

## 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



## Kespert 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

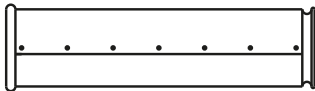
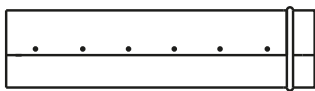
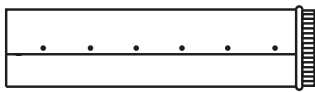
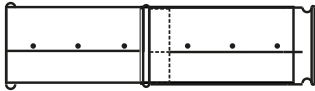
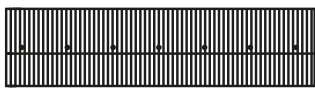
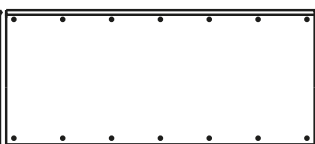
**Attention!** The cladding dimensions in the catalogue are default values. We also manufacture claddings according to dimensions supplied by the customer, or according to different types of insulation materials and various insulation manufacturers products .








### Kespert 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

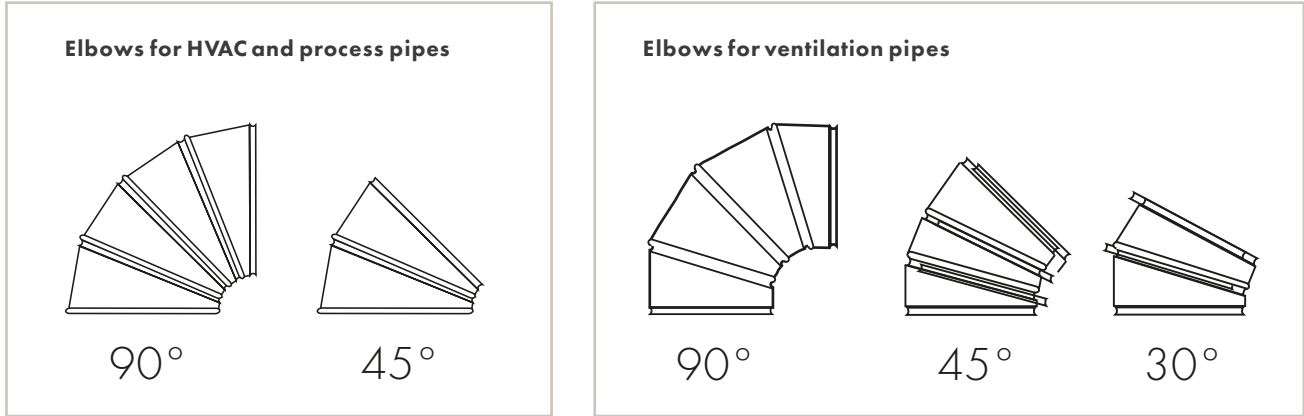
| Beading type  |  |
|---|--|
| A = P+A standard type   |  |
| B = T overlap 50...100 mm   |  |
| C = T+Ruffle overlap 20...50 mm   |  |
| D = P+T+A overlap 20...50 mm  |  |
| G = Tank and round smoke and air duct overlap cladding, overlap 50...100 mm |  |

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

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

# Elbows

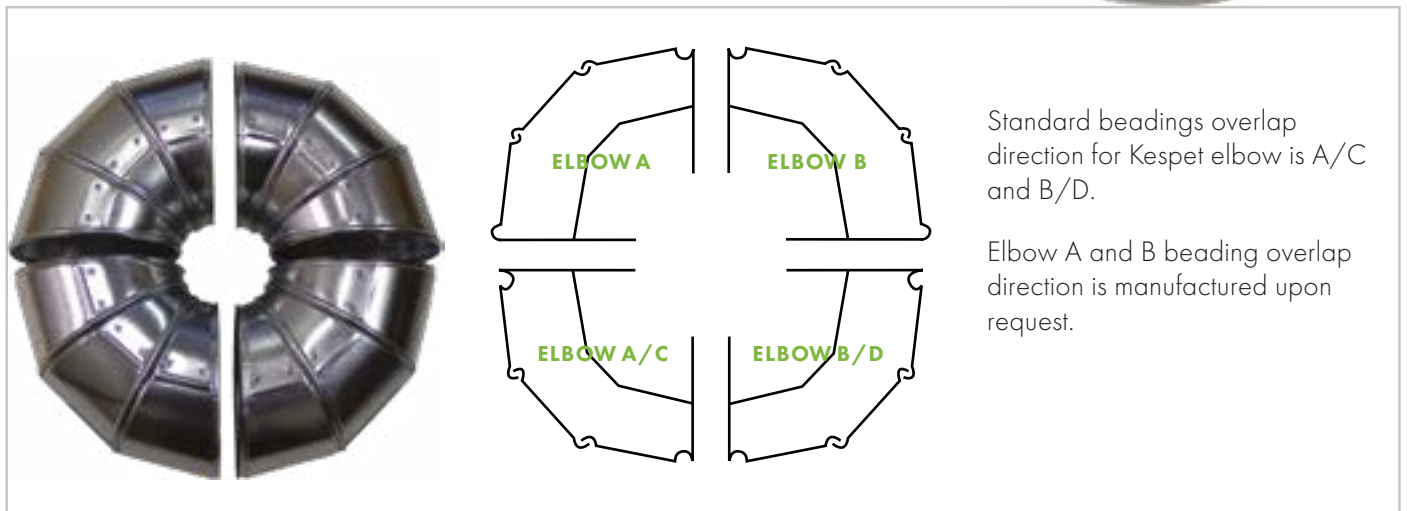
## Models



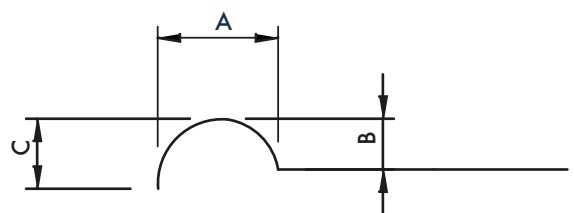
All pipe sizes of Kespel HVAC standard elbows are manufactured according to the models described above. Ventilation elbow manufacturing radius = 1xD. Non-standard amounts of segments or manufacturing radius must be indicated on orders. In such cases, pricing is negotiated separately.



## Beadings



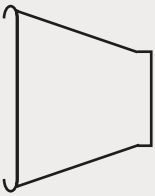

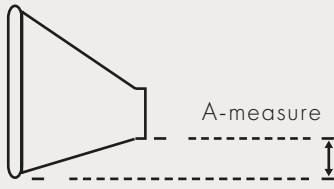
| Beading furrow minimum measures |    |     |     |
|---------------------------------|----|-----|-----|
| Outer diameter                  | a  | b   | c   |
| 70...100                        | 3  | 2   | 3   |
| 101...200                       | 4  | 3   | 4.5 |
| 201...500                       | 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).



|   |   |   |
|---|---|---|
|  |  |  |
| A-model<br>central  | B-model<br>eccentric  | C-model<br>eccentric  |

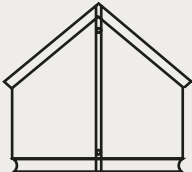
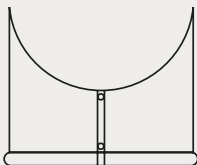
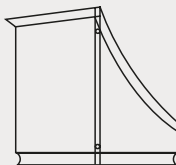
Installed from the larger end to the joining of the cladding and from the smaller end with the connecting collar.

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.

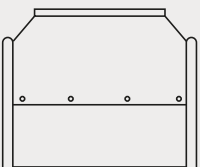
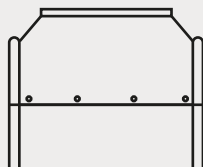


|   |   |   |
|---|---|---|
| P-model   | L-model   | Oblique T-connection  |
|  |  |  |

## 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.

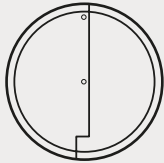
# End Caps, Notch and Expansion Joint

## End Caps

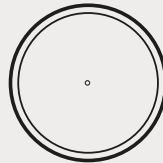
End caps are used for pipe ends. The standard model is delivered as a solid two-piece product. End caps can also be manufactured with a hole (suitable for a pipe). One-piece end cap and furrow edge end cap with edge turned about 20 mm over or under the cladding are also available on request.



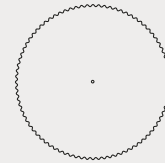
A-model, standard end cap



B-model, solid end cap



End cap with furrow edge

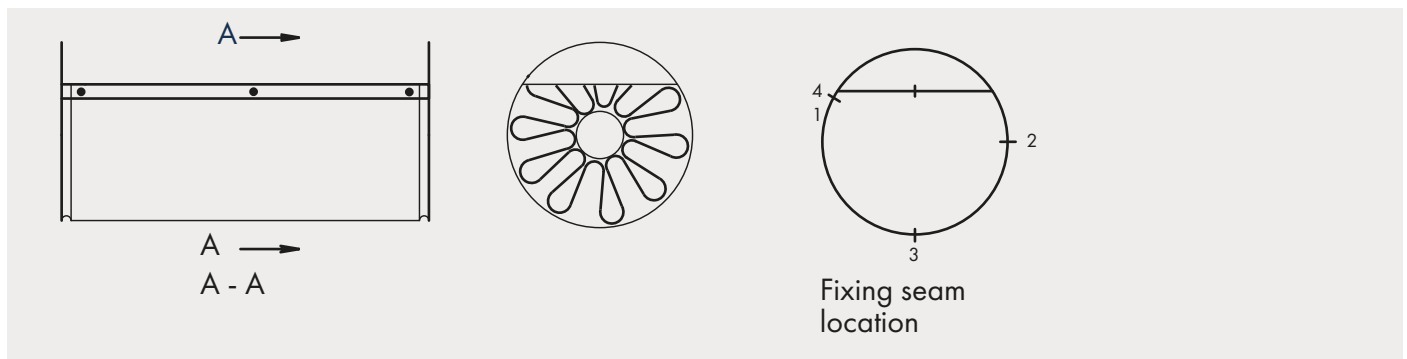


## Notch

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

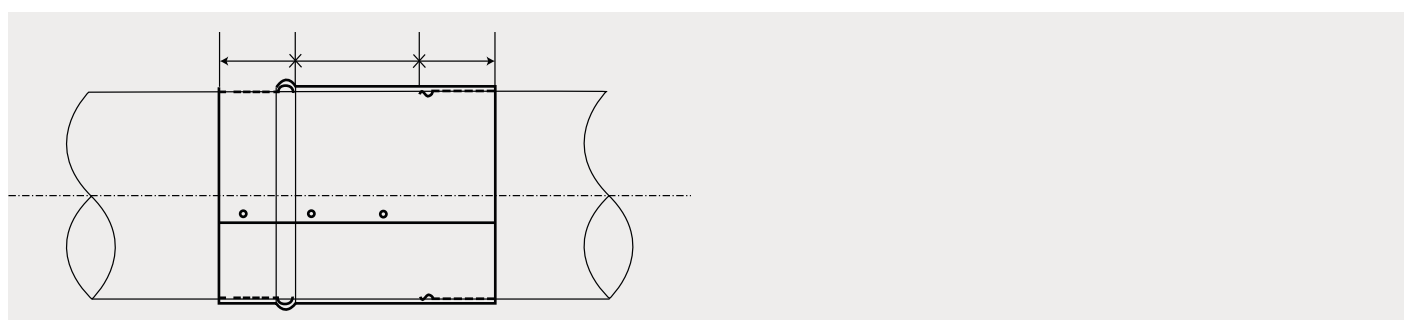


at the end, enabling a connection with a standard pipe cladding. Fixing seam location can be chosen from the options presented in the picture below.



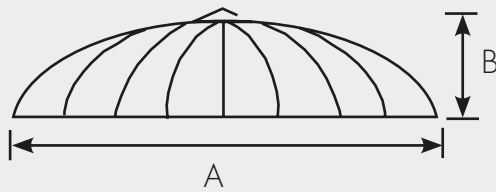
## Expansion Joint

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.

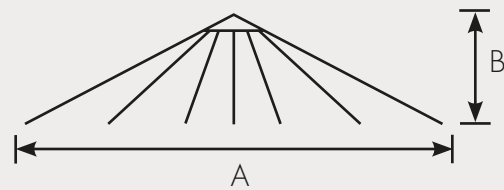




## Zeppelin Gable



## 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 |
|                    |           |                    |                  |           |

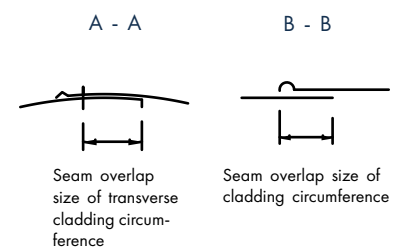
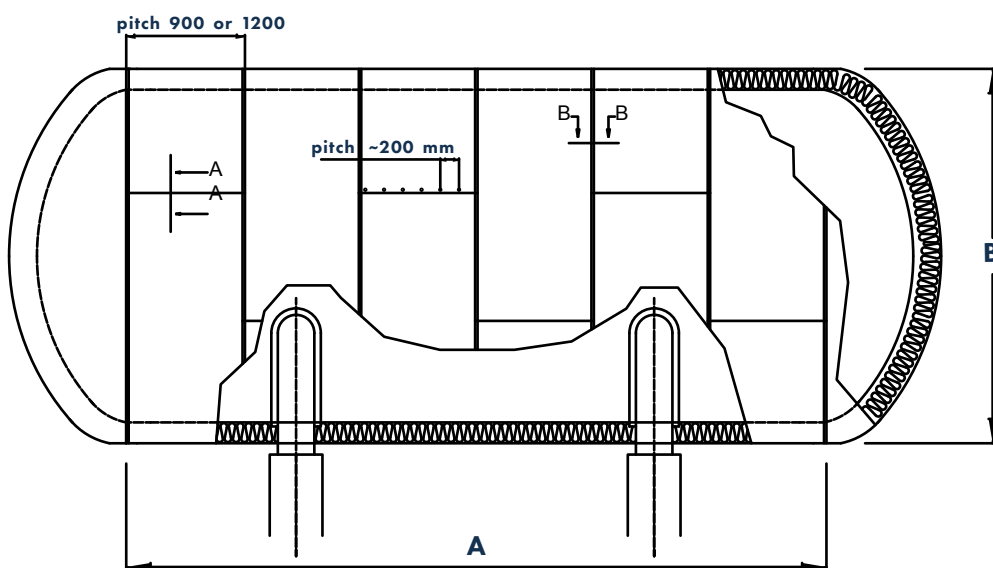
- Gable manufacturing according to standard PSK 3707.
- Assembled as ready-to-install sections or blocks.
- Also available according to the standard gable model.
- AB zeppelin gables and AB cone gables can also be manufactured according to measurements provided by the customer.

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

## Segment elbow 1,5 x D

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

 = 3 segment pieces  
 = 4 segment pieces

 = 6 segment pieces  
 = 8 segment pieces

 = 10 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 $\varnothing = \text{mm}$ | $\varnothing =$ elbow outer diameter mm |                          |                          |                          |                          |                          |                          |                          |                          |                          |
|------------|--|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|            |  | R = manufacturing radius mm             |                          |                          |                          |                          |                          |                          |                          |                          |                          |
|            |  | Insulation thicknesses mm               |                          |                          |                          |                          |                          |                          |                          |                          |                          |
|            |  |   | 30                       | 40                       | 50                       | 60                       | 80                       | 100                      | 120                      | 140                      | 160                      |
| 60         | 70   | $\varnothing =$<br>R =                  | <b>133</b><br><b>90</b>  | <b>160</b><br><b>105</b> | <b>173</b><br><b>115</b> | <b>199</b><br><b>135</b> | <b>238</b><br><b>160</b> |                          |                          |                          |                          |
| 89         | 102  | $\varnothing =$<br>R =                  | <b>173</b><br><b>115</b> | <b>199</b><br><b>135</b> | <b>213</b><br><b>145</b> | <b>225</b><br><b>160</b> | <b>278</b><br><b>180</b> |                          |                          |                          |                          |
| 114        | 127  | $\varnothing =$<br>R =                  | <b>199</b><br><b>155</b> | <b>213</b><br><b>160</b> | <b>238</b><br><b>165</b> | <b>253</b><br><b>170</b> | <b>292</b><br><b>185</b> | <b>332</b><br><b>210</b> |                          |                          |                          |
| 169        | 178  | $\varnothing =$<br>R =                  |                          | <b>266</b><br><b>230</b> | <b>292</b><br><b>230</b> | <b>310</b><br><b>230</b> | <b>345</b><br><b>230</b> | <b>385</b><br><b>250</b> | <b>424</b><br><b>270</b> |                          |                          |
| 219        | 230  | $\varnothing =$<br>R =                  |                          | <b>318</b><br><b>305</b> | <b>345</b><br><b>305</b> | <b>358</b><br><b>305</b> | <b>396</b><br><b>305</b> | <b>436</b><br><b>305</b> | <b>478</b><br><b>305</b> |                          |                          |
| 273        | 289  | $\varnothing =$<br>R =                  |                          | <b>385</b><br><b>381</b> | <b>396</b><br><b>381</b> | <b>424</b><br><b>381</b> | <b>464</b><br><b>381</b> | <b>504</b><br><b>381</b> | <b>542</b><br><b>381</b> |                          |                          |
| 324        | 356  | $\varnothing =$<br>R =                  |                          | <b>451</b><br><b>457</b> | <b>464</b><br><b>457</b> | <b>491</b><br><b>457</b> | <b>530</b><br><b>457</b> | <b>572</b><br><b>457</b> | <b>612</b><br><b>457</b> | <b>647</b><br><b>457</b> |                          |
| 356        | 371  | $\varnothing =$<br>R =                  |                          |                          | <b>478</b><br><b>533</b> | <b>504</b><br><b>533</b> | <b>542</b><br><b>533</b> | <b>582</b><br><b>533</b> | <b>622</b><br><b>533</b> | <b>661</b><br><b>533</b> |                          |
| 406        | 426  | $\varnothing =$<br>R =                  |                          |                          | <b>542</b><br><b>610</b> | <b>556</b><br><b>610</b> | <b>592</b><br><b>610</b> | <b>635</b><br><b>610</b> | <b>675</b><br><b>610</b> | <b>712</b><br><b>610</b> | <b>768</b><br><b>610</b> |
| 508        | 533  | $\varnothing =$<br>R =                  |                          |                          | <b>647</b><br><b>762</b> | <b>661</b><br><b>762</b> | <b>702</b><br><b>762</b> | <b>752</b><br><b>762</b> | <b>792</b><br><b>762</b> | <b>831</b><br><b>762</b> | <b>872</b><br><b>762</b> |
| 612        | 630  | $\varnothing =$<br>R =                  |                          |                          | <b>742</b><br><b>914</b> | <b>768</b><br><b>914</b> | <b>802</b><br><b>914</b> | <b>842</b><br><b>914</b> | <b>882</b><br><b>914</b> | <b>922</b><br><b>914</b> | <b>962</b><br><b>914</b> |

 = 3 segment pieces

 = 6 segment pieces

 = 4 segment pieces

 = 8 segment pieces




## Segment elbow 3 x D

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


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

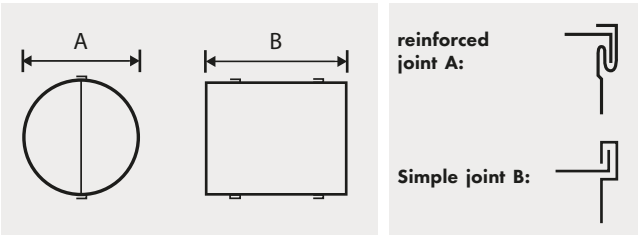


**Ready-to-install insulation box for flanges**

- 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)**

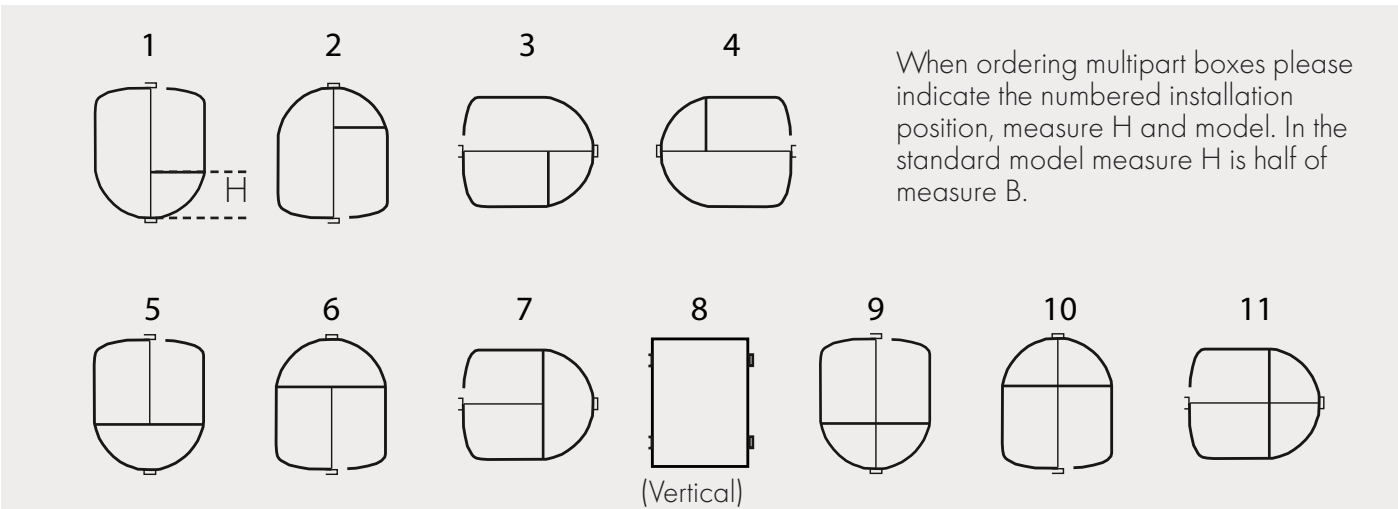
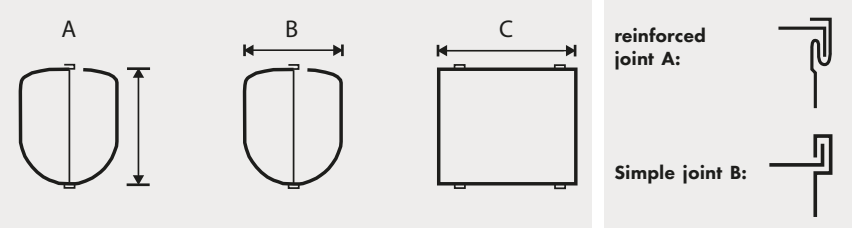


**Ready-to-install insulation box for valves**

- 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 |



Kespet Oy delivered sheet metal claddings to the Metsä Fibre bio product plant. Total amount of delivered products for the project was **1500k.**

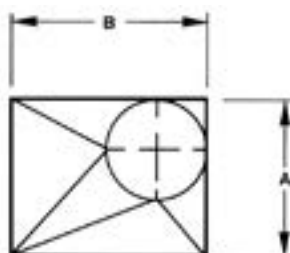
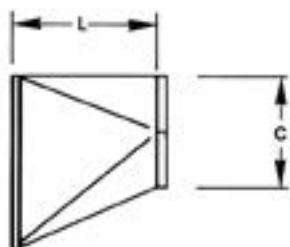
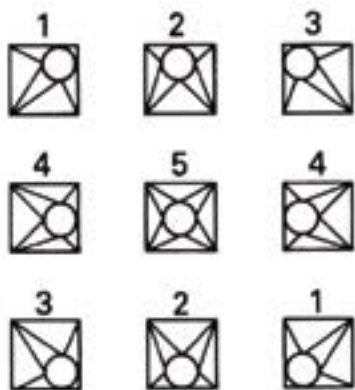
## Adaptors for air conditioning and ventilation insulations

**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.

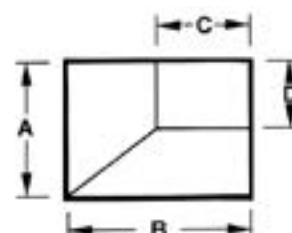
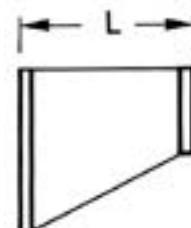
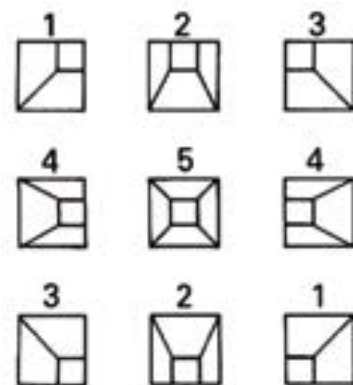
### From rectangle to round:

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



## Kespet 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

Kespet 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



## Kespet Industrial Corrugated Sheet Metals

From Kespet 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 Kespet 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.

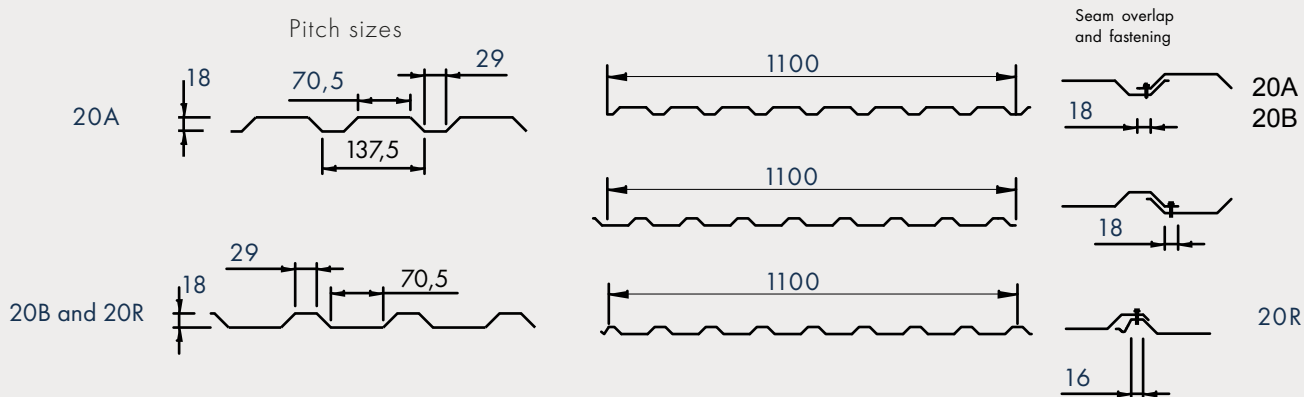
Material sheet thicknesses:

- 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

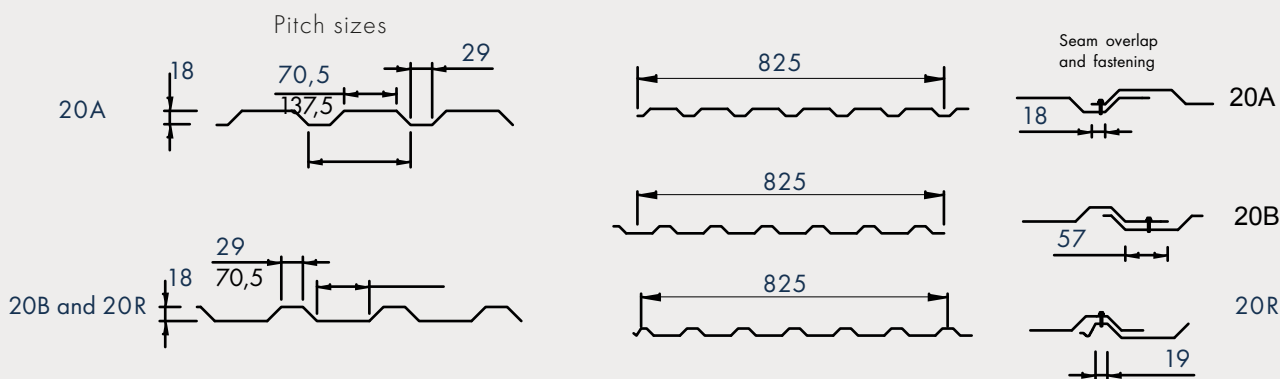


# Corrugated Sheet Metal Measurements

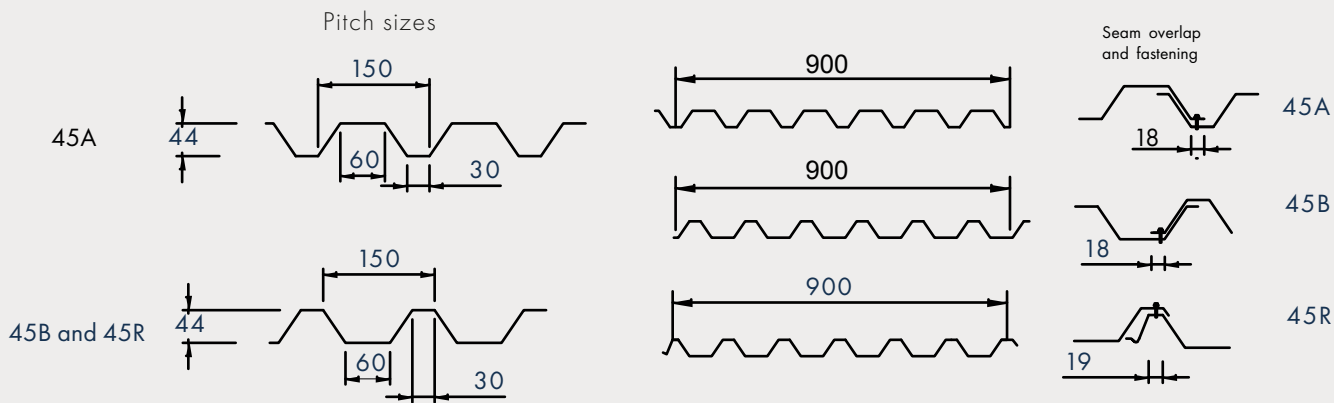
## KESPET 20 corrugated sheet metal from 1250mm wide rawmaterial



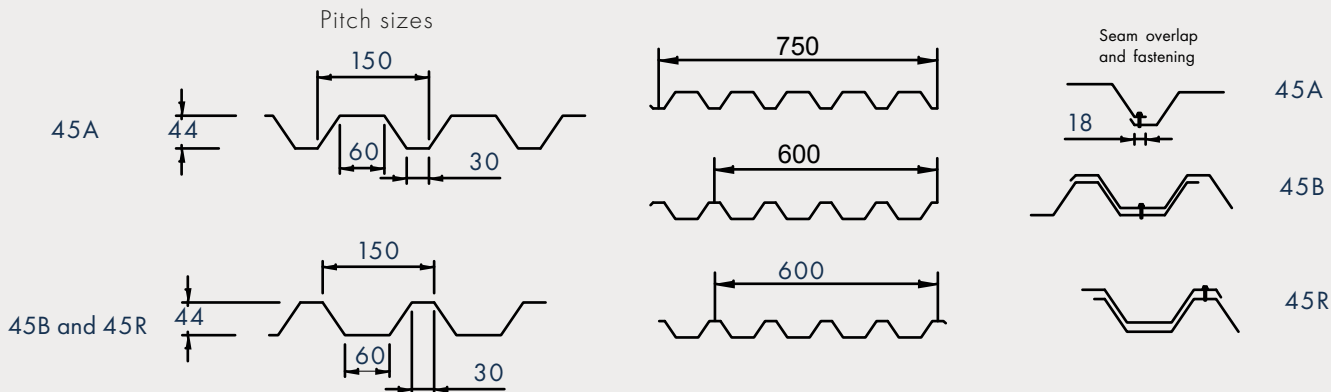
## KESPET 20 corrugated sheet metal from 1000 mm wide rawmaterial



## 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.





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

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

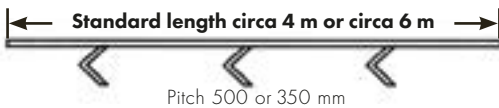
Flex support is used when  $X > 2$   
 Straight support is used when  $X < 2$

| 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 Ø > 2000 mm

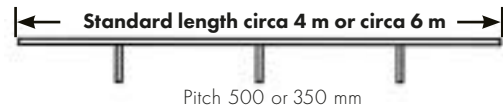
### Flex distance support

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 Ø < 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



Pitch 350 mm

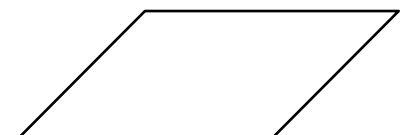
### FLEX SUPPORT



Pitch 350 mm

## 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 thicknesses mm  |     |      |      |      |      |      |      |      |
|       |                        |                            | 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 thicknesses mm  |      |      |      |      |      |      |      |      |
|                  |                            | 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  | 960  |
| 800              | ø                          | 890  | 910  | 930  | 970  | 1010 | 1050 | 1090 | 1130 |
| 1000             | ø                          | 1090 | 1110 | 1130 | 1170 | 1210 | 1250 | 1290 | 1330 |
| 1250             | ø                          | 1340 | 1360 | 1380 | 1420 | 1460 | 1500 | 1540 | 1580 |

## 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 mm | Wool spike nominal distance 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 |



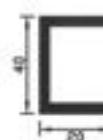
### Corner bars

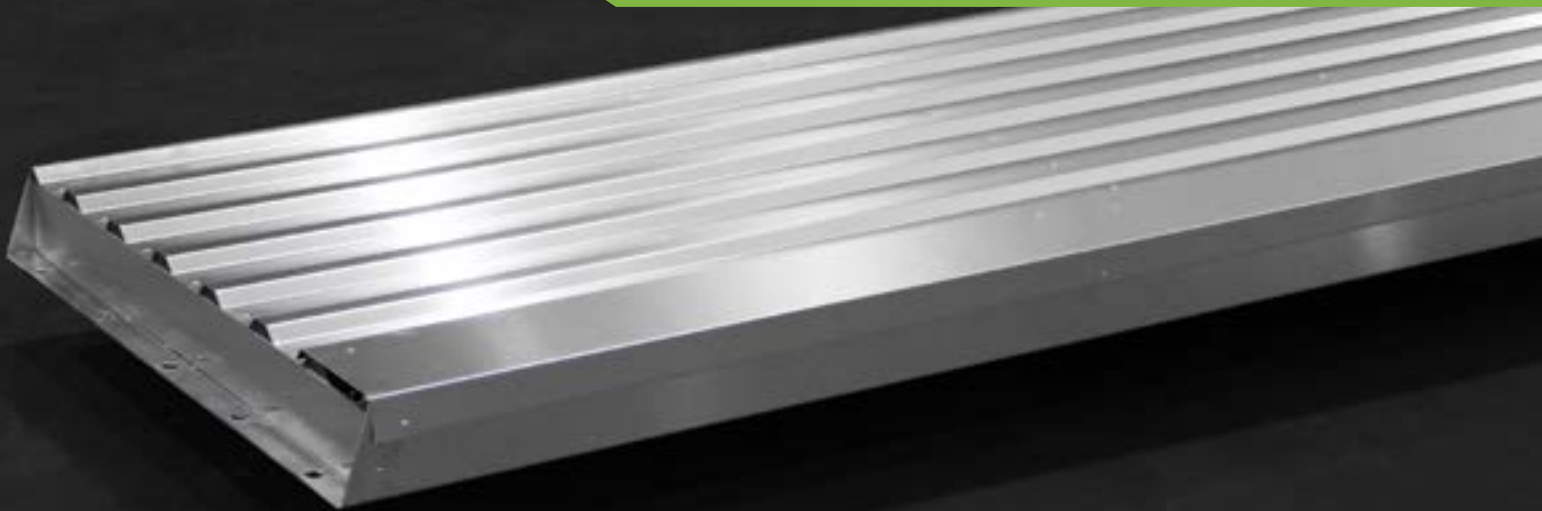
| Size/length mm/m | Material        | kg/m  |
|------------------|-----------------|-------|
| 30x30x3/6        | S235JRG2        | 1,360 |
| 50x50x5/6        | S235JRG2        | 3,770 |
| 30x30x3/6        | Stainless steel | 1,360 |
| 50x50x5/6        | Stainless steel | 3,770 |
| 30x30x3/6       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

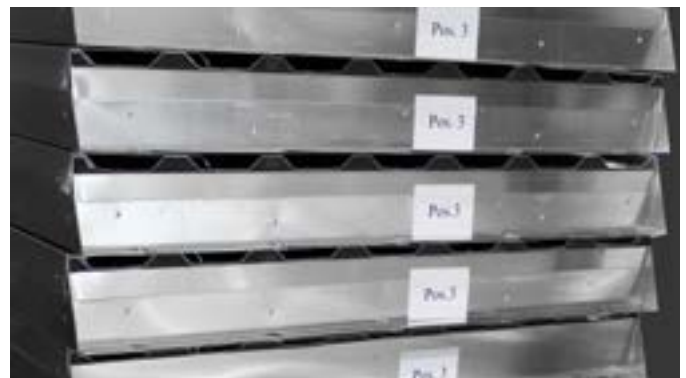
On the side of each element there is a glass fiber ribbon in the form of a thermal break to prevent heat transfer through the body of the element. The design takes thermal movement into account.

## 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.

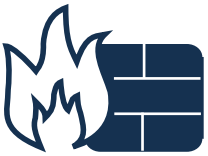


## Kespet Sheet Metal Claddings for HVAC, process and ventilation pipings

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*

