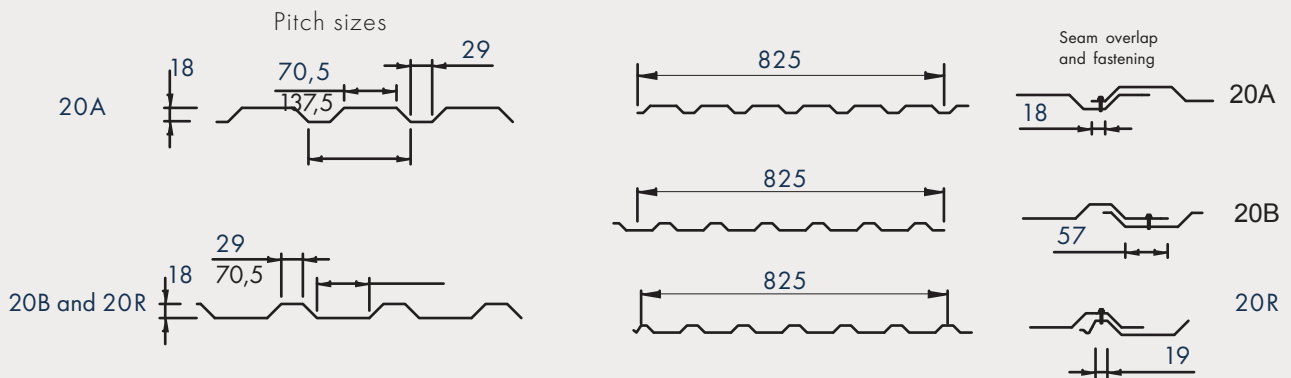


## Corrugated Sheet Metal Measurements

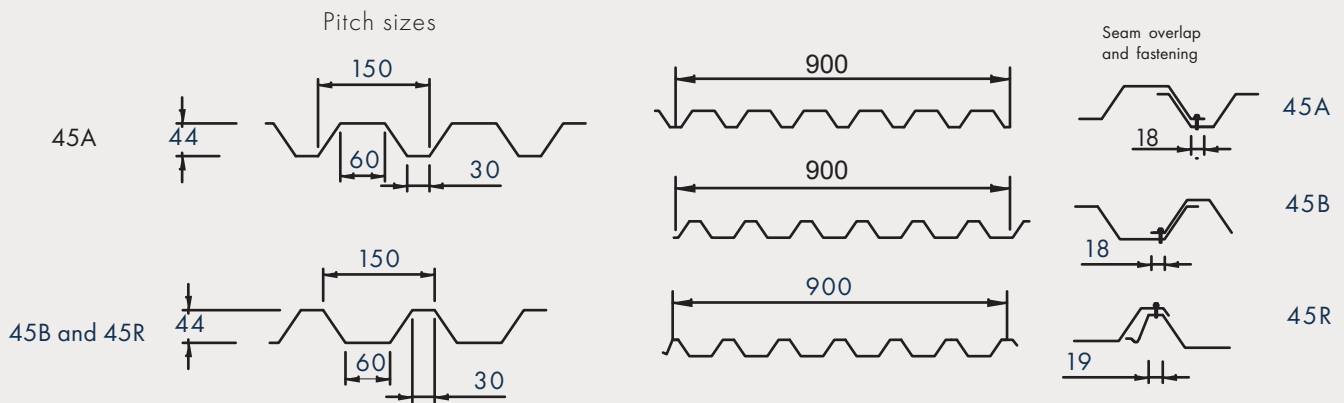
### KESPET 20 corrugated sheet metal from 1250mm wide rawmaterial



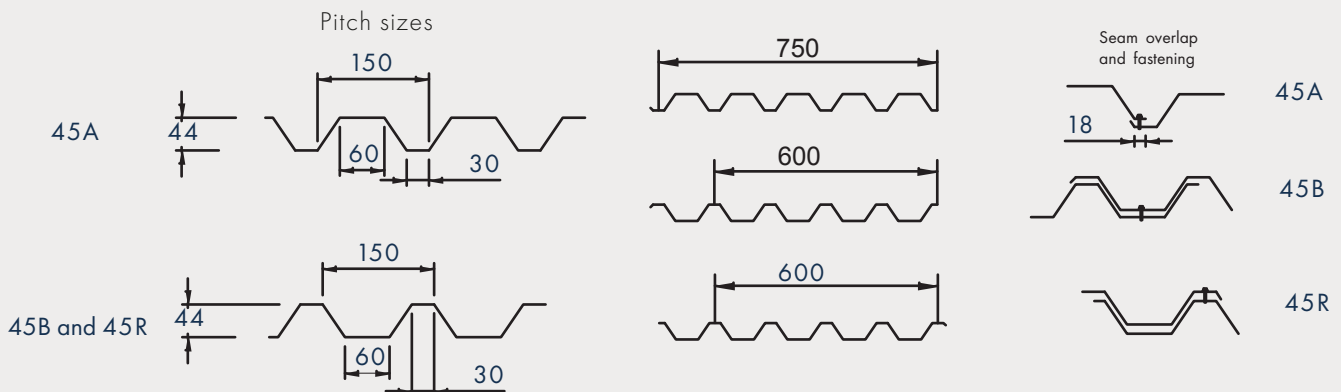
### KESPET 20 corrugated sheet metal from 1000 mm wide rawmaterial



### KESPET 45 corrugated sheet metal from 1250mm wide rawmaterial



### KESPET 45 corrugated sheet metal from 1000 mm wide rawmaterial



Fulfills the minimum requirements of the CE mark standards SFS EN 14783 and SFS EN 14782.

Product tolerances EN508-1,2,3:2000 and EN 502,505,507:2000.



# BASE STRUCTURES



## Kespet base structures

Kespet base structures ensure the quality of insulation and protective cladding. From Kespet you can get support rings for HVAC and process pipings and for round ventilation ducts.

We also supply support structures for mat and slab insulations and reducers, support strips for tank reducer cladding, diamond pieces, base structures and insulation fastening spikes. Materials meet industry standards.

Kespet base structures, insulation materials and protective claddings together ensure the functionality of the process as planned.



## Supporting Structures for Mat and Slab Insulations

### Choosing the nominal distance, material and supports for a base structure

The nominal distance for support rings is defined according to the table on the right (applies for

all products listed on this page). Materials are S235JRG2 (FE) or AISI304 (stainless steel). The supports and the ring may also be of different material.

A distance support is either of the straight or flex type, and selection is done according to the enclosed calculation formula. We also manufacture supporting structures from other materials and according to the customers own measurements.

#### Choosing the distance support type

$$X = \frac{d \times t}{100}$$

$d$  = object diameter (m)  
 $t$  = operating temperature (°C)



Flex support  
is used  
when  $X > 2$



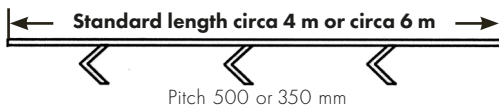
Straight support  
is used  
when  $X < 2$

Insulation nominal strength	Ring nominal distance
mm	mm
50	60
60	70
80	90
100	110
120	130
140	150
160	170
180	190
200	210

### For large tanks and round ducts $\varnothing > 2000$ mm

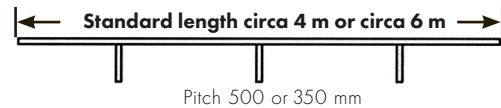
#### Flex distance support

Standard length circa 4 m or circa 6 m.  
Quality according to standards PSK 3706 and PSK 3707.  
Distance ring 30x3 flat, distance support 30x3 flat bent.



#### Straight distance support

Standard length circa 4 m or circa 6 m.  
Quality according to standards PSK 3706 and PSK 3707.  
Distance ring 30x3 flat, distance support 30x3 flat bent.



### For small tanks and round ducts

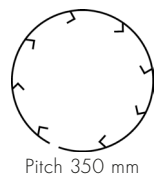
#### Rounded distance support, tanks and ducts $\varnothing < 2000$

Quality according to standards PSK 3706, PSK 3707 and PSK 3708. Fastening overlap 100 mm with riveting or welding.  
Distance ring 30x3 flat, distance support 30x3 flat bent.

#### STRAIGHT SUPPORT



#### FLEX SUPPORT



### Buttress (diamond piece)

Supporting steel nominal distance is made according to the table above or according to customer's dimensioning. Material 70x5 mm flat either S235JRG2 (FE) or AISI304 (stainless steel).



## Support Rings for Mat Insulations



**Support ring 360°**  
Vertical duct



**Support ring 120°**  
Horizontal duct



**Support ring 240°**  
Horizontal duct



**Support ring 360°**  
With inner ring bolt joint



**Support ring 360°**  
Bolt joint

The ends of the support rings (aside from the 120C variant) have 3 mm holes for fastening wire. Distance support spacer distance 200-400 mm. Material S235JRG2 ring 30x3 flat and support 8 mm round. Support ring 360° is also available with overlap fastening (100 mm).

Diameter over 1000 mm also in two parts. When operating temperature is below 250 °C, quality according to standards PSK 3706 and PSK 3707. Support rings with flat support and for over 250°C pipes with thermal break are also available on request.

## Support rings for HVAC and process piping

DN mm	Pipe outer diameter mm	ø = Ring outer diameter mm								
		Insulation thicknessesmm								
			40	50	60	80	100	120	140	160
125	140	ø	223	251	264	316	343	383		
150	168	ø	251	276	302	343	383	422		
200	219	ø	302	330	343	383	422	462	515	
250	273	ø	356	383	409	449	489	528	566	
300	324	ø	409	434	449	489	528	580	620	
350	356	ø		462	489	528	570	610	645	
400	406	ø		515	540	580	620	659	700	
500	508	ø		620	633	685	720	766	800	840
600	612	ø		720	740	790	829	870	910	938
700	714	ø		829	840	880	920	973	1010	1050
800	813	ø		920	938	984	1024	1065	1105	1145
900	914	ø		1024	1050	1090	1130	1170	1210	1250
1000	1016	ø		1130	1154	1194	1235	1275	1315	1358

## Support rings for round ventilation ducts

Duct diameter mm	ø = Ring outer diameter mm								
	Insulation thicknessesmm								
	40	50	60	80	100	120	140	160	
200	ø		290	316	330	369	409	449	
250	ø		343	362	383	422	462	500	540
315	ø		409	422	449	489	525	565	605
400	ø		489	510	530	570	610	650	690
500	ø		590	610	630	670	710	750	790
630	ø		720	740	760	800	840	880	920
800	ø		890	910	930	970	1010	1050	1090
1000	ø		1090	1110	1130	1170	1210	1250	1290
1250	ø		1340	1360	1380	1420	1460	1500	1540

## Wool spikes (weldable and straight spot weldable)

Material 4 mm rounded bar S235JRG2 (FE) and AISI 304 (stainless steel).  
Straight spot weldable spikes are available only of material S235JRG2 (FE).

Straight			Angled		Straight with straight spot welding socket	
Insulation nominal thickness mm	Fastening spike length mm	pieces/box à 10kg/box	Fastening spike length mm	pieces/box à 10kg/box	Fastening spike length	
50	80	1250	55	1250		
60	90	1111	65	1111		
80	110	909	85	909	85	
100	130	769	105	769	105	
120	150	667	125	667	125	
140	170	588	145	588	145	
150	180	555	155	555	155	
160	190	526	165	526	165	
180	210	476	185	476	185	
200	230	435	205	435	205	
220	250	400	225	400		
240	270	370	245	370		
250	280	357	255	357		
260	290	345	265	345		
280	310	322	285	322		
300	330	303	305	303		



## Flat wool spike

Standard length circa 4 m or circa 6 m.  
Distance ring 30x3 flat, wool spike Ø 4 mm straight, fixing from the ends M8 x 30-50 mm.

Insulation nominal thickness	Wool spike nominal distance
mm	mm
50	55
60	65
80	85
100	105
120	125
140	145
160	165
180	185
200	205

We also supply insulation fastening spikes in special lengths with short delivery time.



Quality according to standards PSK 3706, PSK 3707 and PSK 3708.

### Round bars

Ø/length mm/m	Material	kg/m
4/5	St37k	0,100
8/5	St37k	0,395
10/5	St37k	0,620
4/3	Stainless steel	0,100
8/3	Stainless steel	0,395
8/3	Acid-proof	0,395



### Flat bars

Size/length mm/m	Material	kg/m
30x3/4	S235JRG2	0,710
70x5/4	S235JRG2	2,750
30x3/4	Stainless steel	0,710
60x5/4	Stainless steel	2,360
30x3/4	Acid-proof	0,710
60x5/4	Acid-proof	2,360



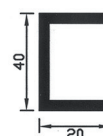
### Corner bars

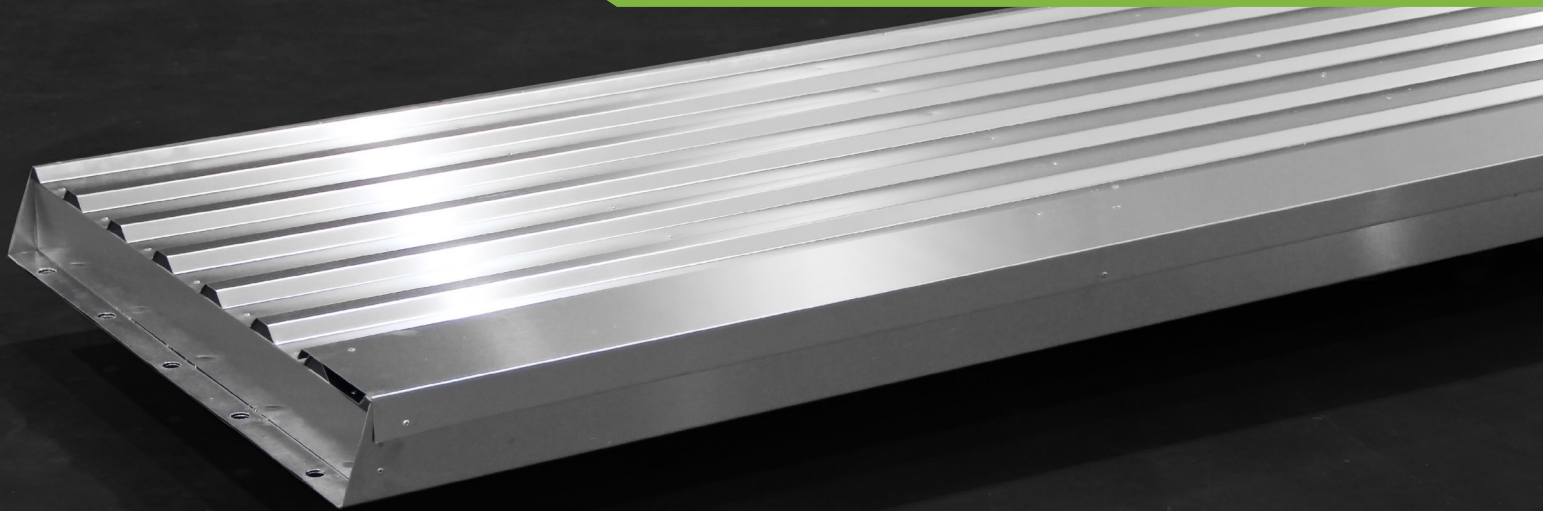
Size/length mm/m	Material	kg/m
30x30x3/6	S235JRG2	1,360
50x50x5/6	S235JRG2	3,770
30x30x3/6	Stainless steel	1,360
50x50x5/6	Stainless steel	3,770
30x30x3/6	Acid-proof	1,360
50x50x5/6	Acid-proof	3,770



### Cold rolled U-bars

Size/length mm/m	Material	kg/m
U 40x20x2/4-6	S235JRG2	1,150





## Modularity/connectivity

A Kespel elements' standard width is 1100 mm, length max. 7500mm. The standard structure consists of an aluminium c-cassette and aluminium corrugated sheet, with stone wool insulation inside. Light-weight design makes it easy to handle the element. The elements are connected to each other with profile seams, which ensure correct installation of elements and a finalized result. The installation procedure is quick, as fastening is done using self drilling screws and ready made mounting points.

## Applications

The Kespel insulation element is designed specially for paper machine scuttle roofs and walls. The product can also be used as a cladding structure solution in different device and machinery spaces

## Carrying capacity, sealing and insulation

The structure is designed to carry a weight of at least 200 kg when the support frame spacing takes place every 2500 mm. On the inside, the structure is reinforced using z-moldings. Elements are sealed together with factory-fitted gaskets and seals installed on the frame.

The elements are steam-sealed inside to prevent moisture from penetrating into the insulation. Profile seals are fitted to the ends, so that the insulation is completely protected from dust and possible air flows. Stone wool insulation is used within the element, as it has good moisture resistance and insulation features. Insulation thickness varies between 30-100 mm according to need.

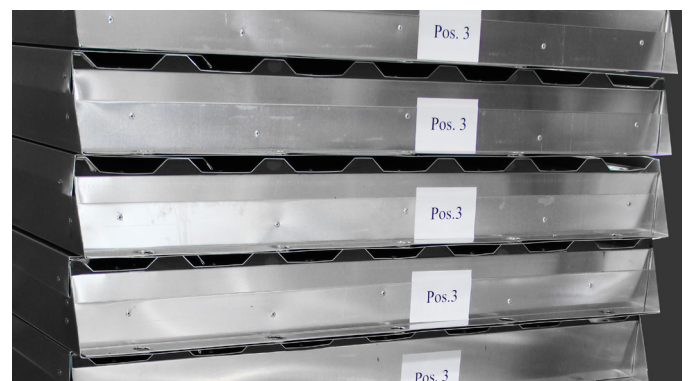
On the side of each element there is a glass fiber ribbon in the form of a thermal break to prevent heat transfer through the body of the element. The design takes thermal movement into account.

## Modifications

Sets of elements are planned and manufactured on a target specific basis, according either to a planned or completed frame structure. Usually delivery also includes the needed moldings and installation accessories. Openings for access doors, servicing hatches or other passageways can be manufactured. The surface can also be manufactured from other materials, like stucco aluminium, coloured sheet metal or galvanized sheet metal. In addition, the wall elements can also be made with a plain sheet metal cladding on top.

## Package and marking

Elements are delivered in a pallet package, each one numbered. An installation diagram will be provided on delivery, which includes the number, location and progress measurement of each element. Elements are packaged with care into shipping containers, enabling global deliveries.

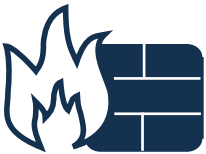


## Kespet Sheet Metal Claddings for HVAC, process and ventilation pipings

Kespet operations are controlled by  
management system standards ISO 9001 and ISO 14001.

We are a responsible company taking care of customer satisfaction,  
our personnel, financial responsibility and environmental responsibility.

FIRE SAFE, DURABLE  
AND RECYCLABLE



COMPATIBLE AND  
EASY TO INSTALL



HIGH-CLASS  
QUALITY, TESTED  
AND ACCURATE



DEPENDABLE AND  
APPROVED



**KESPET OY**  
*Cladding the future*

