

IND panels - Wall and ceiling

isocab



isocab

Isotherm **constructions**



Isocab - IND panels

The Isocab IND panel is an insulated sandwichpanel for exterior, interior and ceiling application. The IND panel can also be used as a flat roof with supplementary roofsealing (e.g. PVC sealing). The panel can be erected easily and fast and can be fixed as well crossed with secret fixing by means of foamed-in omegaprofiles.

The Isocab IND panel offers an excellent thermic performance for different applications



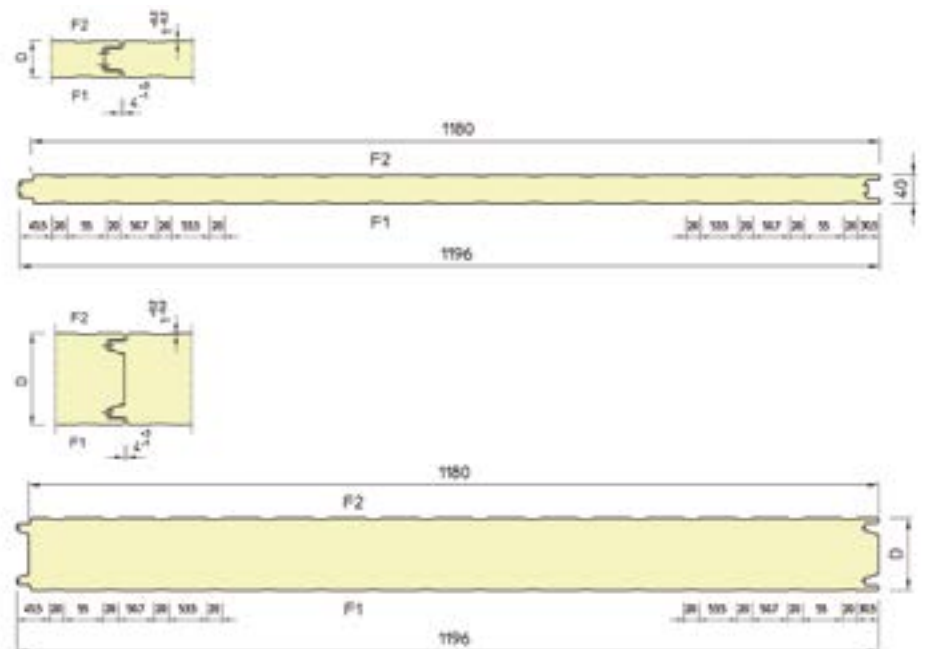
IND panels - Wall and ceiling



Characteristics

- Excellent thermic properties due to the PUR and PIR core
- Good span results by use of galvanised steelplate on both sides
- Cover width 1180 mm, and adjustable to 1120 mm for overseas projects
- For interior and exterior application and ceiling
- For flat roof with extra watertightness (e.g. PVC)
- Fire resistance of 68 min. for IND 200 with PIR core
- Fire resistance of 40 min. for IND 120 with PIR core

Technical properties (standard execution)



Types

Types	Thickness (mm)	Weight (kg/m ²)
IND 40	40	10,7
IND 60	60	11,5
IND 80	80	12,3
IND 100	100	13,1
IND 120	120	13,9
IND 140	140	14,7
IND 170	170	15,9
IND 200	200	17,1
IND 220	220	17,9

Dimensions

Module: - Cover width : 1180mm

- Overall width : 1196mm

Length: - Minimum length : 2000mm

- Maximum length : 20000mm

Tolerances (EN 14509)

- Width \pm 2mm

- Length \pm 5mm

- Thickness \pm 2mm (D \leq 100mm)

- Thickness \pm 2% (D > 100mm)

Fire characteristics

Fire reaction: - Cs3d0 according EN 13501-1 with coating

Optional: - Bs3d0 according EN 13501-1

- Bs2d0 according EN 13501-1

- Equivalent M1 according NFP 92-507

- LPCB approved according LPS1208 and LPS 1181

Fire resistance

NON-BEARING ISOCAB WALL PANELS					
FIRE-RESISTANCE IN MINUTES					
TEST ACCORDING EN 1364-1 • CLASSIFICATION ACCORDING EN 13501-2					
PANEL Type	THICKNESS mm	HOR. VERT.	MAX. SPAN m	REPORT extension	CLASSIFICATION
PIR Rf	120			EN 14509 CSTB RS02-16	EI 30
		V	4		
	200	H	3	EN 14509 CSTB RS02-30	EI 60
		V	4		

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Insulation

CORE

Hard polyurethane foam (PUR)

Density $\pm 40 \text{ kg/m}^3$ (tol. $\pm 5 \text{ kg/m}^3$ according EN 14509)

LAMBDA VALUE : 0,021 W/mK

U & R VALUE

U & R VALUE FOR DIFFERENT CORE THICKNESSES		
Thickness	U=1/Rc	
	Exterior wall	Interior wall
mm	W/m ² K	W/m ² K
40	0,49	0,47
60	0,33	0,32
80	0,25	0,25
100	0,21	0,20
120	0,17	0,17
140	0,15	0,15
170	0,12	0,12
200	0,10	0,10
220	0,10	0,09

Acoustics

Sound reduction value : $R_w = 25\text{dB}$ minimum

Applications :

- Vertical joints
- Horizontal joints
- Ceiling
- Partition wall
- Exterior wall
- Flat roof

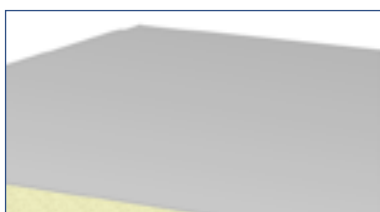
Aspect

STANDARD

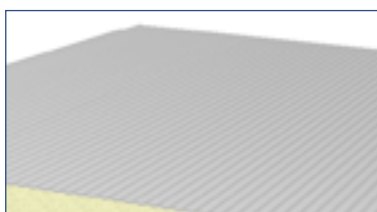


slightly ribbed

OPTION



smooth



linea



twinlook

Finishing

- Standard : Lacquered galvanised steelplate with protection film
- Thickness : Exterior (F2) 0,63mm total + PE
Interior (F1) 0,53mm total + PE
- Colour : Standard white 9002 (RAL)
- Lacquer : Polyestercoating 25my for food process purposes
- Application : see ISOCAB colour range
Variation of colour $\Delta E \leq 1$

OPTIONAL FINISHINGS

LACQUERED STEELPLATE

- Polyestercoating 25my
- Colour : See ISOCAB colour range
- Thickness : 0,53mm - 0,63mm - 0,78mm (incl. coating)
- With protection film

POLYESTERCOATING 15my (interiorcoating)

- Colour : White 9002 (RAL)
- Thickness : 0,52mm (incl. coating)
- Without protection film

HDP 35 my - HIGH DURABLE POLYMER

- Colour : See ISOCAB colour range
- Thickness : 0,63mm - 0,78mm (incl. coating)
- With protection film

PET film 55my

- Polyestercoating + polyethylene-tereftalate film
- Colour : White 9002 (RAL) and white 9010 (RAL)
- Thickness : 0,55mm - 0,65mm (incl. coating)
- With protection film
- For food purposes : - Only for interior use
- High chemical durability

STAINLESS STEEL

INOX 0,60mm – AISI 316 L

- Pinpoint
- Line-brushed
- 2B finishing
- With protection film

INOX 0,60mm – AISI 304

- Pinpoint
- Line-brushed
- 2B finishing
- PVDF 25my - White 9010 (RAL)
- With protection film

OTHERS

ALUMINIUM ZINC

- Thickness : 0,50mm - 185gr/m²
- Without protection film



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Isocab IND panel used as wall

2 SUPPORTS

PRESSURE single span (2 supports)										Span L/200	SUCTION single span (2 supports)									
Panel thickness, mm											Panel thickness, mm									
220	200	170	140	120	100	80	60	40			40	60	80	100	120	140	170	200	220	
Admissible pressure, daN/m ²										m	Admissible suction, daN/m ²									
					597	445	331	204		2,00	193	280	373	463						
			552	504	423	309	217	129		2,50	125	201	282	361	415	444				
		437	395	369	312	225	154	89		3,00	88	149	216	280	328	358	480	541	541	
547	547	356	299	275	231	167	111	62		3,50	60	111	164	220	260	283	373	411	411	
440	440	300	236	213	177	127	83	45		4,00	43	84	126	174	209	232	297	325	325	
361	361	258	192	175	144	99	64			4,50		65	99	139	171	196	242	266	266	
301	301	226	158	142	116	80	50			5,00		52	80	112	139	160	201	222	222	
254	254	189	133	117	94	66				5,50			66	93	115	133	169	198	198	
222	222	161	114	98	79	55				6,00			56	78	97	113	143	179	179	
196	196	139	99	84						6,50					83	97	123	162	162	
171	171	121	86	72						7,00					71	84	107	143	143	
151	151	105								7,50							94	126	126	
133	133									8,00							83	112	112	

3 SUPPORTS

PRESSURE double span (3 supports)										Span L/200	SUCTION double span (3 supports)									
Panel thickness, mm											Panel thickness, mm									
220	200	170	140	120	100	80	60	40			40	60	80	100	120	140	170	200	220	
Admissible pressure, daN/m ²										m	Admissible pressure, daN/m ²									
					449	346	267	153		2,50	146	214	264							
575	575	462	384	359	314	250	195	131		3,00	106	170	210	263	315	367	366			
456	456	358	293	267	232	188	148	95		3,50	81	137	154	192	323	273	282	357	357	
376	376	289	233	207	179	147	116	72		4,00	64	108	118	146	174	202	226	282	282	
317	317	240	190	166	142	119	93	57		4,50	52	85	93	115	135	154	187	229	229	
274	274	204	159	138	118	98	76			5,00		70	75	95	110	120	158	191	191	
217	217	172	136	119	100	83	64			5,50		57	62	80	93	101	121	162	162	
175	175	144	117	103	87	71	54			6,00		48	52	69	80	85	94	143	143	
142	142	123	103	91	76	61				6,50			44	60	70	74	73	129	129	
117	117	106	91	80	65	53				7,00					60	64	63	116	116	
97	97	92	79	59						7,50								106	106	
81	81	81								8,00								93	93	
72	72									8,50										



Isocab IND panels used as ceiling

SUSPENSION

Admissible downwards force, daN/m ²																
Single span								Span L/200	Multi-span							
Panel thickness, mm									Panel thickness, mm							
200	170	140	120	100	80	60	40	m	40	60	80	100	120	140	170	200
				597	445	331	204	2,00								
		552	504	423	309	217	129	2,50	153	267	346	449				
	437	395	369	312	225	154	89	3,00	131	195	250	314	359	384	462	575
547	356	299	275	231	167	111	62	3,50	95	148	188	232	267	293	358	456
440	300	236	213	177	127	83	45	4,00	72	116	147	179	207	233	289	376
361	258	192	175	144	99	64		4,50	57	93	119	142	166	190	240	317
301	226	158	142	116	80	50		5,00		76	98	118	138	159	204	274
254	189	133	117	94	66			5,50		64	83	100	118	136	172	217
222	161	114	98	79	55			6,00		54	71	87	102	117	144	175
196	139	99	84					6,50			61	76	89	103	123	142
171	121	86						7,00			53	65	78	91	106	117
151	105							7,50						79	92	97
133								8,00							81	81

ON SUPPORTS

Admissible downwards force, daN/m ²																
Single span								Span L/200	Multi-span							
Panel thickness, mm									Panel thickness, mm							
200	170	140	120	100	80	60	40	m	40	60	80	100	120	140	170	200
				597	445	331	204	2,00								
		585	504	423	309	217	129	2,50	153	261	345	416				
	548	406	369	312	225	154	89	3,00	131	195	267	340		379	453	573
547	403	299	275	233	165	111	62	3,50	95	148	205	266	267	325	343	491
440	308	229	210	179	127	83	45	4,00	72	116	157	204	207	260	262	420
361	244	181	168	141	99	64		4,50	57	93	124	161	166	205	207	332
300	197	146	136	114	80	50		5,00		76	101	130	138	166	168	269
248	163	121	112	94	66			5,50		64	83	108	118	138	139	222
209	137	102	94	79	55			6,00		54	70	91	102	116	117	187
178	117	87	80					6,50			59	77	88	98	99	159
153	101	75						7,00			51	67	76	85	86	137
134	88							7,50						74	75	119
117								8,00							66	105

COMBINATION SUPPORT-SUSPENSION

Admissible downwards force, daN/m ²																
Single span								Span L/200	Multi-span							
Panel thickness, mm									Panel thickness, mm							
200	170	140	120	100	80	60	40	m	40	60	80	100	120	140	170	200
				597	445	331	204	2,00								
		552	504	423	309	217	129	2,50	153	261	345	416				
	437	395	369	312	225	154	89	3,00	131	195	250	314		379	453	573
547	356	299	275	231	165	111	62	3,50	95	148	188	232	267	293	343	456
440	300	229	210	177	127	83	45	4,00	72	116	147	179	207	233	262	376
361	244	181	168	141	99	64		4,50	57	93	119	142	166	190	207	317
300	197	146	136	114	80	50		5,00		76	98	118	138	159	168	269
248	163	121	112	94	66			5,50		64	83	100	118	136	139	217
209	137	102	94	79	55			6,00		54	70	87	102	116	117	175
178	117	87	80					6,50			59	76	88	98	99	142
153	101	75						7,00			51	65	76	85	86	117
134	88							7,50						74	75	97
117								8,00							66	81

IND panels - Wall and ceiling

Isocab IND panel used as roof

Loads (kN/m ²)			Span (m)								
Use loads	Durable load	Total load	Single span								
			Panel thickness (mm)								
(s)	(p)		40	60	80	100	120	140	170	200	
1,00	0,15	1,15	2,45	3,35	4,05	4,30	5,20	5,70	6,40	7,20	
1,00	0,20	1,20	2,45	3,30	3,95	4,30	5,15	5,65	6,35	7,15	
1,00	0,25	1,25	2,40	3,30	3,90	4,30	5,08	5,55	6,25	7,05	
1,25	0,15	1,40	2,30	3,15	3,70	4,30	4,88	5,35	6,05	6,80	
1,25	0,25	1,50	2,25	3,10	3,60	4,30	4,78	5,25	5,95	6,70	
1,50	0,15	1,65	2,15	2,95	3,40	4,15	4,62	5,05	5,70	6,45	
1,50	0,25	1,75	2,15	2,95	3,35	4,10	4,55	4,95	5,65	6,40	
1,50	1,20	2,70	1,90	2,60	2,60	3,25	3,62	3,85	4,55	5,10	

Loads (kN/m ²)			Span (m)								
Use loads	Durable load	Total load	Multi-span								
			Panel thickness (mm)								
(s)	(p)		40	60	80	100	120	140	170	200	
1,00	0,15	1,15	2,90	3,50	4,60	5,45	5,90	6,20	6,00	7,00	
1,00	0,20	1,20	2,85	3,45	4,55	5,40	5,83	6,10	5,90	6,85	
1,00	0,25	1,25	2,85	3,40	4,45	5,30	5,73	6,00	5,80	6,75	
1,25	0,15	1,40	2,70	3,25	4,20	5,05	5,45	5,65	5,50	6,40	
1,25	0,25	1,50	2,65	3,20	4,10	4,90	5,30	5,50	5,35	6,20	
1,50	0,15	1,65	2,55	3,10	3,90	4,70	5,08	5,25	5,15	5,95	
1,50	0,25	1,75	2,55	3,05	3,80	4,55	4,93	5,10	5,00	5,80	
1,50	1,20	2,70	2,10	2,45	2,95	3,50	3,78	3,95	3,85	4,45	



Wall and Roofpanels of Isocab for :

- **MEAT PROCESSING INDUSTRY**
- **FISH PROCESSING INDUSTRY**
- **SUPERMARKETS**
- **DISTRIBUTION CENTERS**
- **DAIRY INDUSTRY**
- **GARDEN CENTERS**
- **LABORATORIES**
- **THE ORGANIC SECTOR**
- **CONTROLLED TEMPERATURE STORAGE**
- **HIGH-RISE BUILDINGS**
- **ETC. ...**

Technical approvals

CSTB Avis Techniques - Bardage ISOCAB INDUSTRIAL Vertical et Horizontal
CSTB Avis Techniques - ISOCAB INDUSTRIAL Entrepôts Frigorifiques Agro
Butgb ATG - INDUSTRIELE SANDWICHPANELEN
Zulassung DIBt - ISOCAB DACH UND WAND





Isocab NV

Treurnietstraat 10, 8531 Bavikhove - Harelbeke, Belgium
Tel: +32 (0)56 73 43 11, Fax: +32 (0)56 73 43 22
www.isocab.com - info@isocab.be

Isocab France SAS

Z.I. de Grande Synthe, 3 Rue Charles Fourier, CS 30142, 59792 Grande Synthe Cedex, France
Tél: +33 (0)3 28 29 24 40, Fax: +33 (0)3 28 29 24 50
www.isocab.com - info@isocabfrance.fr

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