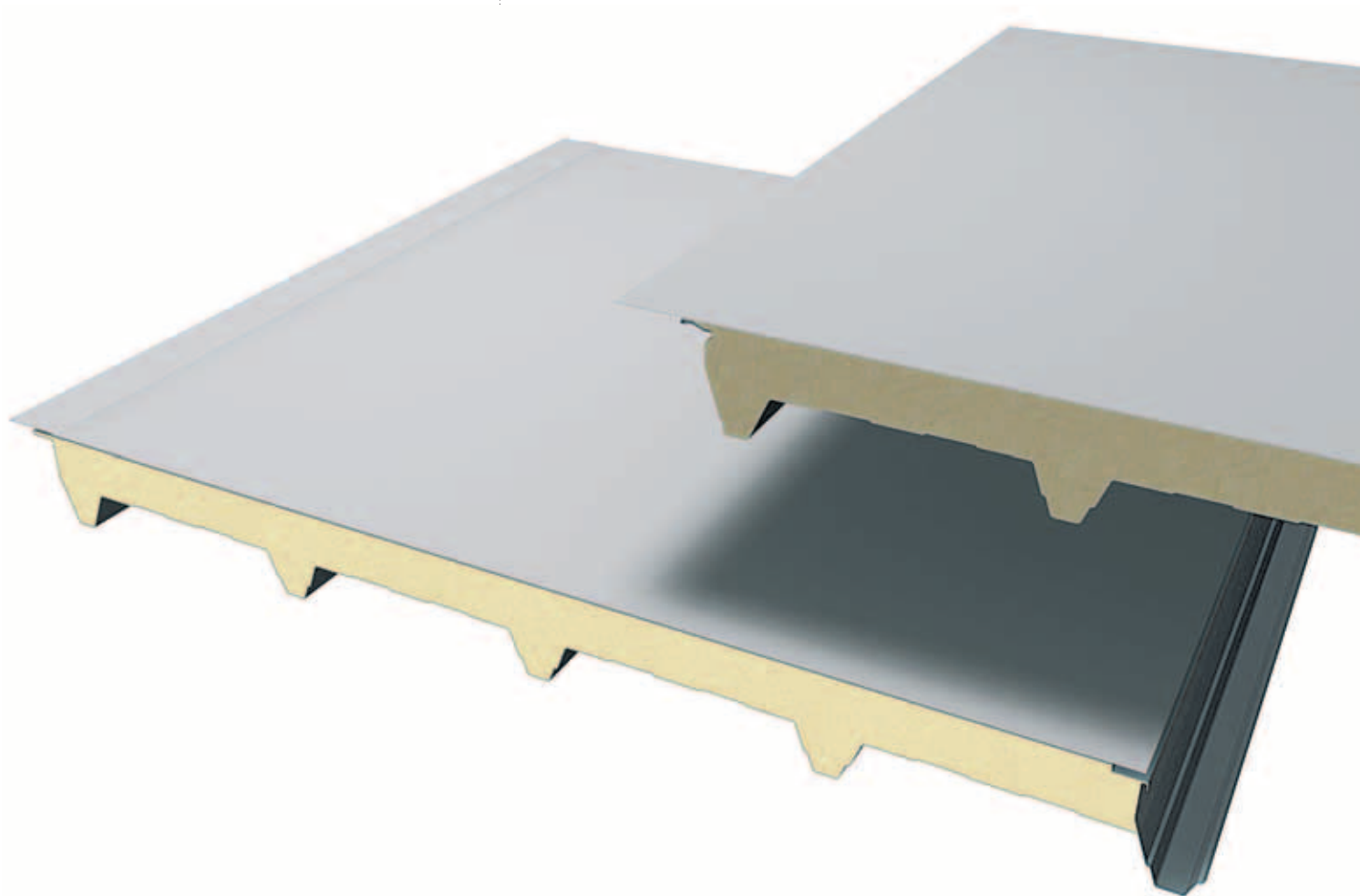


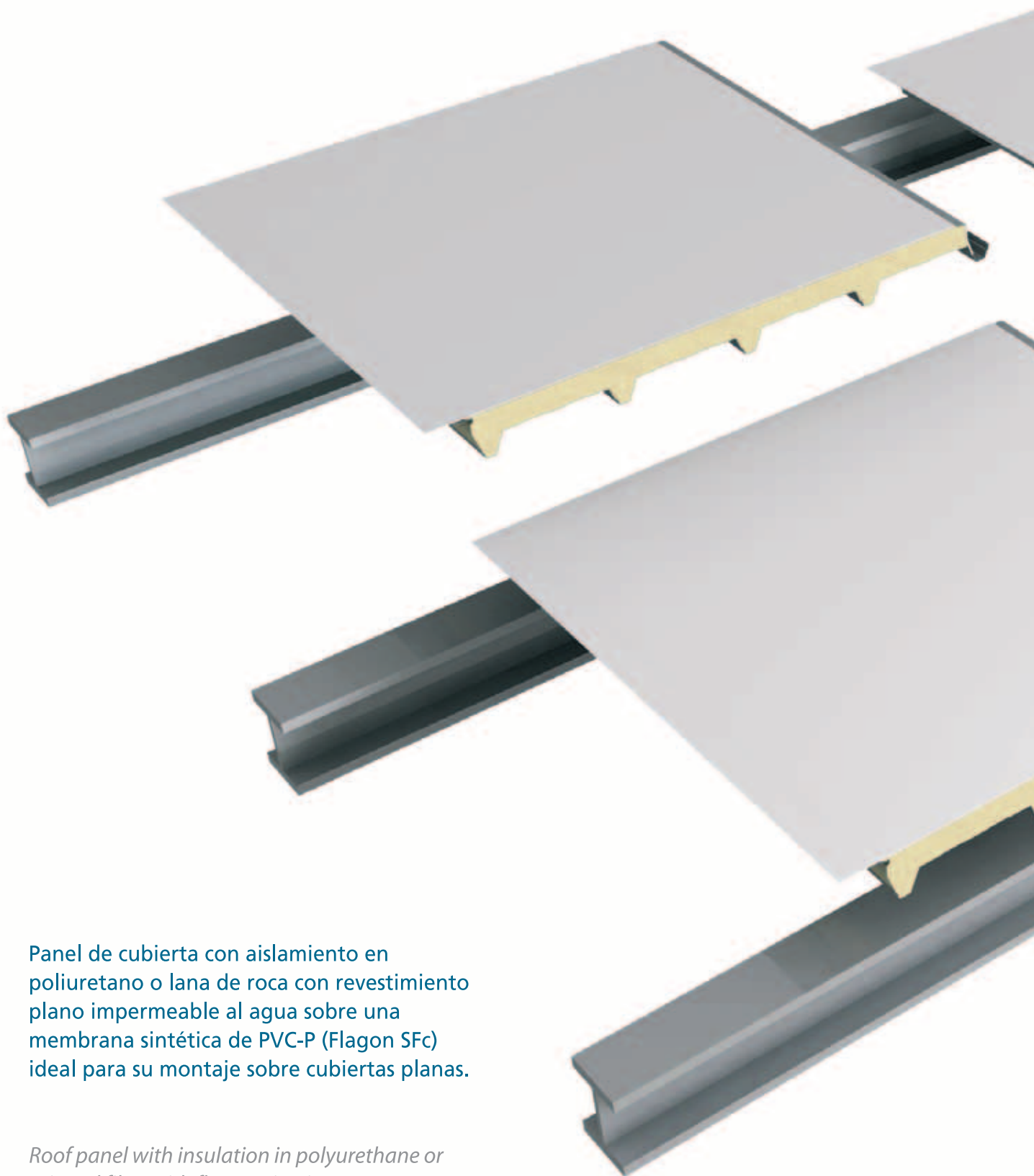
**PENTA/MONOPENTA** | Flagon

**Paneles** para cubiertas horizontales



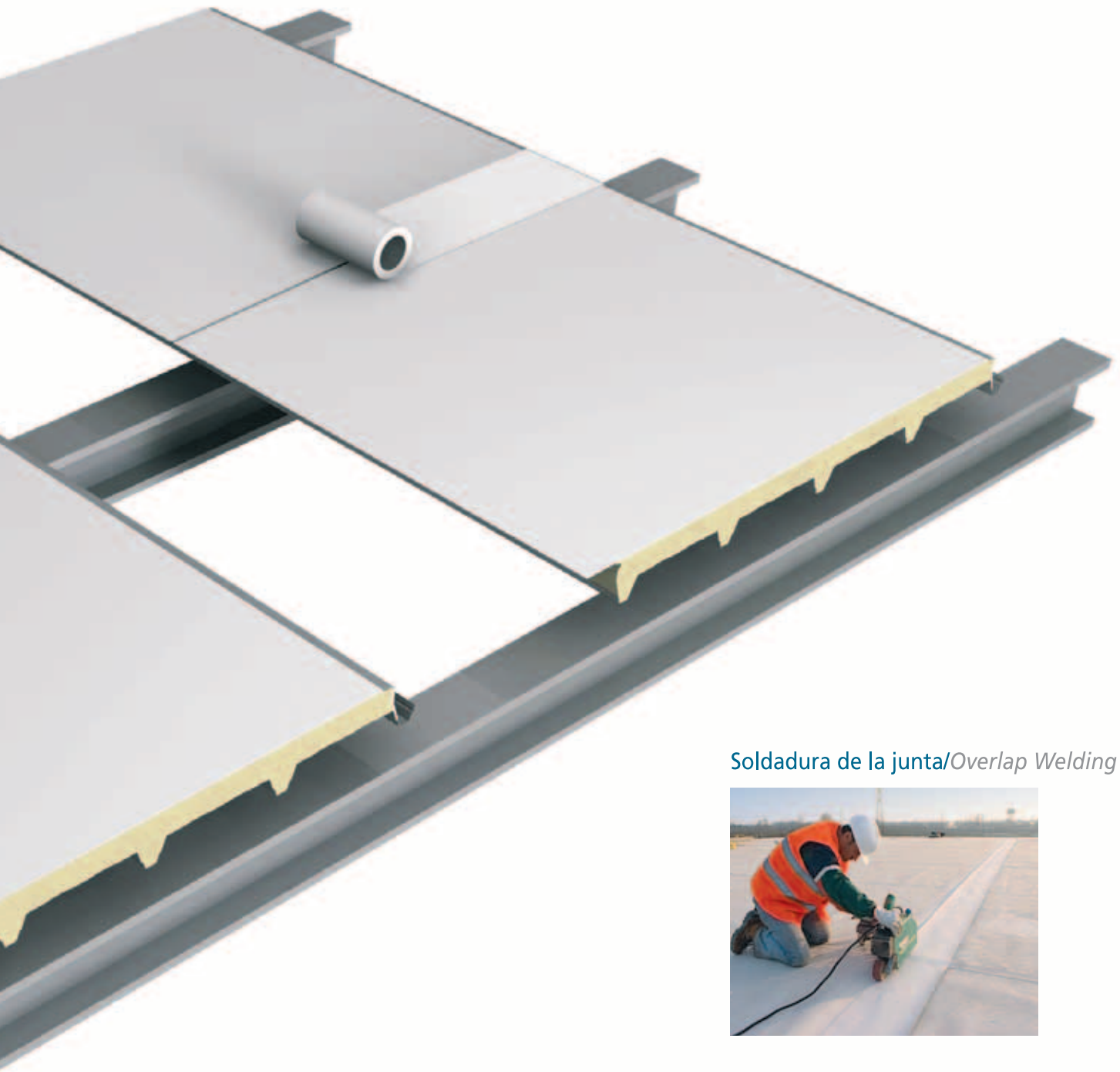
**italpannelli ibérica**





Panel de cubierta con aislamiento en poliuretano o lana de roca con revestimiento plano impermeable al agua sobre una membrana sintética de PVC-P (Flagon SFc) ideal para su montaje sobre cubiertas planas.

*Roof panel with insulation in polyurethane or mineral fibre with flat coating in weatherproofing synthetic PVC membrane ( Flagon SFc) ideal to be assembled on flat roofs.*



Soldadura de la junta / *Overlap Welding*



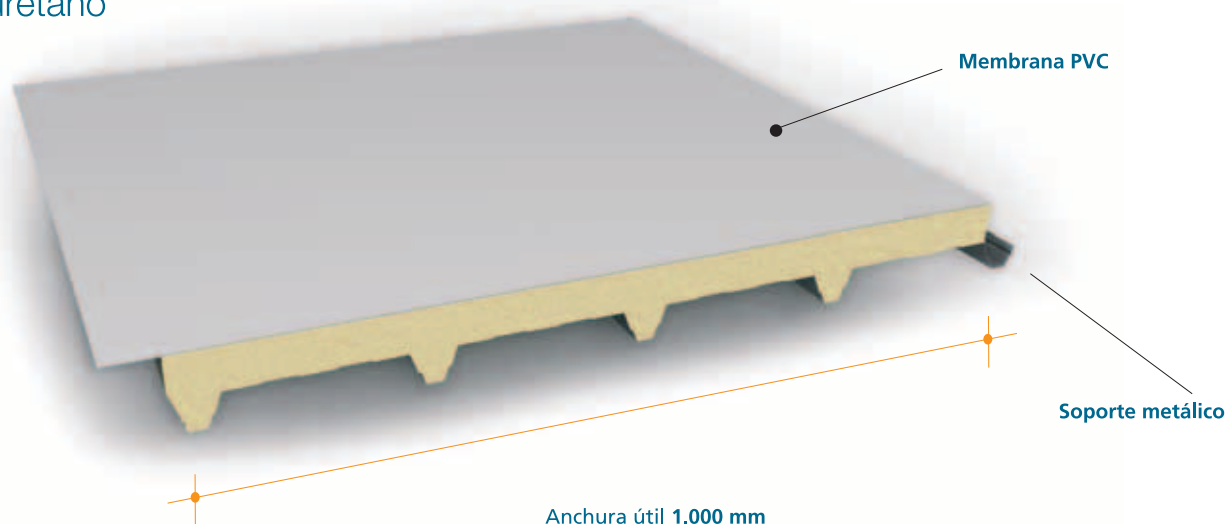
Vista externa / *External Side*



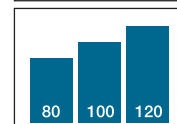
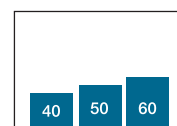
Vista interna / *Internal Side*



Poliuretano

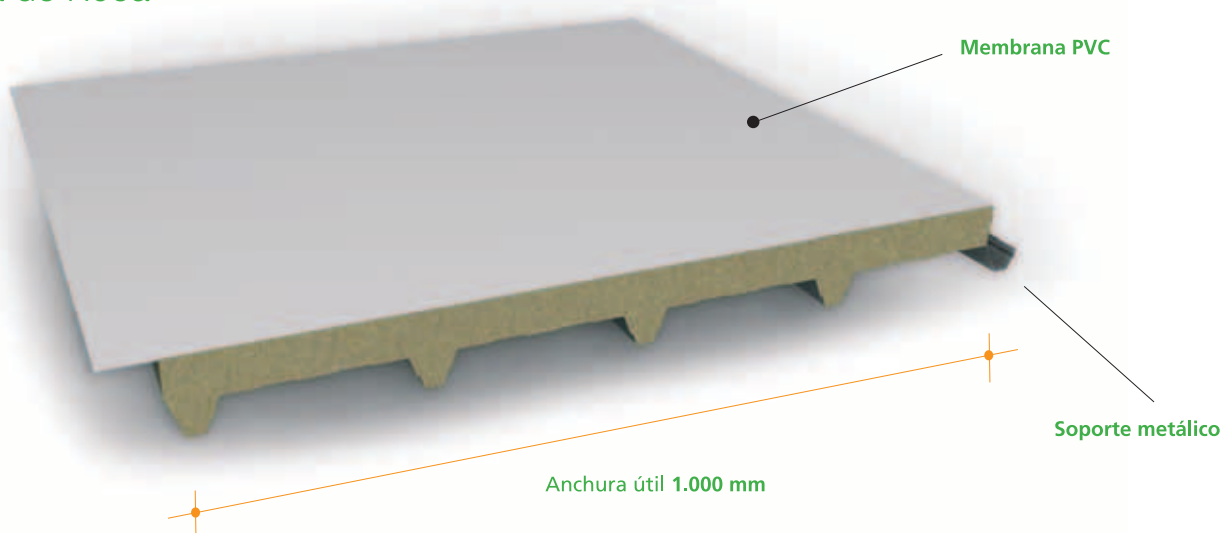


| Espesor Panel mm. | Coeficiente de Transmisión Térmica global o Transmitancia Térmica |                    | Peso panel con soporte externo de acero espesor nominal 0,50 mm (kg./m <sup>2</sup> ) con cobertura de PVC. |
|-------------------|-------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------|
|                   | Kcal/m <sup>2</sup> h°C                                           | W/m <sup>2</sup> K |                                                                                                             |
| 40                | 0.43                                                              | 0.50               | 8.45                                                                                                        |
| 50                | 0.35                                                              | 0.41               | 8.85                                                                                                        |
| 60                | 0.30                                                              | 0.35               | 9.25                                                                                                        |
| 80                | 0.23                                                              | 0.26               | 10.05                                                                                                       |
| 100               | 0.19                                                              | 0.21               | 10.85                                                                                                       |
| 120               | 0.15                                                              | 0.18               | 11.65                                                                                                       |

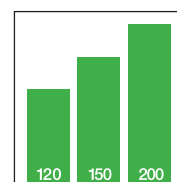
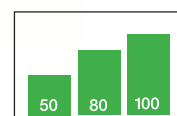


Espesor panel mm.

Lana de Roca



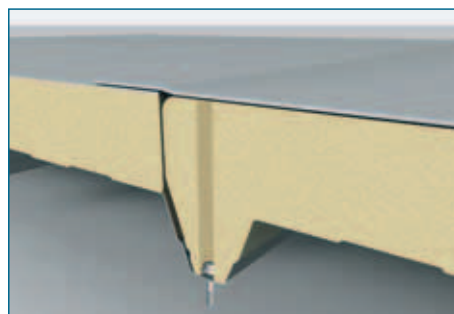
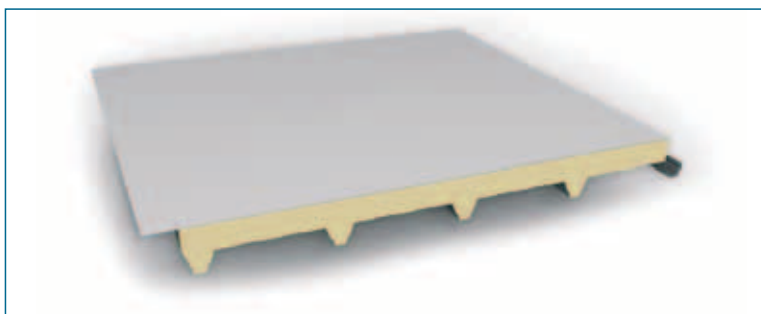
| Espesor Panel mm. | Coeficiente de Transmisión Térmica global o Transmitancia Térmica |                    | Peso panel con soporte externo de acero espesor nominal 0,50 mm (kg./m <sup>2</sup> ) con cobertura de PVC. |
|-------------------|-------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------|
|                   | Kcal/m <sup>2</sup> h°C                                           | W/m <sup>2</sup> K |                                                                                                             |
| 50                | 0.59                                                              | 0.68               | 13.12                                                                                                       |
| 80                | 0.38                                                              | 0.44               | 16.12                                                                                                       |
| 100               | 0.31                                                              | 0.36               | 18.12                                                                                                       |
| 120               | 0.26                                                              | 0.30               | 20.12                                                                                                       |
| 150               | 0.21                                                              | 0.24               | 23.12                                                                                                       |
| 200               | 0.16                                                              | 0.18               | 28.12                                                                                                       |



Espesor panel mm.



## Poliuretano



| Esquema Estático          | DISTANCIA ENTRE APOYOS (cm) - DOS APOYOS |     |     |     |     |     |     |     |     |
|---------------------------|------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Espesor nominal chapa mm. | 150                                      | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 |
| 0.50                      | 166                                      | 113 | 74  | 50  |     |     |     |     |     |
| 0.60                      | 213                                      | 138 | 92  | 65  | 46  | 35  |     |     |     |
| 0.70                      | 255                                      | 170 | 113 | 80  | 58  | 44  | 33  |     |     |
| 0.80                      | 296                                      | 204 | 136 | 95  | 69  | 52  | 40  | 31  |     |
| 1.00                      | 382                                      | 275 | 185 | 130 | 94  | 70  | 54  | 43  | 34  |

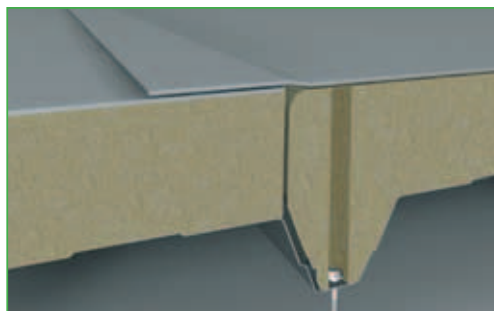
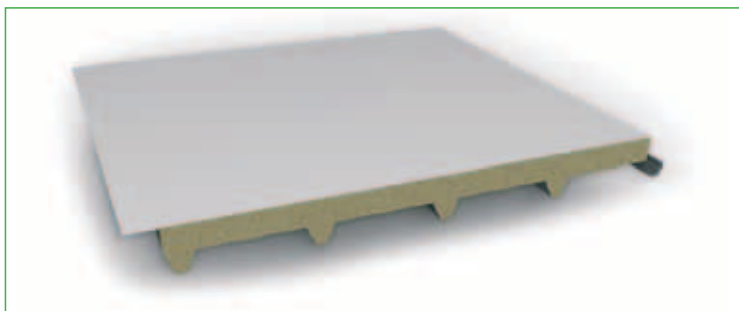
| Esquema Estático          | DISTANCIA ENTRE APOYOS (cm) - TRES O MÁS APOYOS |     |     |     |     |     |     |     |     |
|---------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Espesor nominal chapa mm. | 150                                             | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 |
| 0.50                      | 209                                             | 152 | 115 | 90  | 72  | 49  |     |     |     |
| 0.60                      | 267                                             | 195 | 150 | 108 | 79  | 59  | 45  |     |     |
| 0.70                      | 319                                             | 234 | 179 | 133 | 97  | 72  | 56  | 44  |     |
| 0.80                      | 371                                             | 273 | 209 | 160 | 116 | 87  | 78  | 52  | 42  |
| 1.00                      | 478                                             | 351 | 269 | 212 | 157 | 118 | 90  | 71  | 57  |

Carga uniformemente distribuida admisible en kg/m<sup>2</sup> (factor de conversión 1kg/m<sup>2</sup> = 0,00981 kN/m<sup>2</sup>). Las tablas han sido desarrolladas para paneles con distinto espesor nominal de chapa, imponiendo la limitación de deformación: flecha f = 1/200 L.

Evenly distributed loads allowed in kg./mq. (conversion rate 1 kg./mq. = 0,00981 KN/mq.), the tables have been developed for panels considering the different nominal thickness of the support imposing the deformation limit: deflection f=1/200 L.



## Lana de Roca



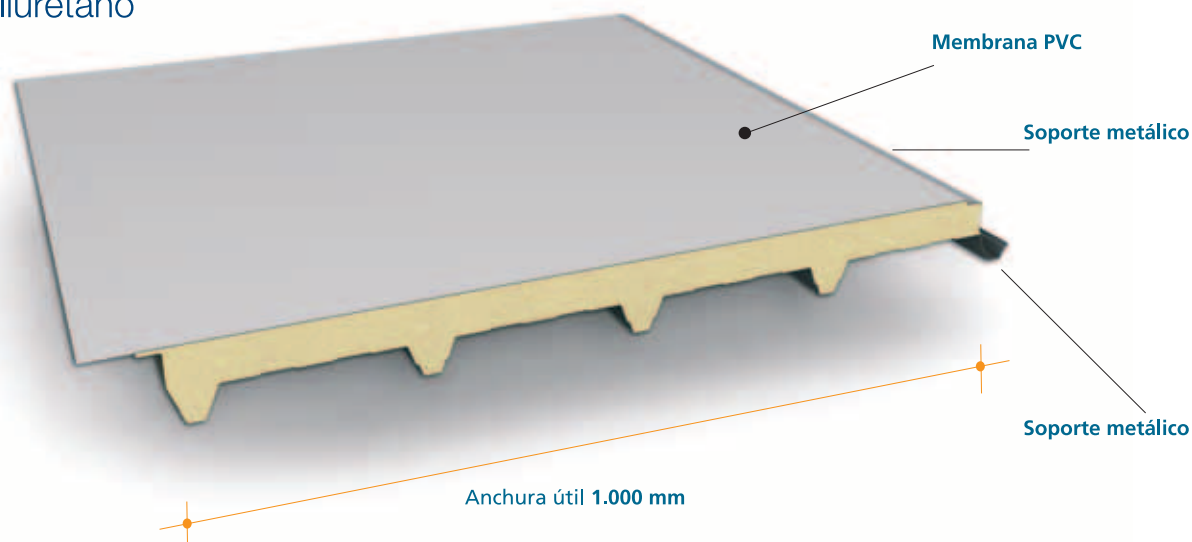
| Esquema Estático              | DISTANCIA ENTRE APOYOS (cm) - DOS APOYOS |     |     |     |     |     |     |     |     |
|-------------------------------|------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Spessore nominale Lamiera mm. | 150                                      | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 |
| 0.60                          | 213                                      | 138 | 92  | 65  | 46  | 35  |     |     |     |
| 0.70                          | 255                                      | 170 | 113 | 80  | 58  | 44  | 33  |     |     |
| 0.80                          | 296                                      | 204 | 136 | 95  | 69  | 52  | 40  | 31  |     |
| 1.00                          | 382                                      | 275 | 185 | 130 | 94  | 70  | 54  | 43  | 34  |

| Esquema Estático              | DISTANCIA ENTRE APOYOS (cm) - TRES O MÁS APOYOS |     |     |     |     |     |     |     |     |
|-------------------------------|-------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Spessore nominale Lamiera mm. | 150                                             | 175 | 200 | 225 | 250 | 275 | 300 | 325 | 350 |
| 0.60                          | 267                                             | 195 | 150 | 108 | 79  | 59  | 45  |     |     |
| 0.70                          | 319                                             | 234 | 179 | 133 | 97  | 72  | 56  | 44  |     |
| 0.80                          | 371                                             | 273 | 209 | 160 | 116 | 87  | 78  | 52  | 42  |
| 1.00                          | 478                                             | 351 | 269 | 212 | 157 | 118 | 90  | 71  | 57  |

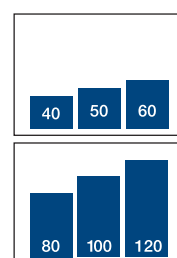
Carga uniformemente distribuida admisible en kg/m<sup>2</sup> (factor de conversión 1kg/m<sup>2</sup> = 0,00981 kN/m<sup>2</sup>). Las tablas han sido desarrolladas para paneles con distinto espesor nominal de chapa, imponiendo la limitación de deformación: flecha f = 1/200 L.

Evenly distributed loads allowed in kg./mq. (conversion rate 1 kg./mq. = 0,00981 KN/mq.), the tables have been developed for panels considering the different nominal thickness of the support imposing the deformation limit: deflection f=1/200 L.

## Poliuretano

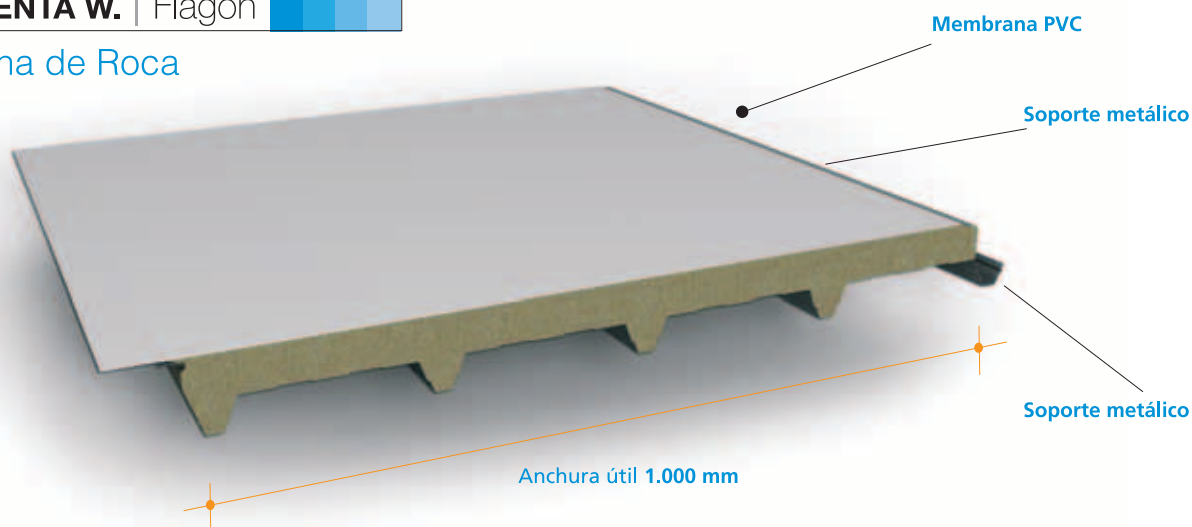


| Espesor Panel mm. | Coeficiente de Transmisión Térmica global o Transmitancia Térmica |                    | Peso panel con soporte externo de acero espesor nominal 0,50 mm (kg./m <sup>2</sup> ) con cobertura de PVC. |
|-------------------|-------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------|
|                   | Kcal/m <sup>2</sup> h°C                                           | W/m <sup>2</sup> K |                                                                                                             |
| 40                | 0.43                                                              | 0.50               | 12.05                                                                                                       |
| 50                | 0.35                                                              | 0.41               | 12.45                                                                                                       |
| 60                | 0.30                                                              | 0.35               | 12.85                                                                                                       |
| 80                | 0.23                                                              | 0.26               | 13.65                                                                                                       |
| 100               | 0.19                                                              | 0.21               | 14.45                                                                                                       |
| 120               | 0.15                                                              | 0.18               | 15.25                                                                                                       |

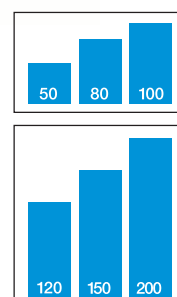


Espesor panel mm.

## Lana de Roca



| Espesor Panel mm. | Coeficiente de Transmisión Térmica global o Transmitancia Térmica |                    | Peso panel con soporte externo de acero espesor nominal 0,50 mm (kg./m <sup>2</sup> ) con cobertura de PVC. |
|-------------------|-------------------------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------|
|                   | Kcal/m <sup>2</sup> h°C                                           | W/m <sup>2</sup> K |                                                                                                             |
| 50                | 0.59                                                              | 0.68               | 16.74                                                                                                       |
| 80                | 0.38                                                              | 0.44               | 19.74                                                                                                       |
| 100               | 0.31                                                              | 0.36               | 21.74                                                                                                       |
| 120               | 0.26                                                              | 0.30               | 23.74                                                                                                       |
| 150               | 0.21                                                              | 0.24               | 26.74                                                                                                       |
| 200               | 0.16                                                              | 0.18               | 31.74                                                                                                       |

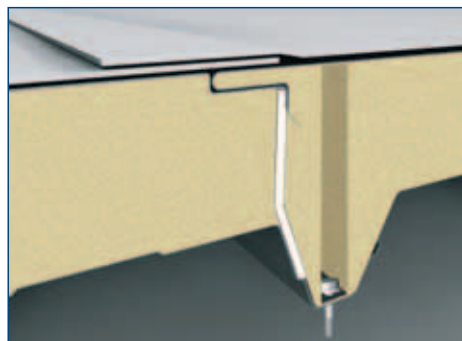
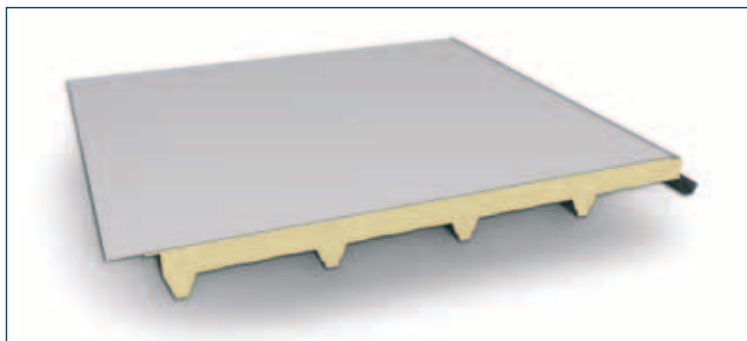


Espesor panel mm.





## Poliuretano

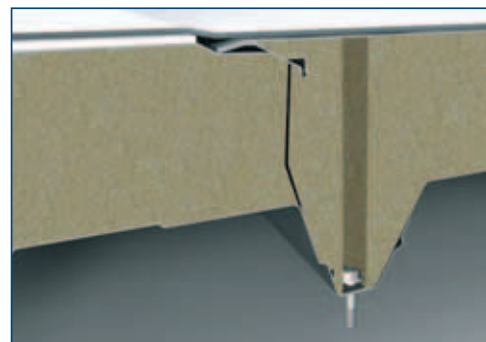
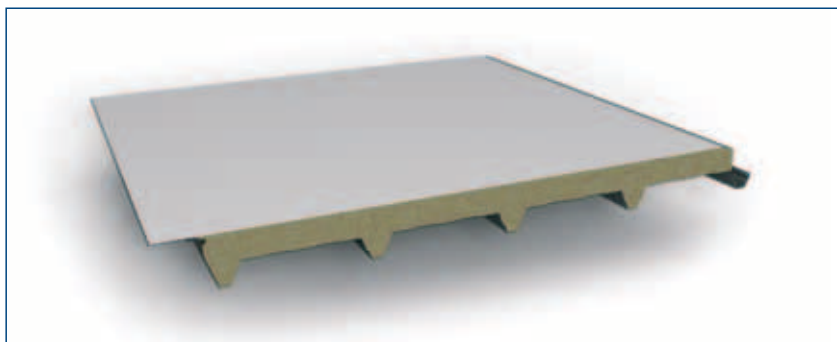


| Esquema Estático          |           | DISTANCIA ENTRE APOYOS (cm) - DOS APOYOS |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |           |     |
|---------------------------|-----------|------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----|
| Espesor nominal chapa mm. |           | 300                                      | 350        | 400        | 425        | 450        | 475        | 500        | 525        | 550        | 575        | 600        | 625        | 650        | 675        | 700        | 725        | 750        | 775       | 800 |
| 40                        | 0.50/0.50 | 161                                      | 115        | 85         |            |            |            |            |            |            |            |            |            |            |            |            |            |            |           |     |
|                           | 0.60/0.50 | 188                                      | 135        | 95         |            |            |            |            |            |            |            |            |            |            |            |            |            |            |           |     |
|                           | 0.60/0.60 | -                                        | 141        | 104        | 85         |            |            |            |            |            |            |            |            |            |            |            |            |            |           |     |
|                           | 0.80/0.60 | -                                        | 159        | 123        | 100        | 82         |            |            |            |            |            |            |            |            |            |            |            |            |           |     |
| 50                        | 0.50/0.50 | <b>205</b>                               | <b>148</b> | <b>111</b> | <b>97</b>  |            |            |            |            |            |            |            |            |            |            |            |            |            |           |     |
|                           | 0.60/0.50 | -                                        | <b>173</b> | <b>130</b> | <b>109</b> | <b>90</b>  |            |            |            |            |            |            |            |            |            |            |            |            |           |     |
|                           | 0.60/0.60 | -                                        | -          | <b>136</b> | <b>119</b> | <b>100</b> |            |            |            |            |            |            |            |            |            |            |            |            |           |     |
|                           | 0.80/0.60 | -                                        | -          | <b>158</b> | <b>141</b> | <b>116</b> | <b>97</b>  |            |            |            |            |            |            |            |            |            |            |            |           |     |
| 60                        | 0.50/0.50 | <b>243</b>                               | <b>183</b> | <b>138</b> | <b>121</b> | <b>107</b> | <b>92</b>  |            |            |            |            |            |            |            |            |            |            |            |           |     |
|                           | 0.60/0.50 | -                                        | <b>208</b> | <b>162</b> | <b>142</b> | <b>122</b> | <b>102</b> |            |            |            |            |            |            |            |            |            |            |            |           |     |
|                           | 0.60/0.60 | -                                        | -          | -          | <b>148</b> | <b>131</b> | <b>113</b> | <b>96</b>  |            |            |            |            |            |            |            |            |            |            |           |     |
|                           | 0.80/0.60 | -                                        | -          | -          | <b>168</b> | <b>157</b> | <b>132</b> | <b>111</b> | <b>94</b>  |            |            |            |            |            |            |            |            |            |           |     |
| 80                        | 0.50/0.50 | <b>304</b>                               | <b>260</b> | <b>196</b> | <b>172</b> | <b>152</b> | <b>135</b> | <b>121</b> | <b>109</b> | <b>95</b>  |            |            |            |            |            |            |            |            |           |     |
|                           | 0.60/0.50 | -                                        | -          | <b>226</b> | <b>202</b> | <b>179</b> | <b>159</b> | <b>143</b> | <b>122</b> | <b>104</b> | <b>90</b>  |            |            |            |            |            |            |            |           |     |
|                           | 0.60/0.60 | -                                        | -          | -          | <b>209</b> | <b>187</b> | <b>166</b> | <b>149</b> | <b>134</b> | <b>117</b> | <b>100</b> | <b>87</b>  |            |            |            |            |            |            |           |     |
|                           | 0.80/0.60 | -                                        | -          | -          | -          | <b>197</b> | <b>186</b> | <b>176</b> | <b>157</b> | <b>134</b> | <b>116</b> | <b>100</b> | <b>87</b>  |            |            |            |            |            |           |     |
| 100                       | 0.50/0.50 | <b>366</b>                               | <b>312</b> | <b>257</b> | <b>227</b> | <b>201</b> | <b>179</b> | <b>160</b> | <b>144</b> | <b>130</b> | <b>118</b> | <b>108</b> | <b>94</b>  |            |            |            |            |            |           |     |
|                           | 0.60/0.50 | -                                        | -          | <b>270</b> | <b>255</b> | <b>238</b> | <b>211</b> | <b>189</b> | <b>171</b> | <b>154</b> | <b>136</b> | <b>119</b> | <b>103</b> | <b>90</b>  |            |            |            |            |           |     |
|                           | 0.60/0.60 | -                                        | -          | -          | -          | -          | <b>220</b> | <b>197</b> | <b>177</b> | <b>160</b> | <b>146</b> | <b>133</b> | <b>116</b> | <b>102</b> | <b>89</b>  |            |            |            |           |     |
|                           | 0.80/0.60 | -                                        | -          | -          | -          | -          | -          | <b>213</b> | <b>202</b> | <b>192</b> | <b>176</b> | <b>153</b> | <b>133</b> | <b>117</b> | <b>102</b> | <b>90</b>  |            |            |           |     |
| 120                       | 0.50/0.50 | <b>430</b>                               | <b>367</b> | <b>319</b> | <b>284</b> | <b>252</b> | <b>225</b> | <b>201</b> | <b>181</b> | <b>164</b> | <b>149</b> | <b>136</b> | <b>124</b> | <b>114</b> | <b>104</b> | <b>92</b>  |            |            |           |     |
|                           | 0.60/0.50 | -                                        | -          | -          | <b>300</b> | <b>283</b> | <b>266</b> | <b>239</b> | <b>215</b> | <b>195</b> | <b>177</b> | <b>161</b> | <b>147</b> | <b>129</b> | <b>114</b> | <b>101</b> | <b>89</b>  |            |           |     |
|                           | 0.60/0.60 | -                                        | -          | -          | -          | -          | -          | <b>247</b> | <b>223</b> | <b>202</b> | <b>183</b> | <b>167</b> | <b>153</b> | <b>140</b> | <b>128</b> | <b>113</b> | <b>100</b> | <b>89</b>  |           |     |
|                           | 0.80/0.60 | -                                        | -          | -          | -          | -          | -          | -          | <b>238</b> | <b>226</b> | <b>216</b> | <b>206</b> | <b>189</b> | <b>166</b> | <b>147</b> | <b>130</b> | <b>115</b> | <b>102</b> | <b>91</b> |     |

| Esquema Estático          |           | DISTANCIA ENTRE APOYOS (cm) – TRES O MÁS APOYOS |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |            |           |
|---------------------------|-----------|-------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|
| Espesor nominal chapa mm. |           | 300                                             | 350        | 400        | 425        | 450        | 475        | 500        | 525        | 550        | 575        | 600        | 625        | 650        | 675        | 700        | 725        | 750        | 775        | 800       |
| 40                        | 0.50/0.50 | 186                                             | 147        | 102        | 83         |            |            |            |            |            |            |            |            |            |            |            |            |            |            |           |
|                           | 0.60/0.50 | -                                               | 160        | 114        | 93         |            |            |            |            |            |            |            |            |            |            |            |            |            |            |           |
|                           | 0.60/0.60 | -                                               | -          | 125        | 102        | 84         |            |            |            |            |            |            |            |            |            |            |            |            |            |           |
|                           | 0.80/0.60 | -                                               | -          | 138        | 120        | 99         | 81         |            |            |            |            |            |            |            |            |            |            |            |            |           |
| 50                        | 0.50/0.50 | <b>211</b>                                      | <b>180</b> | <b>141</b> | <b>118</b> | <b>98</b>  |            |            |            |            |            |            |            |            |            |            |            |            |            |           |
|                           | 0.60/0.50 | -                                               | -          | <b>156</b> | <b>131</b> | <b>108</b> | <b>90</b>  |            |            |            |            |            |            |            |            |            |            |            |            |           |
|                           | 0.60/0.60 | -                                               | -          | -          | <b>145</b> | <b>120</b> | <b>100</b> |            |            |            |            |            |            |            |            |            |            |            |            |           |
|                           | 0.80/0.60 | -                                               | -          | -          | -          | <b>139</b> | <b>116</b> | <b>97</b>  |            |            |            |            |            |            |            |            |            |            |            |           |
| 60                        | 0.50/0.50 | <b>243</b>                                      | <b>205</b> | <b>175</b> | <b>154</b> | <b>133</b> | <b>111</b> | <b>93</b>  |            |            |            |            |            |            |            |            |            |            |            |           |
|                           | 0.60/0.50 | -                                               | -          | -          | <b>169</b> | <b>146</b> | <b>122</b> | <b>103</b> | <b>87</b>  |            |            |            |            |            |            |            |            |            |            |           |
|                           | 0.60/0.60 | -                                               | -          | -          | -          | <b>156</b> | <b>136</b> | <b>115</b> | <b>97</b>  |            |            |            |            |            |            |            |            |            |            |           |
|                           | 0.80/0.60 | -                                               | -          | -          | -          | -          | <b>148</b> | <b>133</b> | <b>112</b> | <b>96</b>  |            |            |            |            |            |            |            |            |            |           |
| 80                        | 0.50/0.50 | <b>305</b>                                      | <b>259</b> | <b>225</b> | <b>210</b> | <b>193</b> | <b>172</b> | <b>154</b> | <b>133</b> | <b>114</b> | <b>98</b>  |            |            |            |            |            |            |            |            |           |
|                           | 0.60/0.50 | -                                               | -          | -          | -          | <b>199</b> | <b>188</b> | <b>171</b> | <b>146</b> | <b>125</b> | <b>108</b> | <b>93</b>  |            |            |            |            |            |            |            |           |
|                           | 0.60/0.60 | -                                               | -          | -          | -          | -          | -          | <b>176</b> | <b>167</b> | <b>140</b> | <b>120</b> | <b>105</b> | <b>90</b>  |            |            |            |            |            |            |           |
|                           | 0.80/0.60 | -                                               | -          | -          | -          | -          | -          | -          | <b>159</b> | <b>139</b> | <b>120</b> | <b>104</b> | <b>90</b>  |            |            |            |            |            |            |           |
| 100                       | 0.50/0.50 | <b>366</b>                                      | <b>310</b> | <b>272</b> | <b>255</b> | <b>240</b> | <b>225</b> | <b>204</b> | <b>183</b> | <b>166</b> | <b>149</b> | <b>130</b> | <b>113</b> | <b>99</b>  |            |            |            |            |            |           |
|                           | 0.60/0.50 | -                                               | -          | -          | -          | -          | -          | <b>215</b> | <b>204</b> | <b>189</b> | <b>164</b> | <b>142</b> | <b>124</b> | <b>109</b> | <b>95</b>  |            |            |            |            |           |
|                           | 0.60/0.60 | -                                               | -          | -          | -          | -          | -          | -          | <b>192</b> | <b>183</b> | <b>159</b> | <b>139</b> | <b>122</b> | <b>107</b> | <b>94</b>  |            |            |            |            |           |
|                           | 0.80/0.60 | -                                               | -          | -          | -          | -          | -          | -          | -          | -          | <b>175</b> | <b>160</b> | <b>140</b> | <b>123</b> | <b>108</b> | <b>96</b>  |            |            |            |           |
| 120                       | 0.50/0.50 | <b>428</b>                                      | <b>365</b> | <b>317</b> | <b>300</b> | <b>280</b> | <b>265</b> | <b>251</b> | <b>230</b> | <b>208</b> | <b>190</b> | <b>173</b> | <b>159</b> | <b>141</b> | <b>125</b> | <b>110</b> | <b>98</b>  |            |            |           |
|                           | 0.60/0.50 | -                                               | -          | -          | -          | -          | -          | -          | <b>240</b> | <b>227</b> | <b>261</b> | <b>202</b> | <b>176</b> | <b>155</b> | <b>137</b> | <b>121</b> | <b>107</b> | <b>95</b>  |            |           |
|                           | 0.60/0.60 | -                                               | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | <b>195</b> | <b>174</b> | <b>154</b> | <b>136</b> | <b>120</b> | <b>107</b> | <b>95</b>  |           |
|                           | 0.80/0.60 | -                                               | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | -          | <b>189</b> | <b>176</b> | <b>156</b> | <b>138</b> | <b>123</b> | <b>110</b> | <b>98</b> |

Carga uniformemente distribuida admisible en kg/m<sup>2</sup> (factor de conversión 1kg/m<sup>2</sup> = 0,00981 kN/m<sup>2</sup>). Las tablas han sido desarrolladas para paneles con distinto espesor nominal de chapa, imponiendo la limitación de deformación: flecha f = 1/200 L.

Evenly distributed loads allowed in kg./mq. (conversion rate 1 kg./mq. = 0,00981 KN/mq.). the tables have been developed for panels considering the different nominal thickness of the support imposing the deformation limit: deflection f=1/200 L.



| Esquema Estático          |           | DISTANCIA ENTRE APOYOS (cm) - DOS APOYOS |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|---------------------------|-----------|------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Espesor nominal chapa mm. |           | 200                                      | 250 | 300 | 350 | 400 | 425 | 450 | 475 | 500 | 525 | 550 | 575 | 600 | 625 | 650 | 675 | 700 | 725 | 750 | 775 | 800 |  |
| 50                        | 0.60/0.50 | 156                                      | 122 | 99  | 83  | 71  | 66  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
| 80                        | 0.60/0.50 | 221                                      | 173 | 141 | 119 | 102 | 95  | 89  | 83  | 78  | 73  | 69  | 66  |     |     |     |     |     |     |     |     |     |  |
| 100                       | 0.60/0.50 | 266                                      | 209 | 171 | 144 | 124 | 115 | 108 | 101 | 95  | 90  | 85  | 80  | 76  | 72  | 69  |     |     |     |     |     |     |  |
| 120                       | 0.60/0.50 | 312                                      | 246 | 201 | 169 | 146 | 136 | 127 | 119 | 112 | 106 | 100 | 95  | 90  | 86  | 81  | 78  | 74  | 71  | 68  |     |     |  |
| 150                       | 0.60/0.50 | 382                                      | 301 | 247 | 208 | 179 | 167 | 156 | 147 | 138 | 131 | 124 | 117 | 111 | 106 | 101 | 96  | 92  | 88  | 84  | 81  | 77  |  |
| 200                       | 0.60/0.50 | 500                                      | 395 | 324 | 273 | 236 | 220 | 206 | 194 | 183 | 173 | 163 | 155 | 147 | 140 | 134 | 128 | 122 | 117 | 112 | 107 | 103 |  |

| Esquema Estático          |           | DISTANCIA ENTRE APOYOS (cm) – TRES O MÁS APOYOS |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|---------------------------|-----------|-------------------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Espesor nominal chapa mm. |           | 200                                             | 250 | 300 | 350 | 400 | 425 | 450 | 475 | 500 | 525 | 550 | 575 | 600 | 625 | 650 | 675 | 700 | 725 | 750 | 775 | 800 |
| 50                        | 0.60/0.50 | 156                                             | 132 | 107 | 90  | 77  | 71  |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 80                        | 0.60/0.50 | 221                                             | 173 | 152 | 129 | 110 | 102 | 96  | 90  | 84  | 79  | 74  | 71  |     |     |     |     |     |     |     |     |     |
| 100                       | 0.60/0.50 | 266                                             | 209 | 171 | 155 | 134 | 124 | 117 | 109 | 102 | 97  | 92  | 86  | 82  | 78  | 75  |     |     |     |     |     |     |
| 120                       | 0.60/0.50 | 312                                             | 246 | 201 | 183 | 158 | 147 | 137 | 129 | 121 | 115 | 108 | 102 | 97  | 93  | 87  | 84  | 80  | 77  | 73  |     |     |
| 150                       | 0.60/0.50 | 382                                             | 301 | 247 | 225 | 193 | 180 | 168 | 158 | 149 | 141 | 134 | 126 | 120 | 115 | 110 | 104 | 99  | 95  | 91  | 87  | 83  |
| 200                       | 0.60/0.50 | 500                                             | 395 | 324 | 294 | 255 | 237 | 222 | 210 | 198 | 187 | 176 | 167 | 159 | 151 | 144 | 138 | 132 | 126 | 121 | 115 | 111 |

Carga uniformemente distribuida admisible en kg/m<sup>2</sup> (factor de conversión 1kg/m<sup>2</sup> = 0,00981 kN/m<sup>2</sup>). Las tablas han sido desarrolladas para paneles con distinto espesor nominal de chapa, imponiendo la limitación de deformación: flecha f = 1/200 L.

Evenly distributed loads allowed in kg./mq. (conversion rate 1 kg./mq. = 0,00981 KN/mq.). the tables have been developed for panels considering the different nominal thickness of the support imposing the deformation limit: deflection f=1/200 L.





## MONOPENTA | Flagon [ Especificaciones ]

Panel monochapa aislante y autoportante con impermeabilización a base de una membrana de PVC-P para cubiertas planas e inclinadas, constituido por:

### Lado Interno:

*Chapa grecada de acero zincado y prelacado conforme a las normas EN 10142 y EN 10147.*

Espesores nominales: 0,50, 0,60, 0,80 mm.

Altura greca: 40 mm; Paso: 250 mm.

*Tipo de prelacado para el soporte externo:*

Poliéster, Sistema base

Poliéster siliconado, Sistema Super

Polifluoruro de vinilideno, Sistema PVDF

### Aislamiento Térmico:

*Realizado con espuma poliuretánica rígida con densidad media  $40 \text{ kg/m}^3 \pm 4$ .*

Espesores sin contar la greca: 40, 50, 60, 80, 100 y 120 mm

O bien

*Realizado con lana de roca inorgánica, biosoluble y de composición basáltica completamente exenta de aminas y de sílice cristalina, con densidad media de  $100 \text{ kg/m}^3 \pm 10$ .*

Espesores sin contar la greca: 50, 80, 100, 120, 150, 200 mm

### Lado Externo:

Membrana sintética de PVC-P (Flagon SFC) de espesor 1,50 mm resistente a los agentes atmosféricos y a los rayos U.V., aplicado en ciclo continuo en contacto directo con el material aislante. El manto se estabiliza dimensionalmente añadiendo tejido de fibra de vidrio de 50 gr/m<sup>2</sup>, y se aplica sobre el soporte de fieltro no tejido en poliéster de 200 gr/m<sup>2</sup> con un solape lateral de unos 60 mm a soldar en obra.

**La instalación del panel debe ser efectuada por operarios altamente especializados, aprobados por Flag s.p.a. y/o por Italpannelli s.r.l.**

Single sheet insulated self supporting panel with weatherproofing made out of PVC -P membrane for flat and sloped roofing constituted by :

### Internal side:

*Ribbed sheet in galvanized and prepainted steel conform to the norms UNI EN 10142 and UNI EN 10147.*

Nominal thickness : 0,50, 0,60, 0,80 mm.

Rib height : 40 mm; Breath: 250 mm

*Type of paint for the external support :*

Polyester for Base System

Silicone polyester for Super System

Polivindenfluorur for PVDF system

### Thermal insulation

*Rigid polyurethane foam average density  $40 \text{ Kg./m}^3 \pm 4$ .*

Out of rib thickness 40, 50, 60, 80, 100 and 120 mm

Or

*Inorganic and bio-soluble rock wool with basaltic composition, completely free from asbestos and crystal silica, average density  $100 \text{ Kg./m}^3 \pm 10$ .*

Out of rib thickness 50, 80, 100, 120, 150, 200 mm

### External side :

Synthetic membrane in PVC-P (Flagon SFC) thickness 1,50 mm resistant to environmental agents and to U.V. rays applied in continuous directly on the insulation material. The sheets is dimensionally stabilized with the addition of a 50 gr/m<sup>2</sup> fibre glass tissue and is applied onto the 200 gr/m<sup>2</sup> non woven polyester felt support with a lateral overlap of around 60 mm to be welded on site.

**The assembling of panels has to be effected by highly specialized workers, approved by Flag s.p.a. and/or Italpannelli s.r.l.**

## PENTA | Flagon [ Especificaciones ]

Panel bichapa aislante y autoportante con impermeabilización a base de una membrana de PVC-P para cubiertas planas e inclinadas, constituido por:

### Lado Interno:

*Chapa grecada de acero zincado y prelacado conforme a las normas EN 10142 y EN 10147.*

Espesores nominales: 0,50, 0,60, 0,80 mm.

Altura greca: 40 mm; Paso: 250 mm.

*Tipo de prelacado para el soporte externo:*

Poliéster, Sistema base

Poliéster siliconado, Sistema Super

Polifluoruro de vinilideno, Sistema PVDF

### Aislamiento Térmico:

*Realizado con espuma poliuretánica rígida con densidad media  $40 \text{ kg/m}^3 \pm 4$ .*

Espesores sin contar la greca: 40, 50, 60, 80, 100 y 120 mm

O bien

*Realizado con lana de roca inorgánica, biosoluble y de composición basáltica completamente exenta de aminas y de sílice cristalina, con densidad media de  $100 \text{ kg/m}^3 \pm 10$ .*

Espesores sin contar la greca: 50, 80, 100, 120, 150, 200 mm

### Lado Externo:

Chapa lisa, no perfilada, en acero zincado (espesores nominales 0,50 y 0,60 mm) sobre la cual se aplica en ciclo continuo una membrana sintética de PVC-P (Flagon SFC) de espesor 1,50 mm resistente a los agentes atmosféricos y a los rayos U.V. El manto se estabiliza dimensionalmente añadiendo tejido de fibra de vidrio de 50 gr/m<sup>2</sup>, y se aplica sobre el soporte de fieltro no tejido en poliéster de 200 gr/m<sup>2</sup> con un solape lateral de unos 60 mm a soldar en obra.

**La instalación del panel debe ser efectuada por operarios altamente especializados, aprobados por Flag s.p.a. y/o por Italpannelli s.r.l.**

Double sheeted insulated self supporting panel with weatherproofing made out of PVC -P membrane for flat and sloped roofing constituted by

### Internal side:

*Ribbed sheet in galvanized and prepainted steel conform to the norms UNI EN 10142 and UNI EN 10147.*

Nominal thickness : 0,50, 0,60, 0,80 mm.

Rib height : 40 mm; Breath: 250 mm

*Type of paint for the external support :*

Polyester for Base System

Silicone polyester for Super System

Polivindenfluorur for PVDF system

### Thermal insulation

*Rigid polyurethane foam average density  $40 \text{ Kg./m}^3 \pm 4$ .*

Out of rib thickness 40, 50, 60, 80, 100 and 120 mm

Or

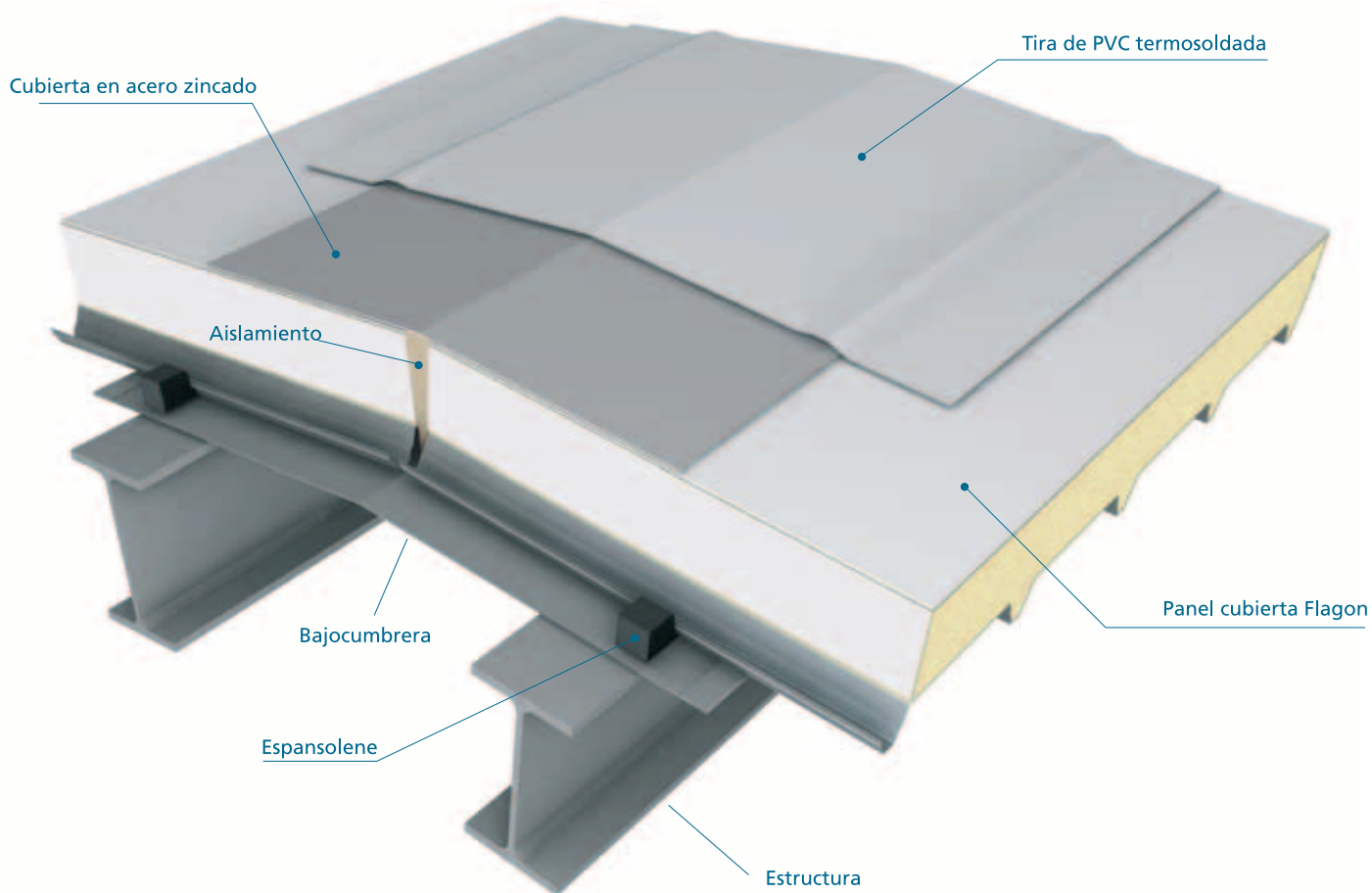
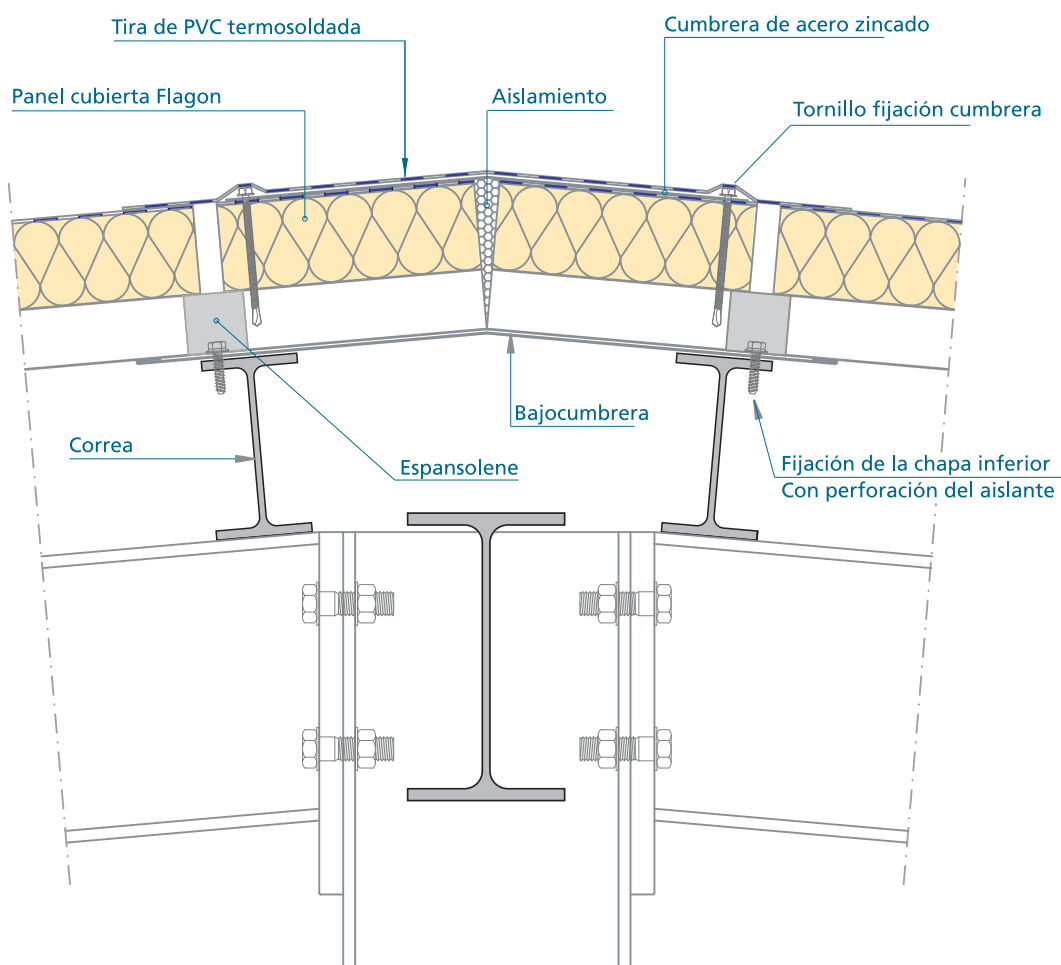
*Inorganic and bio-soluble rock wool with basaltic composition, completely free from asbestos and crystal silica, average density  $100 \text{ Kg./m}^3 \pm 10$ .*

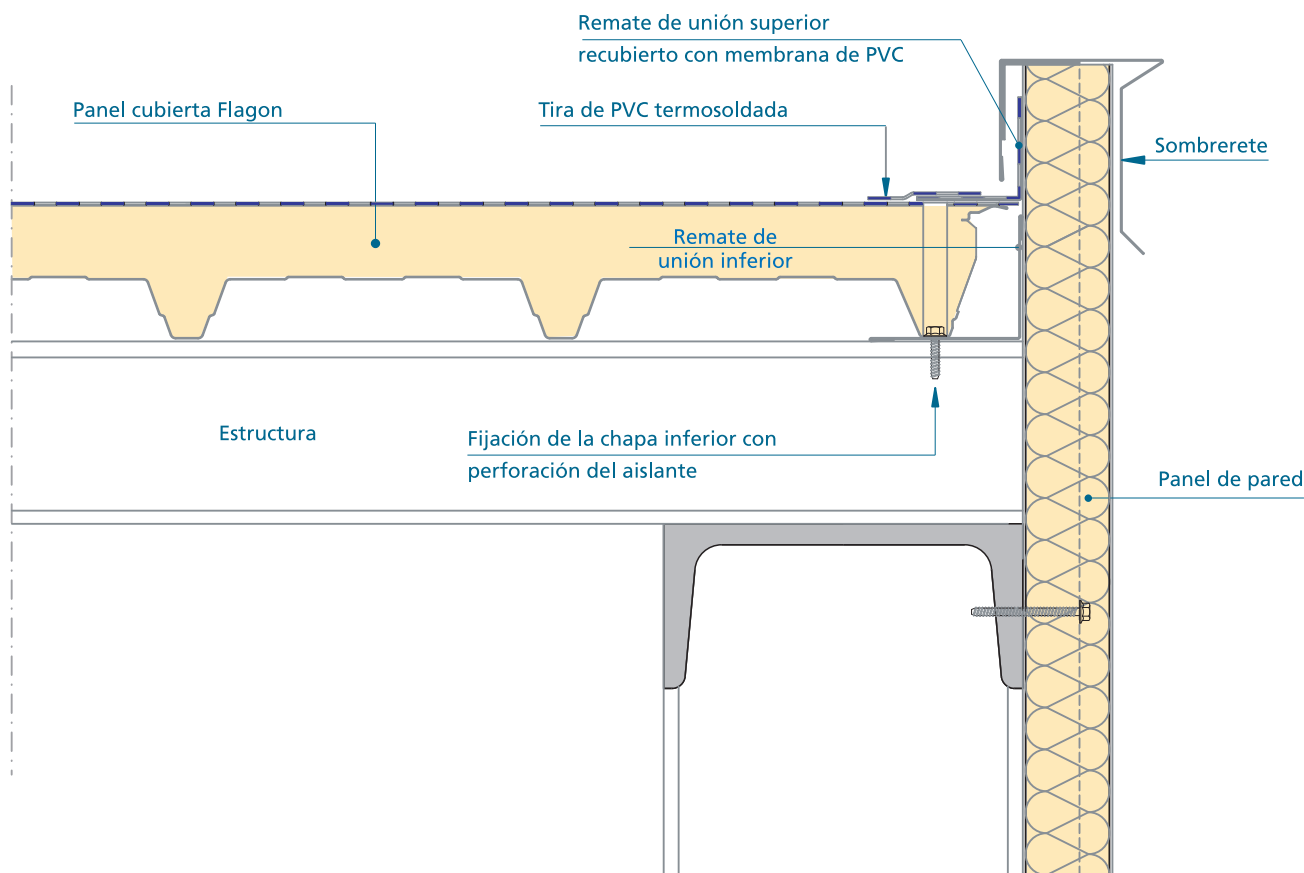
Out of rib thickness 50, 80, 100, 120, 150, 200 mm

### External side:

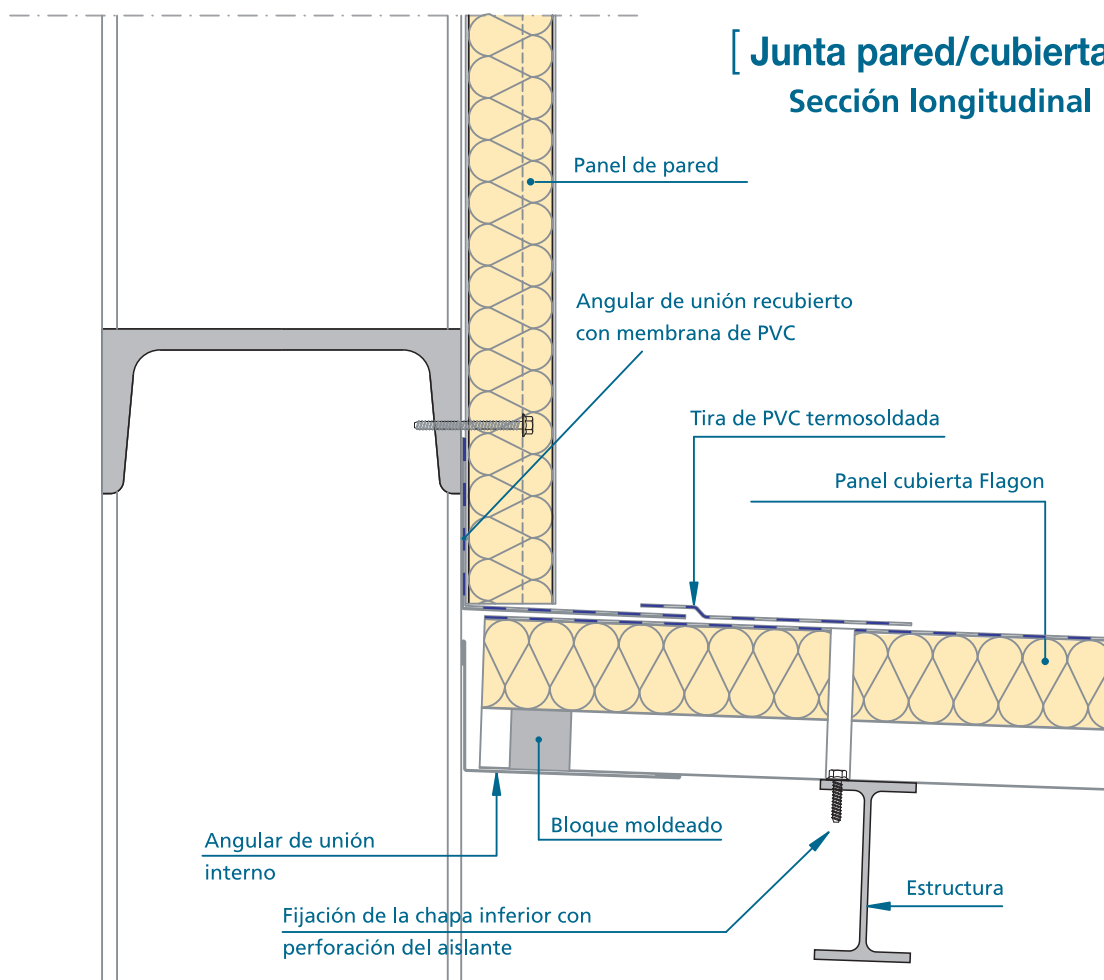
Flat non profiled sheet in galvanized steel ( nominal thickness mm 0,50 and 0,60) with the application in continuous of a synthetic membrane in PVC-P (Flagon SFC) thickness 1,50 mm, resistant to environmental agents and to U.V. rays. The sheets is dimensionally stabilized with the addition of a 50 gr/m<sup>2</sup> fibre glass tissue and is applied onto the 200 gr/m<sup>2</sup> non woven polyester felt support with a lateral overlap of around 60 mm to be welded on site.

**The assembling of panels has to be effected by highly specialized workers, approved by Flag s.p.a. and/or Italpannelli s.r.l.**

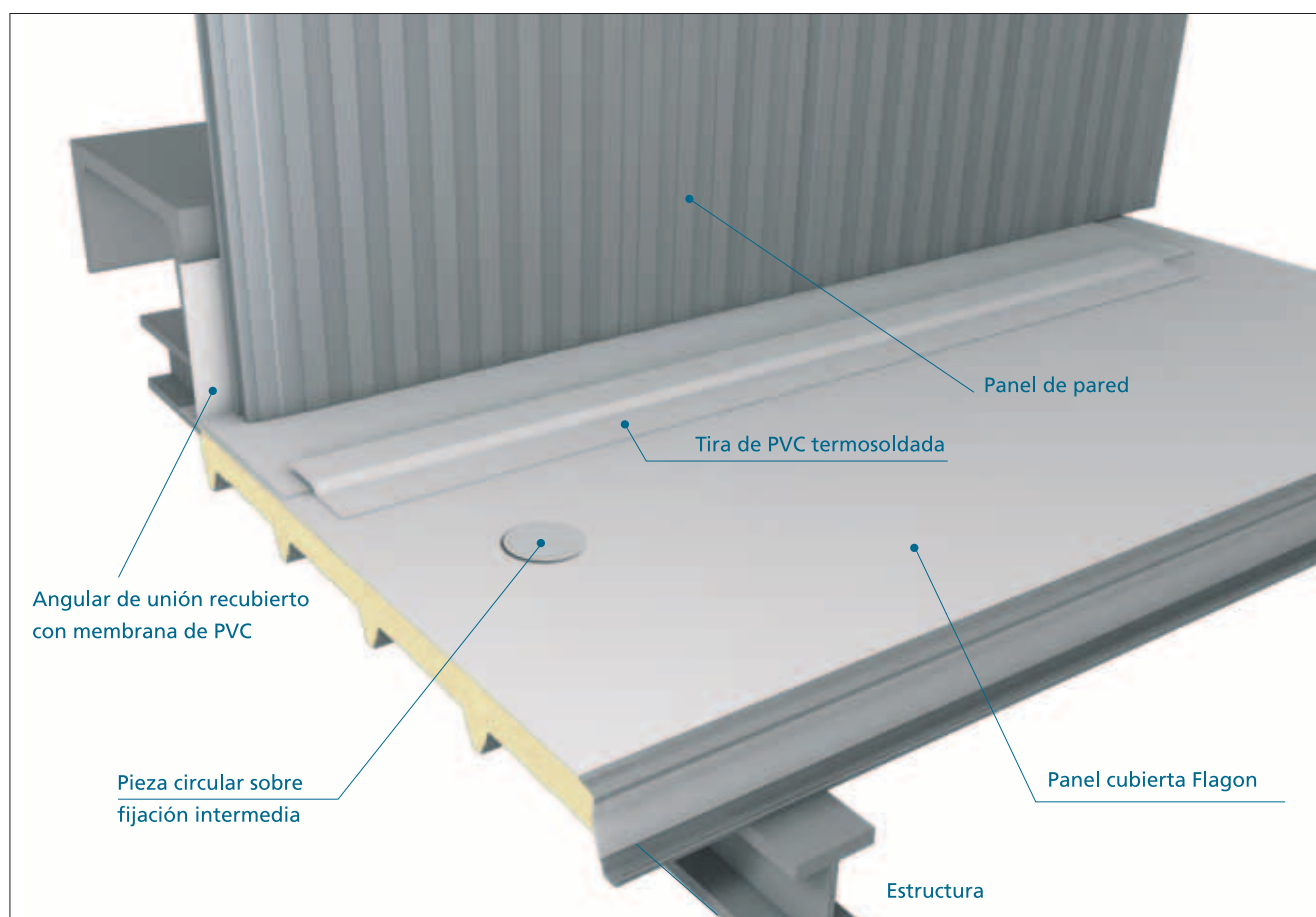
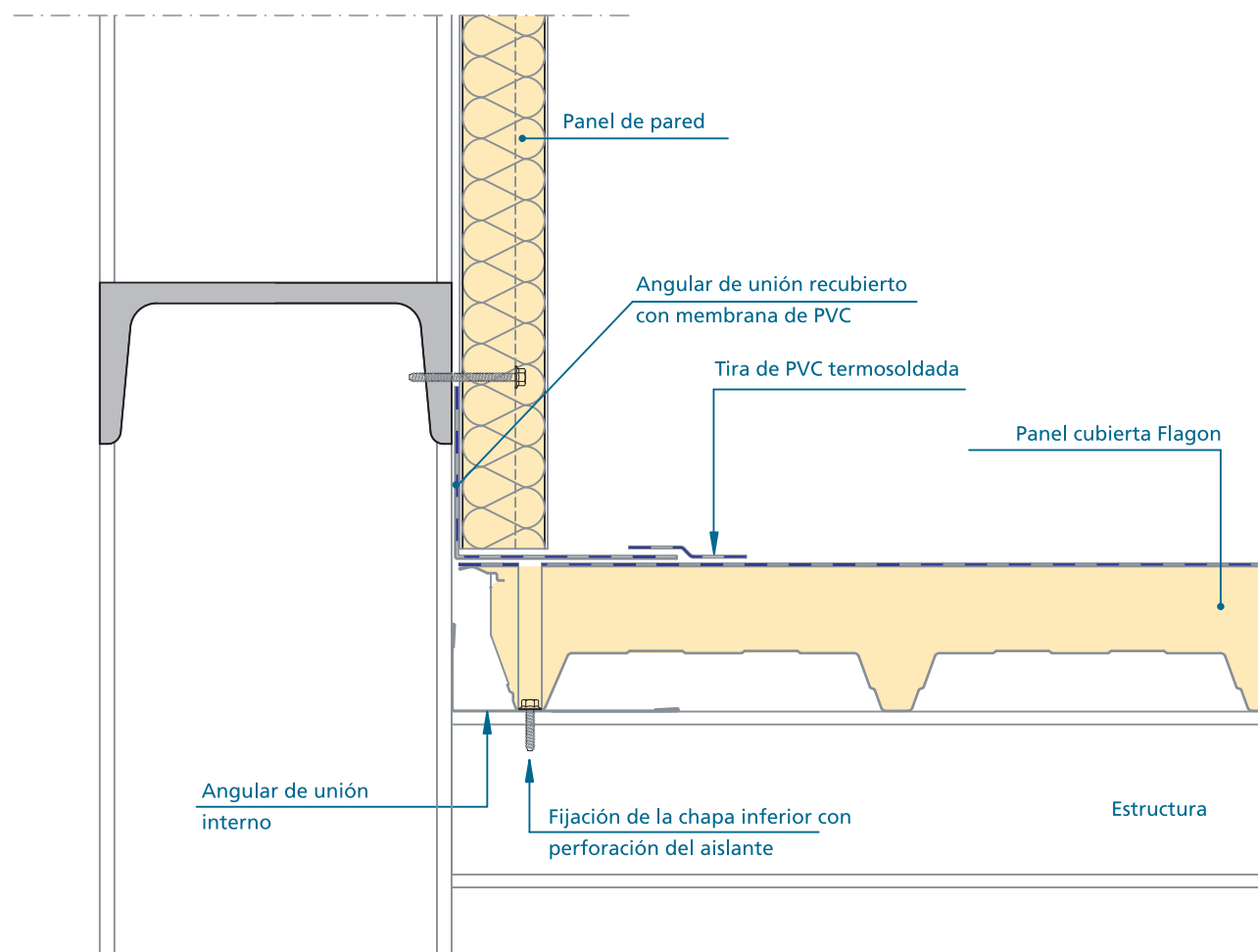




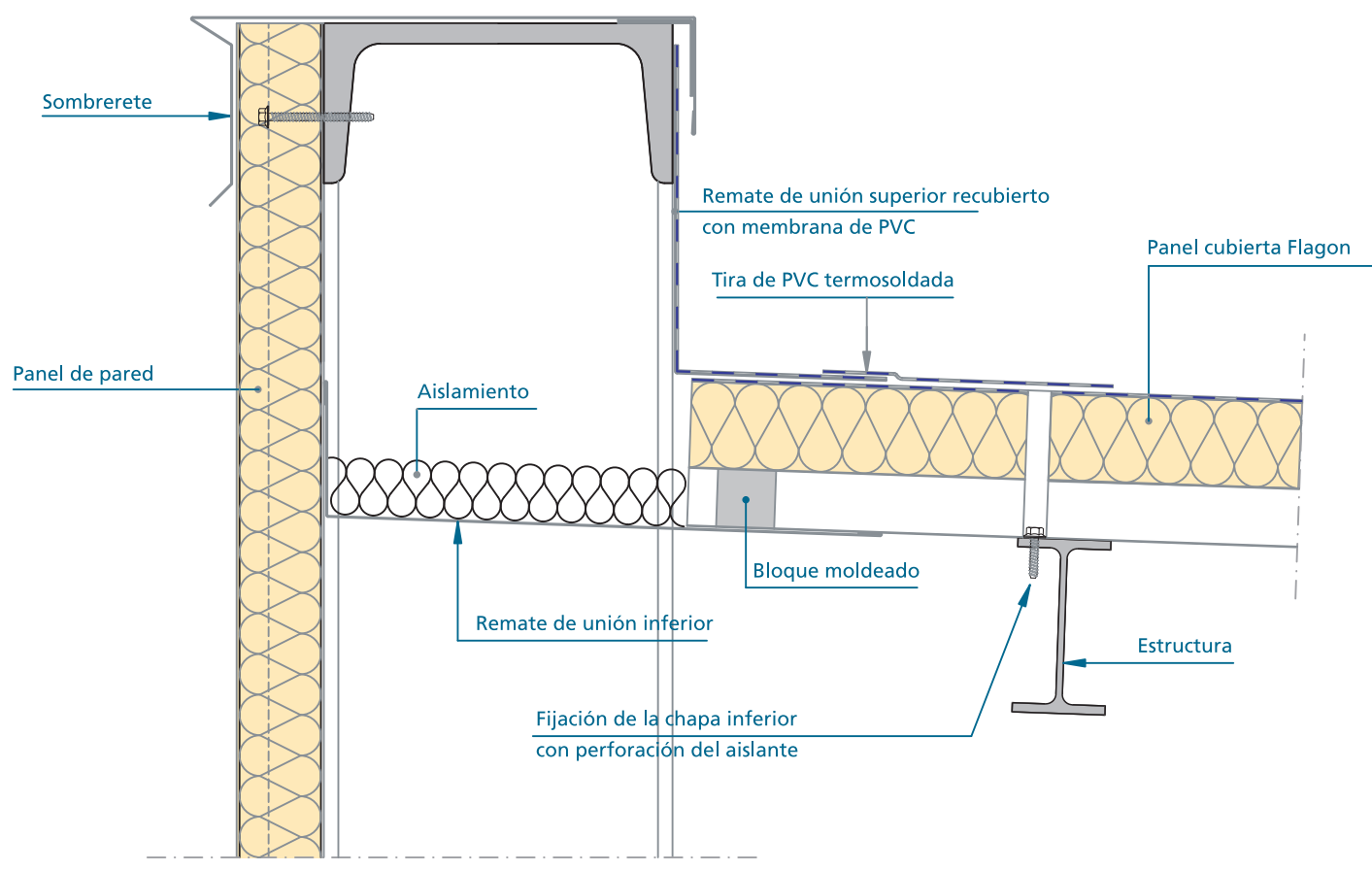
### [ Junta pared/cubierta 1 ] Sección longitudinal



Sección transversal

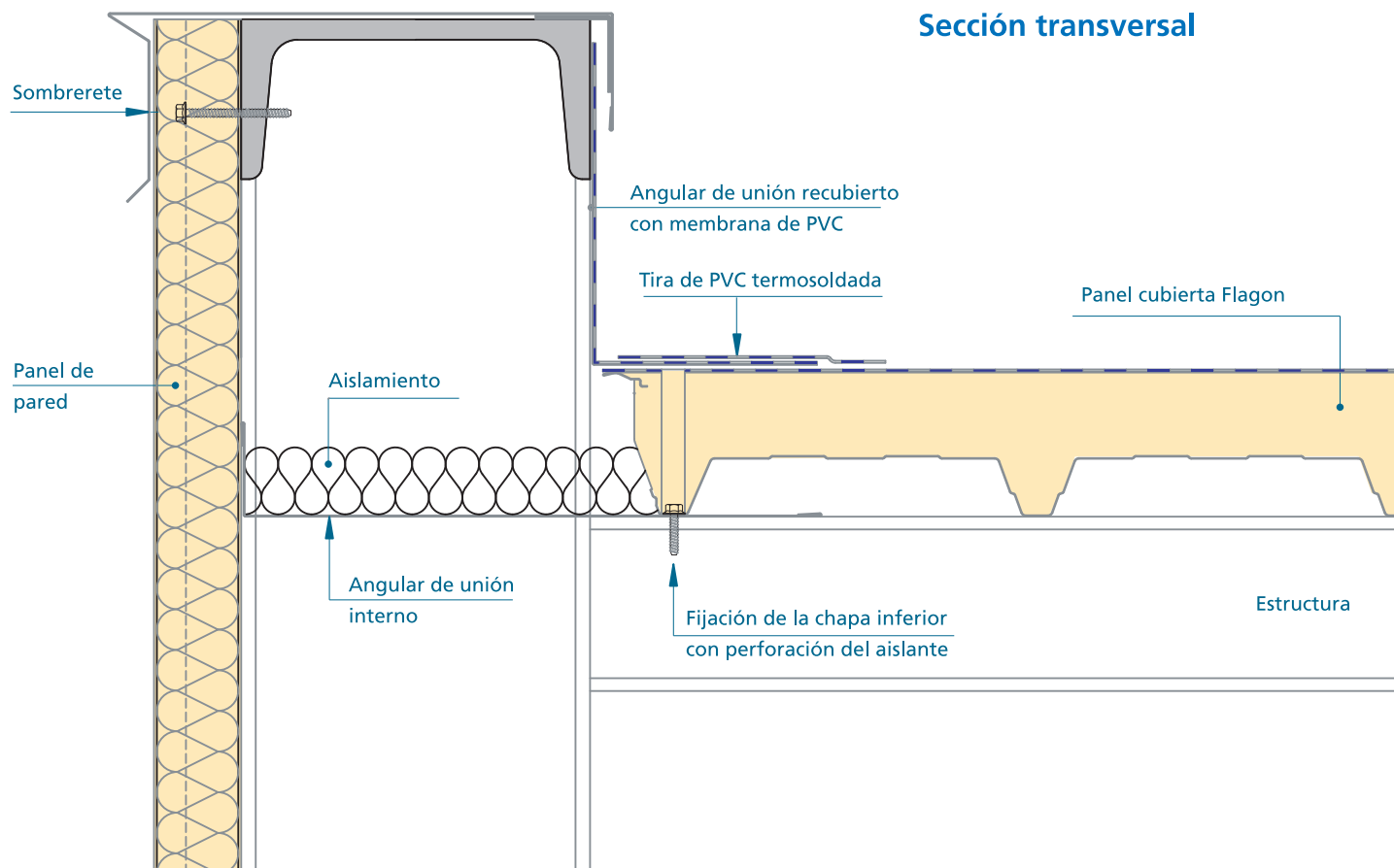


## Sección longitudinal

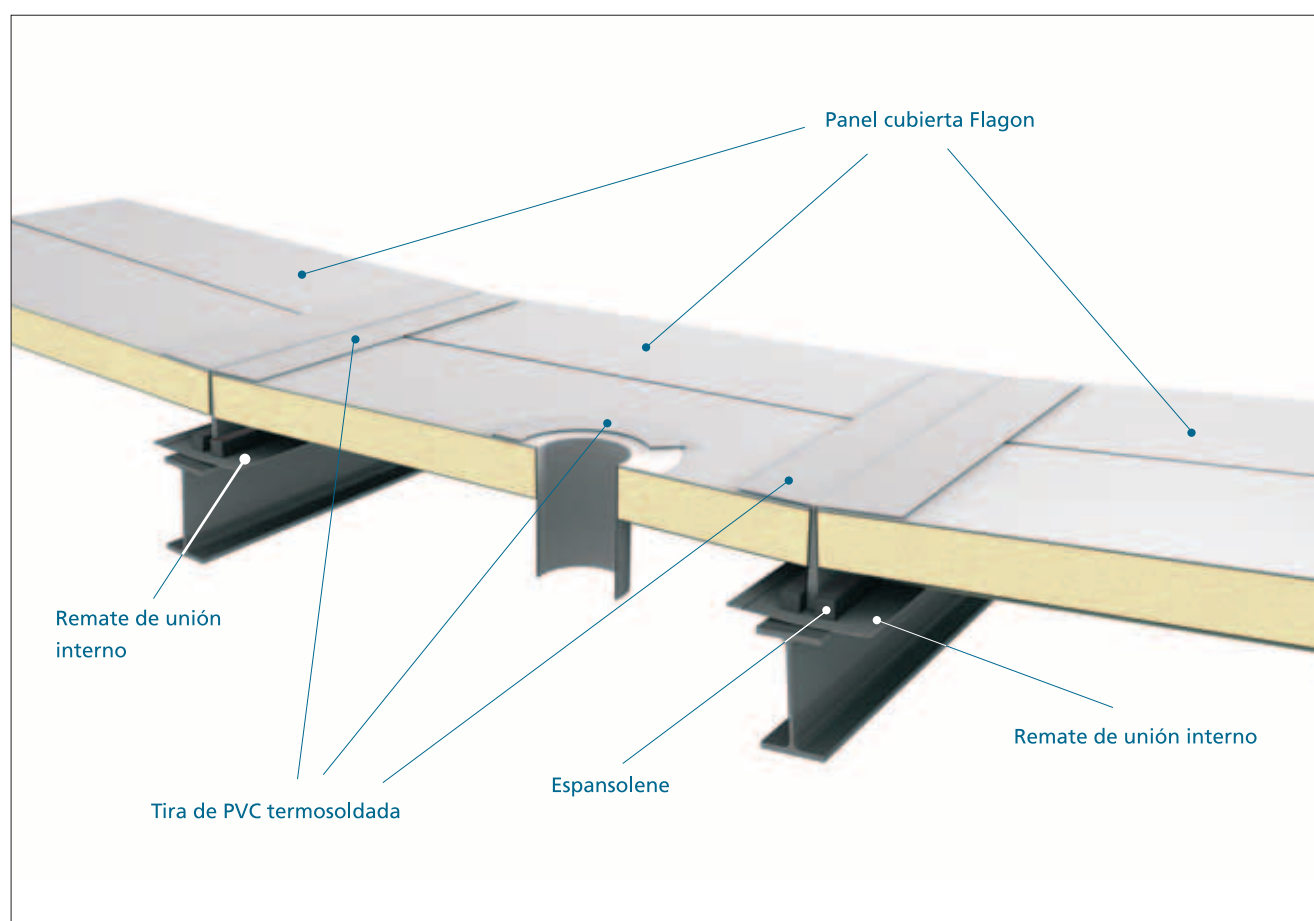
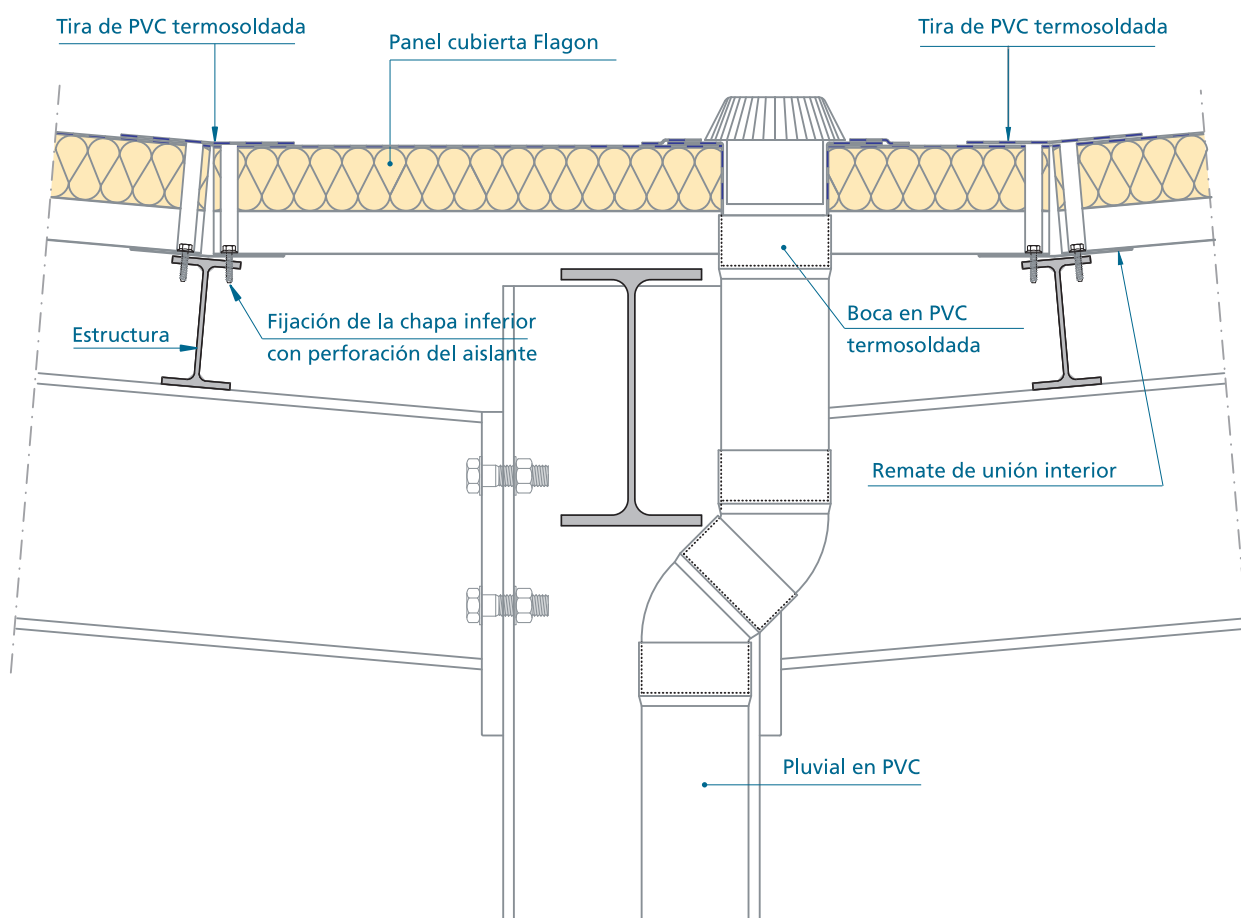


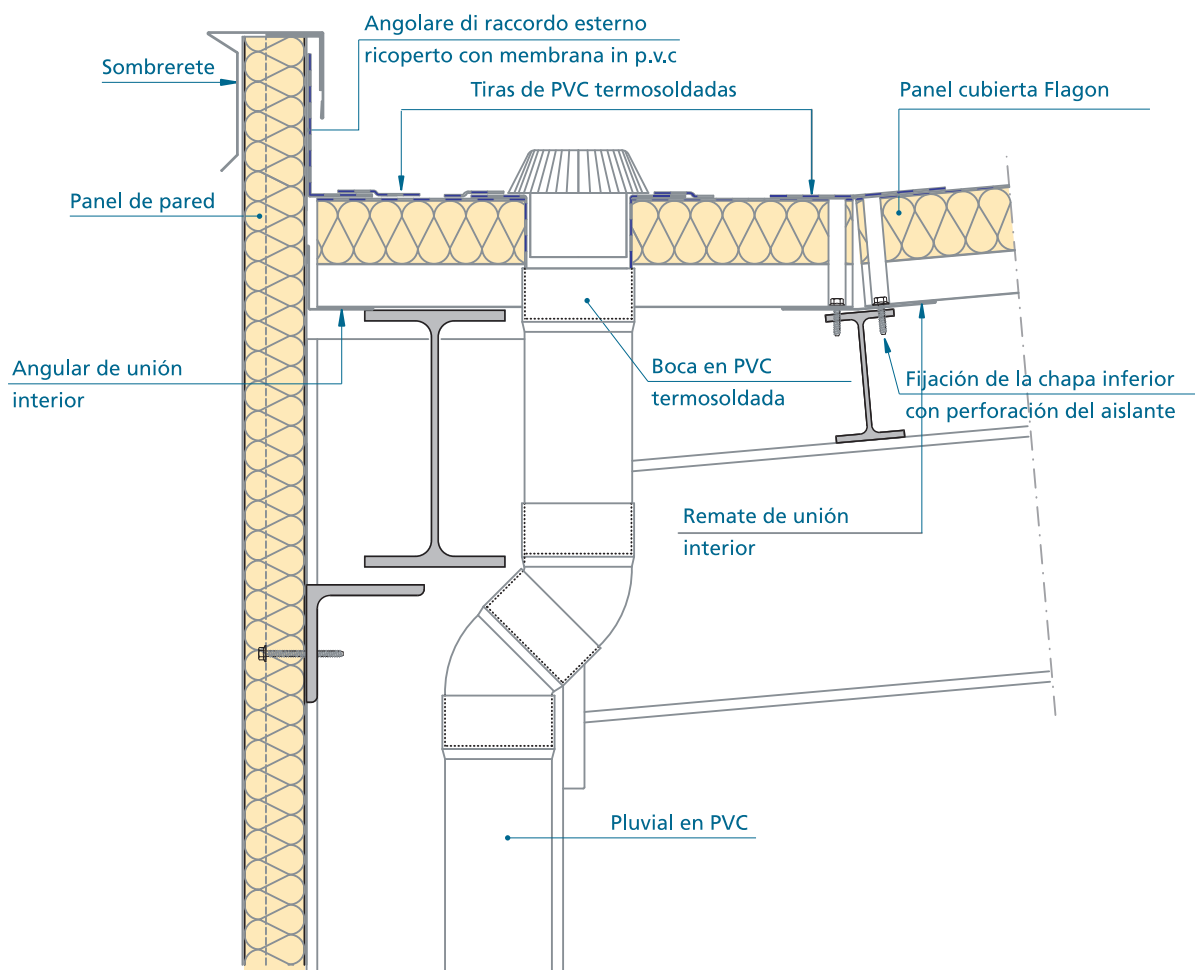
## [ Junta pared/cubierta 2 ]

## Sección transversal

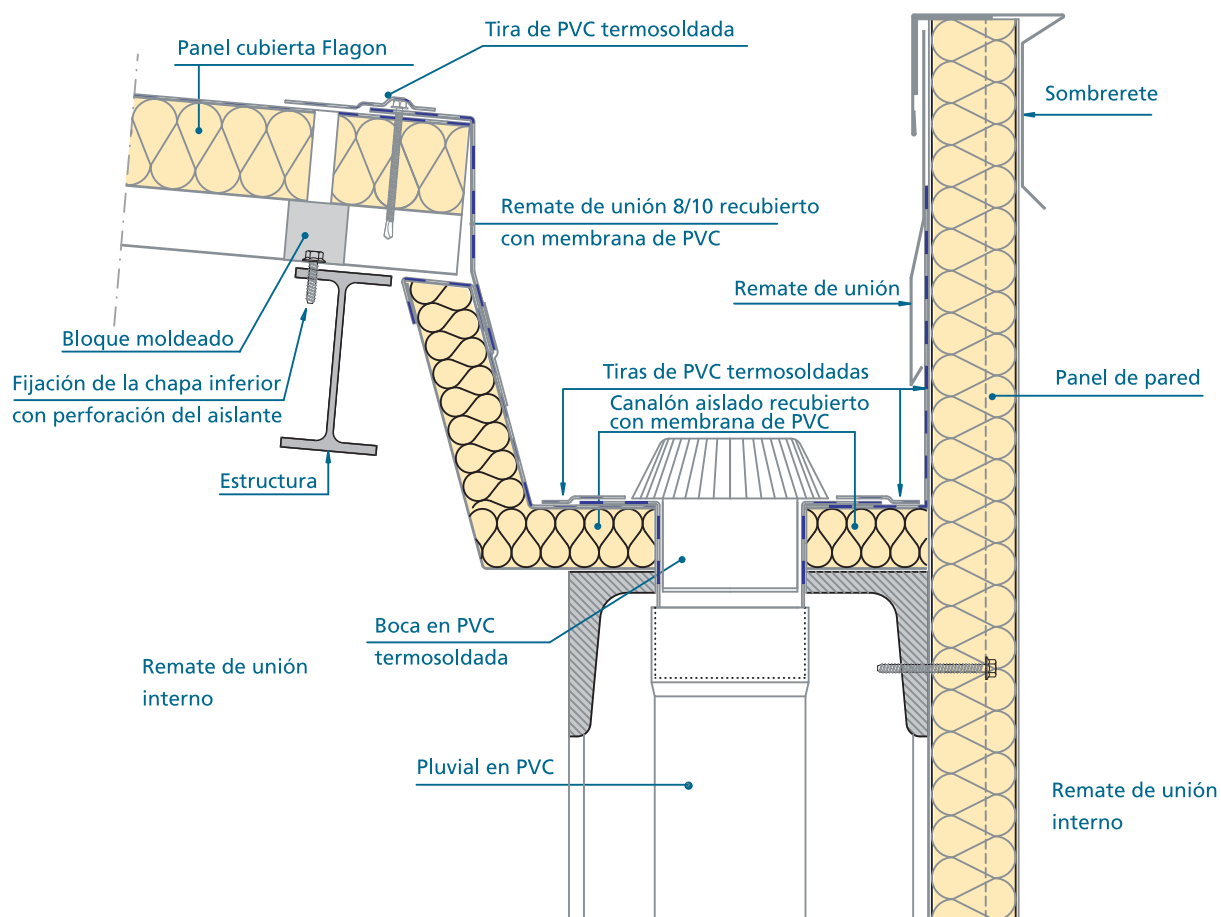


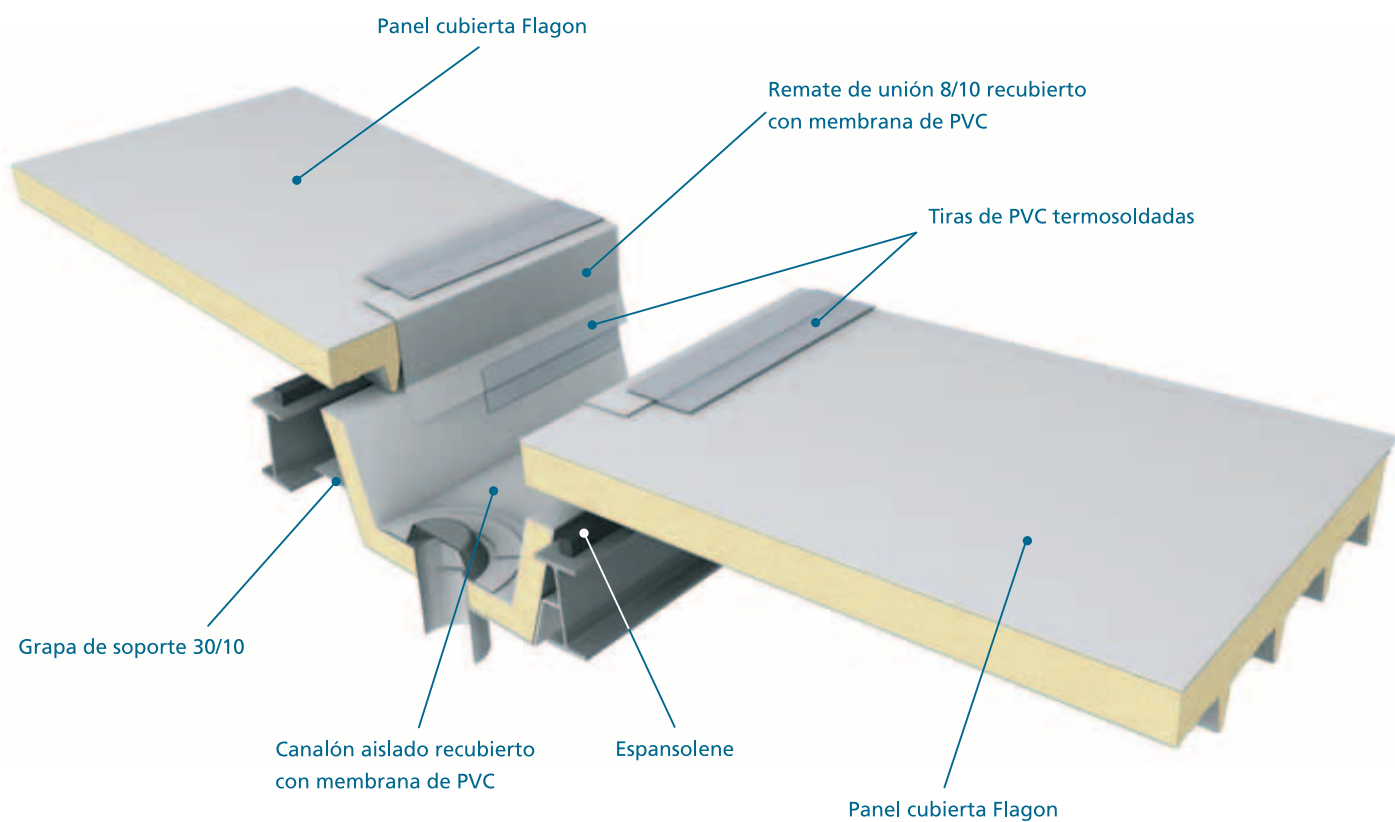
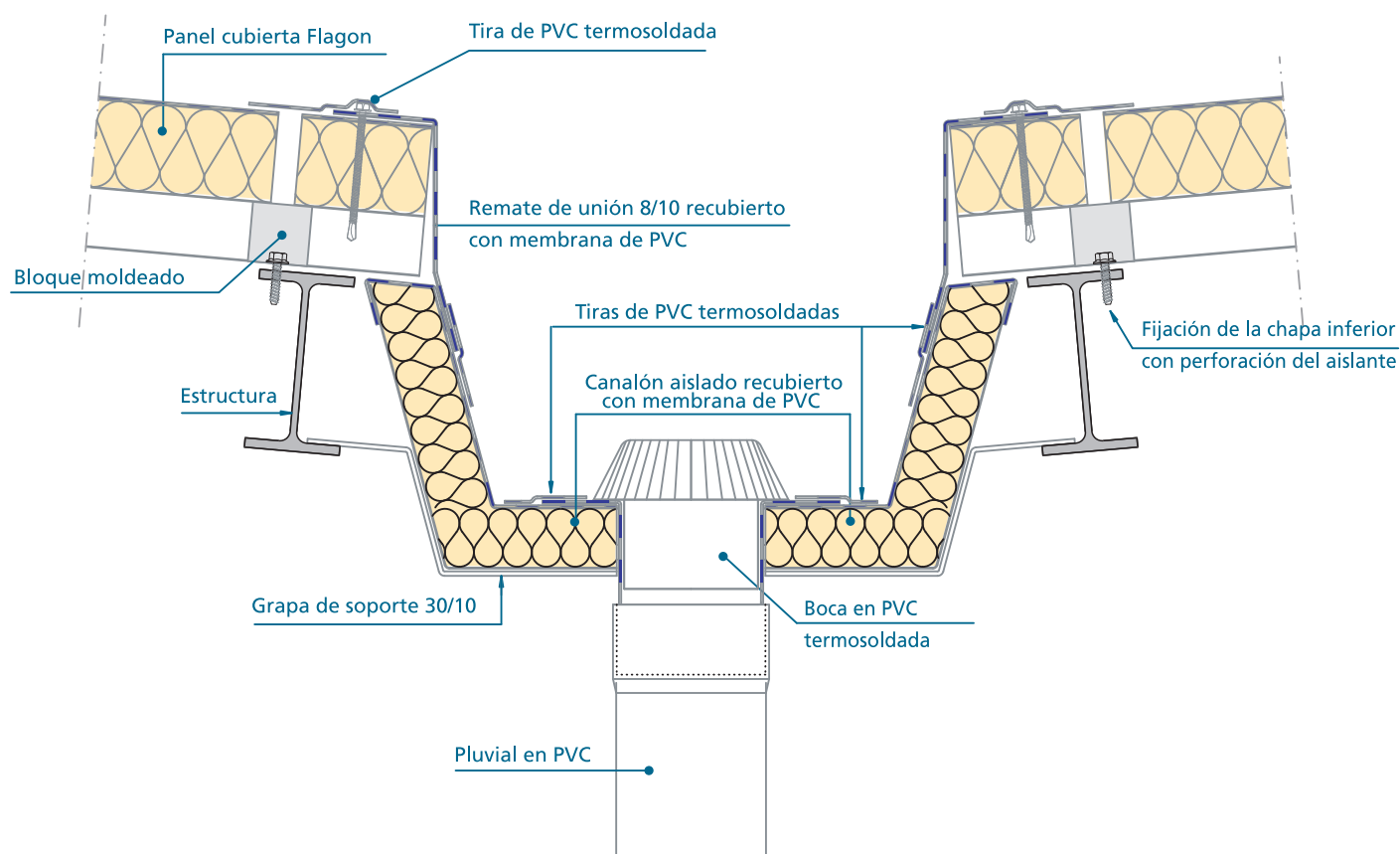






## [ Canalón lateral con aislamiento ]







Para el montaje y fijación de los paneles dirigirse a las indicaciones dadas por Italtel en su manual técnico.

For the assembling and fixing of panels pls refer to what foreseen by the instructions given by Italtel on its technical manual.

## IMPERMEABILIZACIÓN

Los sistemas de soldadura posibles son de tres tipos:

- Con pistolas de aire caliente manuales.
- Con dispositivos automáticos.
- Con disolvente tetrahidrofurano (THF).

Los tres sistemas no son excluyentes, sino que pueden utilizarse al mismo tiempo según las exigencias y particularidades que presente cada proyecto de impermeabilización. Independientemente del sistema de soldadura adoptado, es absolutamente necesario que el solape de la lámina esté limpio y seco.

## WEATHERPROOFING

Three types of welding systems are advised :

- with hot air welding applicators;
- with automatic devices;
- with THF solvent.

The a.m. three systems are not excluding one with the other but ,on the contrary, can be used at the same time according to the specific needs of each weatherproofing project. Whatever kind of system will be applied it is absolutely necessary that the overlapping sheets are well cleaned and dry.

## SOLDADURA MANUAL CON AIRE CALIENTE

La soldadura de la tira de solape se efectúa insertando la punta de la pistola entre las dos tiras a unir, con una inclinación de unos 45° respecto a la línea de soldadura a realizar, y ejerciendo una presión constante con un rodillo a una distancia de unos pocos mm. Generalmente, la temperatura del aire caliente varía entre 550°C y 580°C y se regula en función de la temperatura externa.

## MANUAL HOT AIR WELDING

The welding of the overlap is made by inserting the nozzle between the two adjacent membranes, with an inclination of abt. 45° in respect of the welding to be effected and by constantly pressing with a tape roller at a distance of a few mm. Usually the temperature of the air varies from 550 °C to 580 °C and has to be adjusted according to external temperature.



## SOLDADURA CON UN DISPOSITIVO AUTOMÁTICO

La soldadura con dispositivos automáticos puede efectuarse con máquinas de soldadura de borde caliente o bien de aire caliente. La temperatura óptima para la soldadura de PVC es e unos 500/530°C, y la velocidad de soldadura, de 170/200 cm/min. En cualquier caso, es aconsejable regular el aparato in situ, realizando una prueba de soldadura antes de iniciar las operaciones de impermeabilización.

## WELDING WITH ELECTRONIC DEVICE

The welding with automatic device can be effected with hot wedge or hot air welding machines. The optimal temperature for the welding of the PVC membranes would be around 500/530 °C, the welding speed around 170/200 cm/min. It is anyway recommended to effect the adjustment of the welding machines directly on site, making at first a sample welding, before starting the weatherproofing operations.



## SOLDADURA QUÍMICA CON TETRAHIDROFURANO (THF)

La soldadura efectuada con tetrahidrofurano (THF) se realiza insertando entre las dos capas a unir un peine conectado a un recipiente o sistema de aporte del disolvente. El peine se va desizando entre las dos capas, ejerciendo una presión constante con un rodillo a una distancia de unos 2/3 desde el aporte del disolvente. En este caso, las operaciones de control se deben efectuar no antes de 12/24 horas desde la aplicación de disolvente.

## CHEMICAL WELDING WITH THF

The welding made by THF are executed by inserting between the two membranes a brush connected to a solubilizing distributor. The brush is then made to slide between the two overlapping membranes and then a constant pressure is being made trough a tape roller at a distance of 2/3 meters from the solvent distributor. In this case the checks are to be made not earlier than 12/24 hours from the solvent distribution.

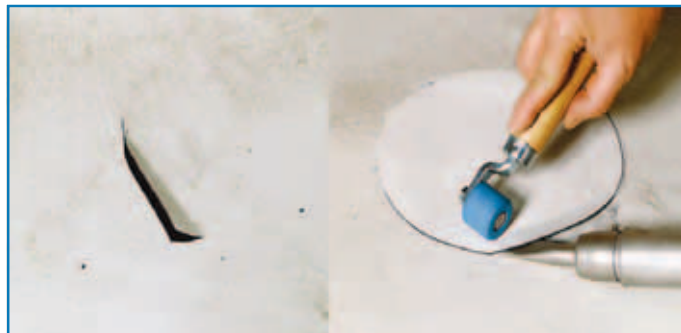


**CONTROL de las superficies instaladas**

El control de la integridad total de la superficie de PVC es posible por la diferencia de color entre el lado superior y el lado inferior. Si durante las operaciones en obra se realizan accidentalmente cortes o abrasiones en el material, éstos se evidencian por un color más oscuro. Es posible entonces intervenir mediante el soldado de un parche del mismo material sobre el punto dañado.

**CHECKING the assembled surfaces**

The check of the total integrity of the membrane is allowed by the different color of the inferior and superior sheets. If by accident on site some cuts or abrasions were made on the membrane, these are evidenced by the different color. It is then possible to intervene by welding a patch of same material over the damaged spot.

**CONTROL DE LA SOLDADURA****Control mecánico NO destructivo**

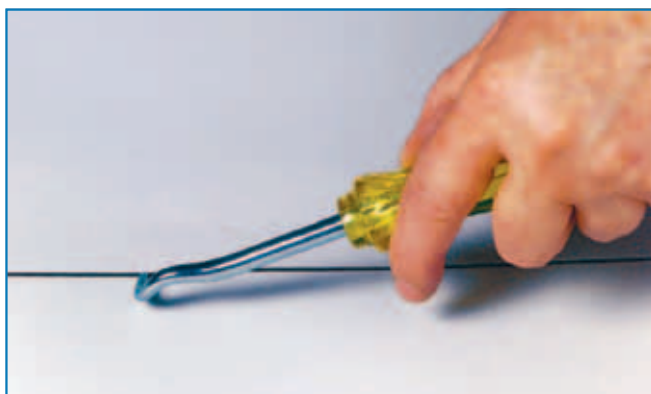
Consiste en pasar una punta redondeada a lo largo de la línea de soldadura, ejerciendo una presión adecuada para localizar la presencia de eventuales puntos débiles o de una adhesión insuficiente. Tal operación, absolutamente necesaria para verificar la integridad de la soldadura, se realiza con el material en frío.

En caso de que se encuentren puntos de discontinuidad o de insuficiente adhesión, se debe colocar un parche del mismo tipo de material sobre dichos puntos.

**CHECKING OF THE WELDED PARTS****Mechanical non destructive check**

A rounded drill is passed along the welding line, by properly pressing in order to locate possible weak spots or where the adhesion is not enough. This operation is extremely important to verify the integrity of the welding and is to be effected when the material is cold.

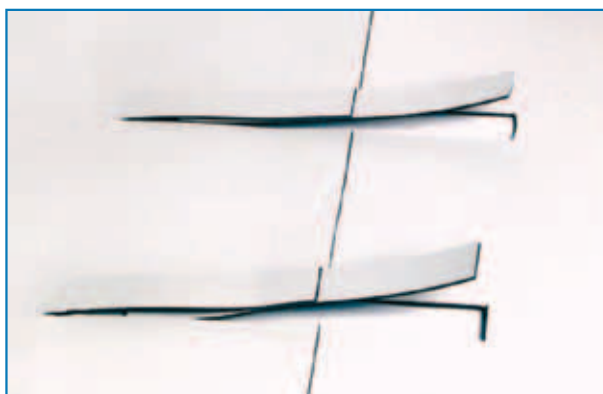
If discontinuity or insufficient adhesion is to be found, batches of same type of material have to be applied on these spots.

**Control mecánico destructivo**

Se efectúa una prueba destructiva de tracción de una probeta transversal a la línea de soldadura efectuada. Se toma un trozo de anchura 1 cm del material previamente soldado. La prueba consiste en aplicar una fuerza de tracción en los dos extremos de la probeta. En caso de que la soldadura esté bien hecha, la rotura de la probeta tendrá lugar fuera de la unión.

**Mechanical destructive check**

A tensile destructive test is performed on a block transversal to the welding line effected. A section 1 cm large is taken out from the welded membrane. The test consists in applying a tensile strength at the two ends of the block. In case the welding is well done, the break has to be on the external side.

**ACCESORIOS PREFABRICADOS**

Bajo pedido se pueden suministrar toda una serie de accesorios prefabricados recubiertos de PVC para su utilización en aplicaciones particulares.

**PREFABRICATED ACCESSORIES**

A complete series of prefabricated accessories covered by PVC membrane for special applications can be provided upon request.



## Características de los componentes

### Condiciones Generales de Venta de las chapas gredadas, de los paneles metálicos aislantes y de los accesorios.

#### Núcleo aislante

Espuma poliuretánica rígida.  
Densidad total:  $40 \pm 4 \text{ kg/m}^3$ .  
Estabilidad dimensional: máx 1% entre  $-25^\circ\text{C}$  y  $+70^\circ\text{C}$ , de acuerdo a la norma UNI 8069.  
Temperatura de uso: Entre  $-90^\circ\text{C}$  y  $+80^\circ\text{C}$ .  
Estructura celular: material no higroscópico con el 95% de las células cerradas y un valor de absorción de agua inferior al 3% en volumen.  
Conductividad térmica indicativa de referencia (medida a  $10^\circ\text{C}$  en muestras producidas hace 3-6 meses)  $\lambda_m = 0,020 \text{ W/mK} - 0,017 \text{ kcal/mh}^\circ\text{C}$ .

#### Características Lana de roca

Lana de roca inorgánica biosoluble de composición basáltica completamente exenta de amianto y de sílice cristalina realizada en listones dispuestos con las fibras orientadas ortogonalmente al plano de los soportes.

Conductividad térmica indicativa de referencia

(medida a  $10^\circ\text{C}$ , norma EN 12667)  $\lambda_m = 0,035 \text{ W/mK}$ .

- Coeficiente de dilatación térmica: Despreciable.
- Calor específico:  $0,20 \text{ kcal/kg}^\circ\text{C}$  - Imputrescibilidad: Total
- Temperatura de fusión: sobre  $1120^\circ\text{C}$
- Resistencia al agua: la lana de roca no es hidrófila ni higroscópica
- Color de la lana: gris-verde
- Coeficiente de absorción acústica: Dadas las características particulares del material con celdas abiertas, el coeficiente de absorción resulta ser de alta eficacia
- Exento de CFC y/o HCFC - Densidad media:  $100 \text{ kg/m}^3 \pm 10\%$  - pH: neutro en solución acuosa en frío
- Temperatura máxima de utilización:  $750^\circ\text{C}$  puntualmente,  $700^\circ\text{C}$  en continuo
- Corrosión: no provoca ni favorece la corrosión
- Reacción al fuego: no combustible
- Resistencia a compresión media según EN 826:  $0,012 \text{ N/mm}^2$

#### Coeficiente de Transmisión Térmica

Los valores de K (coeficiente de transmisión térmica) reportados en las fichas de los paneles se han determinado aplicando a los valores de  $\lambda_m$  arriba indicados, los coeficientes previstos en la norma UNI 10351 y teniendo en cuenta la resistencia laminar interna y externa, cuya suma se asume igual a  $0,26 \text{ m}^2\text{h}^\circ\text{C/kCal} = 0,22 \text{ m}^2\text{K/W}$

#### Soportes

Acero zincado: sistema SENDZIMIR, conforme a la norma EN 10142 y EN 10147, con protección de Zinc de  $150 \text{ g/m}^2$ . Bajo pedido pueden suministrarse soportes con gramajes de Zinc mayores

Para tal componente no viene declarada ninguna garantía de resistencia a la oxidación y a la corrosión.

#### Acero Prelacado

- > Protección superficial a base de:
  - > Poliéster para sistema base
  - > Poliéster siliconado para el sistema Super
  - > Polifluoruro de vinilideno para el sistema PVDF
  - > Poliéster modificado para el sistema Plastisol.
- Bajo pedido pueden suministrarse protecciones superficiales con características particulares de resistencia y/o idóneas al contacto con los alimentos, de acuerdo al D.M. del 21/03/73 y a la directiva 82/711/CEE, 90/128/CEE, 92/39/CEE.

#### Aluminio aleado

Conforme a la norma UNI 9003/3, liso o gofrado, natural o prelacado según los sistemas arriba descritos.

## Specification of Components

### General Selling Conditions for Corrugated Sheets, Insulated Panels and Accessories

**Enclosure A:** Rules concerning the handling and the stock piling of corrugated sheets, insulated panels and fittings.

**Enclosure B:** Quality standards for corrugated sheets and insulated panels.

**Enclosure C:** Advices concerning the assembling of corrugated sheets and insulated panels

#### Insulating foam

Rigid polyurethane foam.  
Total density:  $40 \pm 4 \text{ Kg./m}^3$   
Dimensional stability: max 1% from  $-25^\circ\text{C}$  to  $+70^\circ\text{C}$  in accordance with UNI 8069  
Working Temperature: from  $-90^\circ\text{C}$  to  $+80^\circ\text{C}$   
Cellular structure: non-hygroscopic material with 95% closed cells and an absorption value of the water of less than 3% in volume.  
Reference Thermal Conductivity (measured at  $10^\circ\text{C}$  on samples three to six months old):  $\lambda_m = 0,020 \text{ W/mK} - 0,017 \text{ Kcal/mh}^\circ\text{C}$

#### Mineral Wool Properties:

Inorganic and bio-soluble rock wool with basaltic composition, completely free from asbestos and crystal silica, made of fillets with fibres at right-angles orientated with respect to the metal sheets plane.  
Reference Thermal conductivity (measured at  $10^\circ\text{C}$ , standards EN 12667)  $\lambda_m = 0.035 \text{ W/mK}$ .

$^\circ\text{C}$ , standards EN 12667)  $\lambda_m = 0.035 \text{ W/mK}$ .

- Thermal elongation coefficient : neglectable
- Specific heat :  $0.20 \text{ kcal/kg}$
- Specific heat :  $0.20 \text{ kcal/kg}^\circ\text{C}$
- Unrotting : full
- Fusion temperature : about  $1120^\circ\text{C}$
- Water absorption : the rock wool is neither absorbent nor hygroscopic
- Colour: grey – green
- Acoustic absorption coefficient: because of the peculiar features of the material whose cells are open, the absorption coefficient is highly effective
- Free from CFC and/or HCFC
- Average density :  $100 \text{ kg/m}^3 \pm 10\%$
- pH: neutral in cold water solution
- Maximum temperature of utilization:  $750^\circ\text{C}$  desulforily;  $700^\circ\text{C}$  continuously
- Corrosion : the material does not cause nor it facilitates corrosion
- Fire behaviour : incombustible
- Compression resistance, measured according to UNI EN 826 :  $0.012 \text{ N/mm}^2$

#### Thermal Transmission Coefficient

The K values (thermal transmission coefficient) shown in the panel technical sheets are determined by applying to the above specified  $\lambda$

m values the allowance coefficients required by the UNI 10351 standard and taking into account the internal and external laminar resistance which sum up to  $0,26 \text{ m}^2 \text{ h}^\circ\text{C/kCal} = 0,22 \text{ m}^2 \text{ K/W}$ .

#### Supports

Galvanized steel: SENDZIMIR system, in accordance with UNI EN 10142 and UNI EN 10147, with  $150 \text{ g/m}^2$  zinc protection of. On request the supports can be supplied with different coating thicknesses.

#### Pre-painted steel

Surface protection with a base of:  
> polyester for Basic System;  
> siliconized polyester for the Super System  
> polyvinylidene Difluoride for the PVDF System  
> modified polyester for the Plastisol System  
On request surface protections can be supplied with particular characteristics of resistance and/or suitable for contact with food products in accordance with the Law of 21/03/73 and EU directives 82/711/EEC, 85/572/EEC, 90/128/EEC and 92/39/EEC.

#### Aluminum alloy

According to UNI 9003/3 Standards, smooth or embossed, natural or prepainted according to the previously described system

## Características químico-físicas del lado PVC / Physical - Chemical Properties PVC Side

| Prueba                                                              | Valor      | Método               | Prueba                                                                            | Valor          | Método                       |
|---------------------------------------------------------------------|------------|----------------------|-----------------------------------------------------------------------------------|----------------|------------------------------|
| Espesor (mm)                                                        | 1,5        | UNI 8202/6           | Masa aérea (kg/m <sup>2</sup> )                                                   | $2,00 \pm 5\%$ | UNI 8202/7                   |
| Carga a rotura (N/5cm) (muestra rectangular)                        | $\geq 700$ | UNI 8202/8           | Elongación a rotura (%) (muestra rectangular)                                     | $\geq 80$      | UNI 8202/8                   |
| Resistencia a punzonamiento dinámico sobre soporte rígido           | PD 3       | UNI 8202/12          | Resistencia punzonamiento estático sobre soporte rígido                           | PS 5           | UNI 8202/11                  |
| Doblado en frío (°C)                                                | $\leq -20$ | UNI 8202/15          | Impermeabilidad al agua (6 horas a 0,5 MPa)                                       | Impermeable    | UNI 8202/21                  |
| Estabilidad dimensional después de 6 horas a $80^\circ\text{C}$ (%) | $\leq 0,1$ | UNI 8202/17          | Envejecimiento acelerado a la luz: Irradiación de $18.000 \text{ MJ/m}^2$         | Sin agrietado  | UNI ISO 4892 metodo Xenotest |
| Resistencia a granizo sobre soporte rígido (m/s)                    | $\geq 23$  | SIA 280/9            | Envejecimiento térmico en aire: Pérdida de masa tras 56 días a $80^\circ\text{C}$ | $\leq 2,5$     | UNI 8202/26                  |
| Test                                                                | Value      | Test Method          | Test                                                                              | Value          | Test Method                  |
| Thickness (mm)                                                      | 1,5        | DIN 53353            | Weight (Kg./mq)                                                                   | $2,00 \pm 5\%$ | DIN 53352                    |
| Tensile strength (N/5 cm) (rectangular test specimen)               | 700        | DIN 16726-5.6.1 C-VI | Elongation to break (%) (rectangular test specimen)                               | 80             | DIN 16726-5.6.1 C-VI         |
| Tear Resistance (N)                                                 | 170        | DIN 53363            | Puncture bending (mm)                                                             | 800            | DIN 16726-5.12               |
| Cold Bending (°C)                                                   | - 20       | DIN 53361            | Hydrostatic pressure resistance (24 hours a 2 bar)                                | waterproof     | DIN 16726-5.11               |
| Dimensional stability after 6 hours at $80^\circ\text{C}$ (%)       | 0,1        | DIN 16726-5.13.1     | Resistance to artificial weathering                                               | no cracking    | DIN 16726-5.17               |
| Resistance to hail on rigid substrate (m/s)                         | 23         | SIA 280/9            | Thermal ageing in air: mass loss after 56 days at $80^\circ\text{C}$ (%)          | 2,5            | DIN 16726-5.13.3             |



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