

RELAZIONE TECNICA

RT/037/2010

DETERMINAZIONE DELLA TRASMITTANZA TERMICA DI
NODI DI SISTEMA PER SERRAMENTI
“EL76E Excellence”



Richiedente

Gastaldello Sistemi S.p.A.
V.le Artigianato, 16
37064 Povegliano Veronese (VR)

Gli Sperimentatori

Dario Badiali

M. Cristina Pollastro

Per IRcCOS S.c. a r.l.:

Il Presidente

Dott. Italo Meroni



Legnano (MI), 01 Settembre 2010

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1. PREMESSA

L'analisi, condotta da IRcCOS S.c.a r.l. per conto della ditta Gastaldello Sistemi S.p.A. di Povegliano Veronese (VR), ha avuto come obiettivo la determinazione della trasmittanza termica di profili di telaio di serramenti appartenenti alla serie commercialmente denominata "EL76E Excellence".

2. DESCRIZIONE DEI NODI ANALIZZATI E RISULTATI OTTENUTI

La serie sottoposta a prova è costituita da n. 178 sezioni di nodi di serramenti (cfr. da Fig. 1 a Fig. 178); tale serie è stata commercialmente denominata "EL76E Excellence".

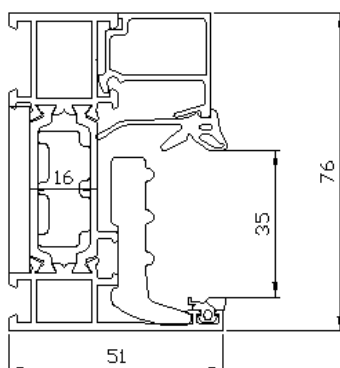
La serie è stata identificata ai sensi della norma di prodotto EN 14351-1:2006.

La descrizione e i disegni tecnici di seguito riportati, riferiti ai campioni sottoposto a prova, sono stati dichiarati e forniti dal richiedente sotto la propria responsabilità.

- Tipologia: profili per serramenti.
- Profili: profili in alluminio lega EN AW 6060, prodotti da Gastaldello Sistemi S.p.A..
- Guarnizioni vetri:
 - lato esterno: in EPDM/coestruso art. 205186,
 - lato interno: in EPDM art.205036, art.205037, art.205038,
 prodotti da Gastaldello Sistemi S.p.A.
- Guarnizioni di tenuta:
 - guarnizione centrale EPDM/coestruso art. 205304,
 - guarnizione di battuta interna in EPDM art. 205030,
 - guarnizione di battuta in EPDM art. 205055,
 prodotto da Gastaldello Sistemi S.p.A.
- Taglio termico:
 - barrette in Poliammide 6.6 rinforzata con fibre di vetro al 25% art. BAPM40S01, art. BAPM40S03, art. BAPM40S31, art. BAPM30S01, art. BAPM30S34,
 prodotti da Gastaldello Sistemi S.p.A..
- Isolanti:
 - isolanti in PE, Polietilene Espanso art. 205305, art. 205306, art. 205307, art. 205308, art. 205309, art. 205310, art. 205329,
 - isolante in Veolene art. 205326, prodotti da Gastaldello Sistemi S.p.A..
- Dimensioni nominali dichiarate: cfr. disegni tecnici allegati.

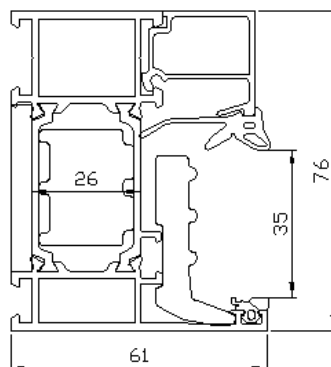
Da Fig. 1 a Fig. 178 sono riportate le sezioni dei nodi in esame.

2.1. Telai fissi



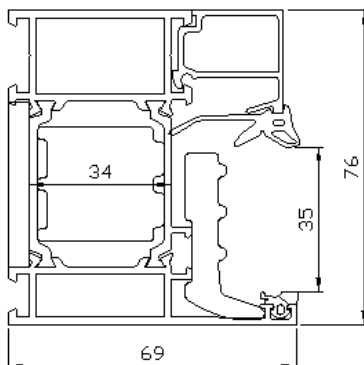
Nodo 1
 $U_f=1,32 \text{ W/m}^2\text{K}$

Fig. 1: sezione del nodo 1 – 371 501 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



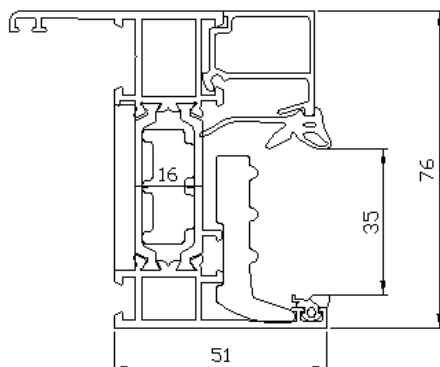
Nodo 2
 $U_f=1,23 \text{ W/m}^2\text{K}$

Fig. 2: sezione del nodo 2 – 371 502 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



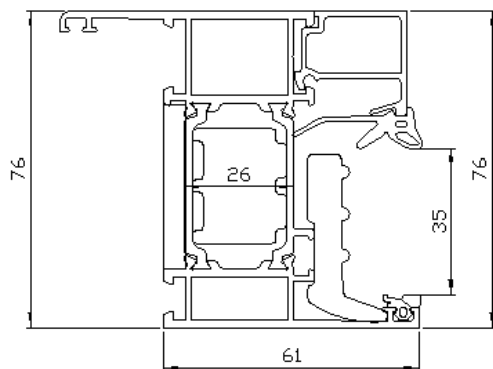
Nodo 3
 $U_f=1,19 \text{ W/m}^2\text{K}$

Fig. 3: sezione del nodo 3 – 371 503 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



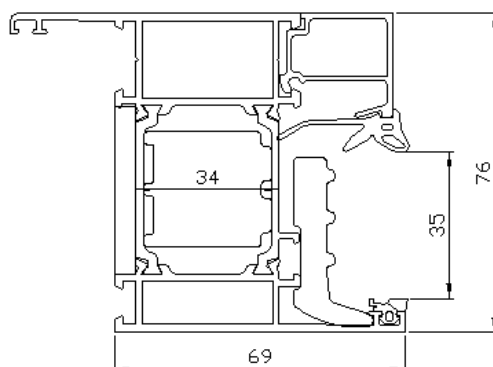
Nodo 4
 $U_f=1,36 \text{ W/m}^2\text{K}$

Fig. 4: sezione del nodo 4 – 371 504 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



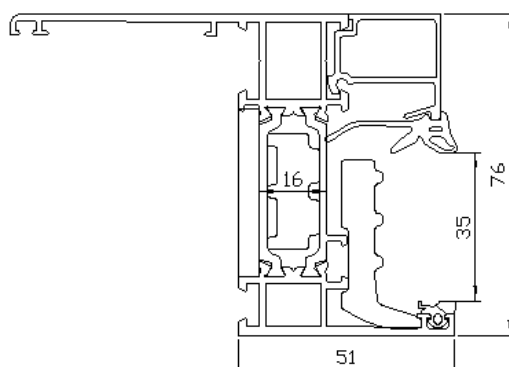
Nodo 5
 $U_f=1,28 \text{ W/m}^2\text{K}$

Fig. 5: sezione del nodo 5 – 371 505 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



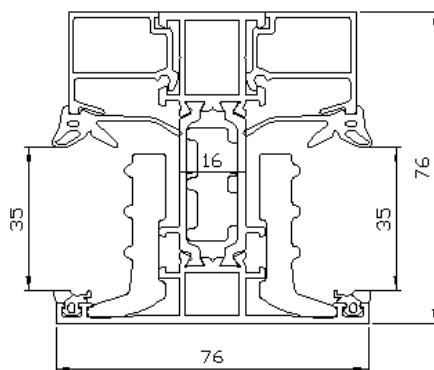
Nodo 6
 $U_f=1,22 \text{ W/m}^2\text{K}$

Fig. 6: sezione del nodo 6 – 371 506 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



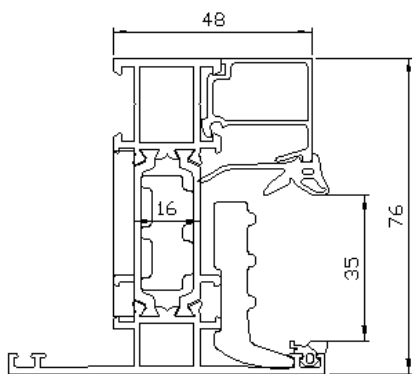
Nodo 7
 $U_f=1,37 \text{ W/m}^2\text{K}$

Fig. 7: sezione del nodo 7 – 371 524 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



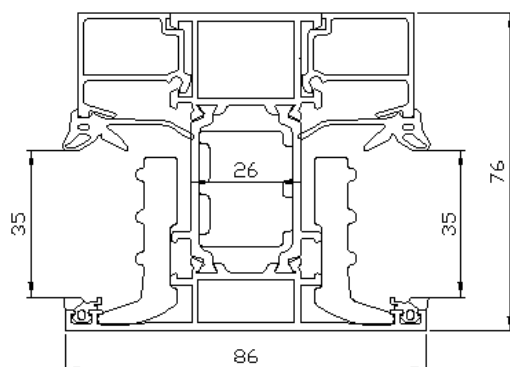
Nodo 8
 $U_f=1,21 \text{ W/m}^2\text{K}$

Fig. 8: sezione del nodo 8 – 371 507 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



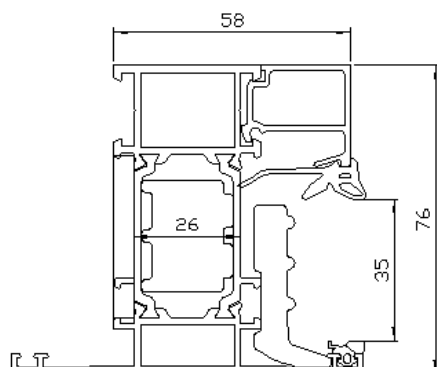
Nodo 9
 $U_f=1,31 \text{ W/m}^2\text{K}$

Fig. 9: sezione del nodo 9 – 371 507T sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



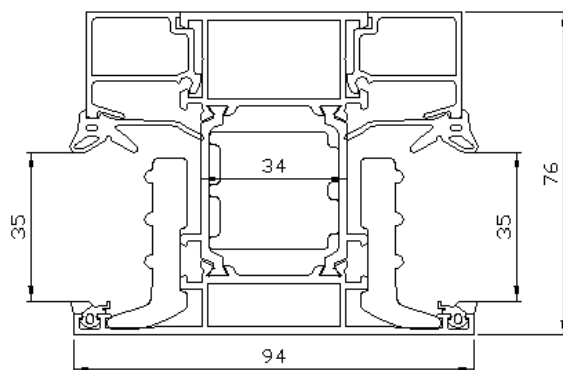
Nodo 10
 $U_f=1,17 \text{ W/m}^2\text{K}$

Fig. 10: sezione del nodo 10 – 371 508 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



Nodo 11
 $U_f=1,23 \text{ W/m}^2\text{K}$

Fig. 11: sezione del nodo 11 – 371 508T sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



Nodo 12
 $U_f=1,14 \text{ W/m}^2\text{K}$

Fig. 12: sezione del nodo 12 – 371 509 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)

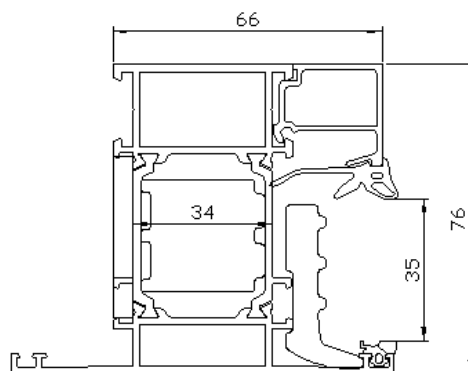


Fig. 13: sezione del nodo 13 – 371 509T sottoposto a prova
(dimensioni nominali dichiarate, espresse in mm)

Nodo 13
 $U_f=1,18 \text{ W/m}^2\text{K}$

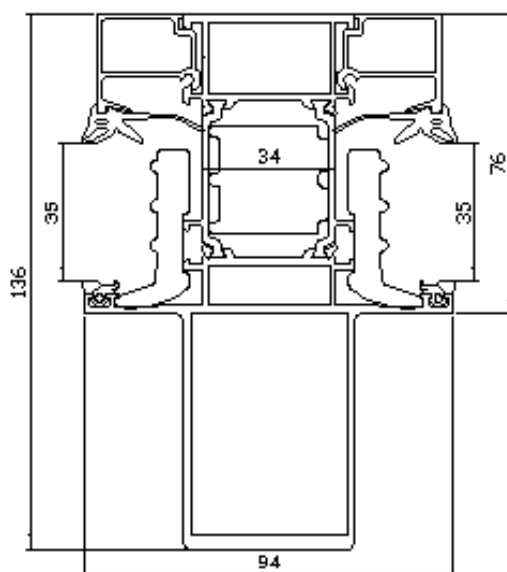


Fig. 14: sezione del nodo 14 – 371 521 sottoposto a prova
(dimensioni nominali dichiarate, espresse in mm)

Nodo 14
 $U_f=1,15 \text{ W/m}^2\text{K}$

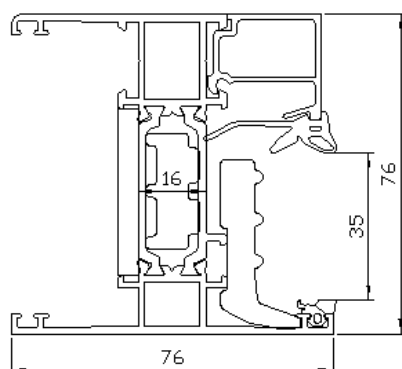
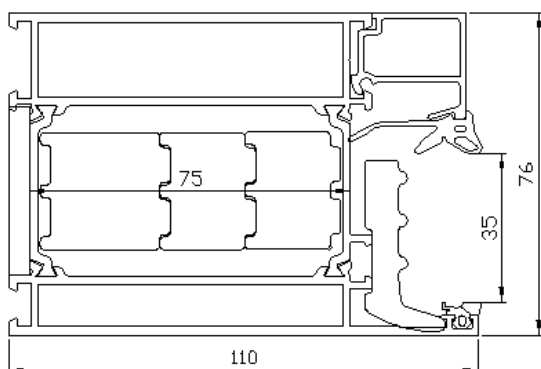


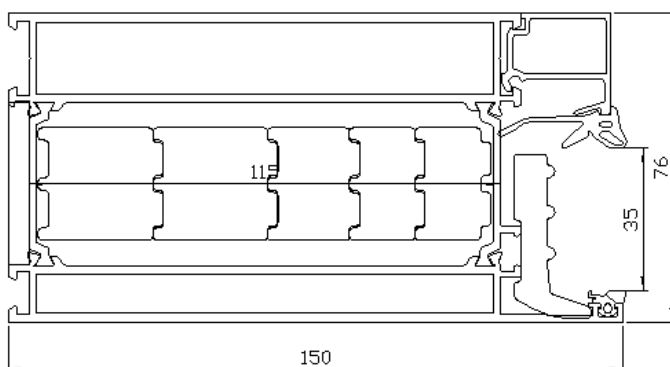
Fig. 15: sezione del nodo 15 – 371 559 sottoposto a prova
(dimensioni nominali dichiarate, espresse in mm)

Nodo 15
 $U_f=1,96 \text{ W/m}^2\text{K}$



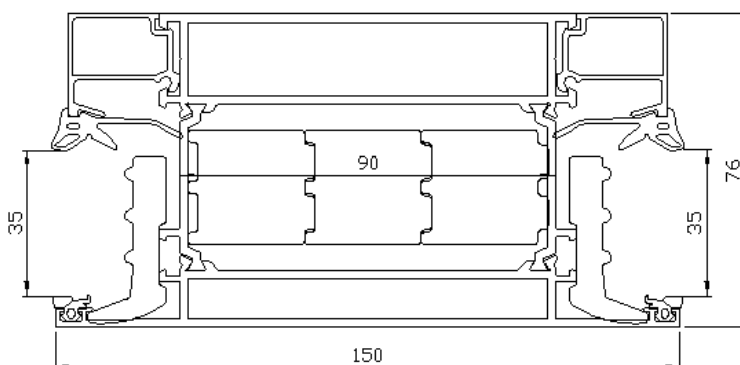
Nodo 16
 $U_f=1,03 \text{ W/m}^2\text{K}$

Fig. 16: sezione del nodo 16 – 371 538 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



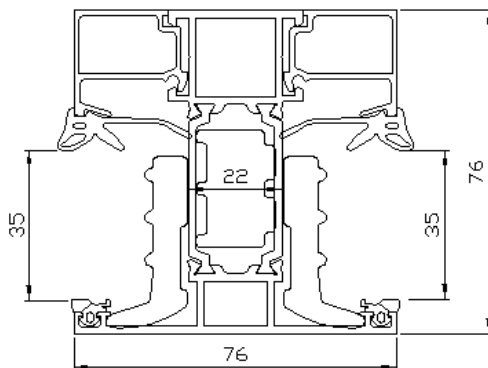
Nodo 17
 $U_f=0,95 \text{ W/m}^2\text{K}$

Fig. 17: sezione del nodo 17 – 371 535 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



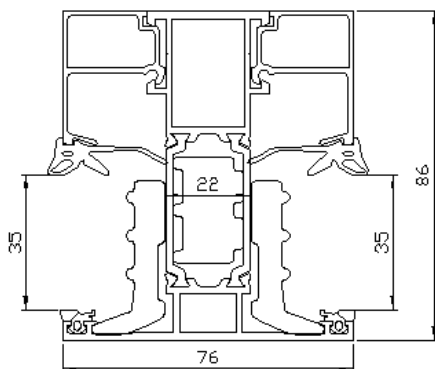
Nodo 18
 $U_f=0,99 \text{ W/m}^2\text{K}$

Fig. 18: sezione del nodo 18 – 371 537 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



Nodo 19
 $U_f=1,24 \text{ W/m}^2\text{K}$

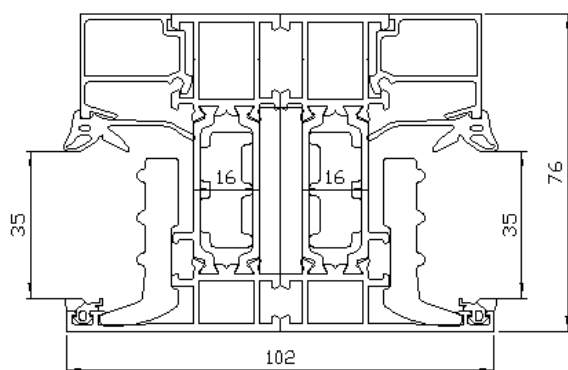
Fig. 19: sezione del nodo 19 – 371 522 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



Nodo 20
 $U_f=1,26 \text{ W/m}^2\text{K}$

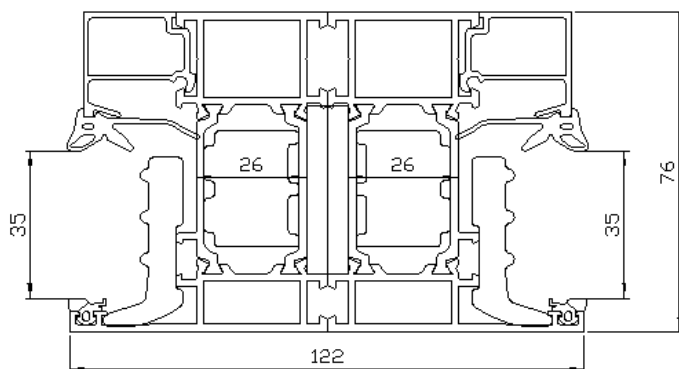
Fig. 20: sezione del nodo 20 – 371 523 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)

2.2. Telai composti



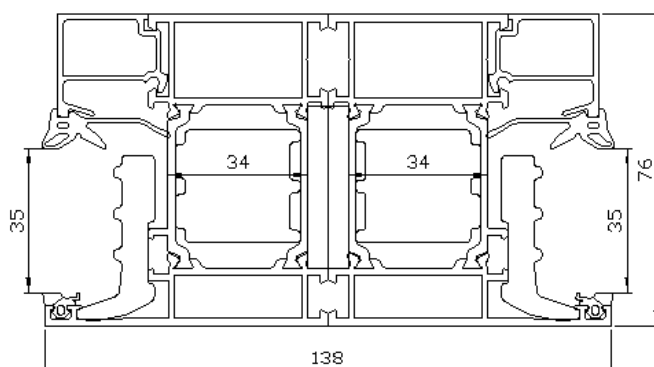
Nodo 21
 $U_f=1,31 \text{ W/m}^2\text{K}$

Fig. 21: sezione del nodo 21 – 371 501_371 501 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



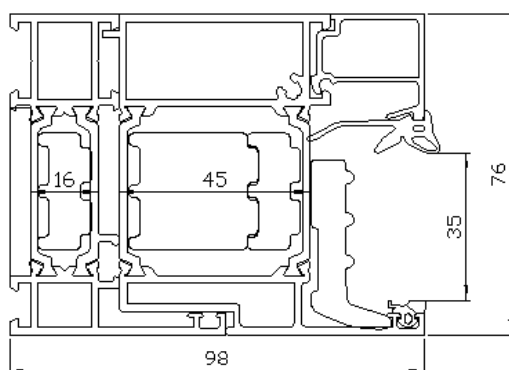
Nodo 22
 $U_f=1,22 \text{ W/m}^2\text{K}$

Fig. 22: sezione del nodo 22 – 371 502_371 502 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



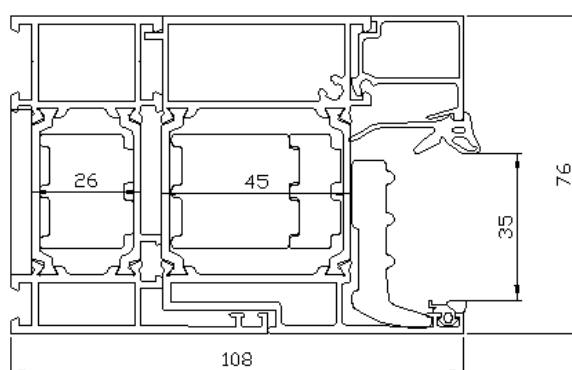
Nodo 23
 $U_f=1,18 \text{ W/m}^2\text{K}$

Fig. 23: sezione del nodo 23 – 371 503_371 503 sottoposto a prova
(dimensioni nominali dichiarate, espresse in mm)



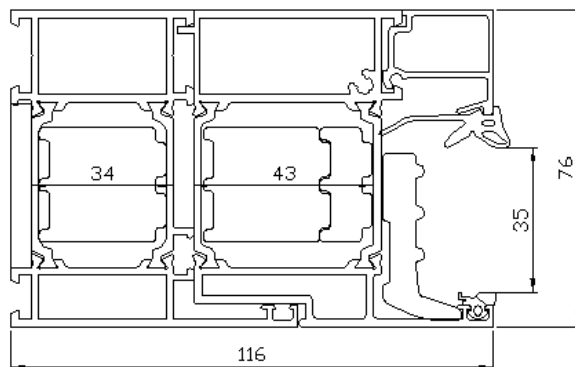
Nodo 24
 $U_f=1,34 \text{ W/m}^2\text{K}$

Fig. 24: sezione del nodo 24 – 371 501_371 556 sottoposto a prova
(dimensioni nominali dichiarate, espresse in mm)



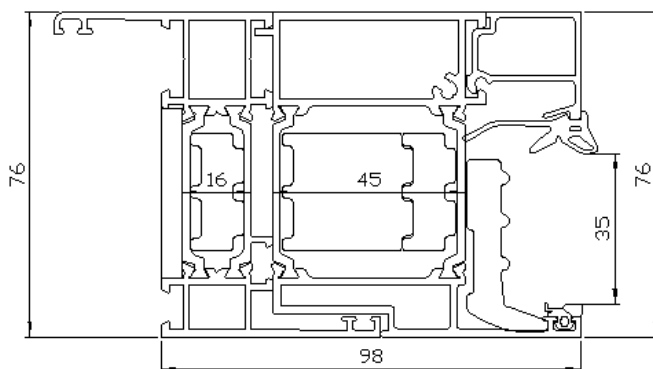
Nodo 25
 $U_f=1,29 \text{ W/m}^2\text{K}$

Fig. 25: sezione del nodo 25 – 371 502_371 556 sottoposto a prova
(dimensioni nominali dichiarate, espresse in mm)



Nodo 26
 $U_f=1,26 \text{ W/m}^2\text{K}$

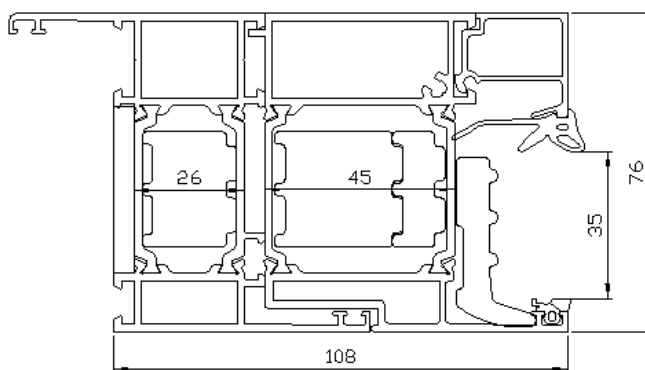
Fig. 26: sezione del nodo 26 – 371 503_371 556 sottoposto a prova
(dimensioni nominali dichiarate, espresse in mm)



Nodo 27
 $U_f=1,37 \text{ W/m}^2\text{K}$

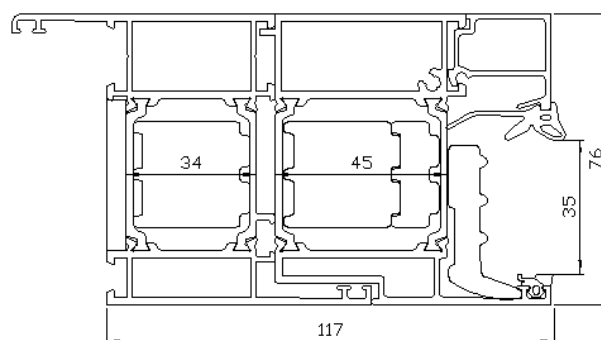
Fig. 27: sezione del nodo 27 – 371 504_371 556 sottoposto a prova

(dimensioni nominali dichiarate, espresse in mm)



Nodo 28
 $U_f=1,31 \text{ W/m}^2\text{K}$

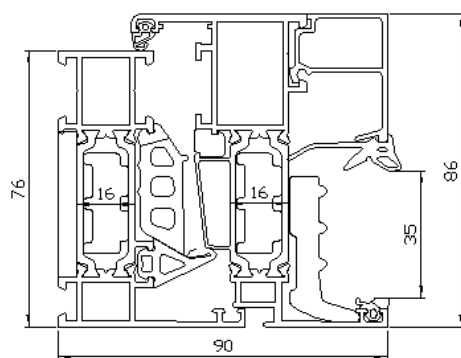
Fig. 28: sezione del nodo 28 – 371 505_371 556 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



Nodo 29
 $U_f=1,28 \text{ W/m}^2\text{K}$

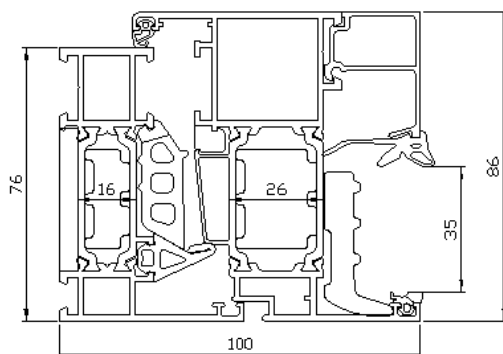
Fig. 29: sezione del nodo 29 – 371 506_371 556 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)

2.3. Telai fissi + apribili



Nodo 30
 $U_f=1,52 \text{ W/m}^2\text{K}$

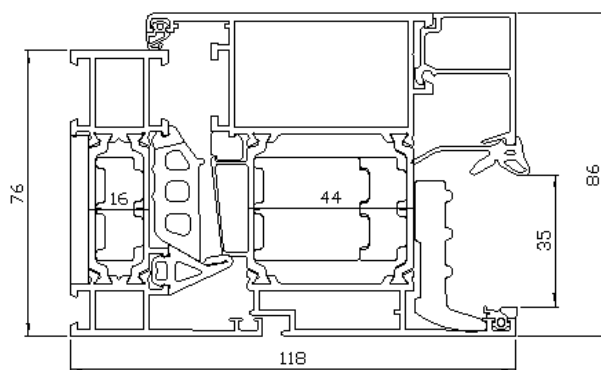
Fig. 30: sezione del nodo 30 – 371 501_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



Nodo 31
 $U_f=1,45 \text{ W/m}^2\text{K}$

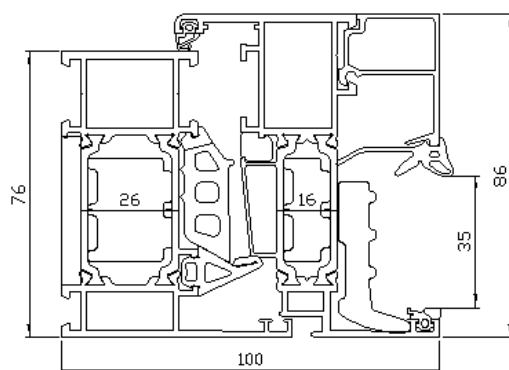
Fig. 31: sezione del nodo 31 – 371 501_371 511 sottoposto a prova

(dimensioni nominali dichiarate, espresse in mm)



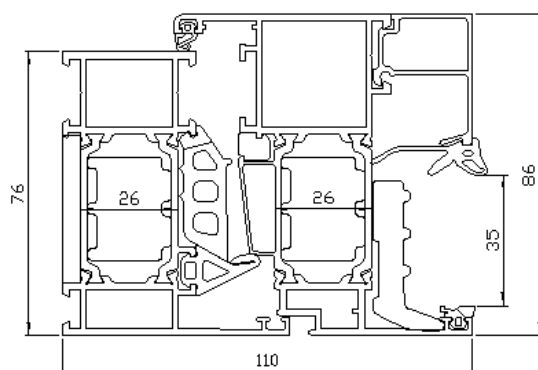
Nodo 32
 $U_f=1,35 \text{ W/m}^2\text{K}$

Fig. 32: sezione del nodo 32 – 371 501_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



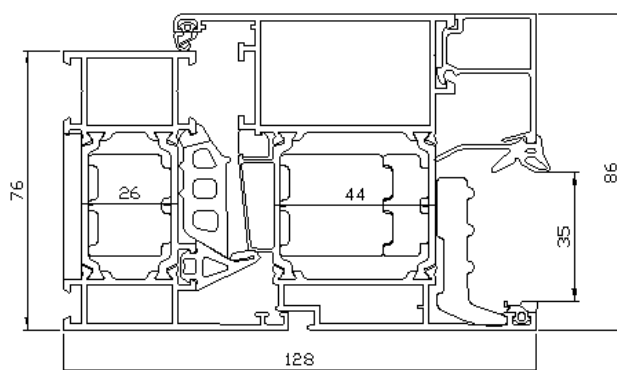
Nodo 33
 $U_f=1,46 \text{ W/m}^2\text{K}$

Fig. 33: sezione del nodo 33 – 371 502_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



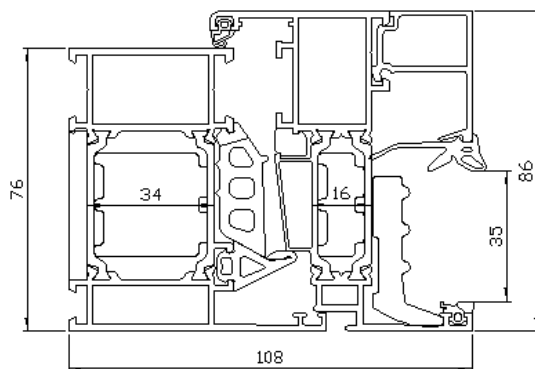
Nodo 34
 $U_f=1,40 \text{ W/m}^2\text{K}$

Fig. 34: sezione del nodo 34 – 371 502_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



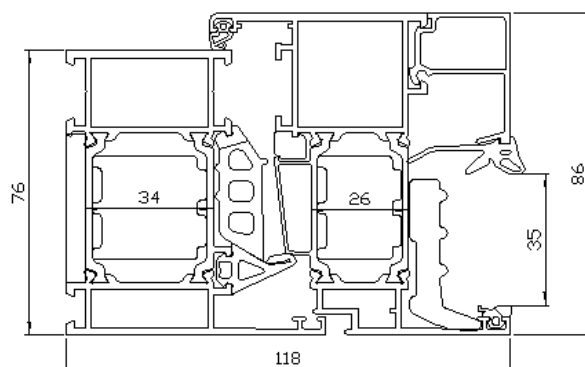
Nodo 35
 $U_f=1,31 \text{ W/m}^2\text{K}$

Fig. 35: sezione del nodo 35 – 371 502_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



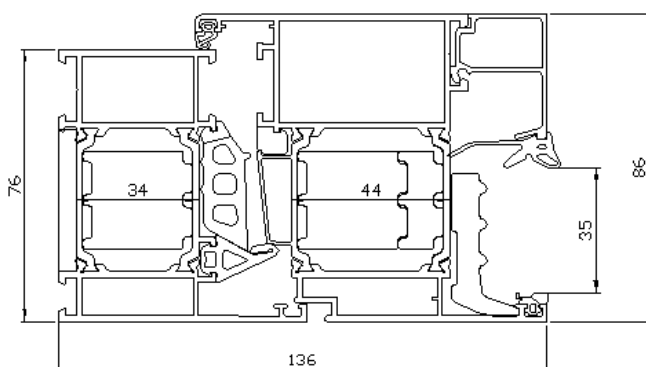
Nodo 36
 $U_f=1,41 \text{ W/m}^2\text{K}$

Fig. 36: sezione del nodo 36 – 363 768_363 960 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



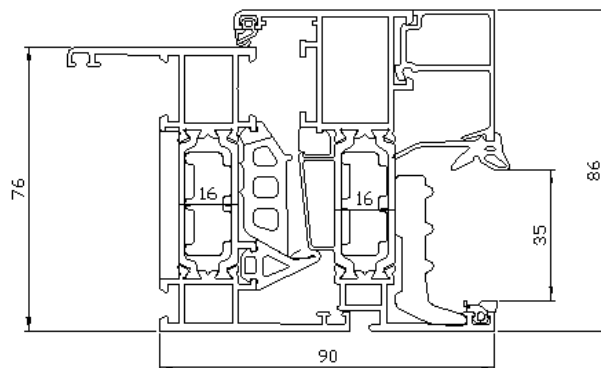
Nodo 37
 $U_f=1,36 \text{ W/m}^2\text{K}$

Fig. 37: sezione del nodo 37 – 371 503_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



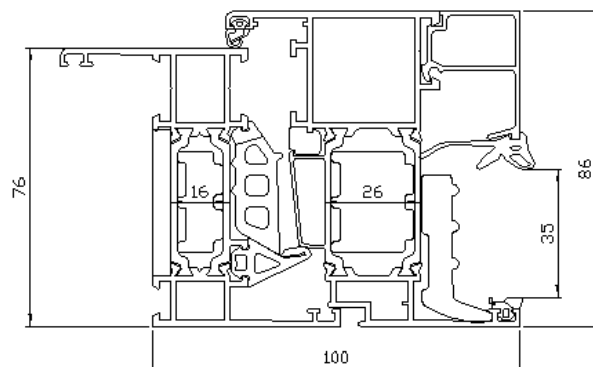
Nodo 38
 $U_f=1,28 \text{ W/m}^2\text{K}$

Fig. 38: sezione del nodo 38 – 371 503_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



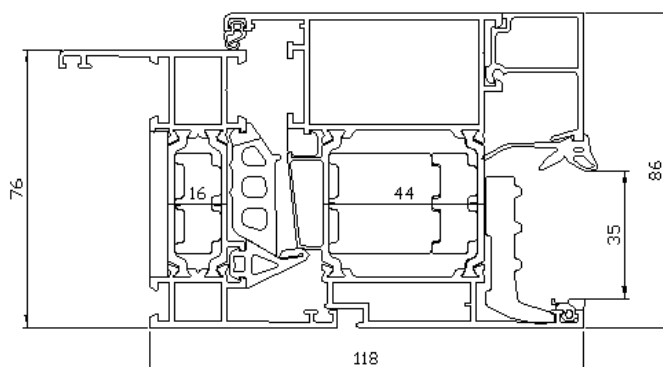
Nodo 39
 $U_f=1,57 \text{ W/m}^2\text{K}$

Fig. 39: sezione del nodo 39 – 371 504_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



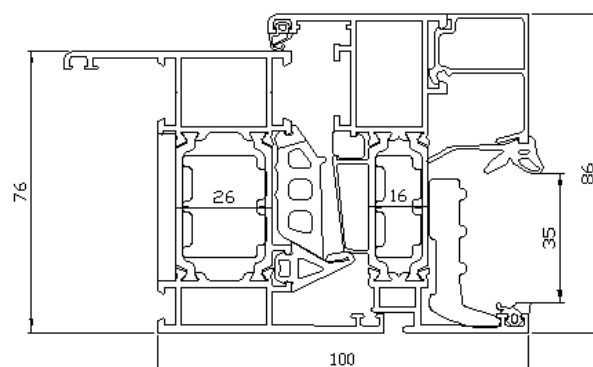
Nodo 40
 $U_f=1,50 \text{ W/m}^2\text{K}$

Fig. 40: sezione del nodo 40 – 371 504_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



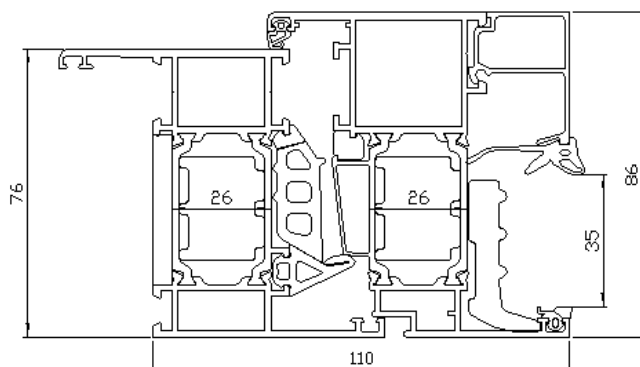
Nodo 41
 $U_f=1,38 \text{ W/m}^2\text{K}$

Fig. 41: sezione del nodo 41 – 371 504_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



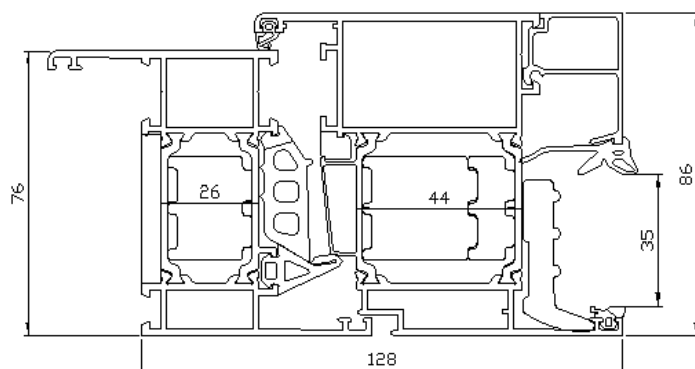
Nodo 42
 $U_f=1,50 \text{ W/m}^2\text{K}$

Fig. 42: sezione del nodo 42 – 371 505_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



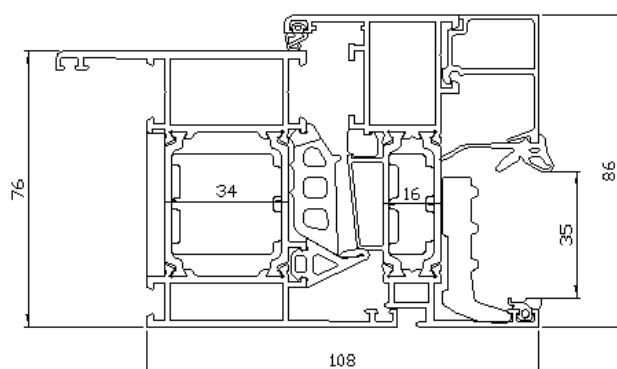
Nodo 43
 $U_f=1,44 \text{ W/m}^2\text{K}$

Fig. 43: sezione del nodo 43 – 371 505_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



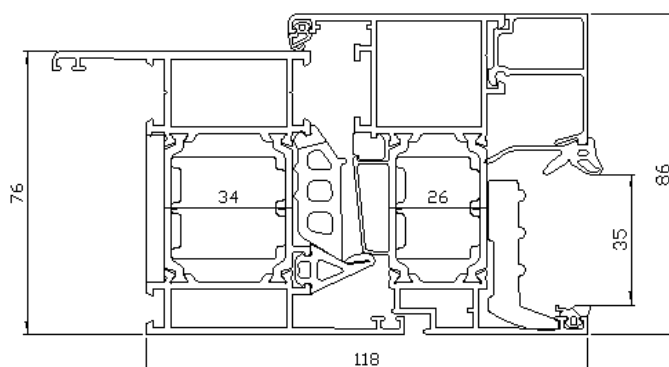
Nodo 44
 $U_f=1,34 \text{ W/m}^2\text{K}$

Fig. 44: sezione del nodo 44 – 371 505_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



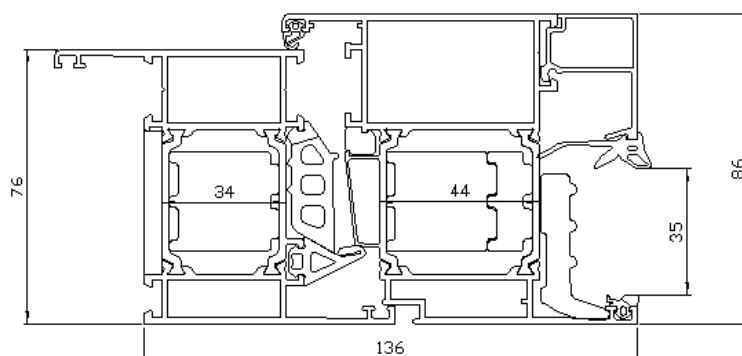
Nodo 45
 $U_f=1,45 \text{ W/m}^2\text{K}$

Fig. 45: sezione del nodo 45 – 371 506_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



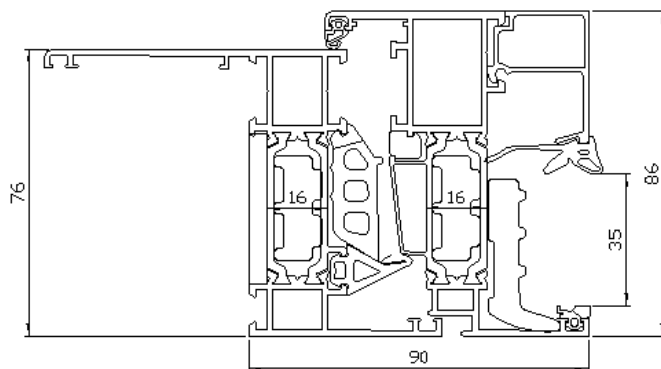
Nodo 46
 $U_f=1,39 \text{ W/m}^2\text{K}$

Fig. 46: sezione del nodo 46 – 371 506_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



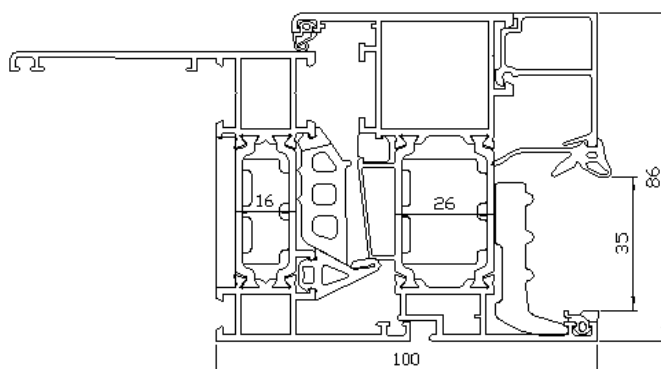
Nodo 47
 $U_f=1,31 \text{ W/m}^2\text{K}$

Fig. 47: sezione del nodo 47 – 371 506_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



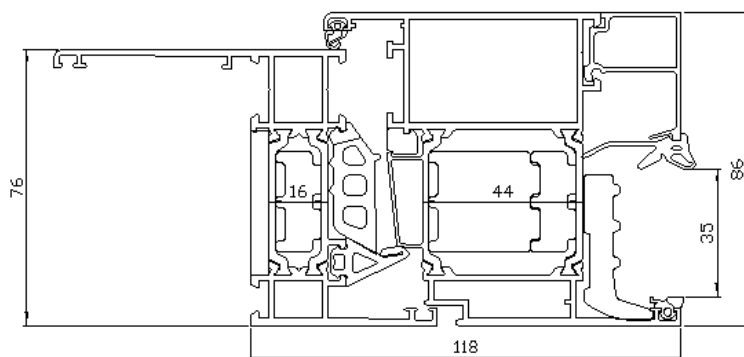
Nodo 48
 $U_f=1,60 \text{ W/m}^2\text{K}$

Fig. 48: sezione del nodo 48 – 371 524_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



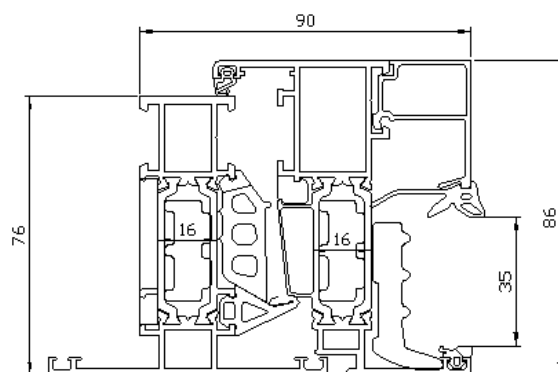
Nodo 49
 $U_f=1,53 \text{ W/m}^2\text{K}$

Fig. 49: sezione del nodo 49 – 371 524_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



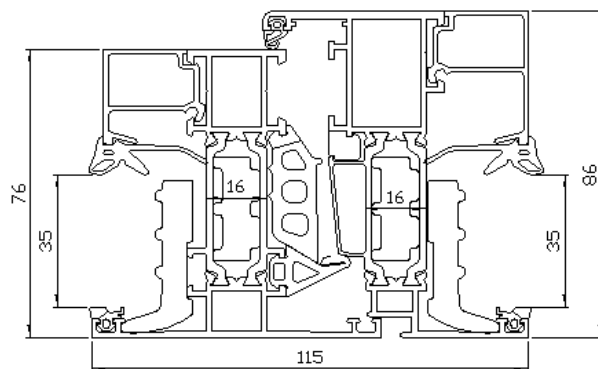
Nodo 50
 $U_f=1,42 \text{ W/m}^2\text{K}$

Fig. 50: sezione del nodo 50 – 371 524_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



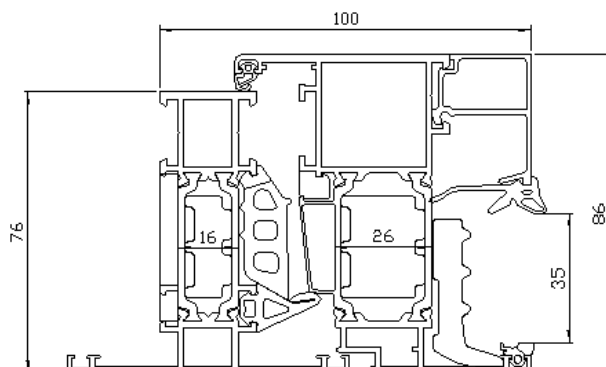
Nodo 51
 $U_f=1,51 \text{ W/m}^2\text{K}$

Fig. 51: sezione del nodo 51 – 371 507T_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



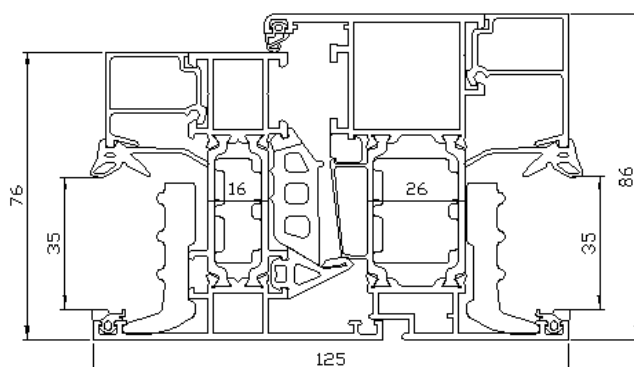
Nodo 52
 $U_f=1,42 \text{ W/m}^2\text{K}$

Fig. 52: sezione del nodo 52 – 371 507_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



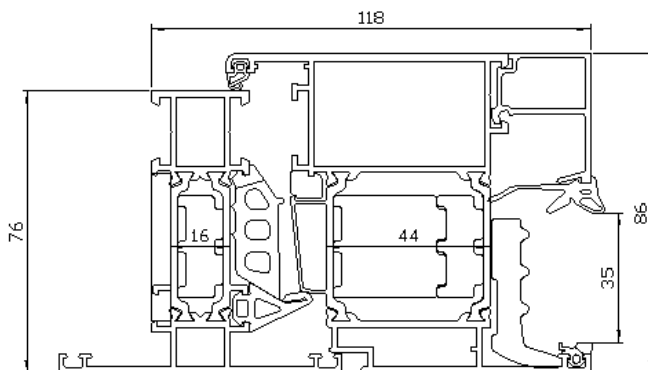
Nodo 53
 $U_f=1,44 \text{ W/m}^2\text{K}$

Fig. 53: sezione del nodo 53 – 371 507T_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



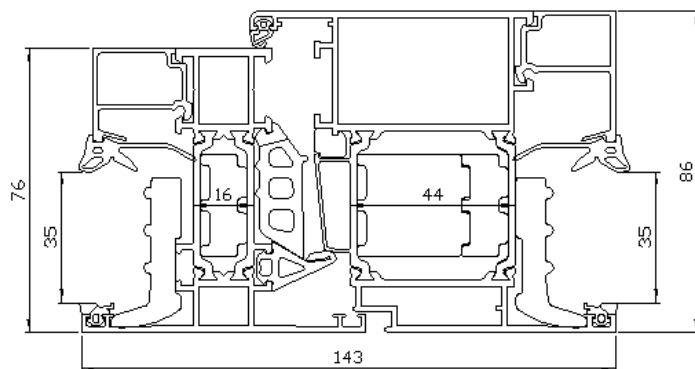
Nodo 54
 $U_f=1,38 \text{ W/m}^2\text{K}$

Fig. 54: sezione del nodo 54 – 371 507_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



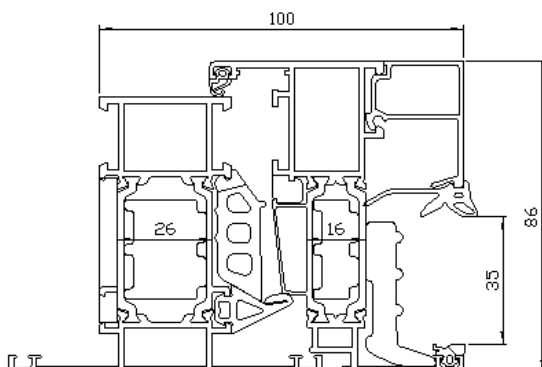
Nodo 55
 $U_f=1,35 \text{ W/m}^2\text{K}$

Fig. 55: sezione del nodo 55 – 371 507T_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



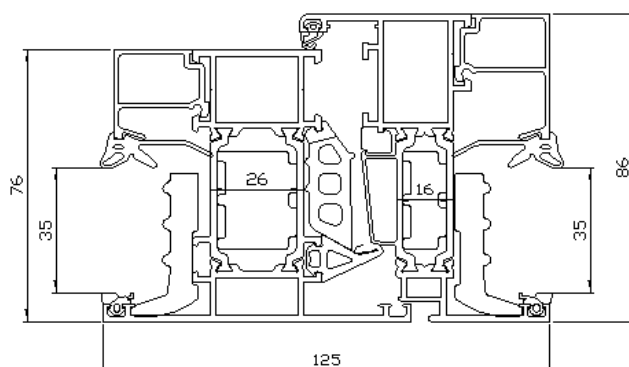
Nodo 56
 $U_f=1,31 \text{ W/m}^2\text{K}$

Fig. 56: sezione del nodo 56 – 371 507_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



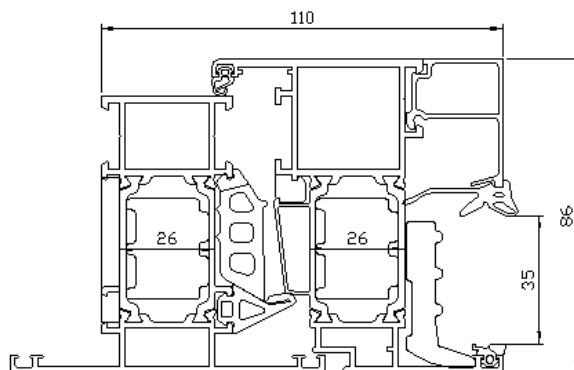
Nodo 57
 $U_f=1,45 \text{ W/m}^2\text{K}$

Fig. 57: sezione del nodo 57 – 371 508T_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



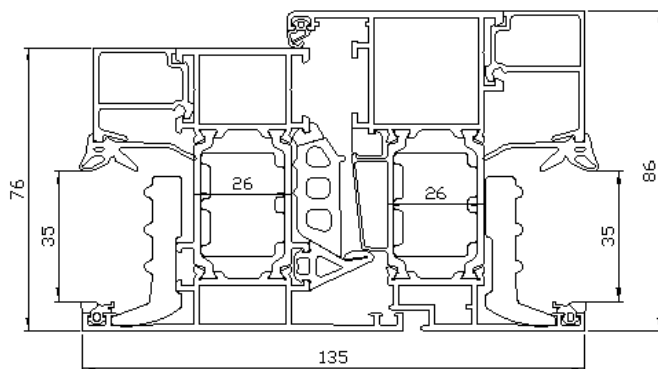
Nodo 58
 $U_f=1,38 \text{ W/m}^2\text{K}$

Fig. 58: sezione del nodo 58 – 371 508_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



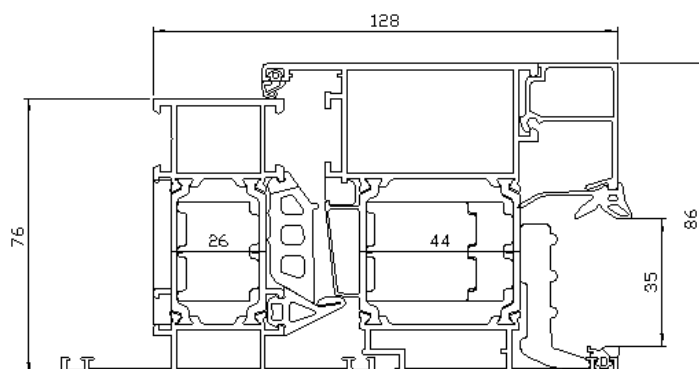
Nodo 59
 $U_f=1,39 \text{ W/m}^2\text{K}$

Fig. 59: sezione del nodo 59 – 371 508T_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



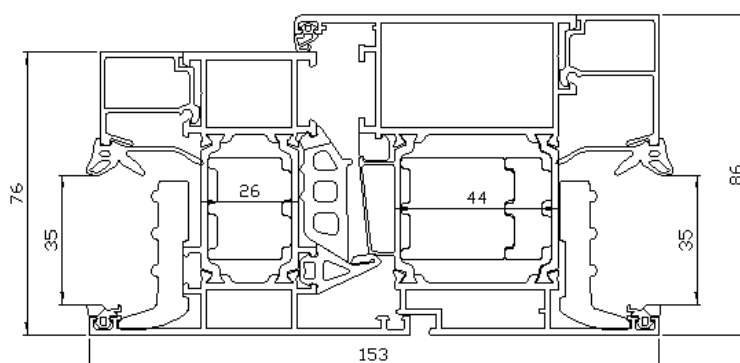
Nodo 60
 $U_f=1,34 \text{ W/m}^2\text{K}$

Fig. 60: sezione del nodo 60 – 371 508_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



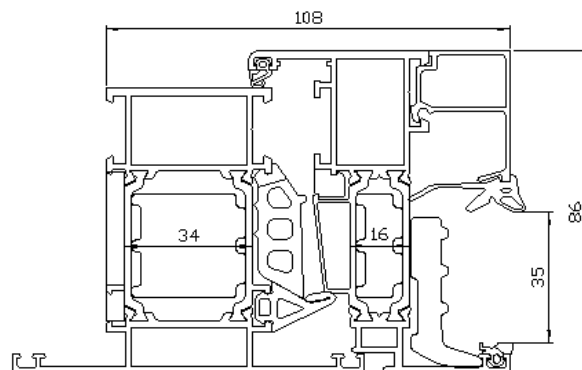
Nodo 61
 $U_f=1,30 \text{ W/m}^2\text{K}$

Fig. 61: sezione del nodo 61 – 371 508T_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



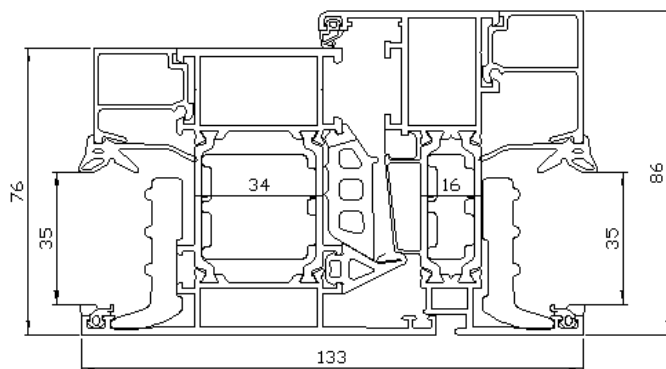
Nodo 62
 $U_f=1,27 \text{ W/m}^2\text{K}$

Fig. 62: sezione del nodo 62 – 371 508_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



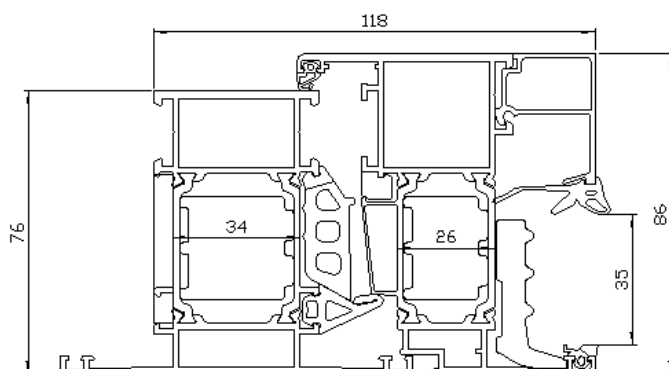
Nodo 63
 $U_f=1,40 \text{ W/m}^2\text{K}$

Fig. 63: sezione del nodo 63 – 371 509T_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



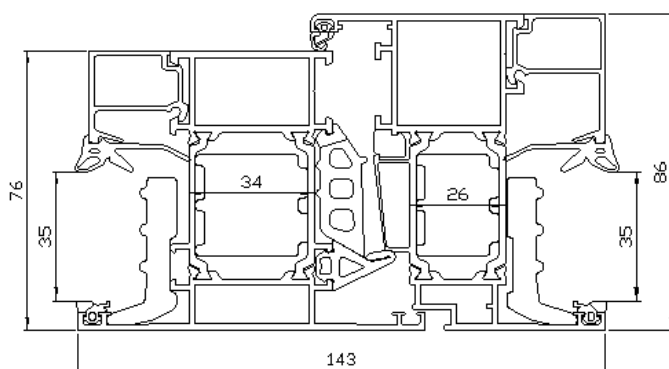
Nodo 64
 $U_f=1,35 \text{ W/m}^2\text{K}$

Fig. 64: sezione del nodo 64 – 371 509_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



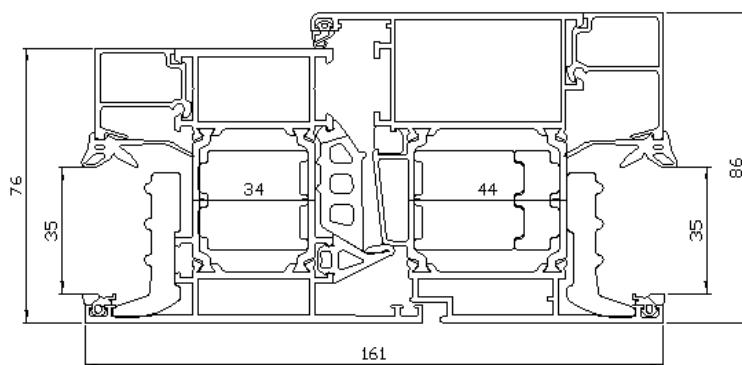
Nodo 65
 $U_f=1,35 \text{ W/m}^2\text{K}$

Fig. 65: sezione del nodo 65 – 371 509T_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



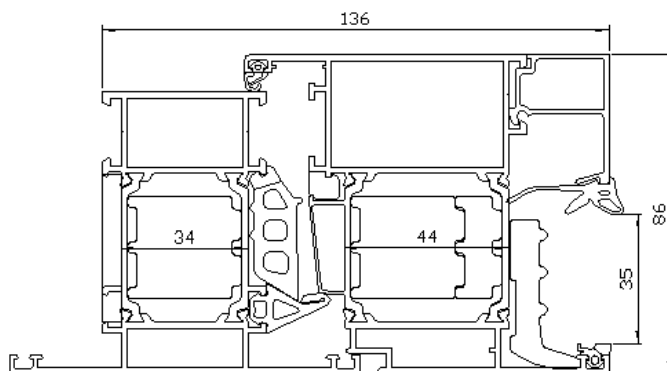
Nodo 66
 $U_f=1,31 \text{ W/m}^2\text{K}$

Fig. 66: sezione del nodo 66 – 371 509_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



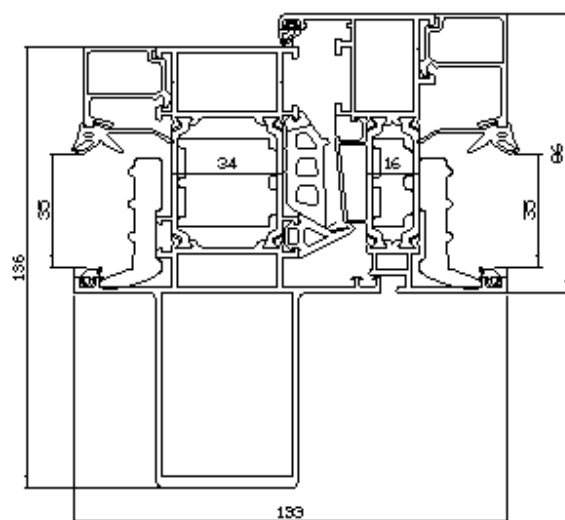
Nodo 67
 $U_f=1,28 \text{ W/m}^2\text{K}$

Fig. 67: sezione del nodo 67 – 371 509_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



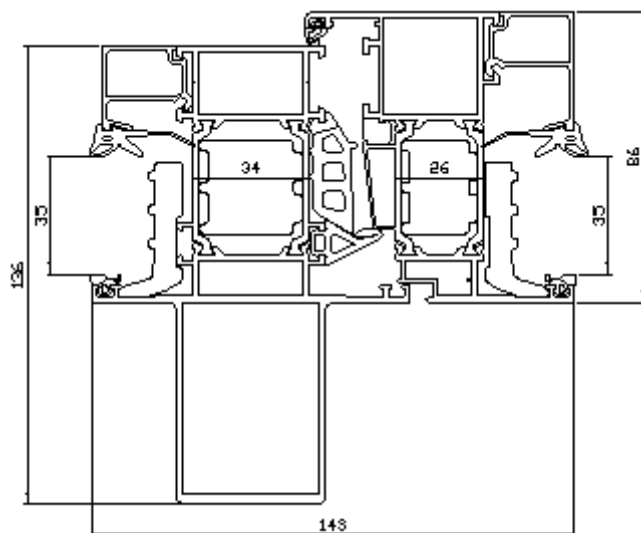
Nodo 68
 $U_f=1,25 \text{ W/m}^2\text{K}$

Fig. 68: sezione del nodo 68 – 371 509T_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



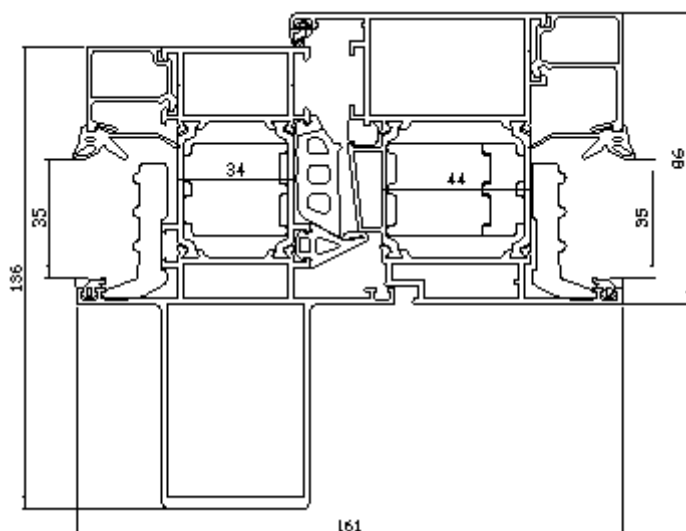
Nodo 69
 $U_f=1,37 \text{ W/m}^2\text{K}$

Fig. 69: sezione del nodo 69 – 371 521_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



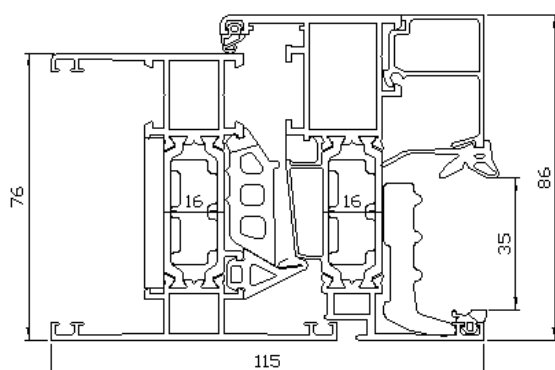
Nodo 70
 $U_f=1,32 \text{ W/m}^2\text{K}$

Fig. 70: sezione del nodo 70 – 371 521_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



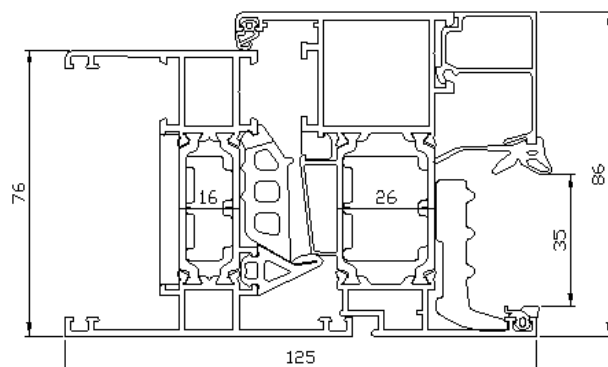
Nodo 71
 $U_f=1,26 \text{ W/m}^2\text{K}$

Fig. 71: sezione del nodo 71 – 371 521_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



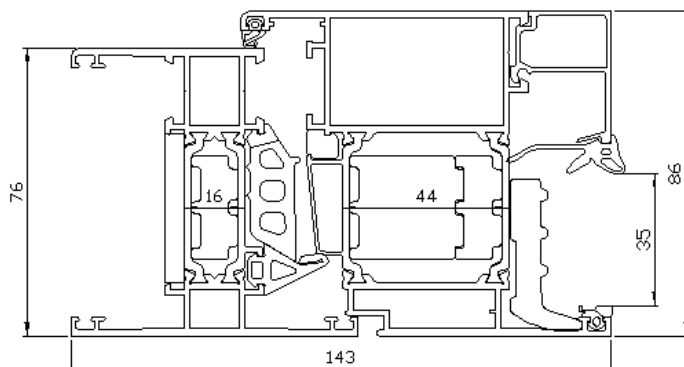
Nodo 72
 $U_f=1,80 \text{ W/m}^2\text{K}$

Fig. 72: sezione del nodo 72 – 371 559_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



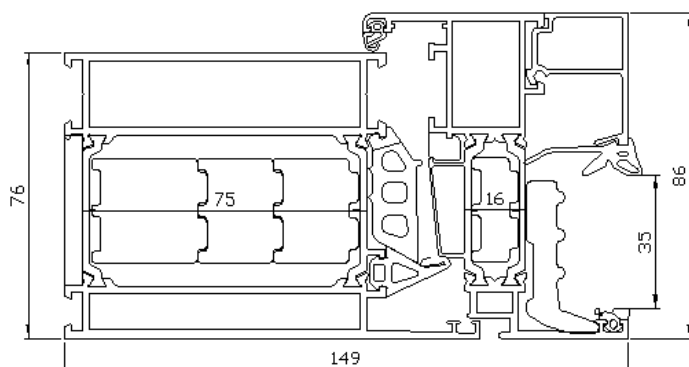
Nodo 73
 $U_f=1,72 \text{ W/m}^2\text{K}$

Fig. 73: sezione del nodo 73 – 371 559_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



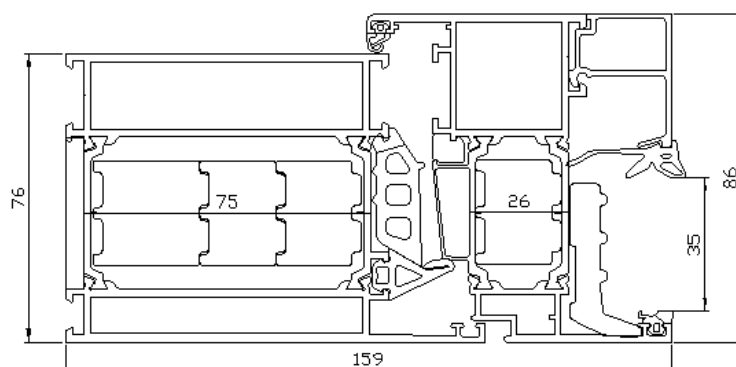
Nodo 74
 $U_f=1,61 \text{ W/m}^2\text{K}$

Fig. 74: sezione del nodo 74 – 371 559_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



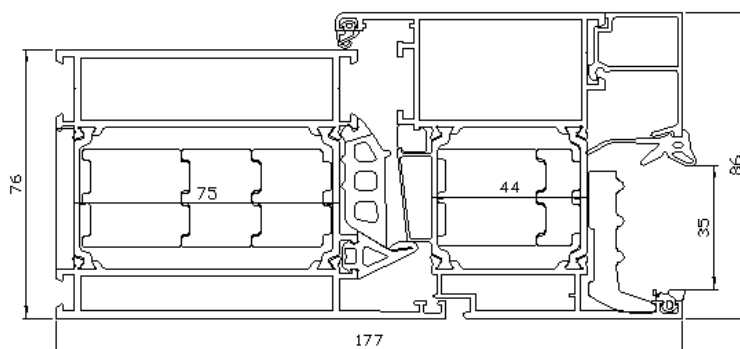
Nodo 75
 $U_f=1,23 \text{ W/m}^2\text{K}$

Fig. 75: sezione del nodo 75 – 371 538_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



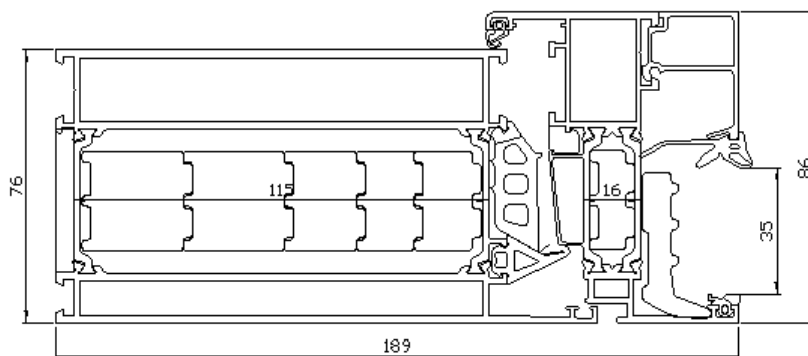
Nodo 76
 $U_f=1,21 \text{ W/m}^2\text{K}$

Fig. 76: sezione del nodo 76 – 371 538_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



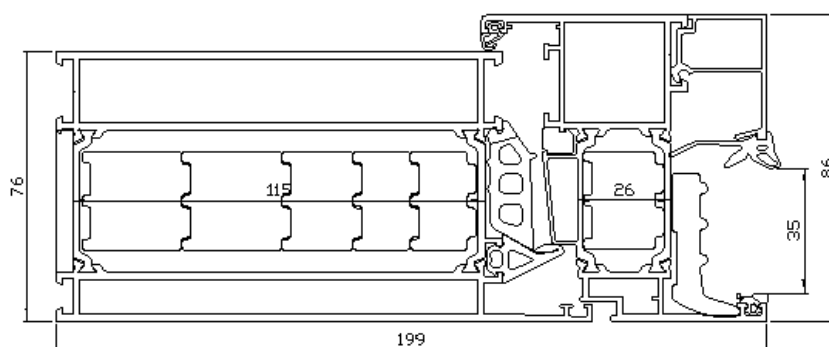
Nodo 77
 $U_f=1,16 \text{ W/m}^2\text{K}$

Fig. 77: sezione del nodo 77 – 371 538_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



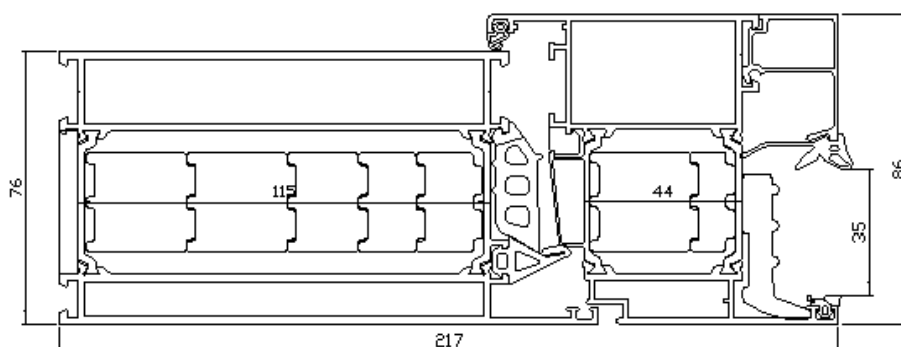
Nodo 78
 $U_f=1,14 \text{ W/m}^2\text{K}$

Fig. 78: sezione del nodo 78 – 371 535_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



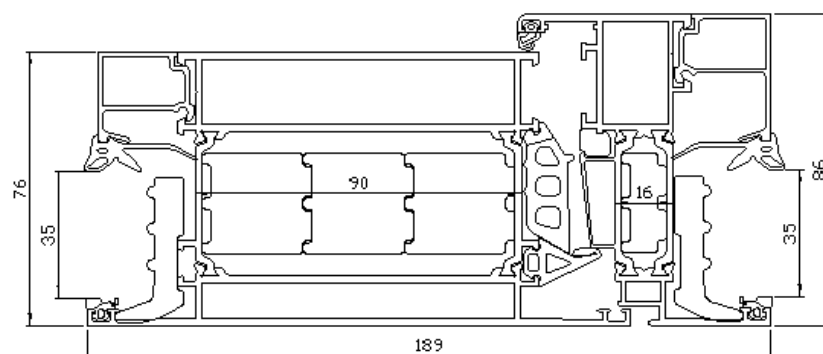
Nodo 79
 $U_f=1,12 \text{ W/m}^2\text{K}$

Fig. 79: sezione del nodo 79 – 371 535_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



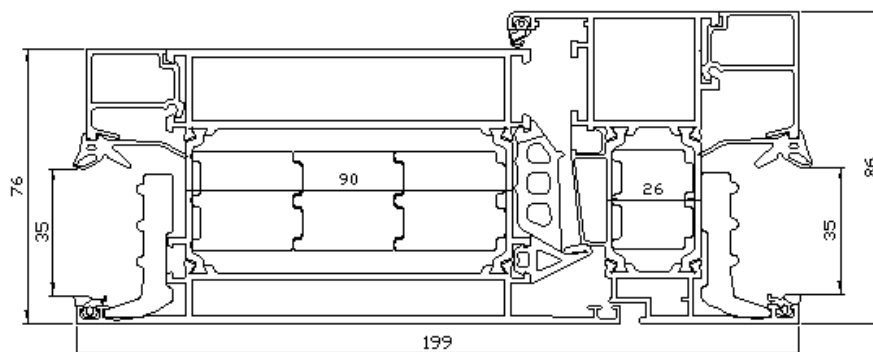
Nodo 80
 $U_f=1,09 \text{ W/m}^2\text{K}$

Fig. 80: sezione del nodo 80 – 371 535_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



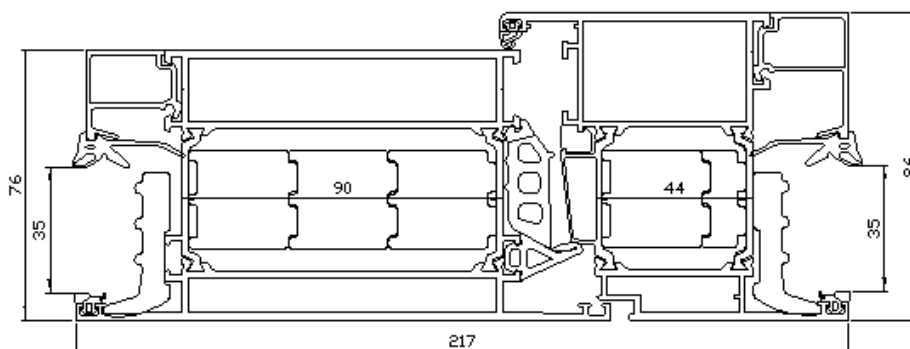
Nodo 81
 $U_f=1,16 \text{ W/m}^2\text{K}$

Fig. 81: sezione del nodo 81 – 371 537_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



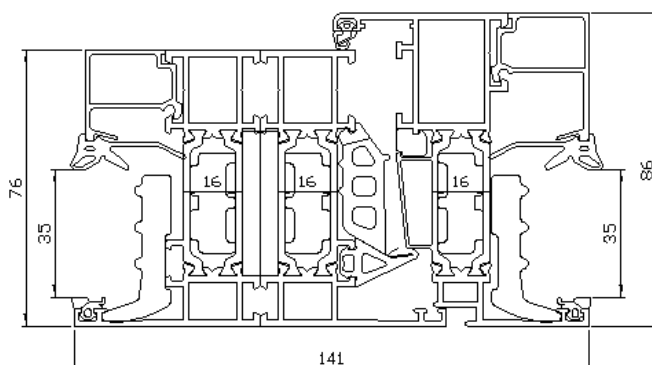
Nodo 82
 $U_f=1,14 \text{ W/m}^2\text{K}$

Fig. 82: sezione del nodo 82 – 371 537_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



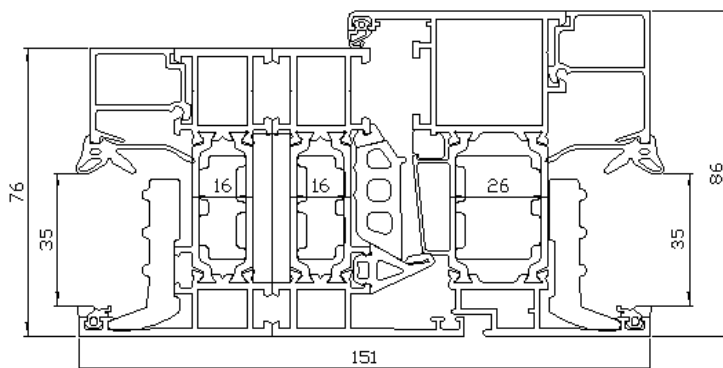
Nodo 83
 $U_f=1,11 \text{ W/m}^2\text{K}$

Fig. 83: sezione del nodo 83 – 371 537_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



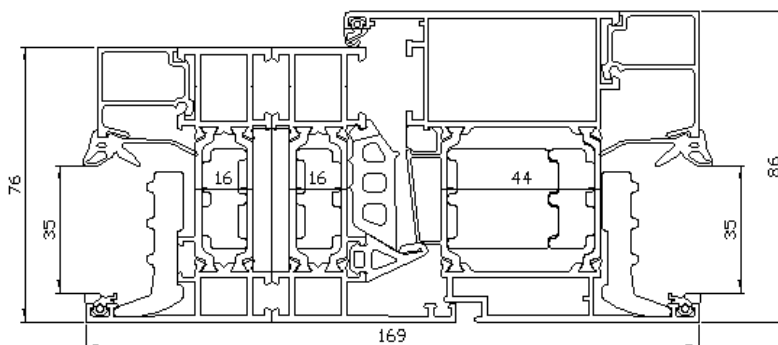
Nodo 84
 $U_f=1,45 \text{ W/m}^2\text{K}$

Fig. 84: sezione del nodo 84 – 371 501_371 501_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



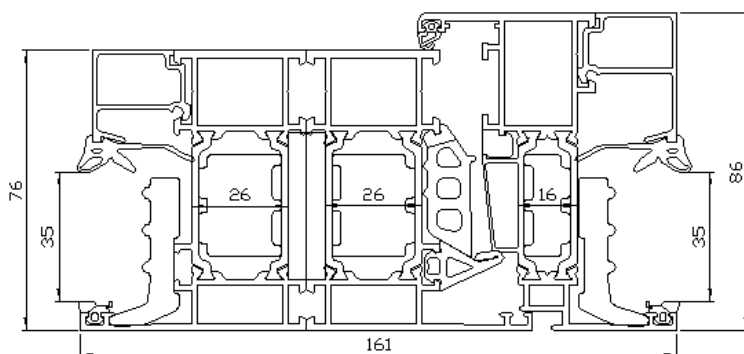
Nodo 85
 $U_f=1,41 \text{ W/m}^2\text{K}$

Fig. 85: sezione del nodo 85 – 371 501_371 501_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



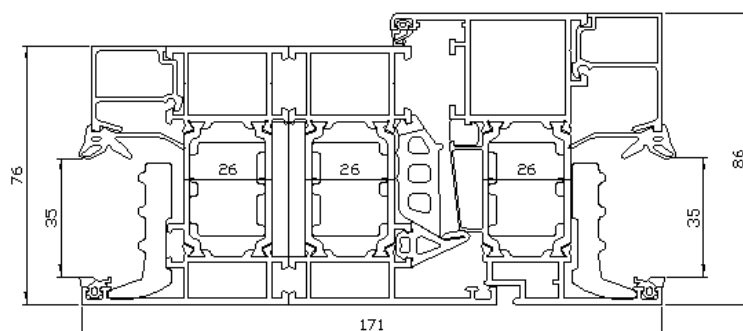
Nodo 86
 $U_f=1,34 \text{ W/m}^2\text{K}$

Fig. 86: sezione del nodo 86 – 371 501_371 501_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



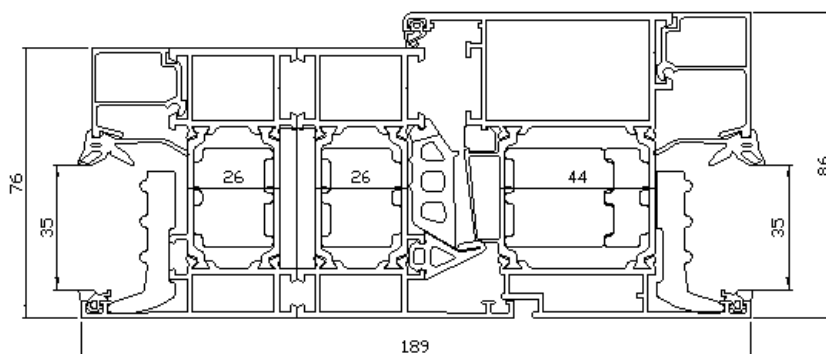
Nodo 87
 $U_f=1,38 \text{ W/m}^2\text{K}$

Fig. 87: sezione del nodo 87 – 371 502_371 502_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



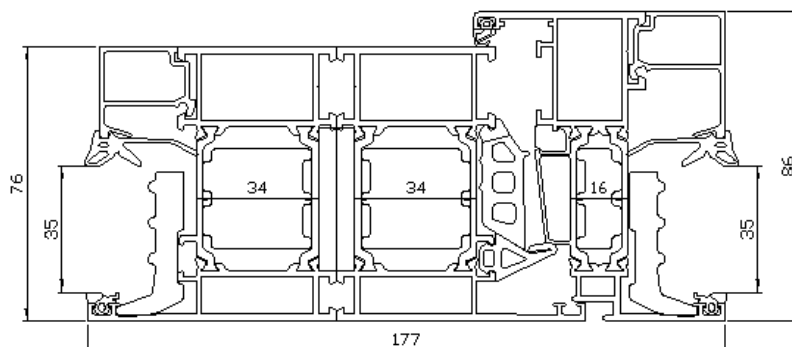
Nodo 88
 $U_f=1,34 \text{ W/m}^2\text{K}$

Fig. 88: sezione del nodo 88 – 371 502_371 502_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



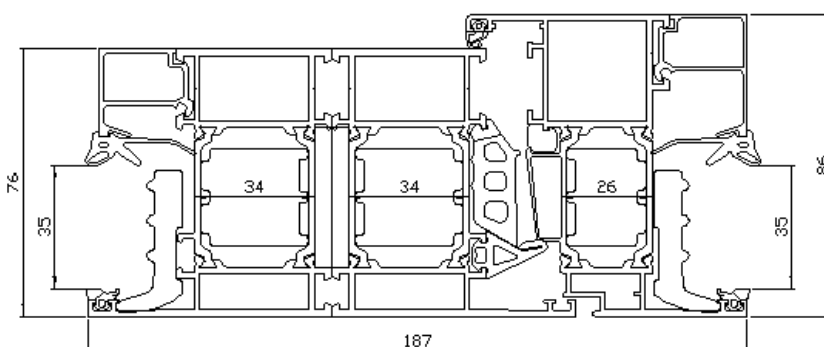
Nodo 89
 $U_f=1,28 \text{ W/m}^2\text{K}$

Fig. 89: sezione del nodo 89 – 371 502_371 502_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



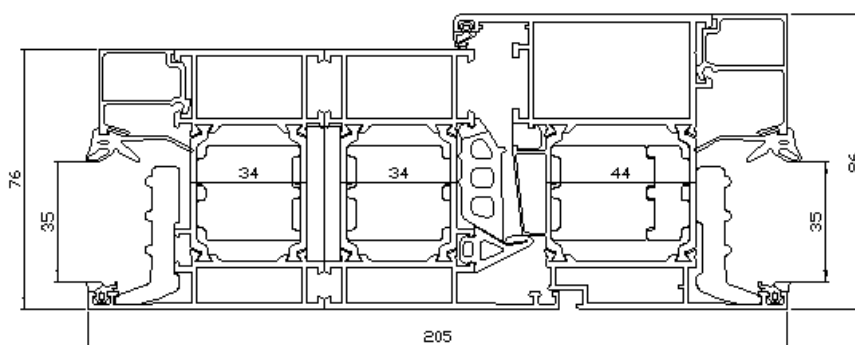
Nodo 90
 $U_f=1,32 \text{ W/m}^2\text{K}$

Fig. 90: sezione del nodo 90 – 371 503_371 503_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



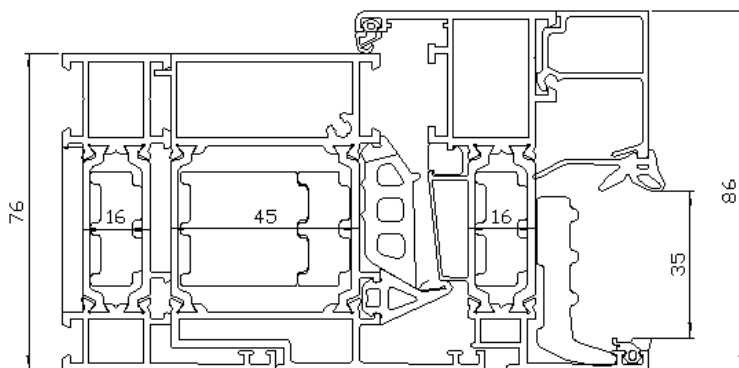
Nodo 91
 $U_f=1,29 \text{ W/m}^2\text{K}$

Fig. 91: sezione del nodo 91 – 371 503_371 503_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



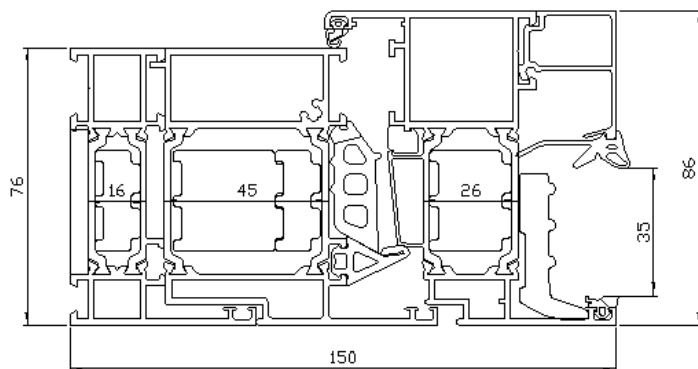
Nodo 92
 $U_f=1,24 \text{ W/m}^2\text{K}$

Fig. 92: sezione del nodo 92 – 371 503_371 503_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



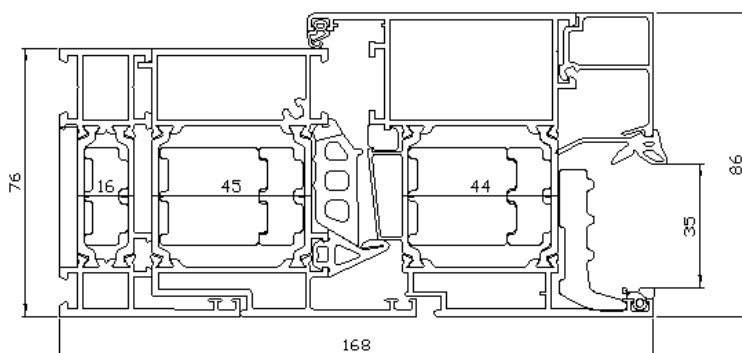
Nodo 93
 $U_f=1,44 \text{ W/m}^2\text{K}$

Fig. 93: sezione del nodo 93 – 371 501_351 569_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



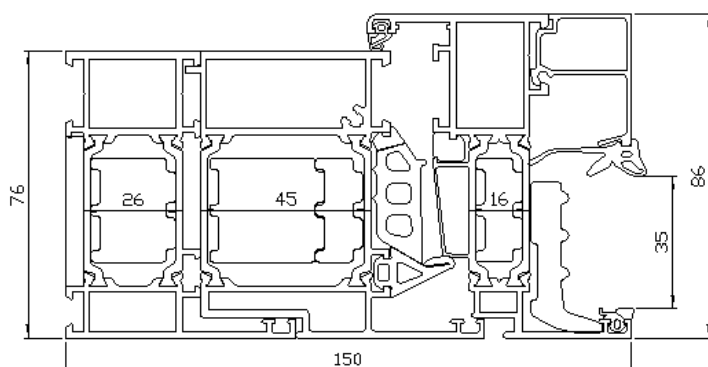
Nodo 94
 $U_f=1,38 \text{ W/m}^2\text{K}$

Fig. 94: sezione del nodo 94 – 371 501_351 569_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



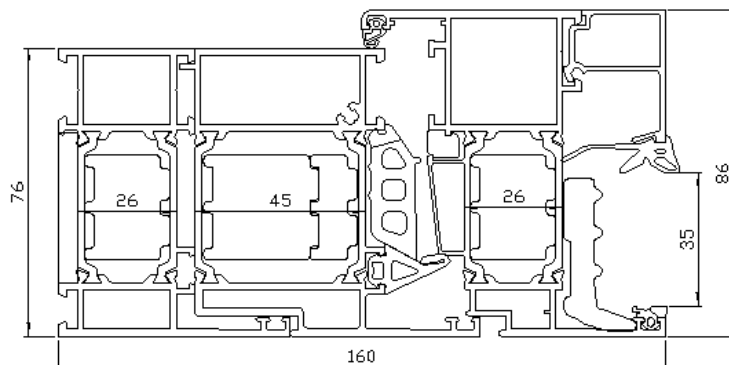
Nodo 95
 $U_f=1,33 \text{ W/m}^2\text{K}$

Fig. 95: sezione del nodo 95 – 371 501_351 569_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



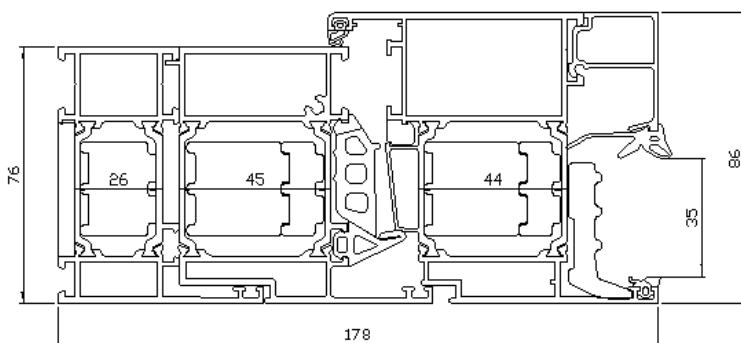
Nodo 96
 $U_f=1,40 \text{ W/m}^2\text{K}$

Fig. 96: sezione del nodo 96 – 371 502_371 569_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



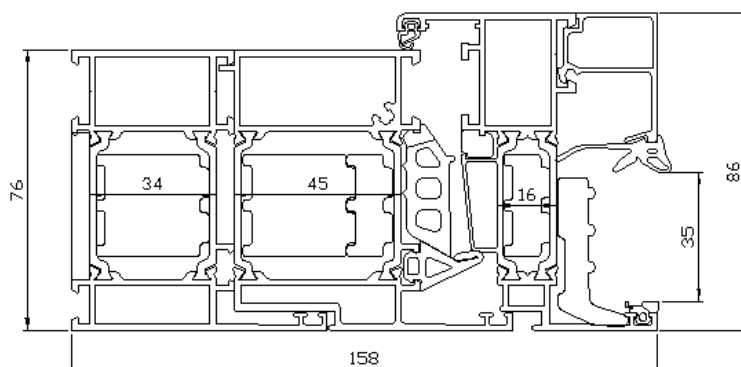
Nodo 97
 $U_f=1,34 \text{ W/m}^2\text{K}$

Fig. 97: sezione del nodo 97 – 371 502_371 569_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



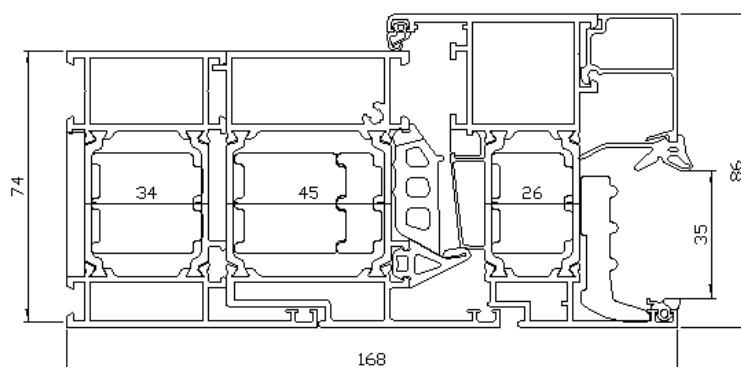
Nodo 98
 $U_f=1,30 \text{ W/m}^2\text{K}$

Fig. 98: sezione del nodo 98 – 371 502_371 569_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



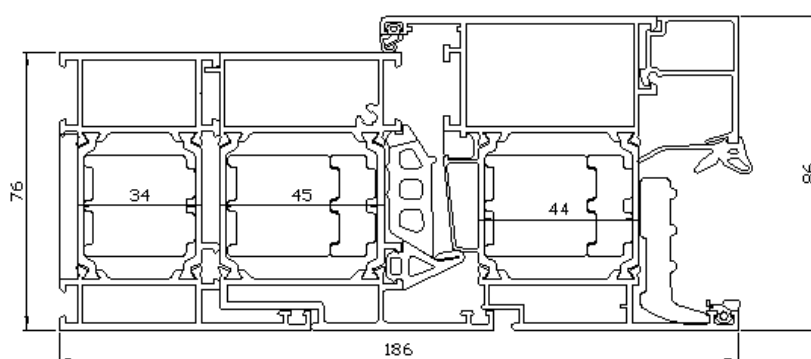
Nodo 99
 $U_f=1,37 \text{ W/m}^2\text{K}$

Fig. 99: sezione del nodo 99 – 371 503_371 569_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



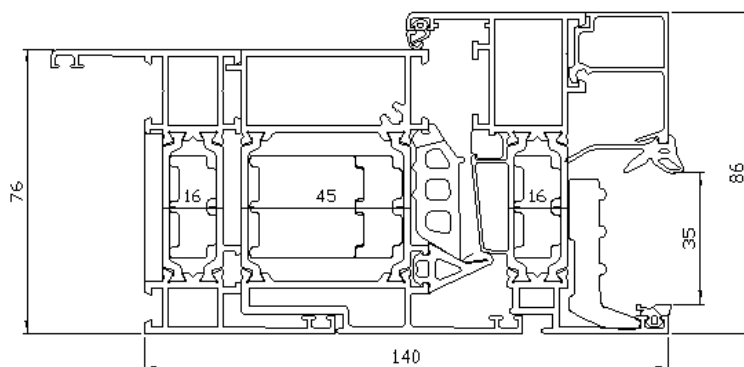
Nodo 100
 $U_f=1,34 \text{ W/m}^2\text{K}$

Fig. 100: sezione del nodo 100 – 371 503_371 569_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



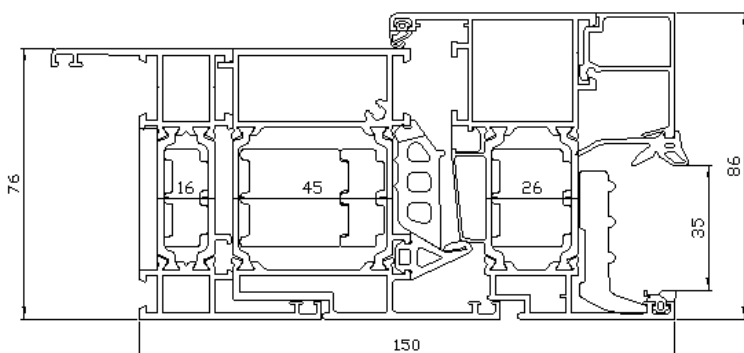
Nodo 101
 $U_f=1,29 \text{ W/m}^2\text{K}$

Fig. 101: sezione del nodo 101 – 371 503_371 569_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



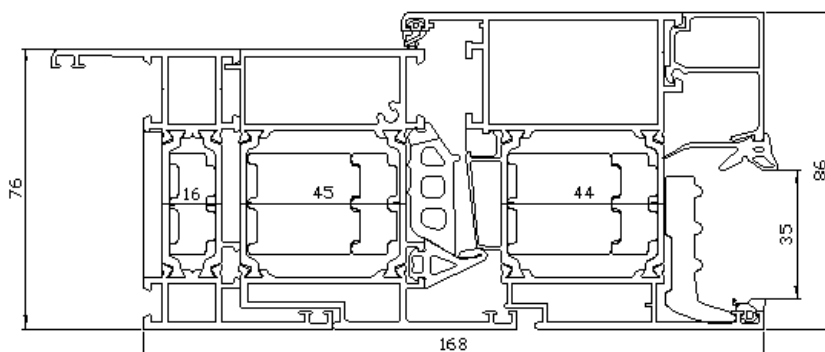
Nodo 102
 $U_f=1,48 \text{ W/m}^2\text{K}$

Fig. 102: sezione del nodo 102 – 371 504_371 569_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



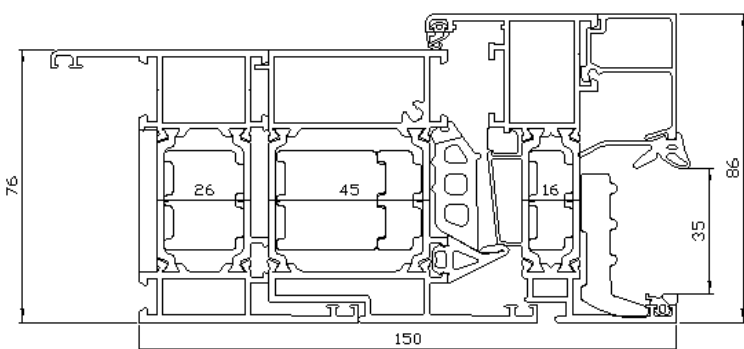
Nodo 103
 $U_f=1,43 \text{ W/m}^2\text{K}$

Fig. 103: sezione del nodo 103 – 371 504_371 569_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



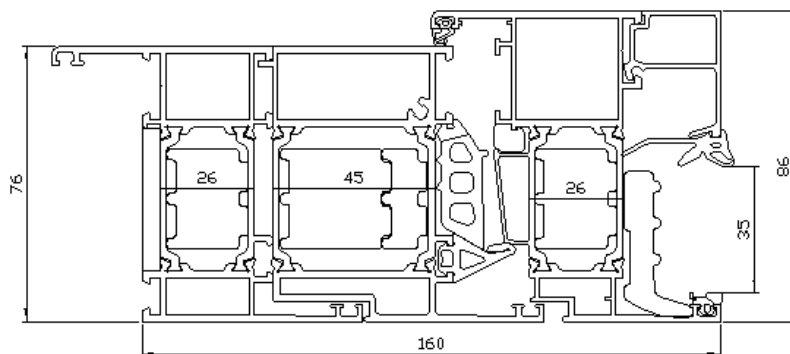
Nodo 104
 $U_f=1,36 \text{ W/m}^2\text{K}$

Fig. 104: sezione del nodo 104 – 371 504_371 569_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



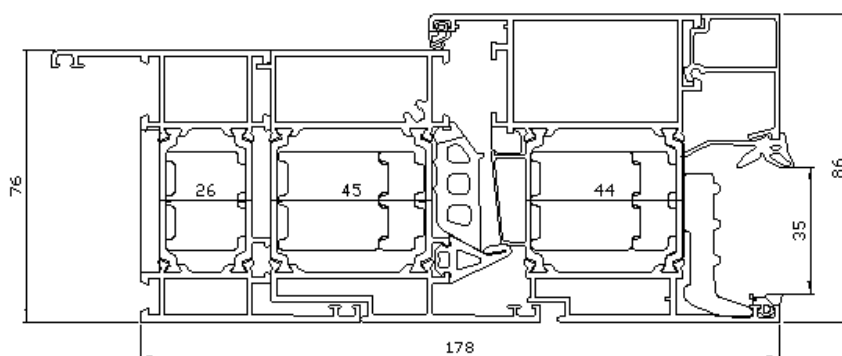
Nodo 105
 $U_f=1,43 \text{ W/m}^2\text{K}$

Fig. 105: sezione del nodo 105 – 371 505_371 569_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



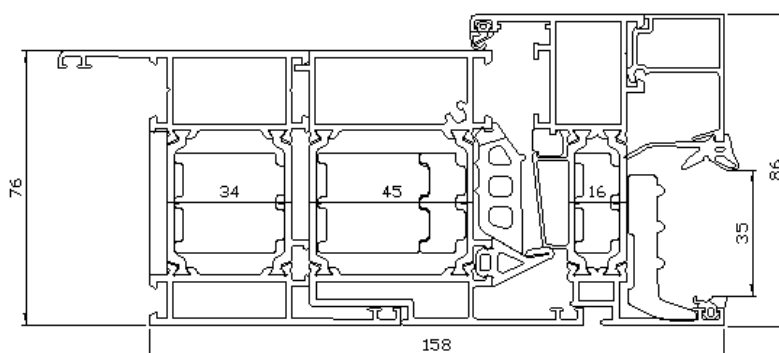
Nodo 106
 $U_f=1,39 \text{ W/m}^2\text{K}$

Fig. 106: sezione del nodo 106 – 371 505_371 569_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



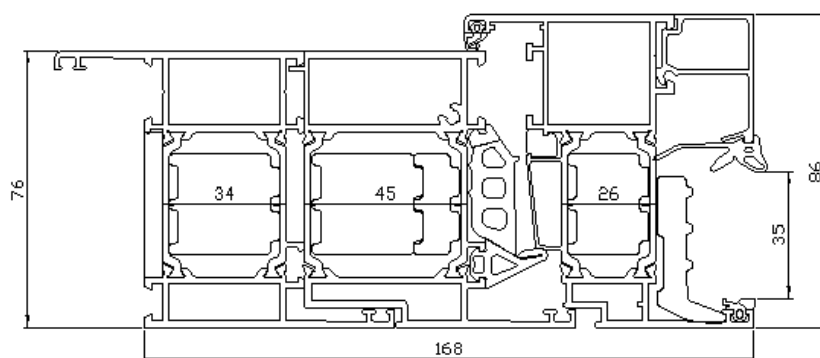
Nodo 107
 $U_f=1,34 \text{ W/m}^2\text{K}$

Fig. 107: sezione del nodo 107 – 371 505_371 569_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



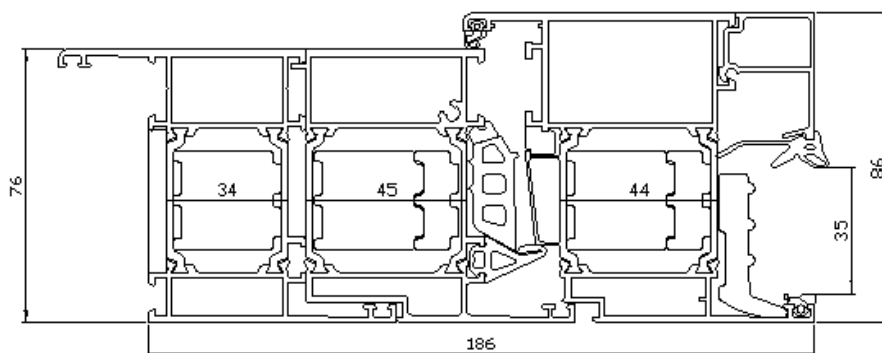
Nodo 108
 $U_f=1,40 \text{ W/m}^2\text{K}$

Fig. 108: sezione del nodo 108 – 371 506_371 569_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



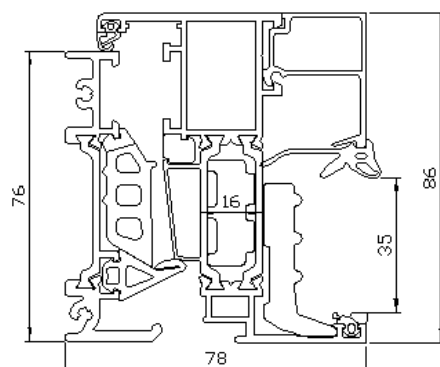
Nodo 109
 $U_f=1,37 \text{ W/m}^2\text{K}$

Fig. 109: sezione del nodo 109 – 371 506_371 569_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



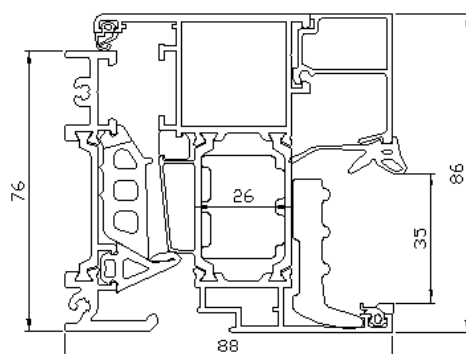
Nodo 110
 $U_f=1,31 \text{ W/m}^2\text{K}$

Fig. 110: sezione del nodo 110 – 371 506_371 569_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



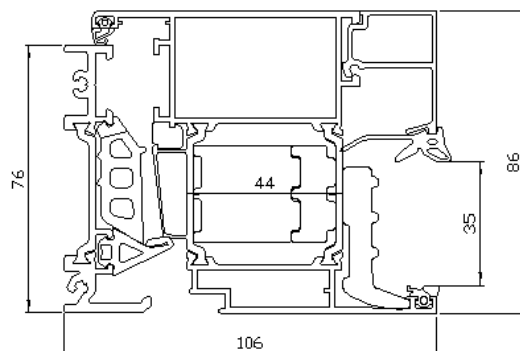
Nodo 111
 $U_f=1,71 \text{ W/m}^2\text{K}$

Fig. 111: sezione del nodo 111 – 371 582_299 148_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



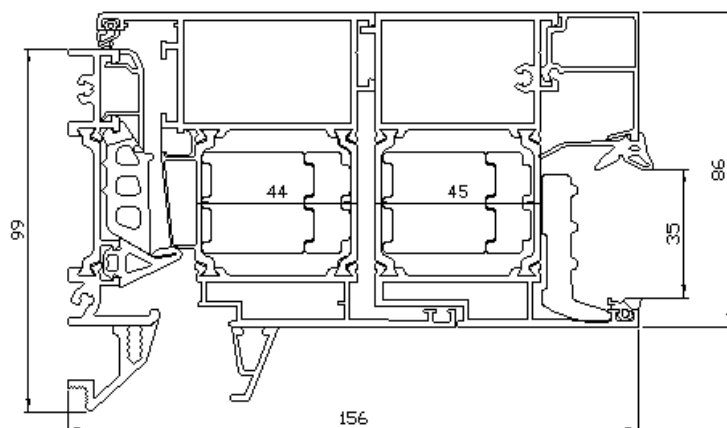
Nodo 112
 $U_f=1,60 \text{ W/m}^2\text{K}$

Fig. 112: sezione del nodo 112 – 371 582_299 148_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



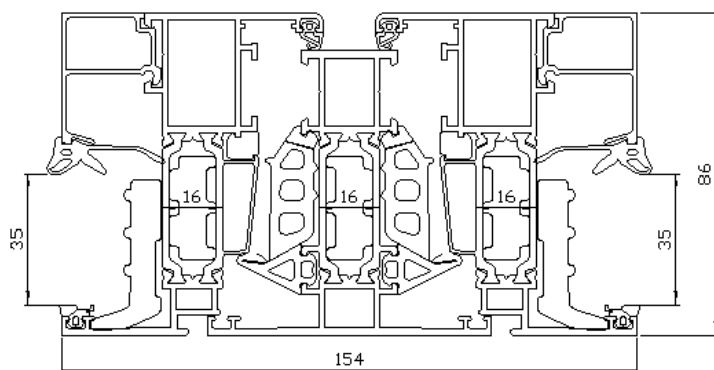
Nodo 113
 $U_f=1,48 \text{ W/m}^2\text{K}$

Fig. 113: sezione del nodo 113 – 371 582_299 148_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



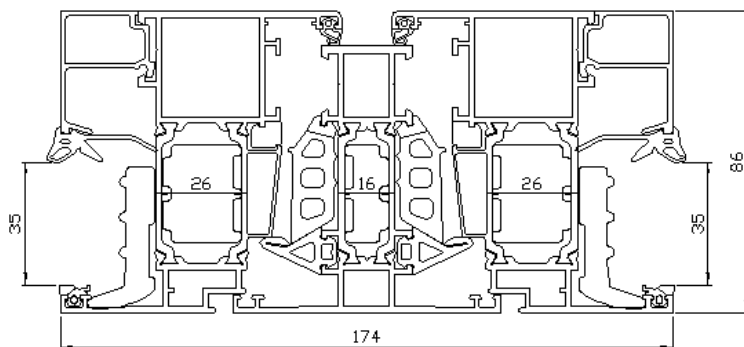
Nodo 114
 $U_f=1,50 \text{ W/m}^2\text{K}$

Fig. 114: sezione del nodo 114 – 371 582_299 148_371 512_518_299 181_73 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



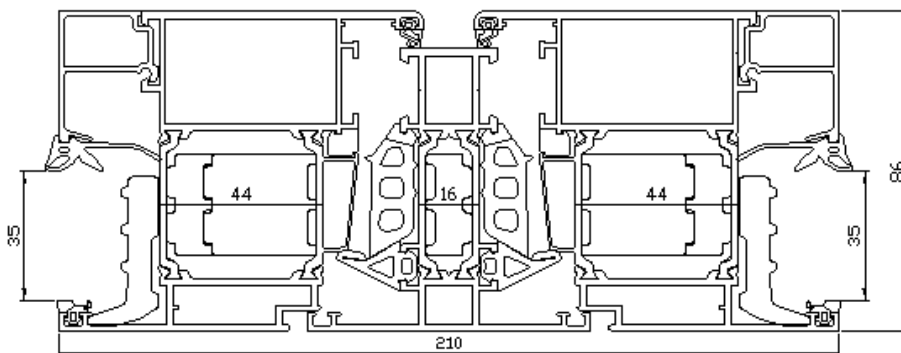
Nodo 115
 $U_f=1,53 \text{ W/m}^2\text{K}$

Fig. 115: sezione del nodo 115 – 371 510_371 507_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



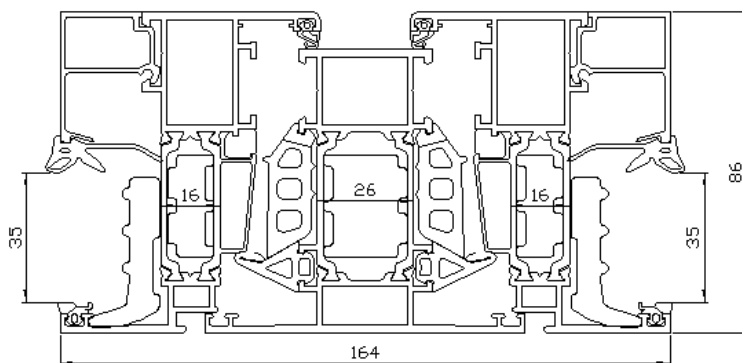
Nodo 116
 $U_f=1,45 \text{ W/m}^2\text{K}$

Fig. 116: sezione del nodo 116 – 371 511_371 507_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



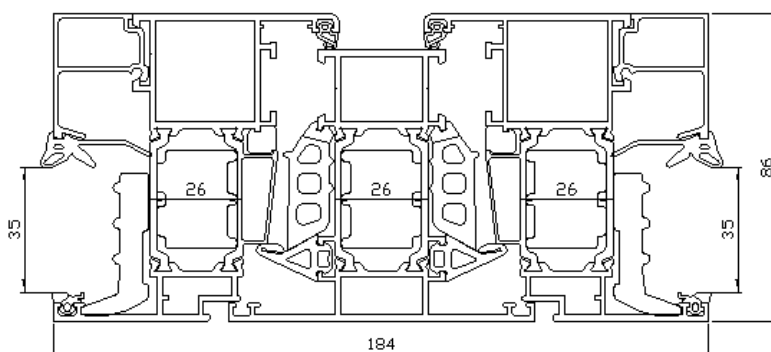
Nodo 117
 $U_f=1,33 \text{ W/m}^2\text{K}$

Fig. 117: sezione del nodo 117 – 371 512_371 507_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



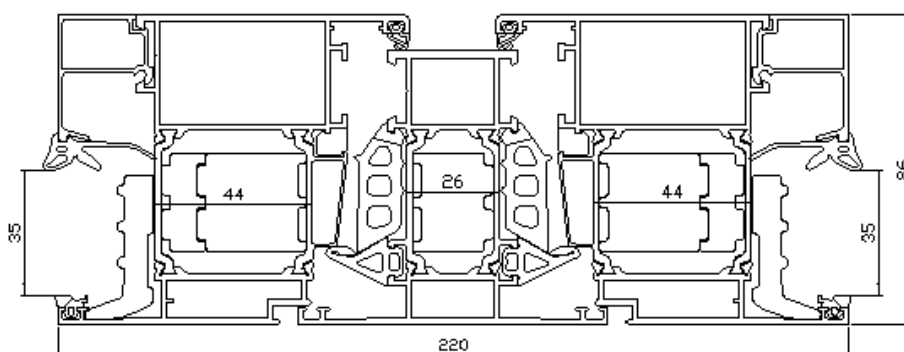
Nodo 118
 $U_f=1,47 \text{ W/m}^2\text{K}$

Fig. 118: sezione del nodo 118 – 371 510_371 508_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



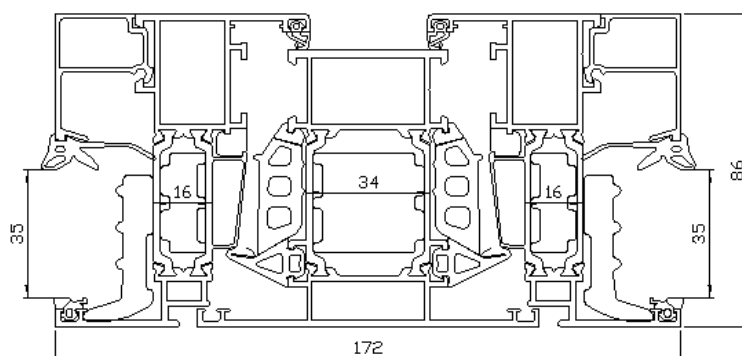
Nodo 119
 $U_f=1,39 \text{ W/m}^2\text{K}$

Fig. 119: sezione del nodo 119 – 371 511_371 508_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



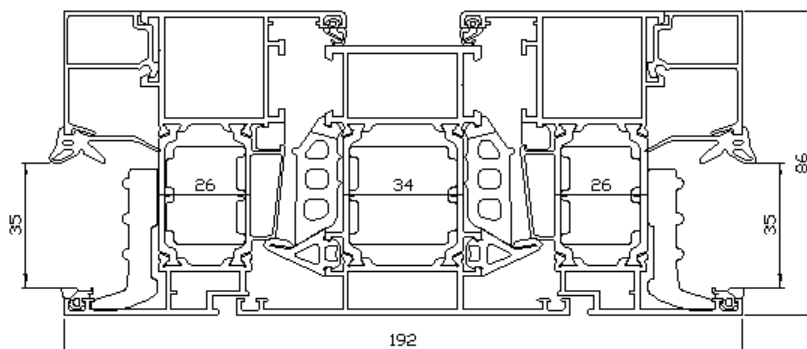
Nodo 120
 $U_f=1,29 \text{ W/m}^2\text{K}$

Fig. 120: sezione del nodo 120 – 371 512_371 508_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



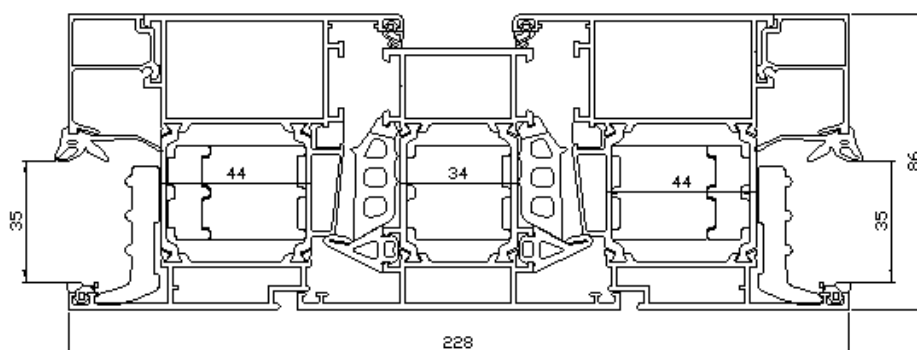
Nodo 121
 $U_f=1,44 \text{ W/m}^2\text{K}$

Fig. 121: sezione del nodo 121 – 371 510_371 509_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



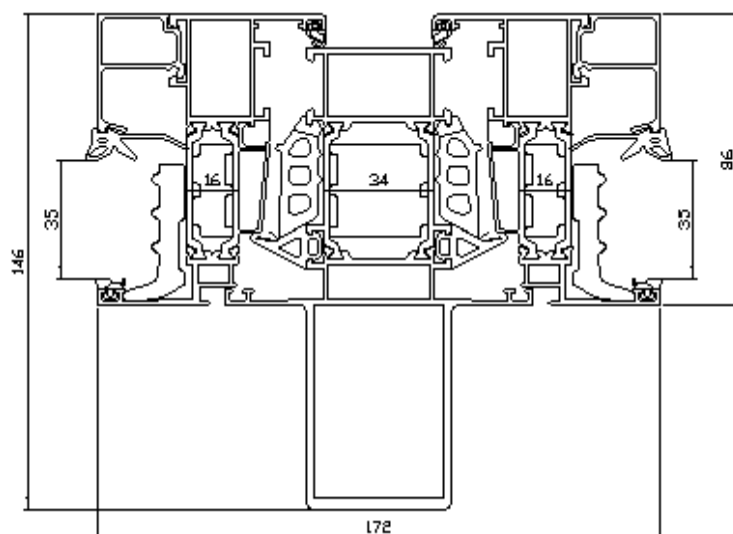
Nodo 122
 $U_f=1,37 \text{ W/m}^2\text{K}$

Fig. 122: sezione del nodo 122 – 371 511_371 509_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



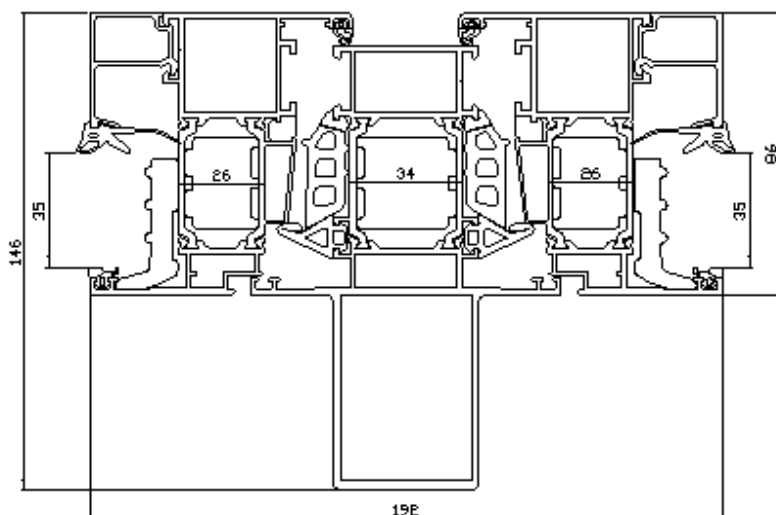
Nodo 123
 $U_f=1,28 \text{ W/m}^2\text{K}$

Fig. 123: sezione del nodo 123 – 371 512_371 509_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



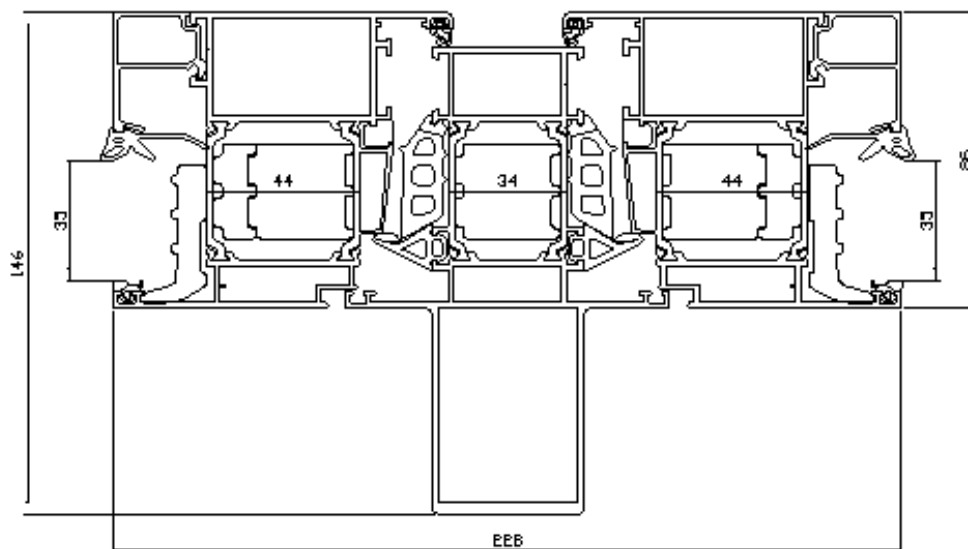
Nodo 124
 $U_f=1,46 \text{ W/m}^2\text{K}$

Fig. 124: sezione del nodo 124 – 371 510_371 521_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



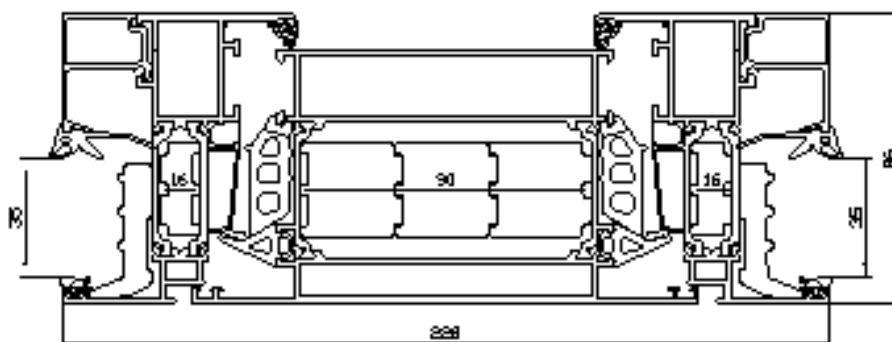
Nodo 125
 $U_f=1,39 \text{ W/m}^2\text{K}$

Fig. 125: sezione del nodo 125 – 371 511_371 521_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



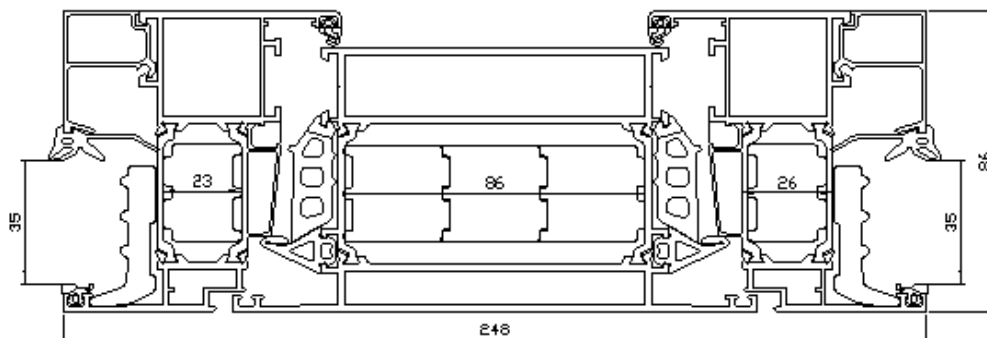
Nodo 126
 $U_f=1,30 \text{ W/m}^2\text{K}$

Fig. 126: sezione del nodo 126 – 371 512_371 521_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



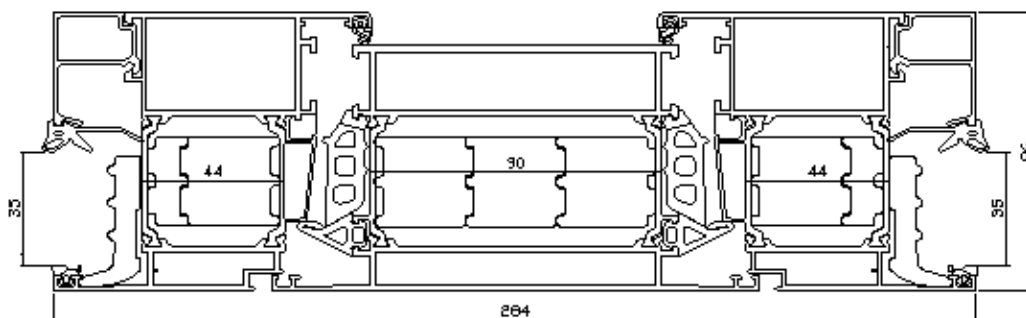
Nodo 127
 $U_f=1,27 \text{ W/m}^2\text{K}$

Fig. 127: sezione del nodo 127 – 371 510_371 537_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



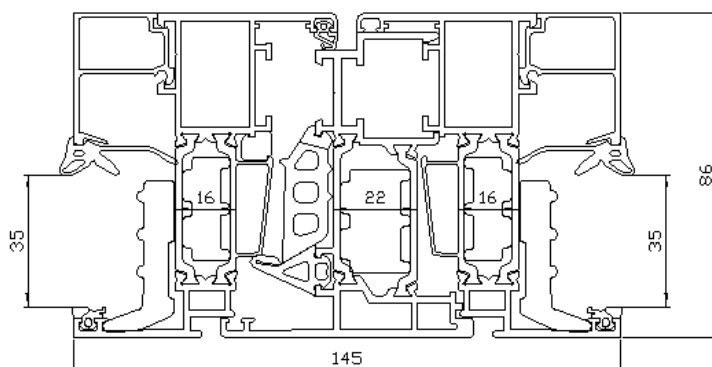
Nodo 128
 $U_f=1,24 \text{ W/m}^2\text{K}$

Fig. 128: sezione del nodo 128 – 371 511_371 537_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



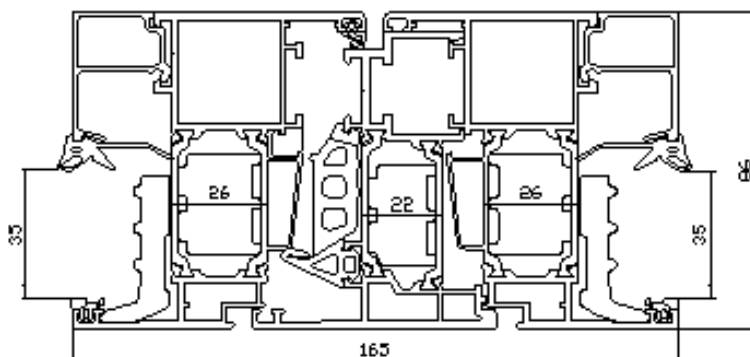
Nodo 129
 $U_f=1,17 \text{ W/m}^2\text{K}$

Fig. 129: sezione del nodo 129 – 371 512_371 537_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



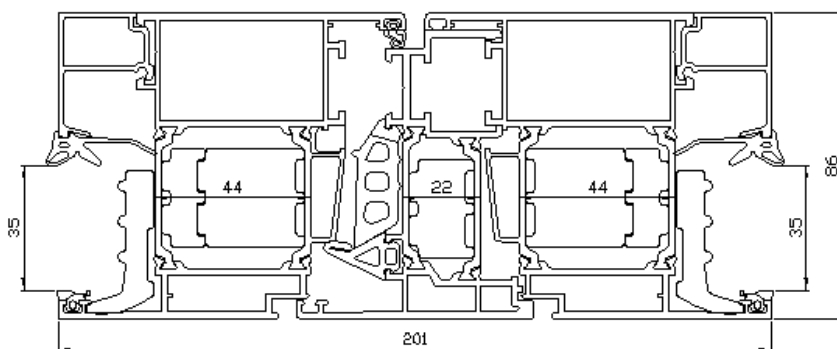
Nodo 130
 $U_f=1,54 \text{ W/m}^2\text{K}$

Fig. 130: sezione del nodo 130 – 371 510_371 526_371 510 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



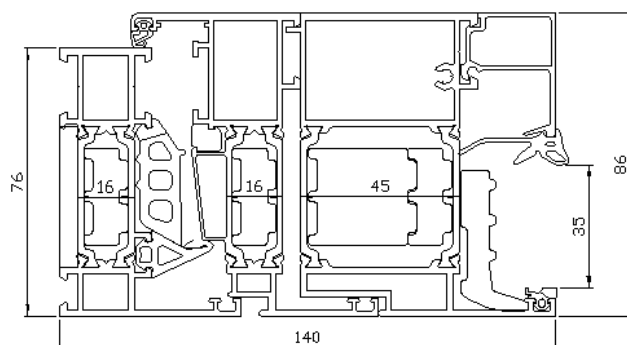
Nodo 131
 $U_f=1,46 \text{ W/m}^2\text{K}$

Fig. 131: sezione del nodo 131 – 371 511_371 526_371 511 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



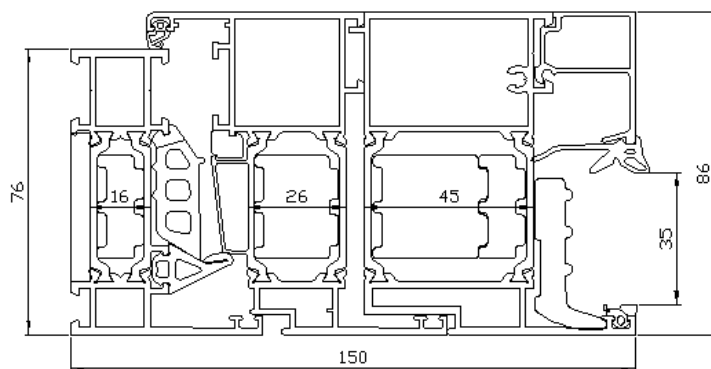
Nodo 132
 $U_f=1,34 \text{ W/m}^2\text{K}$

Fig. 132: sezione del nodo 132 – 371 512_371 526_371 512 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



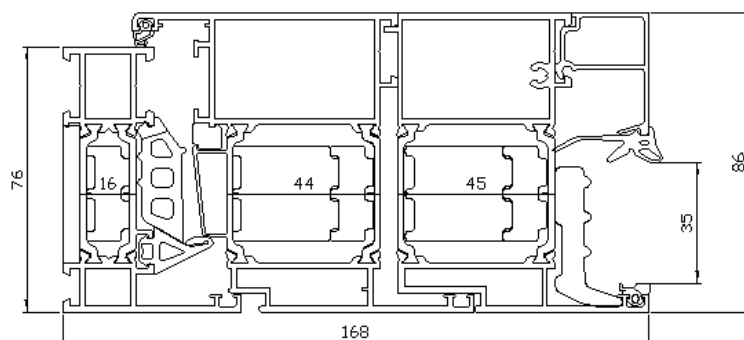
Nodo 133
 $U_f=1,48 \text{ W/m}^2\text{K}$

Fig. 133: sezione del nodo 133 – 371 501_371 510_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



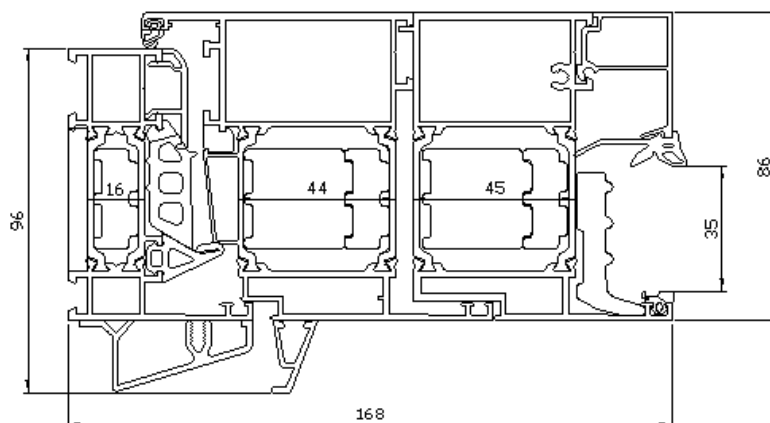
Nodo 134
 $U_f=1,44 \text{ W/m}^2\text{K}$

Fig. 134: sezione del nodo 134 – 371 501_371 511_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



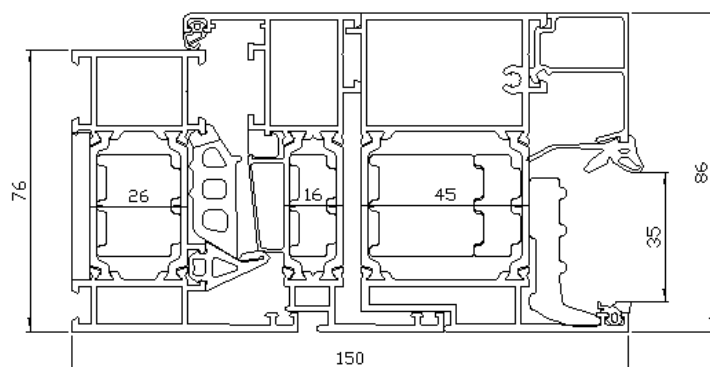
Nodo 135
 $U_f=1,37 \text{ W/m}^2\text{K}$

Fig. 135: sezione del nodo 135 – 371 501_371 512_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



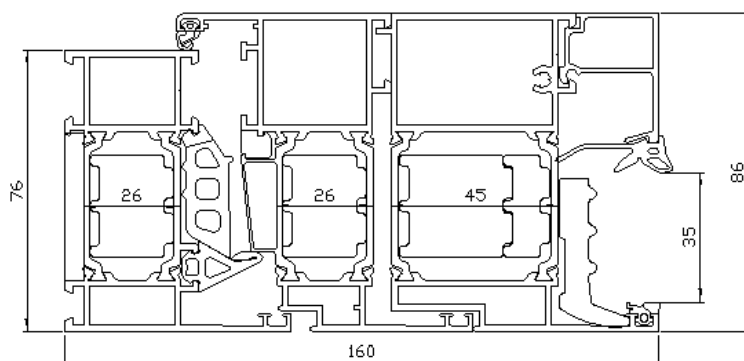
Nodo 136
 $U_f=1,39 \text{ W/m}^2\text{K}$

Fig. 136: sezione del nodo 136 – 371 501_371 512_371 518_299 029_73_81 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



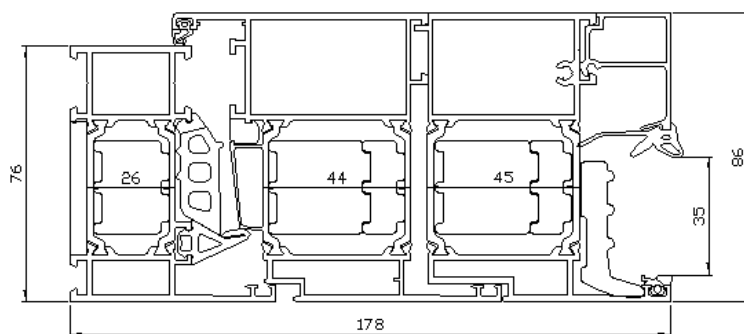
Nodo 137
 $U_f=1,45 \text{ W/m}^2\text{K}$

Fig. 137: sezione del nodo 137 – 371 502_371 510_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



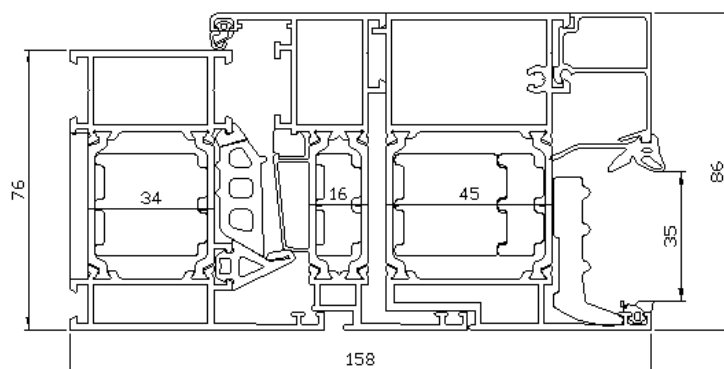
Nodo 138
 $U_f=1,41 \text{ W/m}^2\text{K}$

Fig. 138: sezione del nodo 138 – 371 502_371 511_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



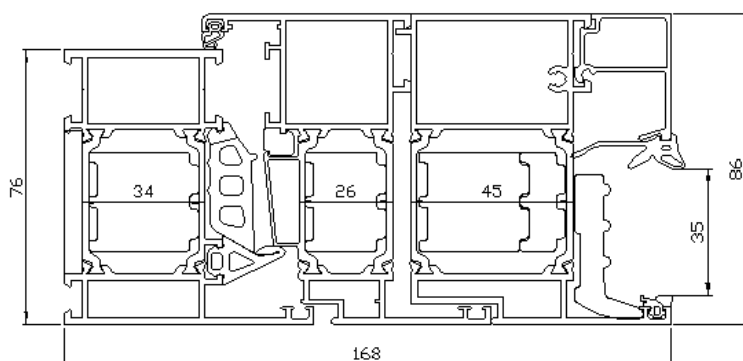
Nodo 139
 $U_f=1,34 \text{ W/m}^2\text{K}$

Fig. 139: sezione del nodo 139 – 371 502_371 512_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



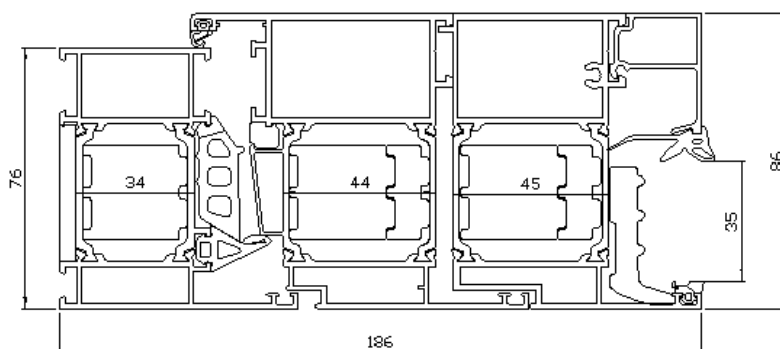
Nodo 140
 $U_f=1,41 \text{ W/m}^2\text{K}$

Fig. 140: sezione del nodo 140 – 371 503_371 510_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



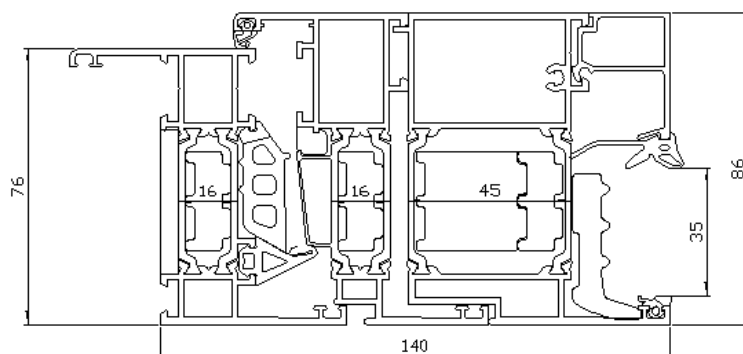
Nodo 141
 $U_f=1,38 \text{ W/m}^2\text{K}$

Fig. 141: sezione del nodo 141 – 371 503_371 511_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



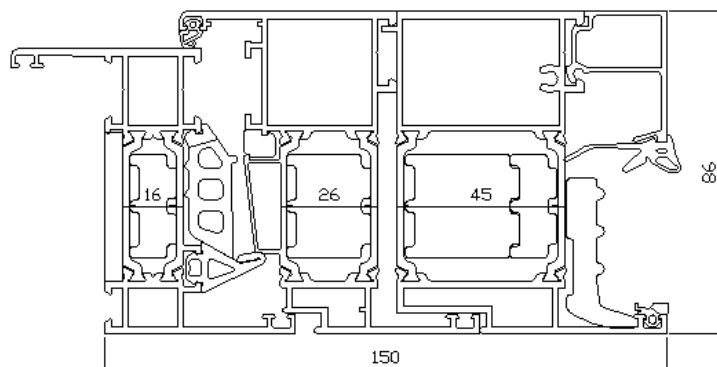
Nodo 142
 $U_f=1,32 \text{ W/m}^2\text{K}$

Fig. 142: sezione del nodo 142 – 371 503_371 512_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



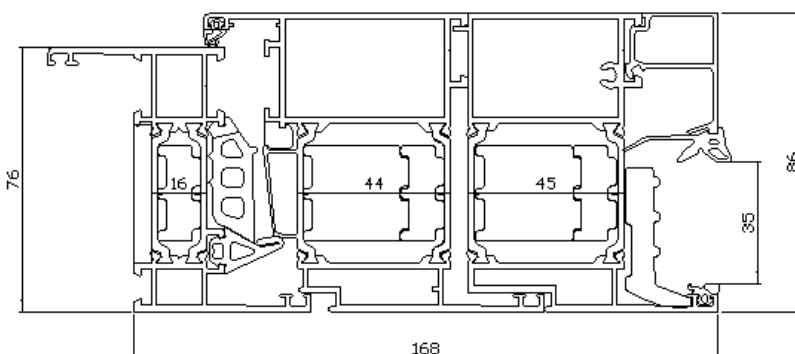
Nodo 143
 $U_f=1,52 \text{ W/m}^2\text{K}$

Fig. 143: sezione del nodo 143 – 371 504_371 510_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



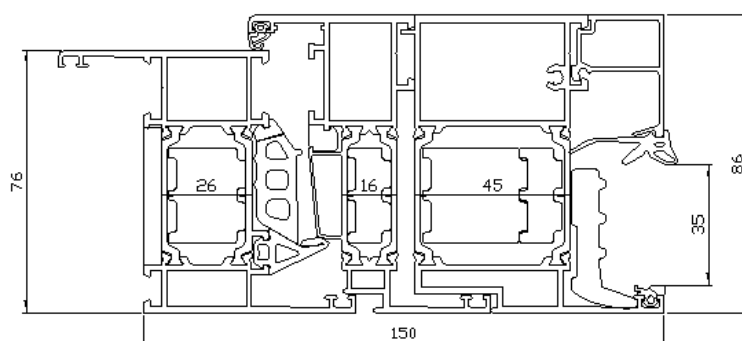
Nodo 144
 $U_f=1,48 \text{ W/m}^2\text{K}$

Fig. 144: sezione del nodo 144 – 371 504_371 511_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



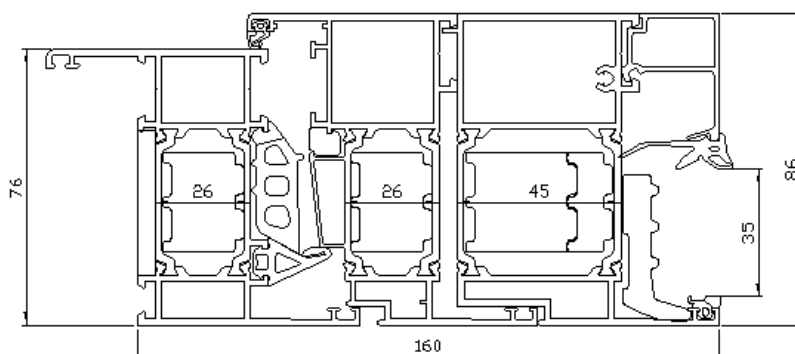
Nodo 145
 $U_f=1,40 \text{ W/m}^2\text{K}$

Fig. 145: sezione del nodo 145 – 371 504_371 512_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



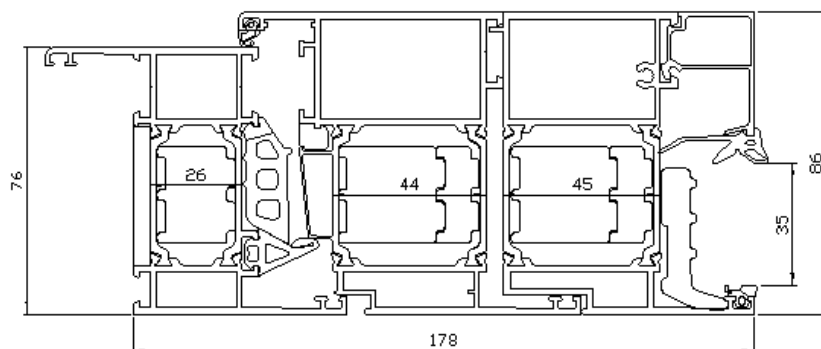
Nodo 146
 $U_f=1,48 \text{ W/m}^2\text{K}$

Fig. 146: sezione del nodo 146 – 371 505_371 510_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



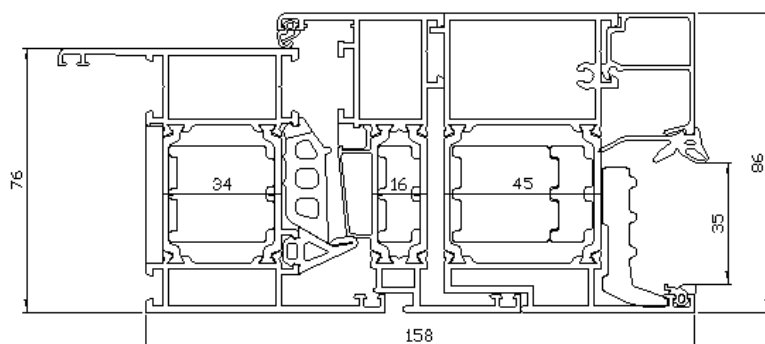
Nodo 147
 $U_f=1,44 \text{ W/m}^2\text{K}$

Fig. 147: sezione del nodo 147 – 371 505_371 511_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



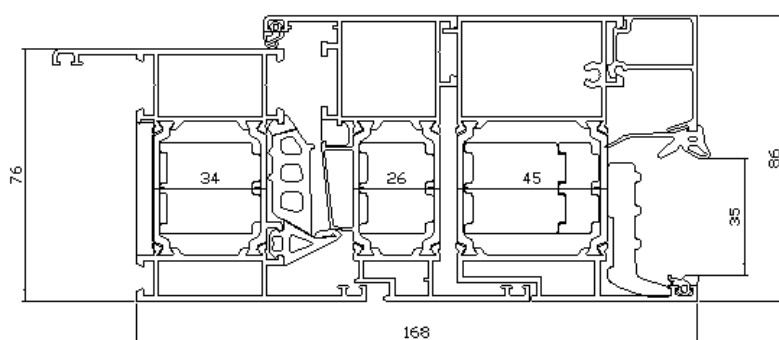
Nodo 148
 $U_f=1,37 \text{ W/m}^2\text{K}$

Fig. 148: sezione del nodo 148 – 371 505_371 512_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



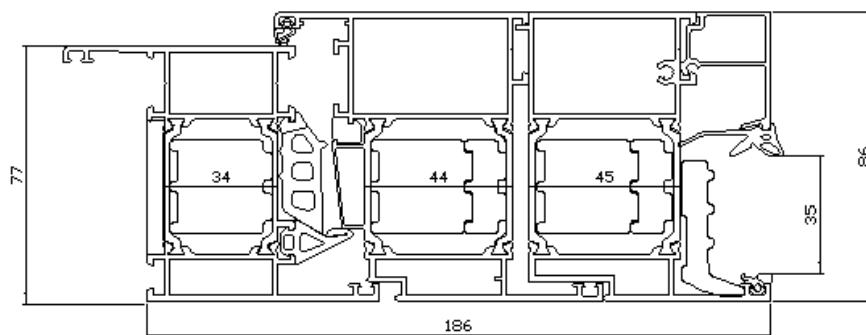
Nodo 149
 $U_f=1,45 \text{ W/m}^2\text{K}$

Fig. 149: sezione del nodo 149 – 371 506_371 510_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



Nodo 150
 $U_f=1,41 \text{ W/m}^2\text{K}$

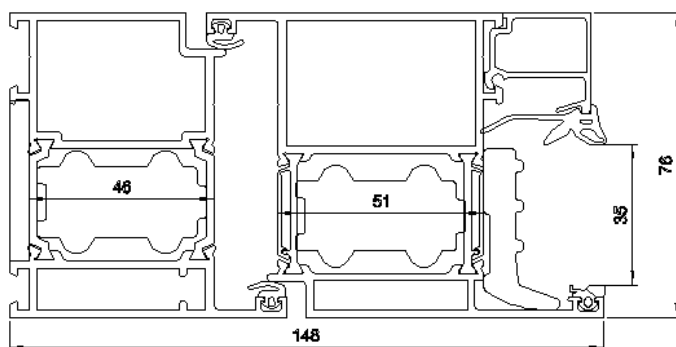
Fig. 150: sezione del nodo 150 – 371 506_371 511_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



Nodo 151
 $U_f=1,35 \text{ W/m}^2\text{K}$

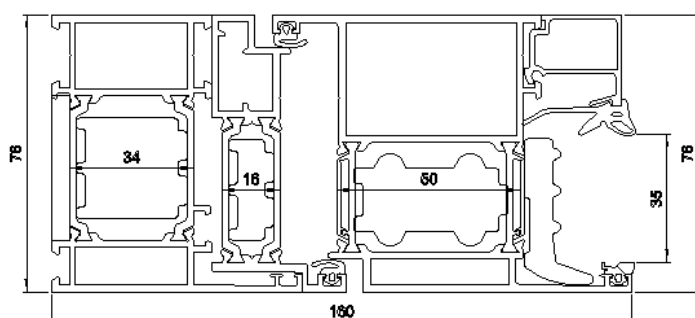
Fig. 151: sezione del nodo 151 – 371 506_371 512_371 518 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)

2.4. Porte



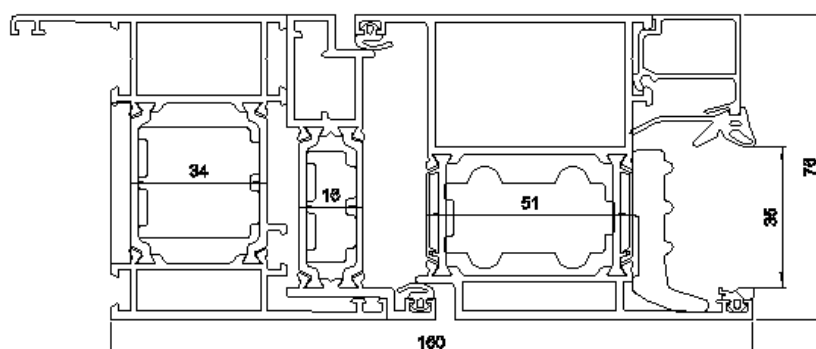
Nodo 152
 $U_f=1,92 \text{ W/m}^2\text{K}$

Fig. 152: sezione del nodo 152 – 371 530_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



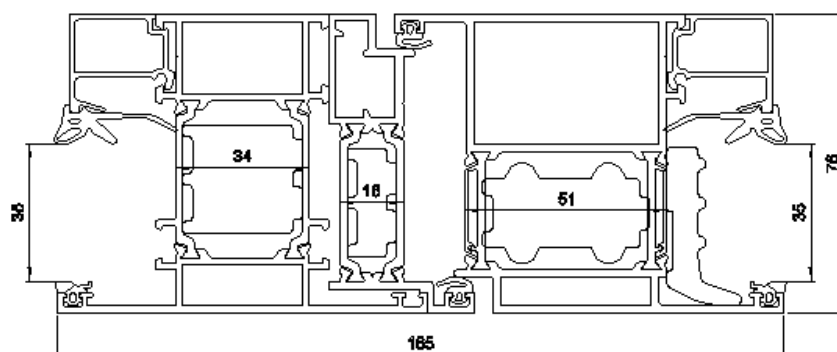
Nodo 153
 $U_f=1,86 \text{ W/m}^2\text{K}$

Fig. 153: sezione del nodo 153 – 371 503_371 607_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



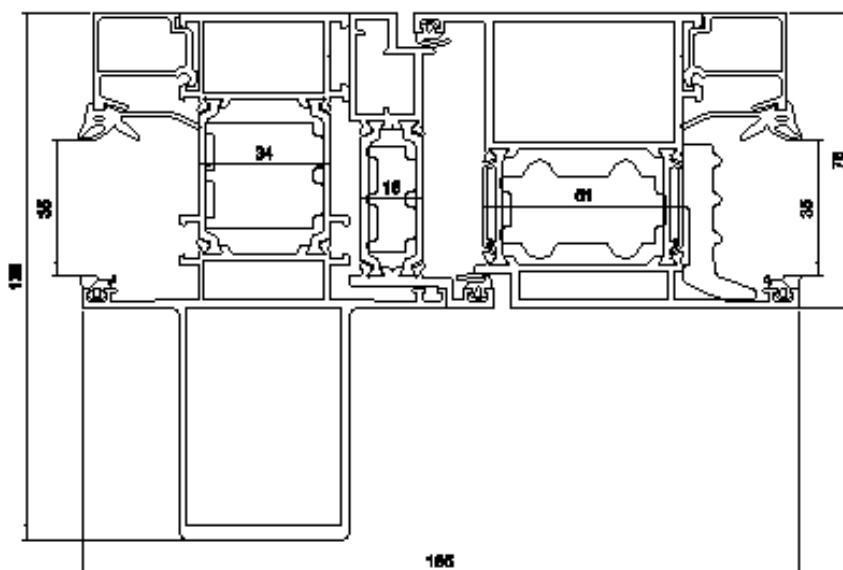
Nodo 154
 $U_f=1,92 \text{ W/m}^2\text{K}$

Fig. 154: sezione del nodo 154 – 371 506_371 607_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



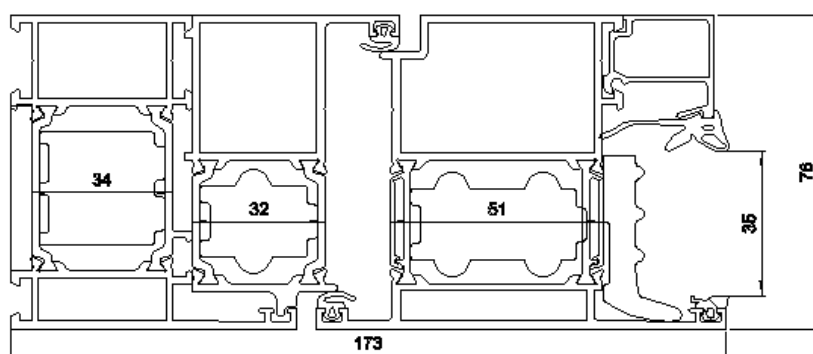
Nodo 155
 $U_f=1,88 \text{ W/m}^2\text{K}$

Fig. 155: sezione del nodo 155 – 371 509_371 607_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



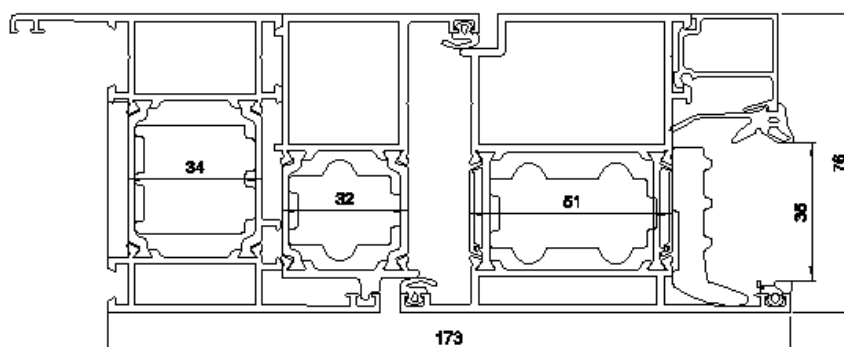
Nodo 156
 $U_f=1,91 \text{ W/m}^2\text{K}$

Fig. 156: sezione del nodo 156 – 371 521_371 607_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



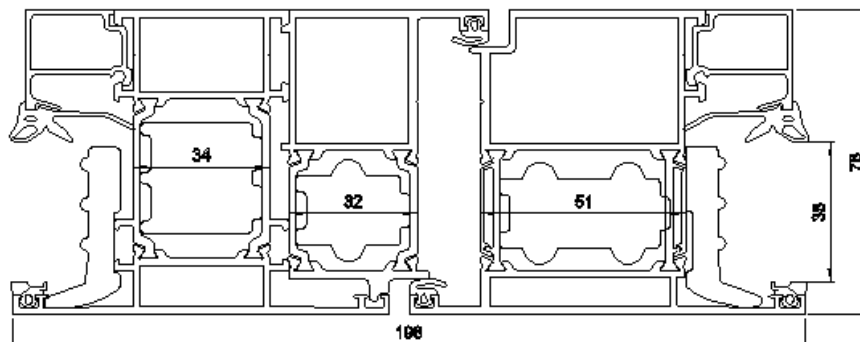
Nodo 157
 $U_f=1,89 \text{ W/m}^2\text{K}$

Fig. 157: sezione del nodo 157 – 371 503_371 534_370 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



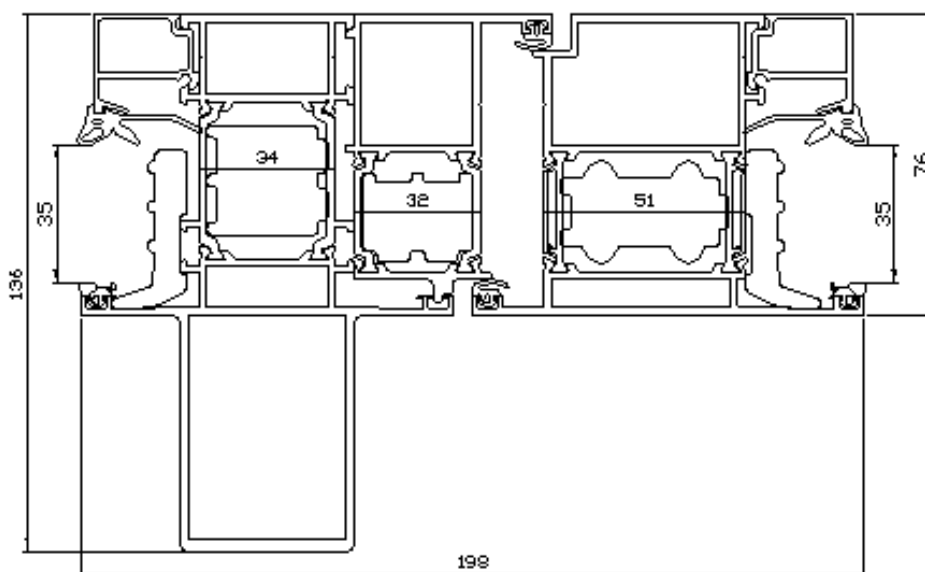
Nodo 158
 $U_f=1,95 \text{ W/m}^2\text{K}$

Fig. 158: sezione del nodo 158 – 371 506_371 534_370 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



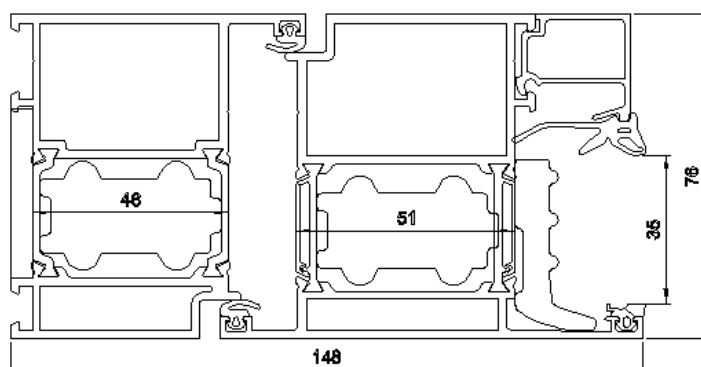
Nodo 159
 $U_f=1,82 \text{ W/m}^2\text{K}$

Fig. 159: sezione del nodo 159 – 371 509_371 534_371 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



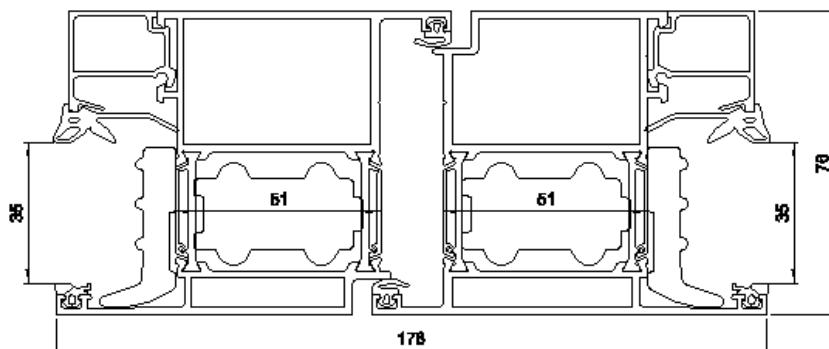
Nodo 160
 $U_f=1,87 \text{ W/m}^2\text{K}$

Fig. 160: sezione del nodo 160 – 371 521_371 534_371 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



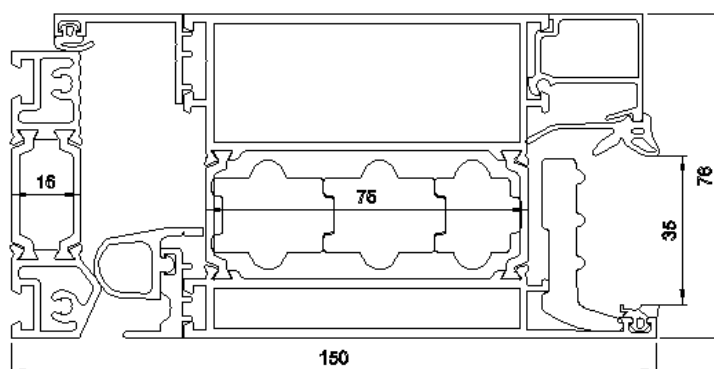
Nodo 161
 $U_f=1,91 \text{ W/m}^2\text{K}$

Fig. 161: sezione del nodo 161 – 371 531_371 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



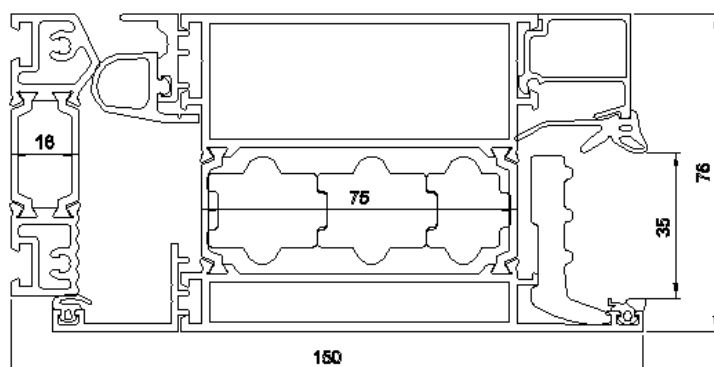
Nodo 162
 $U_f=1,85 \text{ W/m}^2\text{K}$

Fig. 162: sezione del nodo 162 – 371 532_371 533 sottoposto a prova
 (dimensioni nominali dichiarate, espresse in mm)



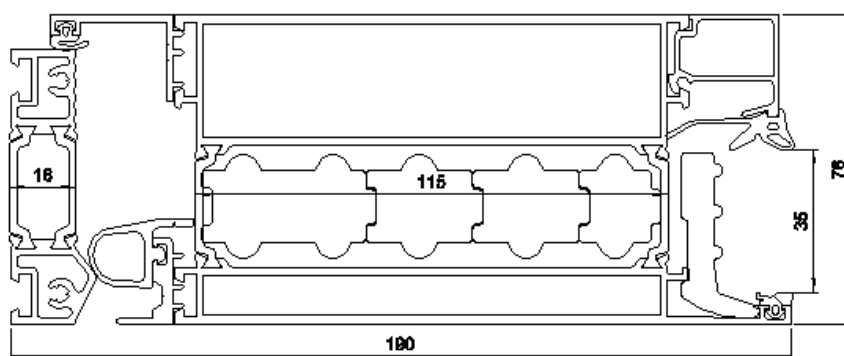
Nodo 163
 $U_f=1,89 \text{ W/m}^2\text{K}$

Fig. 163: sezione del nodo 163 – 371 539_299 095_299 096_371 538 sottoposto a prova
 (dimensioni nominali dichiarate, espresse in mm)



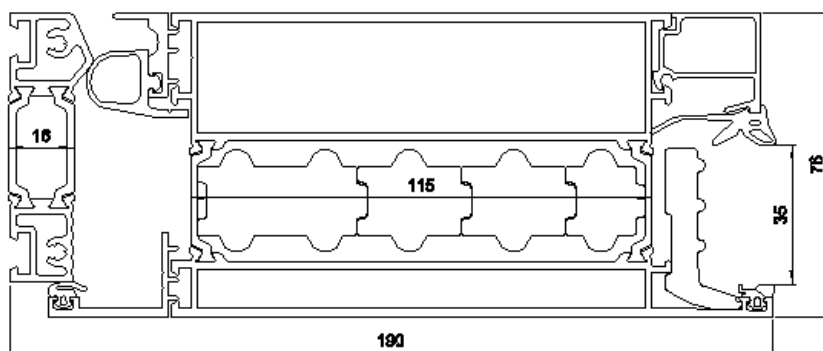
Nodo 164
 $U_f=1,98 \text{ W/m}^2\text{K}$

Fig. 164: sezione del nodo 164 – 371 539_299 096_299 095_371 538 sottoposto a prova
 (dimensioni nominali dichiarate, espresse in mm)



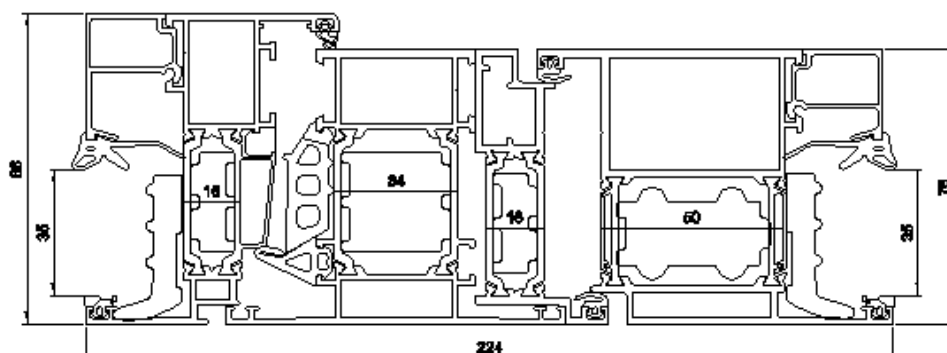
Nodo 165
 $U_f=1,70 \text{ W/m}^2\text{K}$

Fig. 165: sezione del nodo 165 – 371 539_299 095_299 096_371 535 sottoposto a prova
 (dimensioni nominali dichiarate, espresse in mm)



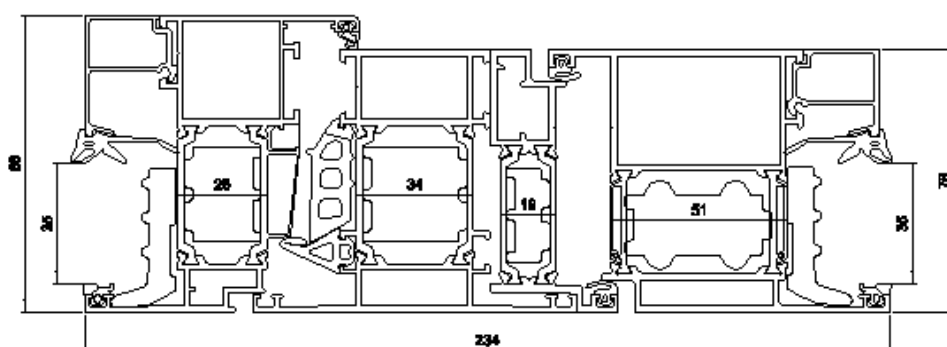
Nodo 166
 $U_f=1,77 \text{ W/m}^2\text{K}$

Fig. 166: sezione del nodo 166 – 371 539_299 096_299 095_371 535 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



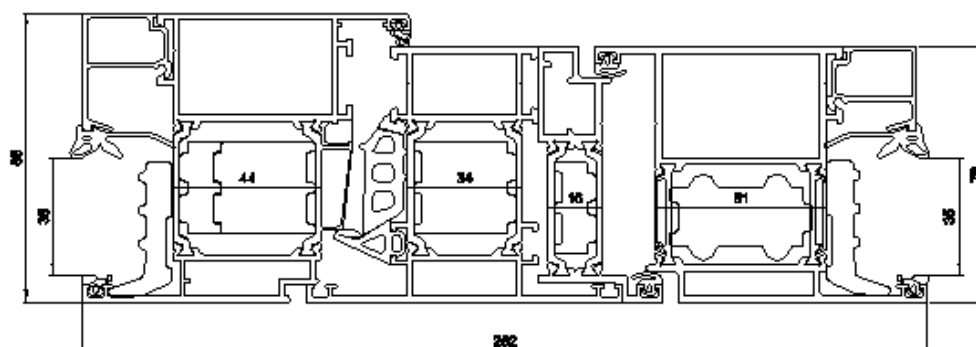
Nodo 167
 $U_f=1,76 \text{ W/m}^2\text{K}$

Fig. 167: sezione del nodo 167 – 371 510_371 509_371 607_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



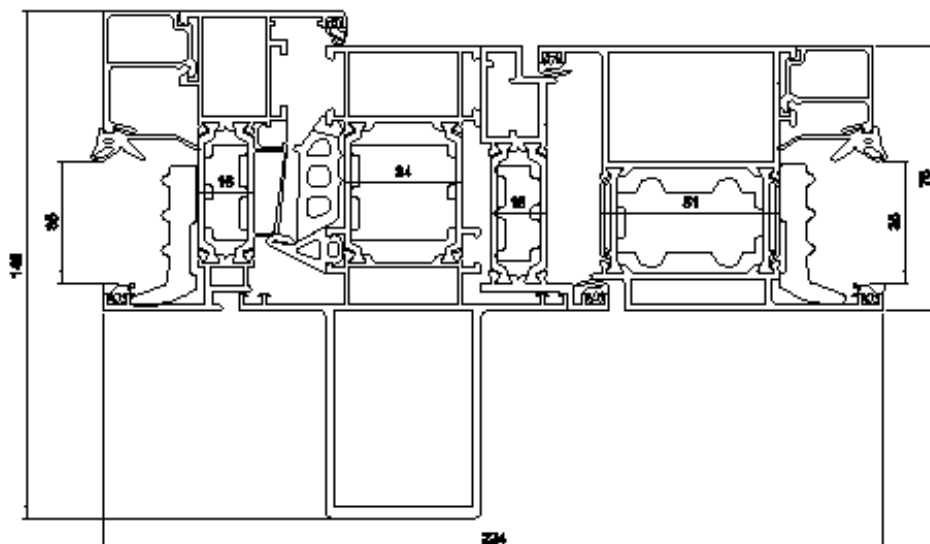
Nodo 168
 $U_f=1,72 \text{ W/m}^2\text{K}$

Fig. 168: sezione del nodo 168 – 371 511_371 509_371 607_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



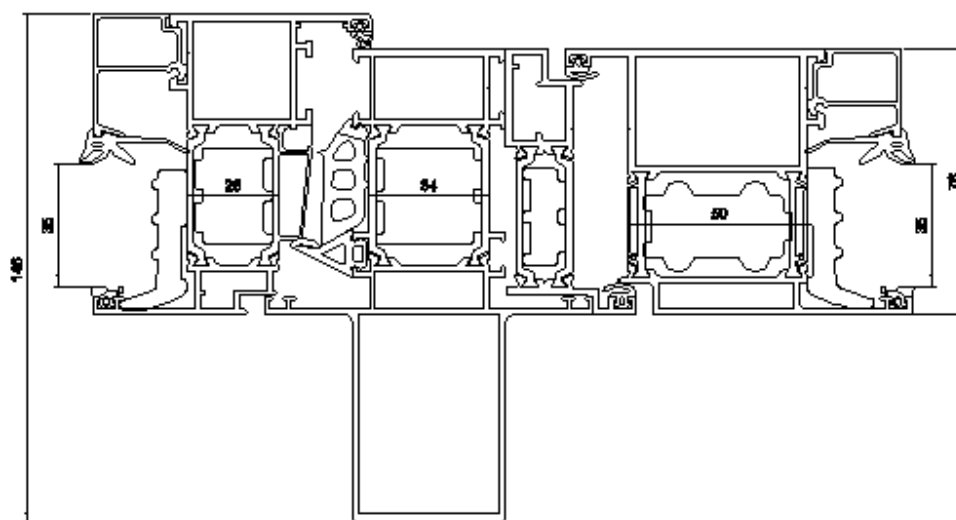
Nodo 169
 $U_f=1,64 \text{ W/m}^2\text{K}$

Fig. 169: sezione del nodo 169 – 371 512_371 509_371 607_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



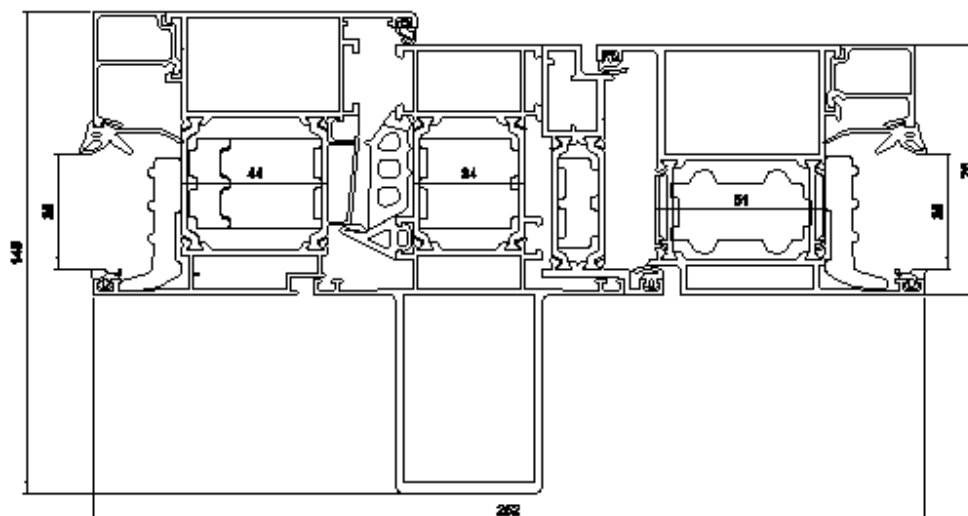
Nodo 170
 $U_f=1,78 \text{ W/m}^2\text{K}$

Fig. 170: sezione del nodo 170 – 371 510_371 521_371 607_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



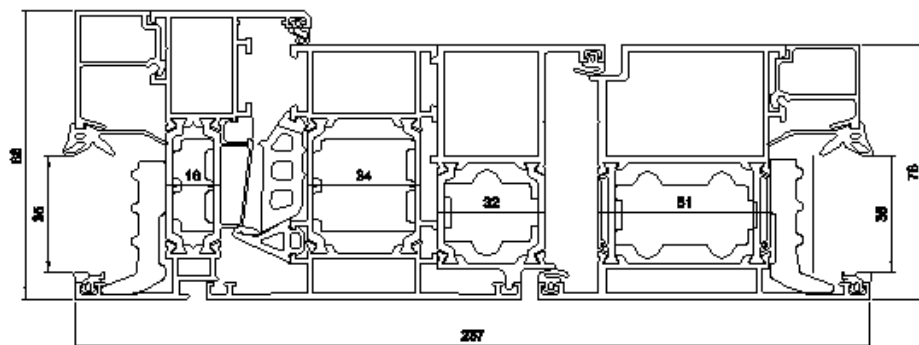
Nodo 171
 $U_f=1,75 \text{ W/m}^2\text{K}$

Fig. 171: sezione del nodo 171 – 371 511_371 521_371 607_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



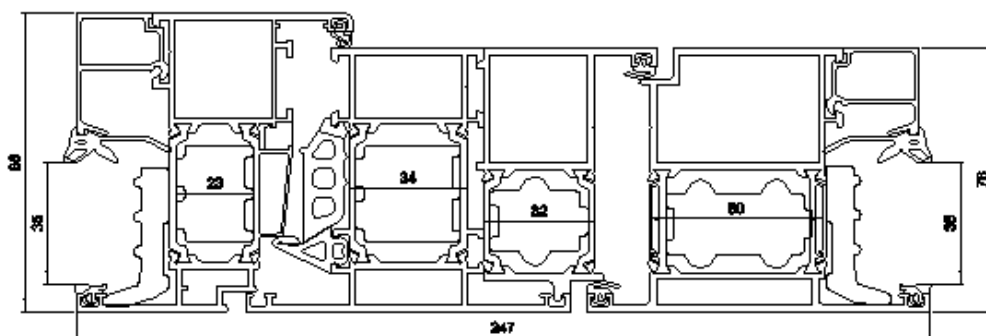
Nodo 172
 $U_f=1,66 \text{ W/m}^2\text{K}$

Fig. 172: sezione del nodo 172 – 371 512_371 521_371 607_371 532 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



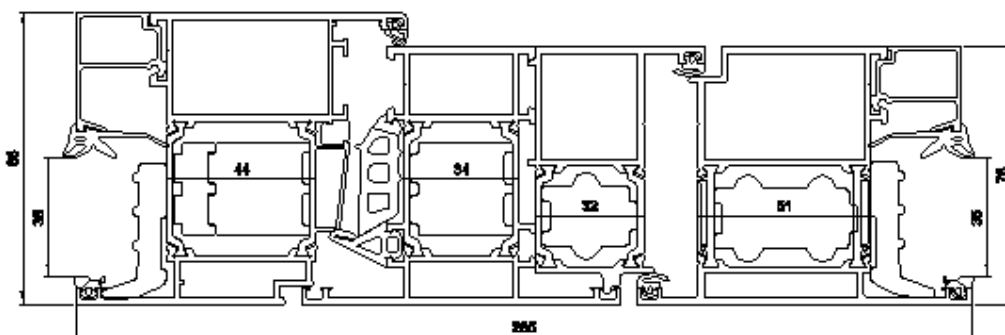
Nodo 173
 $U_f=1,78 \text{ W/m}^2\text{K}$

Fig. 173: sezione del nodo 173 – 371 510_ 371 509_371 534_371 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



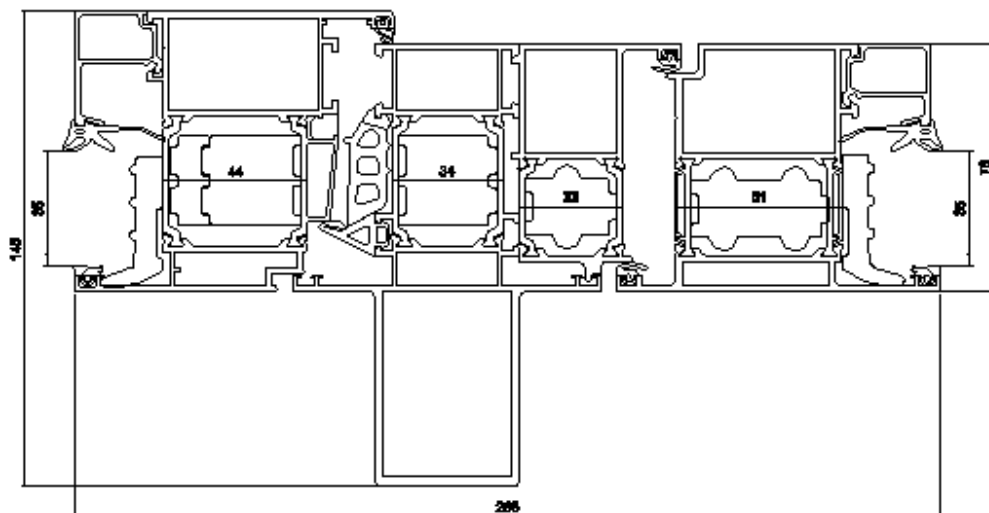
Nodo 174
 $U_f=1,75 \text{ W/m}^2\text{K}$

Fig. 174: sezione del nodo 174 – 371 511_ 371 509_371 534_371 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



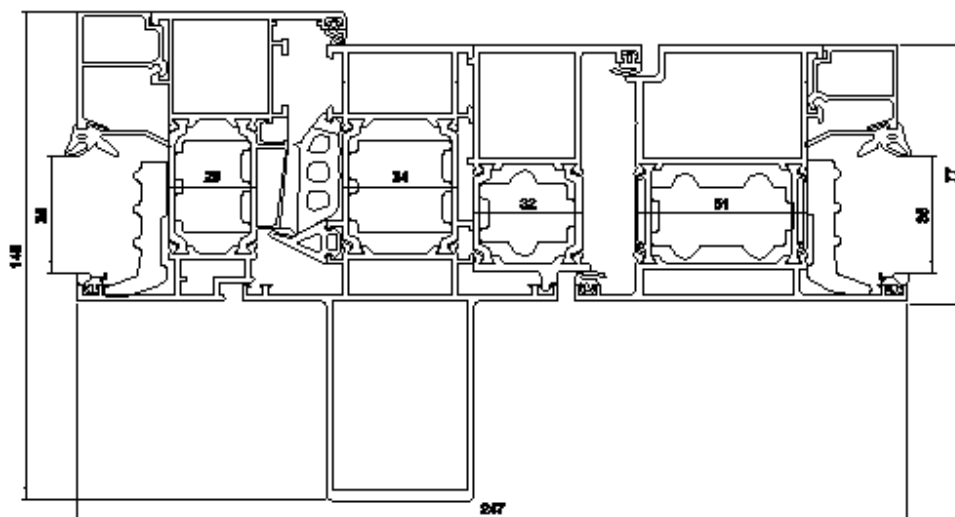
Nodo 175
 $U_f=1,68 \text{ W/m}^2\text{K}$

Fig. 175: sezione del nodo 175 – 371 512_ 371 509_371 534_371 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



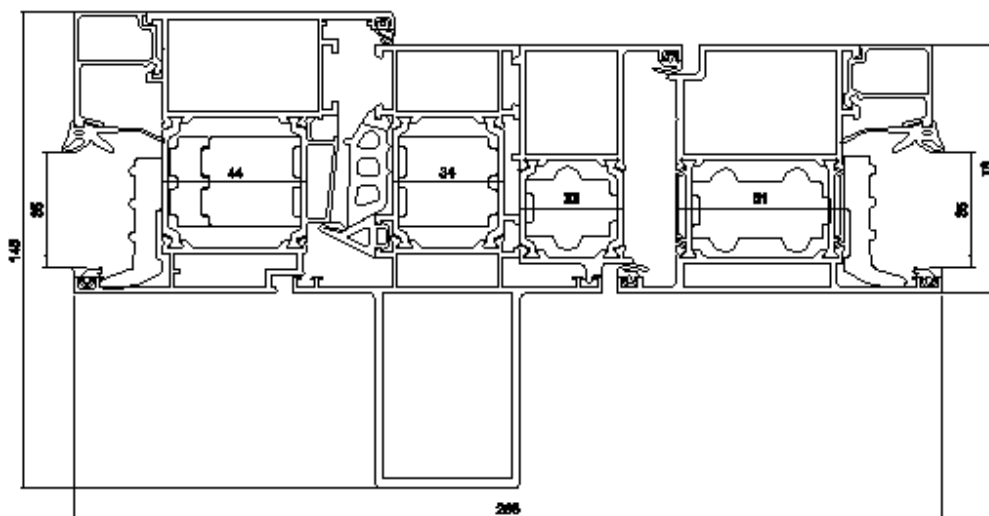
Nodo 176
 $U_f=1,82 \text{ W/m}^2\text{K}$

Fig. 176: sezione del nodo 176 – 371 510_ 371 521_371 534_371 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



Nodo 177
 $U_f=1,77 \text{ W/m}^2\text{K}$

Fig. 177: sezione del nodo 177 – 371 511_ 371 521_371 534_371 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)



Nodo 178
 $U_f=1,71 \text{ W/m}^2\text{K}$

Fig. 178: sezione del nodo 178 – 371 512_ 371 521_371534_371 533 sottoposto a prova (dimensioni nominali dichiarate, espresse in mm)

2.5. Materiali costituenti le sezioni analizzate

In Tab. 1 vengono riportate le caratteristiche dei materiali impiegati nelle analisi.

Materiali che compongono il telaio	Conduttività (W/mK)	Emissività
Alluminio lega 6060*	160	0,9
Alluminio lega 6060 in cavità TT**	160	0,3
Poliammide 6.6 con 25% fibra di vetro*	0,30	0,9
EPDM*	0,25	0,9
EPDM Coestruso**	0,06	0,9
PE – polietilene**	0,038	0,9
Veolene**	0,033	0,9

* = valore ricavato dalla norma UNI EN ISO 10077-2:2004

** = dati forniti dal committente

Tab. 1: caratteristiche termiche dei materiali che costituiscono i campioni

3. METODOLOGIA DI ANALISI UTILIZZATA

Il calcolo della trasmittanza termica è stato eseguito in accordo con la norma UNI EN ISO 10077-2:2004.

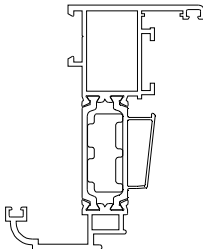
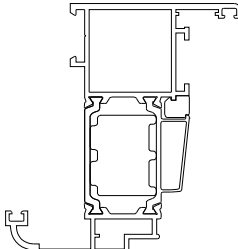
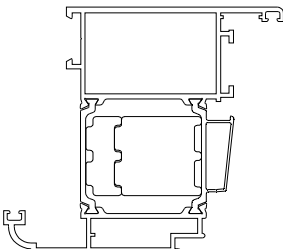
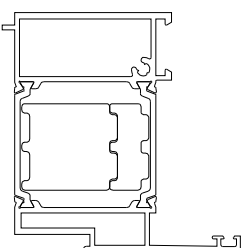
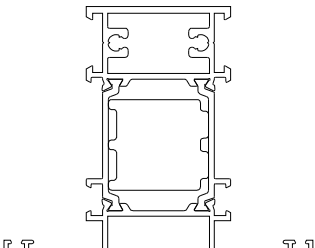
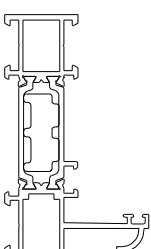
Per i calcoli è stato utilizzato il software “Flixo 6.1”.

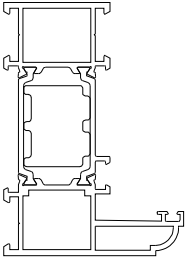
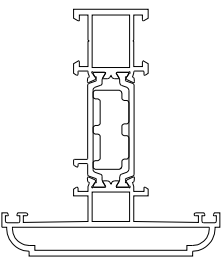
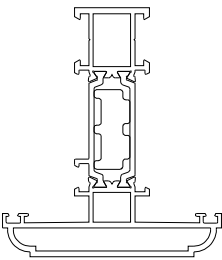
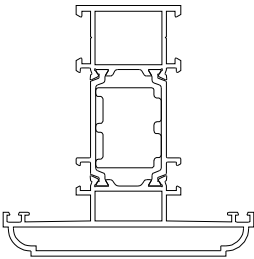
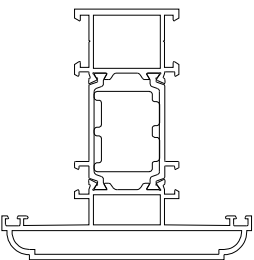
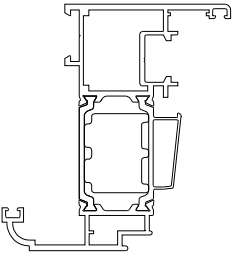
La scelta dei materiali dalla libreria del software Flixo 6.1 è stata condotta sulla base della documentazione fornita dal committente. Nel caso di materiali non presenti nella libreria, questi sono stati inseriti secondo le specifiche fornite dal committente.

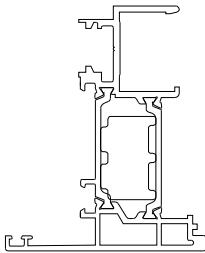
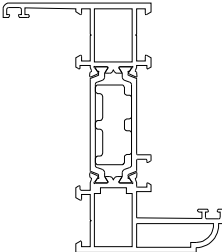
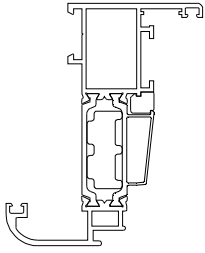
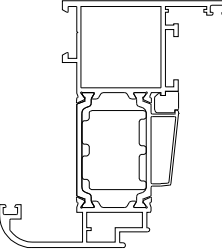
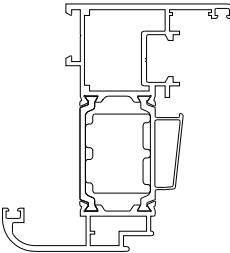
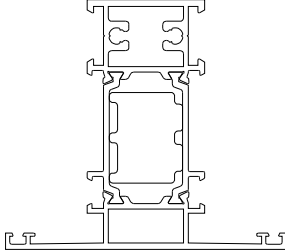
3.1. Osservazioni sui calcoli eseguiti

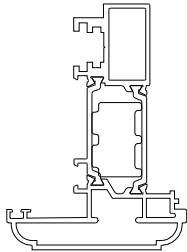
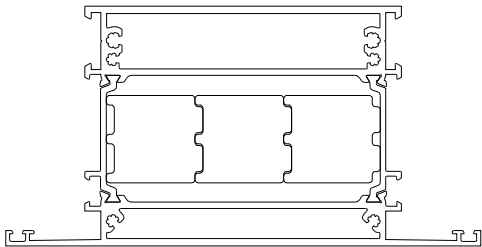
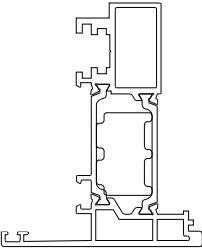
In seguito ad un’analisi comparativa condotta su alcuni profili costituenti le sezioni appartenenti alla serie oggetto della presente relazione, e altri considerati analoghi, è emerso che i valori U_f di questi ultimi presentavano differenze migliorative. In particolare nei nodi composti dai profilati di seguito elencati.

In accordo con il committente, vengono di seguito rappresentate le sezioni considerate analoghe e per le quali è stata valutata l’estendibilità del valore U_f , ponendoci pertanto nella situazione più sfavorevole dal punto di vista del comportamento termico, ma a favore di sicurezza per le sezioni considerate simili.

CODICE ESTENSIONE		CODICE VALIDATO
371 513		371 510 Vedi Pagg. 11, 12, 13, 14, 15, 16, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 2*9, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 46, 47, 48, 49
371 514		371 511 Vedi Pagg. 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 46, 47, 48, 49
371 515		371 512 Vedi Pagg. 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 47, 48, 49, 50
371 517		371 518 Vedi Pagg. 32, 37, 38, 39, 40, 41, 42
371 544		371 509 Vedi Pagg. 6, 19, 20, 34, 43, 44, 46, 47, 48, 49
371 550		371 501 Vedi Pagg. 3, 9, 11, 25, 27, 37, 38

<p>371 551</p>		<p>371 502 Vedi Pagg. 3, 9, 10, 12, 25, 26, 28, 38, 39</p>
<p>371 552</p>		<p>371 507 Vedi Pagg. 5, 16, 17, 32, 33</p>
<p>371 552T</p>		<p>371 507T Vedi Pagg. 5, 16, 17</p>
<p>371 553</p>		<p>371 508 Vedi Pagg. 5, 18, 19, 33, 34</p>
<p>371 553T</p>		<p>371 508T Vedi Pagg. 6, 18, 19</p>
<p>371 577</p>		<p>371 511 Vedi Pagg. 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 46, 47, 48, 49</p>

<p>371 578</p>		<p>371 526 Vedi Pagg. 36, 37</p>
<p>371 588</p>		<p>371 504 Vedi Pagg. 4, 10, 13, 14, 29, 30, 40</p>
<p>371 592</p>		<p>371 510 Vedi Pagg. 11, 12, 13, 14, 15, 16, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 2*9, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 46, 47, 48, 49</p>
<p>371 593</p>		<p>371 511 Vedi Pagg. 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 46, 47, 48, 49</p>
<p>371 594</p>		<p>371 511 Vedi Pagg. 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 46, 47, 48, 49</p>
<p>371 595</p>		<p>371 508 Vedi Pagg. 5, 18, 19, 33, 34</p>

<p>371 596</p>		<p>371 526 Vedi Pagg. 36, 37</p>
<p>371 597</p>		<p>371 537 Vedi Pagg. 8, 24, 36</p>
<p>371 605</p>		<p>371 526 Vedi Pagg. 36, 37</p>