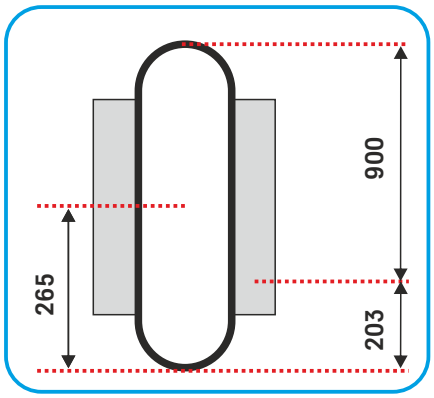
HOW TO CALCULATE CORRUGATED TANKS DISSIPATION

NECESSARY INFORMATIONS:

1 - TOTAL LOSSES (W)
2 - HEIGHT OF PANELS (mm)
3 - BARYCENTRE DIFFERENCE (HD mm)

EXAMPLE OF CALCULATION:



WINDING BARYCENTRE = 265mm
FINWALLS BARYCENTRE = 203+900/2 = 653 mm

HD = (653-265) mm = 388 mm

K^2 = 0,00044x388+0,92957 = 1,10 (see table n° 4)

K^1 for finwalls high 900 mm => 1.025 (see table n° 2)

THEN YOU DECIDE WHICH FINWALLS DEPTH:

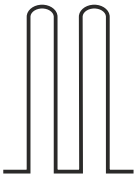
A) P=150mm K= 280 W/m² (see table n°1)

$$\frac{\text{TOTAL LOSSES}}{K = K^1 + K^2} = \frac{4000\ W}{280\ W/m^2 \times 1.025 \times 1,10} = 12,70\ m^2$$

B) P=140mm K= 285 W/m²

$$\frac{\text{TOTAL LOSSES}}{K = K^1 + K^2} = \frac{4000\ W}{285\ W/m^2 \times 1.025 \times 1,10} = 12,45\ m^2$$

Finally you check how many m² of real surface you have on the tank

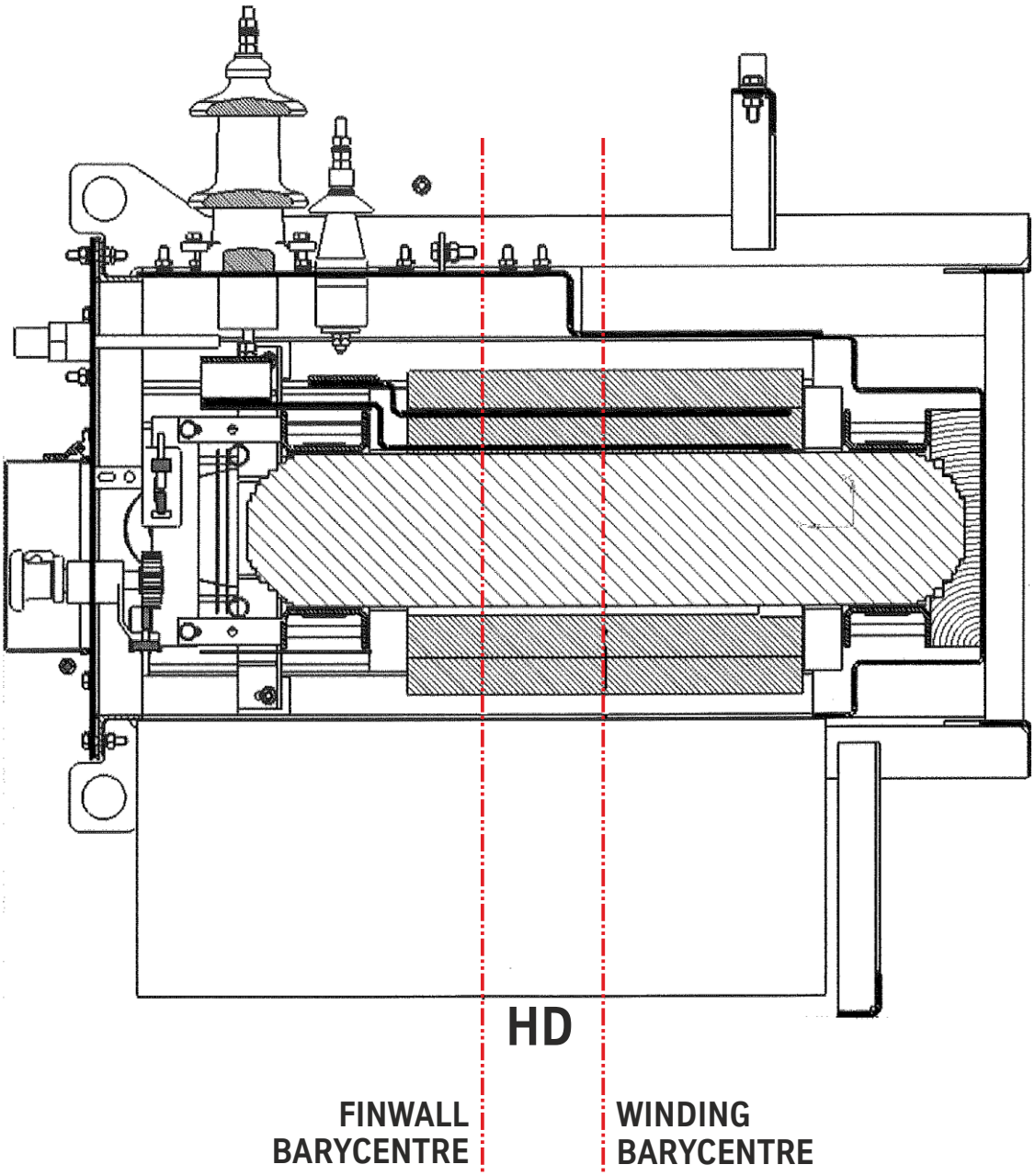


2 x n° of FINS x H of FINS = 104x140x900
(n° of FINS-1) x PITCH x W of FINS = 50x40x900 => 14,90 m²

So we have a margin of 19,7% - 14,90 m² VS 12,45 m²

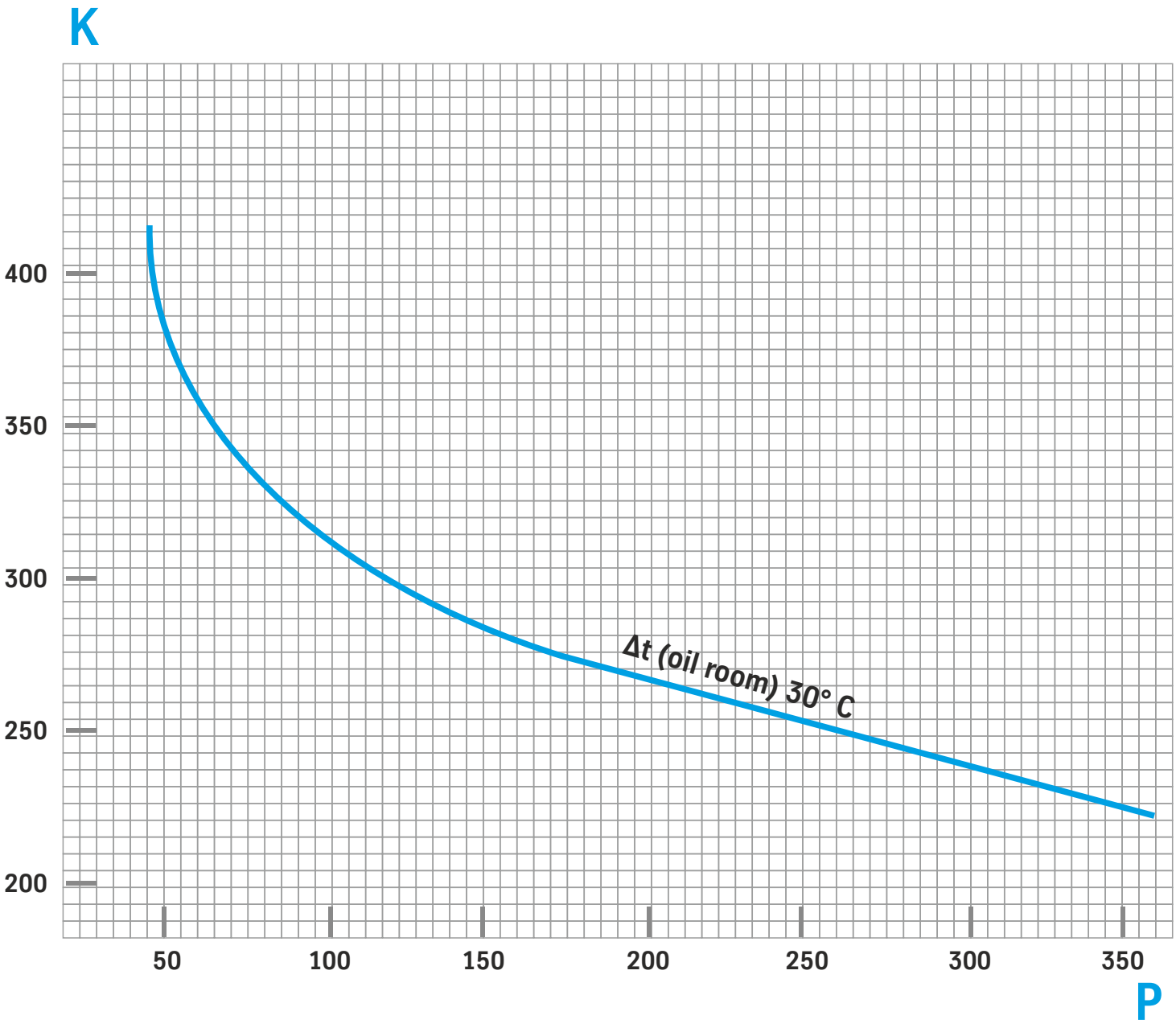
CONVETT s.r.l.
36050 Bressanvido (VI) - ITALY - Via del Lavoro, 7
Ph: +39.0444.460144 - Fax: +39.0444.460110 - sales@convett.it - www.convett.it

HD - BARYCENTRE DIFFERENCE



CONVETT s.r.l.
36050 Bressanvido (VI) - ITALY - Via del Lavoro, 7
Ph: +39.0444.460144 - Fax: +39.0444.460110 - sales@convett.it - www.convett.it

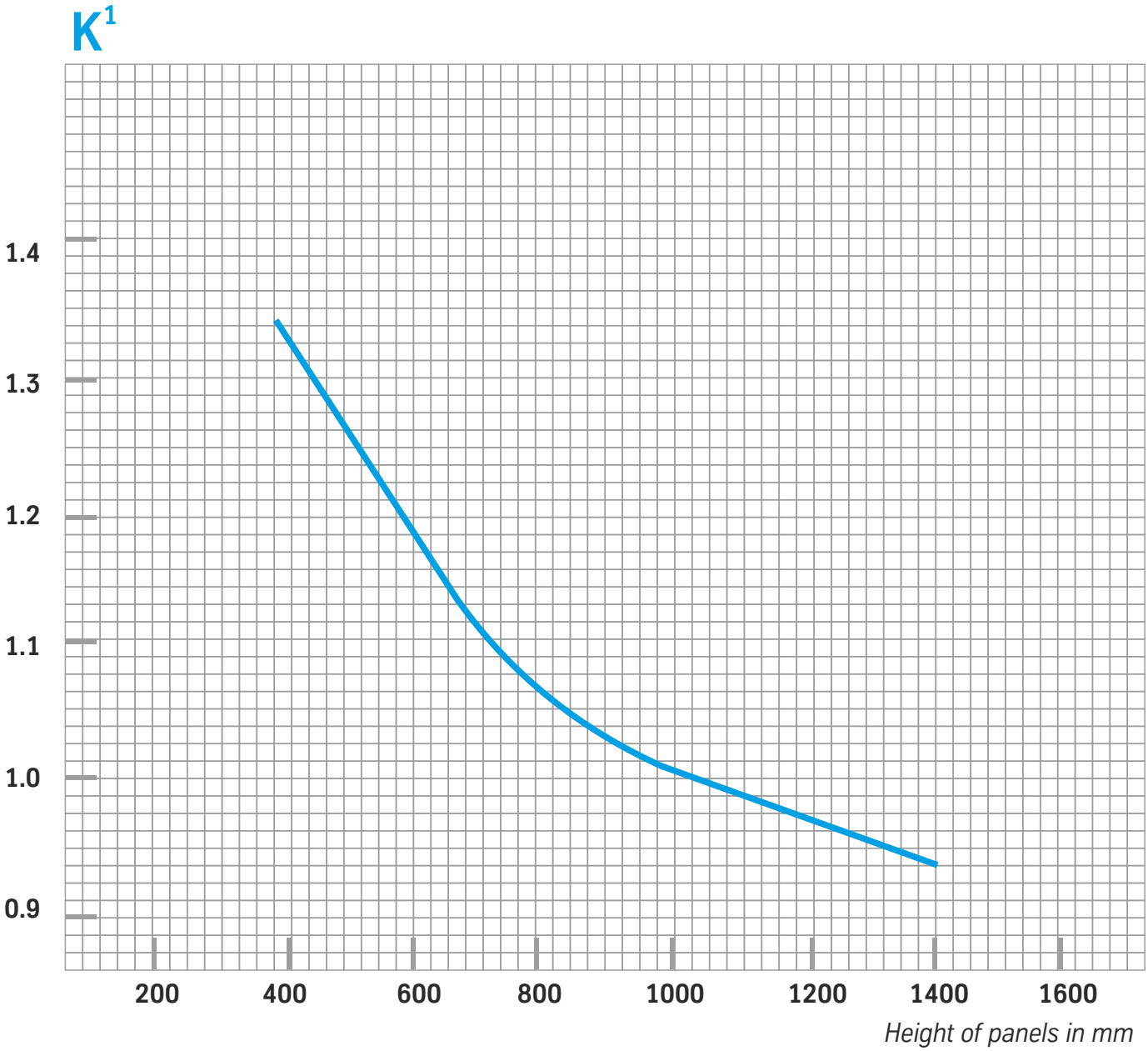
DISSIPATION DIAGRAM - TABLE n°1



K=dissipation coefficient (W/sq) for 1.000 mm height panels
P= panels depth with 45 mm step

CONVETT s.r.l.
36050 Bressanvido (VI) - ITALY - Via del Lavoro, 7
Ph: +39.0444.460144 - Fax: +39.0444.460110 - sales@convett.it - www.convett.it

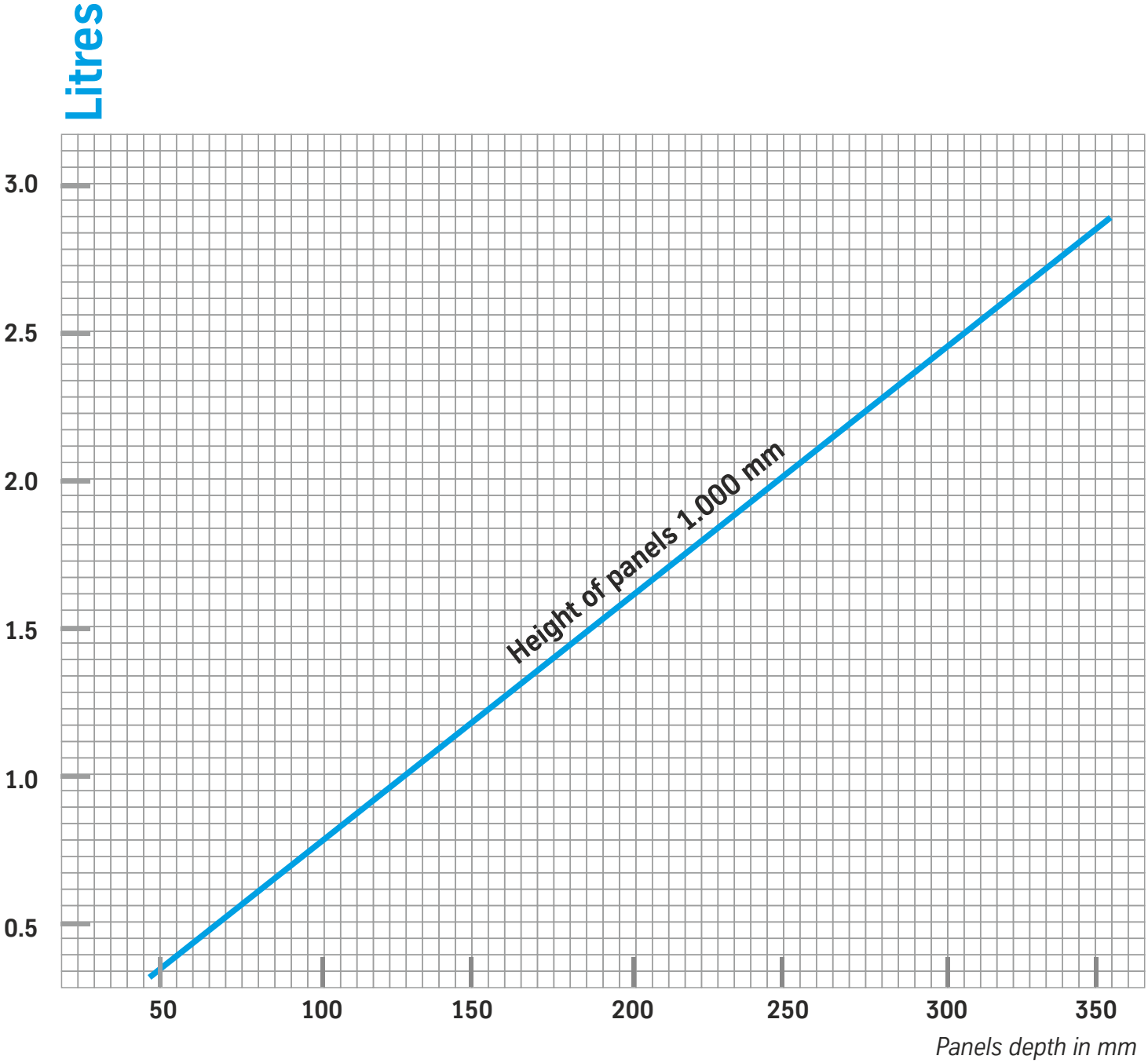
CORRECTIVE COEFFICIENT K1 - TABLE n°2



K^1 = corrective coefficient as a function of height of panels

CONVETT s.r.l.
36050 Bressanvido (VI) - ITALY - Via del Lavoro, 7
Ph: +39.0444.460144 - Fax: +39.0444.460110 - sales@convett.it - www.convett.it

PANELS OIL CAPACITY - TABLE n°3

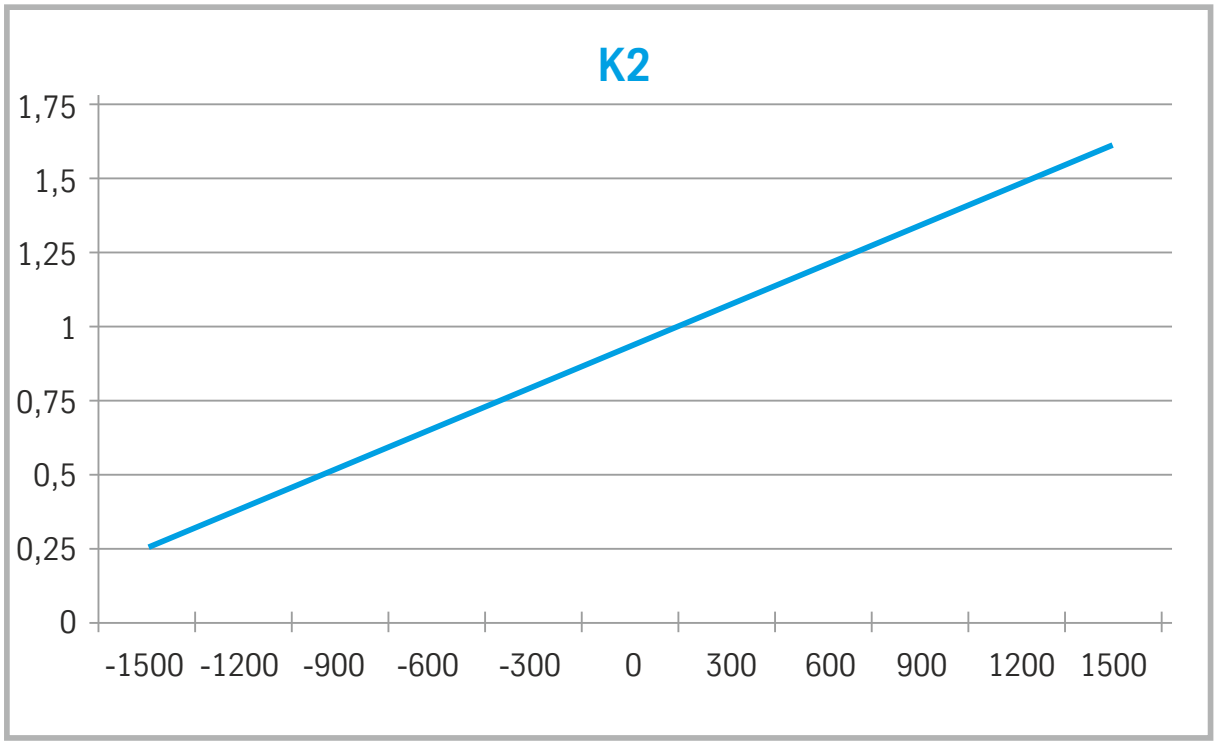


Oil capacity on panels **H**=1.000 mm as a function of depth

CONVETT s.r.l.
36050 Bressanvido (VI) - ITALY - Via del Lavoro, 7
Ph: +39.0444.460144 - Fax: +39.0444.460110 - sales@convett.it - www.convett.it

CORRECTIVE COEFFICIENT K2 - TABLE n°4

K2 = [0,0044*HD (mm) +0,92957]



1,75	0,26957	-1500
1,5	0,40157	-1200
1,25	0,53357	-900
1	0,66557	-600
0,75	0,79757	-300
0,5	0,92957	0
0,25	1,06157	300
0	1,19357	600
-0,25	1,32557	900
-0,5	1,45757	1200
-0,75	1,58957	1500

HD: DISTANCE BETWEEN WINDING BARYCENTRE AN FIN WALLS PANEL BARYCENTRE

CONVETT s.r.l.
36050 Bressanvido (VI) - ITALY - Via del Lavoro, 7
Ph: +39.0444.460144 - Fax: +39.0444.460110 - sales@convett.it - www.convett.it