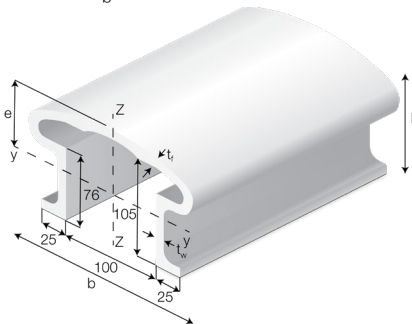
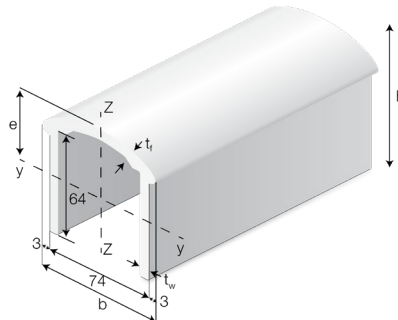
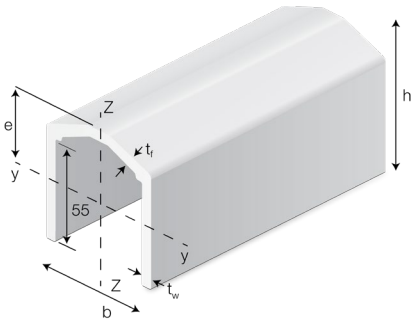


TECHNICAL DATA SHEET FOR STRUCTURAL PROFILES



***Standard stock profiles available in 6 and 12 meters**

Profile h x w x t	h mm	w mm	t _f mm	t _w mm	A mm ²	A _{s,z} mm ²	A _{s,y} mm ²	g kg/m	I _{yy} mm ⁴	I _{zz} mm ⁴	e mm
Faktor	1	1	1	1	10 ³	10 ³	10 ³	1	10 ⁶	10 ⁶	1
70 x 60 x 5*	70	60	5	5	0,86	0,58	0,30	1,55	0,38	0,50	29,39
80 x 80 x 7*	80	80	7	7	1,49	0,64	1,28	2,67	0,87	1,31	31,9
120 x 180 x 8*	120	180	8	8	3,77	1,81	2,53	6,78	5,55	12,80	47,6

TECHNICAL DATA SHEET FOR STRUCTURAL PROFILES



Material data for structural profiles – Characteristic values

Strength

Material Properties	Unit	Characteristic value
Tensile strength, axial, f_{tx}	N/mm ²	280
Tensile strength, transverse, f_t	N/mm ²	50
Compression strength, axial, f_{cx}	N/mm ²	290
Compression strength, transverse, f_{cy}	N/mm ²	95
Pin bearing strength, axial, f_{px}	N/mm ²	210
Pin bearing strength, transverse, f_{py}	N/mm ²	130
Flexural strength, axial, f_{fx}	N/mm ²	250
Flexural strength, transverse, f_{fy}	N/mm ²	60
Interlaminar Shear strength, T_m	N/mm ²	20
In-plane Shear strength, f_{txy}	N/mm ²	40
Shear strength perpendicular to the plane, $f_{\perp II}$ (Punching shear)	N/mm ²	50
Shear strength in plane, $f_{rxy, torsion}$ (torsion of rectangular hollow sections)	N/mm ²	40

Stiffness and Poisson's ratio

Material Properties	Unit	Average value
Full section modulus, E_{eff} , = Tensile modulus, axial, E_{tx} , = Compression modulus, axial, E_{cx}		
- profiles with wall thickness 5-8 mm	N/mm ²	28.000
- profiles with wall thickness 10 mm		30.000
- profiles with wall thickness 12-18 mm		31.000
Tensile modulus, transverse, E_{ty}	N/mm ²	8.000
Compression modulus, transverse, E_{cy}	N/mm ²	13.000
Poisson's ratio, ν_{yx}	-	0,23
Poisson's ratio, ν_{xy}	-	0,07
In-plane shear modulus, G_{xy} and G_{yz}	N/mm ²	3.600

Strain

Material Properties	Unit	Characteristic value
Tensile failure strain, axial, ϵ_{tx}	%	0,90
Tensile failure strain, transverse, ϵ_{ty}	%	0,60
Compression failure strain, axial, ϵ_{cx}	%	0,90
Compression failure strain, transverse, ϵ_{cy}	%	0,70

Other Properties

Material Properties	Unit	Characteristic value
Thermal expansion, axial	K ⁻¹	10·10 ⁻⁶
Thermal expansion, transverse	K ⁻¹	17·10 ⁻⁶
Fibre content by weight	%	68% ± 5%
Degree of cure- Differential scanning calorimetry (DSC)	%	<6%
Creep (after 24 hours)	%	<6%