

Stade des Alpes - Grenoble
Etudes et Techniques Internationales (ETI)

Theory
Profile Library
Checked Sections

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Introduction

Introduction to the Checked sections

The data in the profile library are checked according to referenced sources. The checks are performed manually and/or by means of electronic data.

For each type considered, the Checked properties, variables and sections are listed.

Version info

Documentation Title	Profile Library – Checked Sections
Release	2011.0
Revision	10/2011

Sources

The following sources are used to check the section characteristics :

CBLIA	CBLIA Centre Belgo-Luxembourgeois d'information de l'acier Belgisch-Luxemburgs staalvoorlichtingscentrum 6e uitgave 1973
ARBED	Profil ARBED Sales programme – Structural Shapes Edition Octobre 1995
SG	Staalprofielen deel 5 (Over)spannend staal Staalbouwkundig Genootschap 1998
BS	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables
BS	BS EN 10219-2:1997 Cold formed welded structural hollow sections of non-alloy and fine grain steels Part 2.
VAK	VHP- Technische Daten Voest-Alpine Krems 04/99
VAK	Standard sections Voest-Alpine Krems 08/97
VM	Structural hollow sections (MSH) circular – square – rectangular Vallourec & Mannesmann Tubes Edition 1998
SIB	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1

SAG	Bauen mit Stahl Thema UPE, UNP, UAP Salzgitter AG
ARBED	Profil ARBED Sales programme – Structural Shapes Edition 1-2001
FERONA	CD-ROM Database Ferona Version 3.0 1999
AISC	CD-ROM Database AISC Shapes Database U.S. Customary & Metric Units Version 3.0 2001
METSEC	Metsec Building Products Limited ZED Purlins & C-Sections 2001
SADEF	SADEF Building profiles – Standard range September 2008
PDF	Technisches Handbuch Profil du Futur MultiBeam & ZED sections
ARC	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004
IS	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision)
RUUKKI	Rautaruukki Oyj Structural Hollow Sections EN10219 Ed.2007
SZS	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005
CORUS	Corus Advance Sections CADS Section Tables V2.31
ICEC	ICEC ICEC Purlin & Girt sections 2008
ATLAS	Atlas Ward Multibeamprofile MK II June 2005

AISI	AISI Cold-Formed Steel Design Manual Ed. 2002
GERD	PERFIS Gerdau Açominas Edition 2006
CORUS	Corus Tubes Celsius LCHS Structural & Conveyer Business Ed.03-2005
IDE	Joris IDE Galvanised Profiles
FRISO	Frisomat Asymmetric Sigma sections
SSMA	AISI Manual Cold-Formed Steel Design Edition 2008
HHM	H.Hardeman b.v. C300 Sigma sections 2011

Section data

I sections

IPE

Formcode	1
Description	European I-beams
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.50-55
Revision date	28/07/05
By	CVL
PBD file	IPE.PBD
Code	Euronorm 19-57

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	ly	I_y
9	lz	I_z
10	Wy	$W_{el,y}$
11	Wz	$W_{el,z}$
14	It	I_t
20	V0	A_L
26	CM	I_w
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$
32	G	G
74	W1	P_{min}

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t _w
T	t _f
R	r

Checked sections

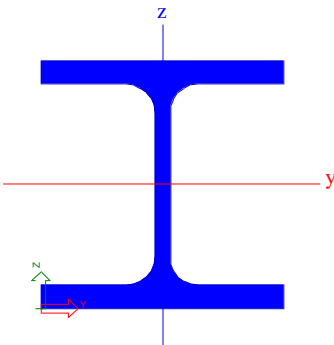
100
100A
120
120A
140
140A
160
160A
180
180A
180O
200
200A
200O

220
220A
220O
240
240A
240O
270
270A
270O
300
300A
300O
330
330A

330O
360
360A
360O
400
400A
400O
450
450A
450O
500
500A
500O
550

550A
550O
600
600A
600O
750x137
750x147
750x173
750x196
80
80A

HD

Formcode	1
Description	Wide flange columns
Source	CBLIA Centre Belgo-Luxembourgeois d'Information de l'acier 6e uitgave 1973 pp.22-23
Revision date	17/02/99
By	CVL
PBD file	HD.PBD
Code	partially ASTM A6/A6M-90a
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ω
2	iy	ix
3	iz	iy
6	Sy	Sx
7	Sz	Sy
8	ly	lx
9	lz	ly
10	Wy	$\left(\frac{I}{V}\right)_x$
11	Wz	$\left(\frac{I}{V}\right)_y$

Checked variables

SCIA symbol	Source symbol
B	b
T	e
S	a

R	R
H	h

Checked sections

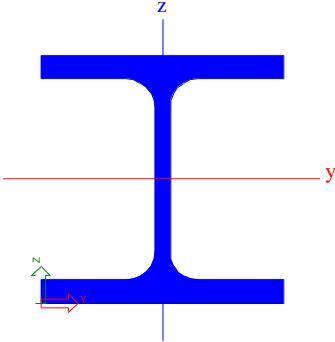
100/15
100/20
100/24
130/20
130/24
130/28
130/33
160/30
160/35
160/40
160/46
210/117
210/139
210/162
210/200
210/252
210/43

210/50
210/56
210/63
210/71
210/83
210/94
260/104
260/121
260/141
260/160
260/184
260/209
260/240
260/274
260/333
260/60
260/68

260/78
260/90
310/106
310/118
310/135
310/155
310/177
310/207
310/240
310/274
310/308
310/350
310/435
310/94
360/135
360/152
360/176

360/199
400/190
400/214
400/237
400/262
400/287
400/312
400/337
400/370
400/404
400/446
400/488
400/531
400/577
400/621
400/679

HD(Arbed)

Formcode	1
Description	Wide flange columns
Source	Arbed Sales programme Edition 1-2001
Revision date	17/12/01
By	CVL
PBD file	HD(Arbed).PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
26	CM	Iw
30	Mpy	Wpl,y x 240 N/mm ²
31	Mpz	Wpl,z x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	b
T	t _f
S	t _w
R	r
H	h

Checked sections

260x114
260x142
260x172
260x54.1
260x68.2
260x93.0
320x127
320x158
320x198
320x245
320x300
320x74.2
320x97.6

360x134
360x147
360x162
360x179
360x196
400x1086
400x187
400x216
400x237
400x262
400x287
400x314
400x347

400x382
400x421
400x463
400x509
400x551
400x592
400x634
400x677
400x744
400x818
400x900
400x990

HD(ARC)

Formcode	1
Description	Wide flange columns
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.68-71
Revision date	28/07/05
By	CVL
PBD file	HD(ARC).PBD

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	Iy	Iy
9	Iz	Iz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A_L
26	CM	Iw
30	Mpy	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mpz	$W_{pl,z} \times 240 \text{ N/mm}^2$
32	G	G
74	W1	ρ_{min}

Checked variables

SCIA symbol	Source symbol
B	b
T	t_f

S	t_w
R	r
H	h

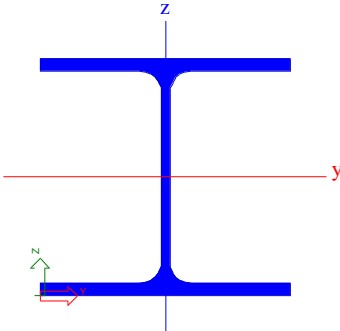
Checked sections

260x114
260x142
260x172
260x54.1
260x68.2
260x93.0
320x127
320x158
320x198
320x245
320x300
320x74.2
320x97.6

360x134
360x147
360x162
360x179
360x196
400x1086
400x187
400x216
400x237
400x262
400x287
400x314
400x347

400x382
400x421
400x463
400x509
400x551
400x592
400x634
400x677
400x744
400x818
400x900
400x990

HEA

Formcode	1
Description	European wide flange beams
Source	Profil ARBED Sales programme – Structural Shapes Edition Octobre 1995 pp.10-17
Revision date	13/11/98
By	NEM
PBD file	HEA.PBD
Code	Euronorm 53-62
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	ly	I_y
9	lz	I_z
10	Wy	W_y
11	Wz	W_z
14	It	I_T
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r

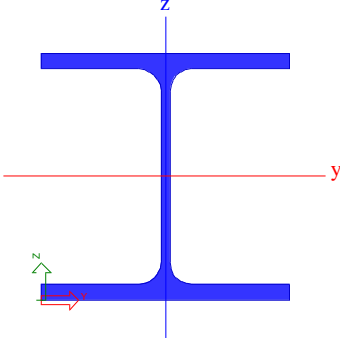
Checked sections

100
1000
1000A
100A
120
120A
140
140A
160
160A
180
180A
200
200A
220
220A

240
240A
260
260A
280
280A
300
300A
320
320A
340
340A
360
360A
400
400A

450
450A
500
500A
550
550A
600
600A
650
650A
700
700A
800
800A
900
900A

HEB

Formcode	1
Description	European wide flange beams
Source	Profil ARBED Sales programme – Structural Shapes Edition Octobre 1995 pp.10-17
Revision date	28.08.98
By	NEM
PBD file	HEB.PBD
Code	Euronorm 53-62
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	ly	I_y
9	lz	I_z
10	Wy	W_y
11	Wz	W_z
14	It	I_T
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r

Checked sections

100
1000
120
140
160
180
200
220

240
260
280
300
320
340
360
400

450
500
550
600
650
700
800
900

HEC

Formcode	1
Description	European wide flange beams
Source	Staalprofielen deel 5 (Over)spannend staal Staalbouwkundig Genootschap 1998 pp.28-29
Revision date	01/03/99
By	CVL
PBD file	HEC.PBD
Code	Euronorm 53-62

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	ly	I_y
9	lz	I_z
10	Wy	$W_{y,el}$
11	Wz	$W_{z,el}$
14	It	I_T
30	Mply	$W_{y,pl} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{z,pl} \times 240 \text{ N/mm}^2$

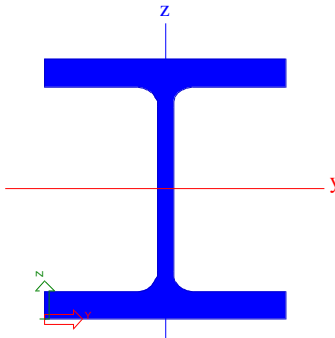
Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r

Checked sections

300

HEM

Formcode	1
Description	European wide flange beams
Source	Profil ARBED Sales programme – Structural Shapes Edition Octobre 1995 pp.10-17
Revision date	13/11/98
By	GV
PBD file	HEM.PBD
Code	Euronorm 53-62
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	ly	l_y

9	Iz	I_z
10	Wy	W_y
11	Wz	W_z
14	It	I_T
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r

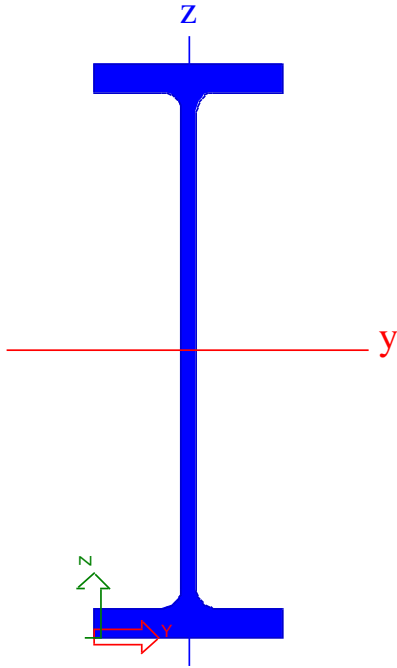
Checked sections

100
1000
120
140
160
180
200
220

240
260
280
300
320
340
360
400

450
500
550
600
650
700
800
900

HE

Formcode	1
Description	European wide flange beams
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.58-65
Revision date	28/07/05
By	CVL
PBD file	HE.PBD
Code	Euronorm 53-62
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	ly	I_y
9	lz	I_z
10	Wy	$W_{el,y}$
11	Wz	$W_{el,z}$
14	It	I_t
20	V0	A_L
26	CM	I_w
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$

32	G	G
74	W1	p_{min}

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r

Checked sections

1000A
1000AA
1000B
1000M
1000x249
1000x393
1000x415
1000x438
1000x494
1000x584
100A
100AA
100B
100M
120A
120AA
120B
120M
140A
140AA
140B
140M
160A
160AA
160B
160M
180A
180AA
180B
180M
200A
200AA
200B

200M
220A
220AA
220B
220M
240A
240AA
240B
240M
260A
260AA
260B
260M
280A
280AA
280B
280M
300A
300AA
300B
300M
320A
320AA
320B
320M
340A
340AA
340B
340M
360A
360AA
360B
360M

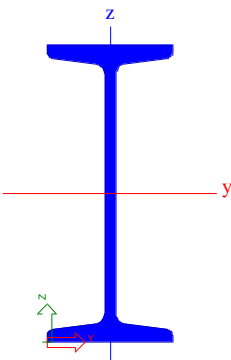
400A
400AA
400B
400M
450A
450AA
450B
450M
500A
500AA
500B
500M
550A
550AA
550B
550M
600A
600AA
600B
600M
600x337
600x399
650A
650AA
650B
650M
650x343
650x407
700A
700AA
700B
700M
700x352

700x418
800A
800AA
800B
800M

800x373
800x444
900A
900AA
900B

900M
900x391
900x466

I

Formcode	1
Description	Schmale I Träger
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.28-29 pp.44
Revision date	06/03/00
By	CVL
PBD file	I.PBD
Code	DIN 1025
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
6	Sy	S_y
8	Iy	I_y
9	Iz	I_z
10	Wy	W_y
11	Wz	W_z
14	It	I_T
30	Mply	$W_{pl,y-y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z-z} \times 240 \text{ N/mm}^2$

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_s
T	t_g
R	r_2
R1	r_1

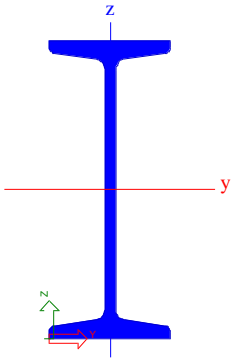
Checked sections

100
120
140
160
180
200
220
240

260
280
300
320
340
360
380
400

425
450
475
500
550
600
80

IPN

Formcode	1
Description	European standard beams
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.56-57
Revision date	28/07/05
By	CVL
PBD file	IPN.PBD
Code	DIN 1025-1:1963; NF A 45-209 (1983)
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	ly	I_y
9	lz	I_z
10	Wy	$W_{el,y}$
11	Wz	$W_{el,z}$
14	It	I_t
20	V0	A_L
26	CM	I_w
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$
32	G	G
74	W1	p_{min}

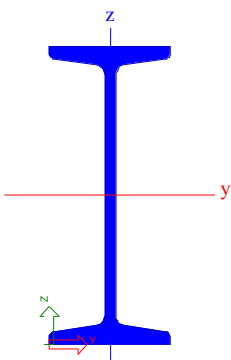
Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r_2
R1	r_1

Checked sections

100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
450
500
550
600
80

J

Formcode	1
Description	British Joists with taper flanges
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.140-141
Revision date	28/07/05
By	CVL
PBD file	J.PBD
Code	BS 4-1: 1993
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	Iy	I_y
9	Iz	I_z
10	Wy	$W_{el,y}$
11	Wz	$W_{el,z}$
14	It	I_t
20	V0	A_L
26	CM	I_w
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$
32	G	G

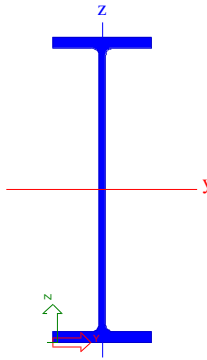
Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r_2
R1	r_1

Checked sections

102x102x23
102x44x7
114x114x27
127x114x27
127x114x29
127x76x16
152x127x37
203x152x52
254x114x37
254x203x82
76x76x13
76x76x15
89x89x19

UB

Formcode	1
Description	British Universal Beams
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.2-B.7
Revision date	07/10/99
By	CADS
PBD file	UB.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	Radius of gyration / Axis x-x
3	iz	Radius of gyration / Axis y-y
8	Iy	Second Moment of Area / Axis x-x
9	Iz	Second Moment of Area / Axis y-y
10	Wy	Elastic modulus / Axis x-x
11	Wz	Elastic modulus / Axis y-y
14	It	J : Torsional constant
20	V0	Surface area
32	G	Mass

Checked variables

SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	r

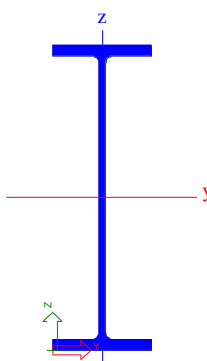
Checked sections

127/76/13
152/89/16
178/102/19
203/102/23
203/133/25
203/133/30
254/102/22
254/102/25
254/102/28
254/146/31
254/146/37
254/146/43
305/102/25
305/102/28
305/102/33
305/127/37
305/127/42
305/127/48
305/165/40
305/165/46
305/165/54
356/127/33
356/127/39
356/171/45
356/171/51

356/171/57
356/171/67
406/140/39
406/140/46
406/178/54
406/178/60
406/178/67
406/178/74
457/152/52
457/152/60
457/152/67
457/152/74
457/152/82
457/191/67
457/191/74
457/191/82
457/191/89
457/191/98
533/210/101
533/210/109
533/210/122
533/210/82
533/210/92
610/229/101
610/229/113

610/229/125
610/229/140
610/305/149
610/305/179
610/305/238
686/254/125
686/254/140
686/254/152
686/254/170
762/267/134
762/267/147
762/267/173
762/267/197
838/292/176
838/292/194
838/292/226
914/305/201
914/305/224
914/305/253
914/305/289
914/419/343
914/419/388

UB(ARC)

Formcode	1
Description	British Universal Beams
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.134-139
Revision date	28/07/05
By	CVL
PBD file	UB(ARC).PBD
Code	BS 4-1: 1993
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A_L
26	CM	lw
30	Mpy	$W_{ply} \times 240 \text{ N/mm}^2$
31	Mpz	$W_{plz} \times 240 \text{ N/mm}^2$
32	G	G
74	W1	ρ_{min}

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	tw
T	tf
R	r

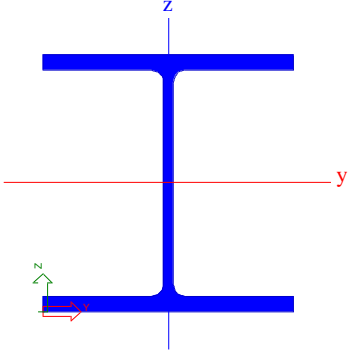
Checked sections

1016x305x222
1016x305x249
1016x305x272
1016x305x314
1016x305x349
1016x305x393
1016x305x415
1016x305x438
1016x305x494
1016x305x584
127x76x13
152x89x16
178x102x19
203x102x23
203x133x25
203x133x30
254x102x22
254x102x25
254x102x28
254x146x31
254x146x37
254x146x43
305x102x25
305x102x28
305x102x33
305x127x37
305x127x42
305x127x48

305x165x40
305x165x46
305x165x54
356x127x33
356x127x39
356x171x45
356x171x51
356x171x57
356x171x67
406x140x39
406x140x46
406x178x54
406x178x60
406x178x67
406x178x74
457x152x52
457x152x60
457x152x67
457x152x74
457x152x82
457x191x67
457x191x74
457x191x82
457x191x89
457x191x98
533x210x101
533x210x109
533x210x122

533x210x82
533x210x92
610x229x101
610x229x113
610x229x125
610x229x140
610x305x149
610x305x179
610x305x238
686x254x125
686x254x140
686x254x152
686x254x170
762x267x147
762x267x173
762x267x197
838x292x176
838x292x194
838x292x226
914x305x201
914x305x224
914x305x253
914x305x289
914x419x343
914x419x388

UC

Formcode	1
Description	British Universal Columns
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.8-B.10
Revision date	07/10/99
By	CADS
PBD file	UC.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	Radius of gyration / Axis x-x
3	iz	Radius of gyration / Axis y-y
8	Iy	Second Moment of Area / Axis x-x
9	Iz	Second Moment of Area / Axis y-y
10	Wy	Elastic modulus / Axis x-x
11	Wz	Elastic modulus / Axis y-y
14	It	J : Torsional constant
20	V0	Surface area
32	G	Mass

Checked variables

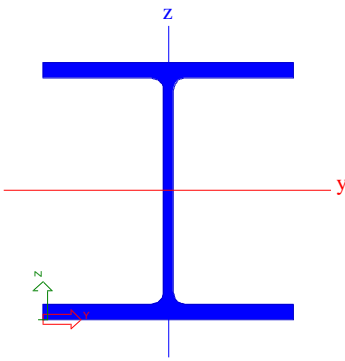
SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	r

Checked sections

152/152/23
152/152/30
152/152/37
203/203/46
203/203/52
203/203/60
203/203/71
203/203/86
254/254/107
254/254/132
254/254/167
254/254/73
254/254/89
305/305/118
305/305/137
305/305/158

305/305/198
305/305/240
305/305/283
305/305/97
356/368/129
356/368/153
356/368/177
356/368/202
356/406/235
356/406/287
356/406/340
356/406/393
356/406/467
356/406/551
356/406/634

UC(ARC)

Formcode	1
Description	British Universal Columns
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.142-145
Revision date	28/07/05
By	CVL
PBD file	UC(ARC).PBD
Code	BS 4-1: 1993
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A_L
26	CM	lw
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	G
74	W1	p_{min}

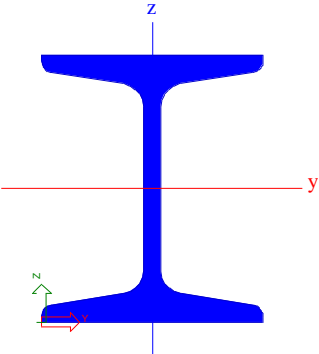
Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	tw
T	tf
R	r

Checked sections

152x152x23
152x152x30
152x152x37
203x203x46
203x203x52
203x203x60
203x203x71
203x203x86
254x254x107
254x254x132
254x254x167
254x254x73
254x254x89
305x305x118
305x305x137
305x305x158
305x305x198
305x305x240
305x305x283
305x305x97
356x368x129
356x368x153
356x368x177
356x368x202
356x406x235
356x406x287
356x406x340
356x406x393
356x406x467
356x406x551
356x406x634

RSJ

Formcode	1
Description	British Joists
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.12-B.14
Revision date	07/10/99
By	CADS
PBD file	RSJ.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	Radius of gyration / Axis x-x
3	iz	Radius of gyration / Axis y-y
8	Iy	Second Moment of Area / Axis x-x
9	Iz	Second Moment of Area / Axis y-y
10	Wy	Elastic modulus / Axis x-x
11	Wz	Elastic modulus / Axis y-y
14	It	J : Torsional constant
20	V0	Surface area
32	G	Mass

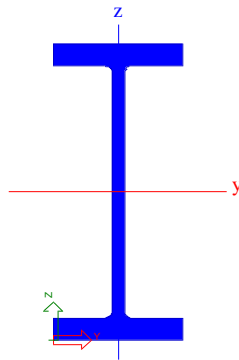
Checked variables

SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	r1
R1	r2

Checked sections

102/102/23
102/44/7
114/114/27
127/114/27
127/114/29
127/76/16
152/127/37
203/152/52
254/114/37
254/203/82
76/76/13
76/76/15
89/89/19

HL

Formcode	1
Description	European wide flange beam
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.66-67
Revision date	28/07/05
By	CVL
PBD file	HL.PBD
Code	Euronorm 53-62
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z

8	ly	I _y
9	lz	I _z
10	Wy	W _{el,y}
11	Wz	W _{el,z}
14	It	I _t
20	V0	A _L
26	CM	I _w
30	Mply	W _{pl,y} × 240 N/mm ²
31	Mplz	W _{pl,z} × 240 N/mm ²
32	G	G
74	W1	p _{min}

Checked variables

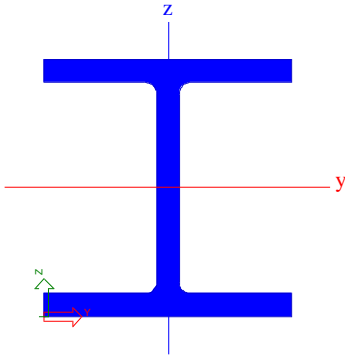
SCIA symbol	Source symbol
B	b
H	h
S	t _w
T	t _f
R	r

Checked sections

1000A
1000AA
1000B
1000M
1000x443
1000x483
1000x539
1000x554
1000x591
1000x642
1000x748
1000x883
1100A
1100B

1100M
1100R
920x342
920x365
920x387
920x417
920x446
920x488
920x534
920x585
920x653
920x784
920x967

UBP

Formcode	1
Description	British wide flange bearing piles
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.146-147
Revision date	28/07/05
By	CVL
PBD file	UBP.PBD
Code	BS 4-1:1993
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	ly	I_y
9	lz	I_z
10	Wy	$W_{el,y}$
11	Wz	$W_{el,z}$
14	It	I_t
20	V0	A_L
26	CM	I_w
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$
32	G	G
74	W1	p_{min}

Checked variables

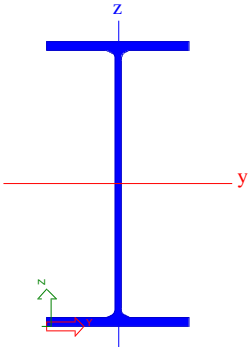
SCIA symbol	Source symbol
B	b
H	h

S	t_w
T	t_f
R	r

Checked sections

203x203x45
203x203x54
254x254x63
254x254x71
254x254x85
305x305x110
305x305x126
305x305x149
305x305x186
305x305x223
305x305x79
305x305x88
305x305x95
356x368x109
356x368x133
356x368x152
356x368x174

H(JIS)

Formcode	1
Description	Japanese H sections
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.196-197
Revision date	28/07/05
By	CVL
PBD file	H(JIS).PBD
Code	JIS G 3192: 2000 ; JIS A 5526: 1994
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	ly	I_y
9	lz	I_z
10	Wy	$W_{el,y}$
11	Wz	$W_{el,z}$
14	It	I_t
20	V0	A_L
26	CM	I_w
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$
32	G	G
74	W1	p_{min}

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r

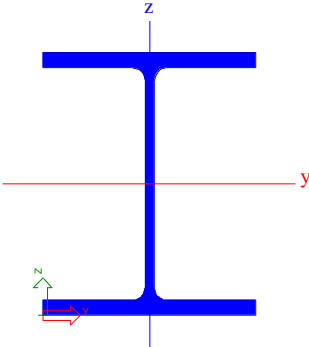
Checked sections

100x100x6x8
125x125x6.5x9
150x150x7x10
150x75x5x7
175x175x7.5x11
200x100x4.5x7
200x100x5.5x8
200x200x12x12
200x200x8x12
250x125x5x8
250x125x6x9
250x250x11x11
250x250x14x14
250x250x9x14
300x150x5.5x8
300x150x6.5x9
300x300x10x15

300x300x12x12
300x300x15x15
350x175x6x9
350x175x7x11
350x350x10x16
350x350x12x19
350x350x13x13
350x350x16x16
350x350x19x19
400x300x10x16
400x400x11x18
400x400x13x21
400x400x15x15
400x400x18x18
400x400x18x28
400x400x20x35
400x400x21x21

400x400x30x50
500x200x10x16
500x200x11x19
500x200x9x14
500x300x11x15
500x300x11x18
600x300x12x17
600x300x12x20
600x300x14x23
700x300x13x20
700x300x13x24
800x300x14x22
800x300x14x26
900x300x15x23
900x300x16x28
900x300x18x34

W

Formcode	1
Description	American Wide-Flange shapes Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	W.PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf

Checked sections

1000X222
1000X249
1000X272
1000X296
1000X314
1000X321
1000X350
1000X371
1000X393
1000X412
1000X415
1000X443
1000X483
1000X486
1000X494
1000X539
1000X554
1000X584
1000X591
1000X642
1000X748
1000X883
100X19.3
1100X343
1100X390
1100X433
1100X499
130X23.8
130X28.1
150X13
150X13.5
150X18
150X22.5
150X24
150X29.8
150X37.1
200X100

200X15
200X19.3
200X22.5
200X26.6
200X31.3
200X35.9
200X41.7
200X46.1
200X52
200X59
200X71
200X86
250X101
250X115
250X131
250X149
250X167
250X17.9
250X22.3
250X25.3
250X28.4
250X32.7
250X38.5
250X44.8
250X49.1
250X58
250X67
250X73
250X80
250X89
310X107
310X117
310X129
310X143
310X158
310X179
310X202

310X21
310X226
310X23.8
310X253
310X28.3
310X283
310X313
310X32.7
310X342
310X375
310X38.7
310X415
310X44.5
310X454
310X500
310X52
310X60
310X67
310X74
310X79
310X86
310X97
360X101
360X1086
360X110
360X1202
360X122
360X134
360X147
360X162
360X179
360X196
360X216
360X237
360X262
360X287
360X314

360X32.9
360X347
360X382
360X39
360X421
360X44
360X463
360X509
360X51
360X551
360X57.8
360X592
360X634
360X64
360X677
360X72
360X744
360X79
360X818
360X900
360X91
360X990
410X100
410X114
410X132
410X149
410X38.8
410X46.1
410X53
410X60
410X67
410X75
410X85
460X106
460X113
460X128
460X144
460X158
460X177
460X193
460X213
460X235
460X260
460X52
460X60
460X68
460X74
460X82
460X89

460X97
530X101
530X109
530X123
530X138
530X150
530X165
530X182
530X196
530X219
530X248
530X272
530X300
530X66
530X72
530X74
530X82
530X85
530X92
610X101
610X113
610X125
610X140
610X153
610X155
610X174
610X195
610X217
610X241
610X262
610X285
610X307
610X341
610X372
610X415
610X455
610X498
610X551
610X82
610X92
690X125
690X140
690X152
690X170
690X192
690X217
690X240
690X265
690X289

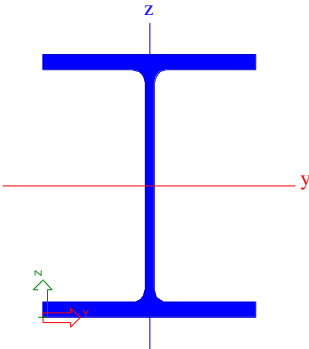
690X323
690X350
690X384
690X419
690X457
690X500
690X548
690X802
760X134
760X147
760X161
760X173
760X185
760X196
760X220
760X257
760X284
760X314
760X350
760X389
760X434
760X484
760X531
760X582
840X176
840X193
840X210
840X226
840X251
840X299
840X329
840X359
840X392
840X433
840X473
840X527
840X576
920X1188
920X201
920X223
920X238
920X253
920X271
920X289
920X313
920X342
920X345
920X365
920X381

920X387
920X417
920X446

920X488
920X534
920X585

920X653
920X784
920X967

W(Imp)

Formcode	1
Description	American Wide-Flange shapes Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	W(Imp).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf

Checked sections

10X100
10X112
10X12
10X15
10X17
10X19
10X22
10X26
10X30
10X33
10X39
10X45
10X49
10X54
10X60
10X68
10X77
10X88
12X106
12X120
12X136
12X14
12X152
12X16
12X170
12X19
12X190
12X210
12X22
12X230
12X252
12X26
12X279
12X30
12X305

12X336
12X35
12X40
12X45
12X50
12X53
12X58
12X65
12X72
12X79
12X87
12X96
14X109
14X120
14X132
14X145
14X159
14X176
14X193
14X211
14X22
14X233
14X257
14X26
14X283
14X30
14X311
14X34
14X342
14X370
14X38
14X398
14X426
14X43
14X455

14X48
14X500
14X53
14X550
14X605
14X61
14X665
14X68
14X730
14X74
14X808
14X82
14X90
14X99
16X100
16X26
16X31
16X36
16X40
16X45
16X50
16X57
16X67
16X77
16X89
18X106
18X119
18X130
18X143
18X158
18X175
18X35
18X40
18X46
18X50

18X55
18X60
18X65
18X71
18X76
18X86
18X97
21X101
21X111
21X122
21X132
21X147
21X166
21X182
21X201
21X44
21X48
21X50
21X55
21X57
21X62
21X68
21X73
21X83
21X93
24X103
24X104
24X117
24X131
24X146
24X162
24X176
24X192
24X207
24X229

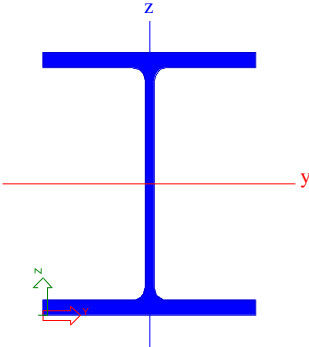
24X250
24X279
24X306
24X335
24X370
24X55
24X62
24X68
24X76
24X84
24X94
27X102
27X114
27X129
27X146
27X161
27X178
27X194
27X217
27X235
27X258
27X281
27X307
27X336
27X368
27X539
27X84
27X94
30X108
30X116
30X124
30X132
30X148

30X173
30X191
30X211
30X235
30X261
30X292
30X326
30X357
30X391
30X90
30X99
33X118
33X130
33X141
33X152
33X169
33X201
33X221
33X241
33X263
33X291
33X318
33X354
33X387
36X135
36X150
36X160
36X170
36X182
36X194
36X210
36X230
36X232

36X245
36X256
36X260
36X280
36X300
36X328
36X359
36X393
36X439
36X527
36X650
36X798
40X149
40X167
40X183
40X199
40X211
40X215
40X235
40X249
40X264
40X277
40X278
40X297
40X324
40X327
40X331
40X362
40X372
40X392
40X397
40X431
40X503

40X593
44X230
44X262
44X290
44X335
4X13
5X16
5X19
6X12
6X15
6X16
6X20
6X25
6X8.5
6X9
8X10
8X13
8X15
8X18
8X21
8X24
8X28
8X31
8X35
8X40
8X48
8X58
8X67

W(ARC)

Formcode	1
Description	American Wide-Flange beams Imperial naming convention
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.154-171
Revision date	28/07/05
By	CVL
PBD file	W(ARC).PBD
Code	ASTM A6/A6M - 03
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A_L
26	CM	Iw
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	G
74	W1	ρ_{min}

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	tw
T	tf
R	r

Checked sections

10x10x100	12x6.5x21	14x6.75x34	21x12.5x132
10x10x112	12x6.5x26	14x6.75x38	21x12.5x147
10x10x49	12x6.5x30	14x8x43	21x12.5x166
10x10x54	12x6.5x35	14x8x48	21x12.5x182
10x10x60	12x8x40	14x8x53	21x12.5x201
10x10x68	12x8x45	16x10.25x100	21x6.5x44
10x10x77	12x8x50	16x10.25x67	21x6.5x50
10x10x88	14x10x61	16x10.25x77	21x6.5x57
10x4x12	14x10x68	16x10.25x89	21x8.25x62
10x4x15	14x10x74	16x5.5x26	21x8.25x68
10x4x17	14x10x82	16x5.5x31	21x8.25x73
10x4x19	14x14.5x109	16x7x36	21x8.25x83
10x5.75x16	14x14.5x120	16x7x40	21x8.25x93
10x5.75x22	14x14.5x132	16x7x45	24x12.75x104
10x5.75x26	14x14.5x90	16x7x50	24x12.75x117
10x5.75x30	14x14.5x99	16x7x57	24x12.75x131
10x8x33	14x16x145	18x11x106	24x12.75x146
10x8x39	14x16x159	18x11x119	24x12.75x162
10x8x45	14x16x176	18x11x130	24x12.75x176
12x10x53	14x16x193	18x11x143	24x12.75x192
12x10x58	14x16x211	18x11x158	24x12.75x229
12x12x106	14x16x233	18x11x175	24x12.75x279
12x12x120	14x16x257	18x11x76	24x12.75x306
12x12x136	14x16x283	18x11x86	24x12.75x335
12x12x152	14x16x311	18x11x97	24x12.75x370
12x12x170	14x16x342	18x6x35	24x7x55
12x12x190	14x16x370	18x6x40	24x7x62
12x12x210	14x16x398	18x6x46	24x9x103
12x12x230	14x16x426	18x7.5x41	24x9x68
12x12x65	14x16x455	18x7.5x45	24x9x76
12x12x72	14x16x500	18x7.5x50	24x9x84
12x12x79	14x16x550	18x7.5x55	24x9x94
12x12x87	14x16x605	18x7.5x60	27x10x102
12x12x96	14x16x665	18x7.5x65	27x10x114
12x4x14	14x16x730	18x7.5x71	27x10x129
12x4x16	14x5x22	21x12.5x101	27x10x84
12x4x19	14x5x26	21x12.5x111	27x10x94
12x4x22	14x6.75x30	21x12.5x122	30x10.5x108

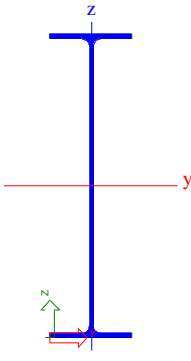
30x10.5x116
30x10.5x124
30x10.5x132
30x10.5x148
30x10.5x99
33x11.5x118
33x11.5x130
33x11.5x141
33x11.5x152
33x11.5x169
36x12x135
36x12x150
36x12x160
36x12x170
36x12x182
36x12x194
36x12x210
36x16.5x230
36x16.5x245
36x16.5x260

36x16.5x280
36x16.5x300
36x16.5x328
36x16.5x359
36x16.5x393
36x16.5x439
36x16.5x527
36x16.5x650
40x12x149
40x12x167
40x12x183
40x12x211
40x12x235
40x12x264
40x12x278
40x12x294
40x12x331
40x12x392
40x16x199
40x16x215

40x16x249
40x16x277
40x16x297
40x16x324
40x16x362
40x16x372
40x16x397
40x16x431
40x16x503
40x16x593
44x16x230
44x16x262
44x16x290
44x16x335
4x4x13
5x5x16
5x5x19
6x4x12
6x4x16
6x4x9

6x6x15
6x6x20
6x6x25
8x4x10
8x4x13
8x4x15
8x5.25x14
8x5.25x18
8x5.25x21
8x6.5x24
8x6.5x28
8x8x31
8x8x35
8x8x40
8x8x48
8x8x58
8x8x67

M

Formcode	1
Description	American Miscellaneous Beams Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	M.PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf

Checked sections

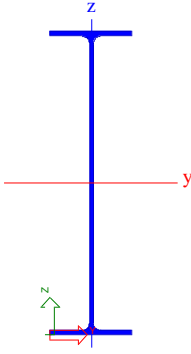
100X8.9
130X28.1
150X5.5

150X6.6
200X9.2
200X9.7

250X11.2
250X11.9
250X13.4

310X14.9
310X16.1
310X17.6

M(Imp)

Formcode	1
Description	American Miscellaneous Beams Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	M(Imp).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

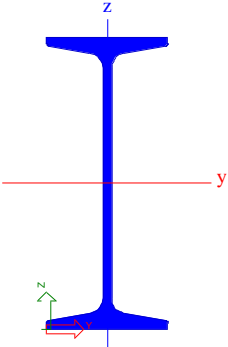
Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf

Checked sections

10X7.5
10X8
10X9
12X10
12X10.8
12X11.8
4X6
5X18.9
6X3.7
6X4.4
8X6.2
8X6.5

S

Formcode	1
Description	American Standard Beams Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	S.PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf
R1	

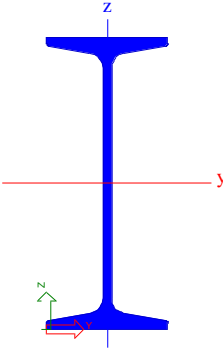
Checked sections

100X11.5
100X14.1
130X15
150X18.6
150X25.7
200X27.4
200X34
250X37.8
250X52
310X47.3

310X52
310X60.7
310X74
380X64
380X74
460X104
460X81.4
510X112
510X128
510X143

510X98.2
610X119
610X134
610X149
610X158
610X180
75X11.2
75X8.5

S(Imp)

Formcode	1
Description	American Standard Beams Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	S(Imp).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf
R1	

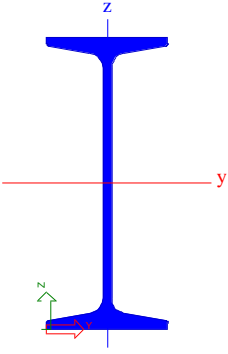
Checked sections

10X25.4
10X35
12X31.8
12X35
12X40.8
12X50
15X42.9
15X50
18X54.7
18X70

20X66
20X75
20X86
20X96
24X100
24X106
24X121
24X80
24X90
3X5.7

3X7.5
4X7.7
4X9.5
5X10
6X12.5
6X17.25
8X18.4
8X23

S(ARC)

Formcode	1
Description	American Standard Beams Imperial naming convention
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.172-175
Revision date	28/07/05
By	CVL
PBD file	S(ARC).PBD
Code	ASTM A6/A6M - 03
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A_L
26	CM	Iw
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	G

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	tw
T	tf
R	r2
R1	r1

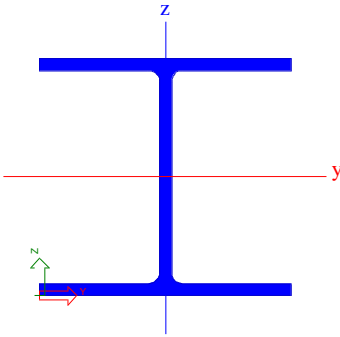
Checked sections

10x25.4
10x35
12x31.8
12x35
12x40.8
12x50
15x42.9
15x50
18x54.7
18x70

20x66
20x75
20x86
20x96
24x100
24x106
24x121
24x80
24x90
3x5.7

3x7.5
4x7.7
4x9.5
5x10
6x12.5
6x17.25
8x18.4
8x23

HP

Formcode	1
Description	American Bearing Piles Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	HP.PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf

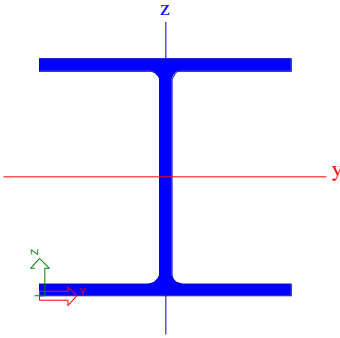
Checked sections

200X53
250X62
250X85
310X110

310X125
310X79
310X93
360X108

360X132
360X152
360X174

HP(Imp)

Formcode	1
Description	American Bearing Piles Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	HP(Imp).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf

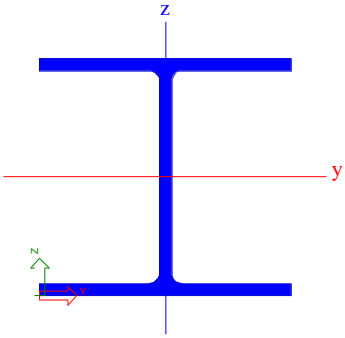
Checked sections

10X42
10X57
12X53
12X63

12X74
12X84
14X102
14X117

14X73
14X89
8X36

HP(ARC)

Formcode	1
Description	Wide Flange Bearing Piles
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.74-77
Revision date	28/07/05
By	CVL
PBD file	HP(ARC).PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
26	CM	Iw
20	V0	A _L
30	Mpy	Wpl,y x 240 N/mm ²
31	Mpz	Wpl,z x 240 N/mm ²
32	G	G
74	W1	p _{min}

Checked variables

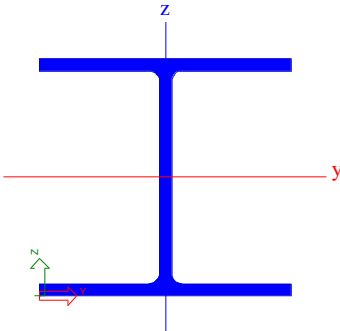
SCIA symbol	Source symbol
B	b
H	h
S	tw
T	tf
R	r

Checked sections

200x43
200x53
220x57
260x75
260x87
305x110
305x126
305x149
305x180
305x186
305x223
305x79
305x88
305x95
320x103
320x117
320x147

320x184
320x88
360x109
360x133
360x152
360x174
360x180
360x84
400x122
400x140
400x158
400x176
400x194
400x213
400x231

HP(ARCUS)

Formcode	1
Description	American Bearing Piles Imperial Naming Convention
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.176-177
Revision date	28/07/05
By	CVL
PBD file	HP(ARCUS).PBD
Code	ASTM A6/A6M - 03
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
26	CM	Iw
20	V0	A_L
30	Mpy	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mpz	$W_{pl,z} \times 240 \text{ N/mm}^2$
32	G	G
74	W1	ρ_{min}

Checked variables

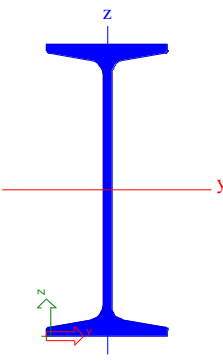
SCIA symbol	Source symbol
B	b
H	h
S	tw
T	tf
R	r

Checked sections

10x42
10x57
12x53
12x63
12x74
12x84
12x89

14x102
14x117
14x73
14x89
8x29
8x36

ISMB

Formcode	1
Description	Indian Standard Medium Flange Beams
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 2.1
Revision date	03/03/06
By	CVL
PBD file	ISMB.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
32	G	M

Checked variables

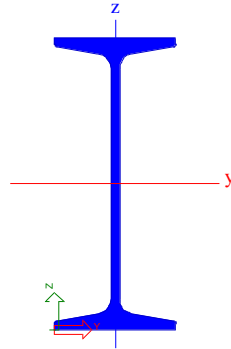
SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	R2
R1	R1

Checked sections

100/50/9
125/70/13
150/75/15
175/85/20
200/100/24
225/110/31
250/125/37
300/140/46

350/140/52
400/140/61
450/150/72
500/180/87
550/190/104
600/210/123

ISJB

Formcode	1
Description	Indian Standard Junior Beams
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 2.2
Revision date	03/03/06
By	CVL
PBD file	ISJB.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
32	G	M

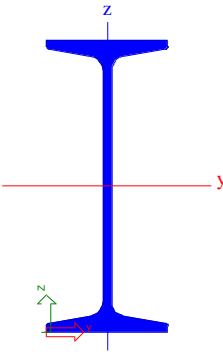
Checked variables

SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	R2
R1	R1

Checked sections

100/45/6
125/50/8
150/55/10
175/60/11
200/70/14

ISLB

Formcode	1
Description	Indian Standard Light Weight Beams
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 2.2
Revision date	03/03/06
By	CVL
PBD file	ISLB.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
32	G	M

Checked variables

SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	R2
R1	R1

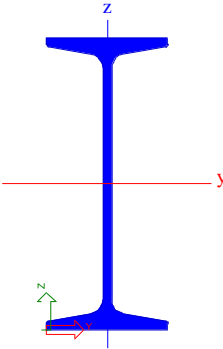
Checked sections

100/50/8
100/50/9
125/75/12
150/80/14
175/80/17
175/90/17
200/100/20
220/100/21

225/100/23
250/125/28
275/140/33
300/140/41
300/150/38
325/165/43
350/165/49
400/165/57

450/170/65
500/180/75
550/190/86
600/210/99
75/50/6

ISWB

Formcode	1
Description	Indian Standard Wide Flange Beams
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 2.2
Revision date	03/03/06
By	CVL
PBD file	ISWB.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
32	G	M

Checked variables

SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	R2
R1	R1

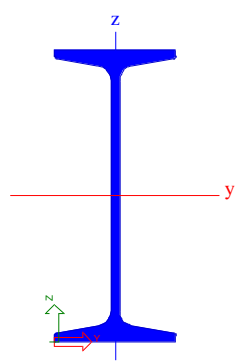
Checked sections

150/100/17
175/125/22
200/140/29
203/152/52
225/150/34

250/200/41
300/200/48
350/200/57
400/200/67
450/200/79

500/250/95
550/250/112
600/250/134
600/250/145

ISSC

Formcode	1
Description	Indian Standard Column Sections
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 3.1
Revision date	03/03/06
By	CVL
PBD file	ISSC.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
32	G	M

Checked variables

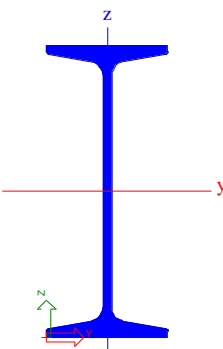
SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	R2
R1	R1

Checked sections

100/100/20
120/120/26
140/140/33
152/152/37
160/160/42

180/180/50
200/200/60
220/220/70
250/250/86

ISHB

Formcode	1
Description	Indian Standard Heavy Weight Beams
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 3.1
Revision date	03/03/06
By	CVL
PBD file	ISHB.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
32	G	M

Checked variables

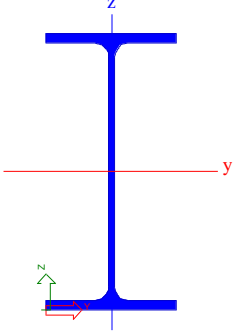
SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	R2
R1	R1

Checked sections

150/150/27
150/150/31
150/150/35
200/200/37
200/200/40
225/225/43
225/225/47
250/250/51
250/250/55

300/250/59
300/250/63
350/250/67
350/250/72
400/250/77
400/250/82
450/250/87
450/250/92

PEA

Formcode	1
Description	European I-beams
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.26-27
Revision date	07/05/07
By	PVT
PBD file	PEA.PBD
Code	Euronorm 19-57, DIN 1025/5, ASTM A6
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
14	It	K=Ix
20	V0	Um
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	m
74	W1	w

Checked variables

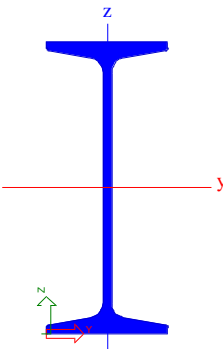
SCIA Symbol	Source Symbol
B	b
H	h
S	tw
T	tf
R	r

Checked sections

120
140
160
180
200
220
240
270

300
330
360
400
450
500
550
600

INP

Formcode	1
Description	European standard beam
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.28-29
Revision date	07/05/07
By	PVT
PBD file	INP.PBD
Code	DIN 1025/1
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
14	It	K=Ix
20	V0	Um
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	m
74	W1	w

Checked variables

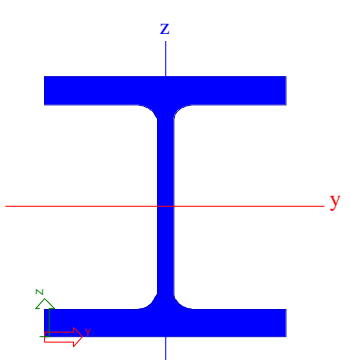
SCIA Symbol	Source Symbol
B	b
H	h
S	tw
T	tf
R	r1
R1	r

Checked sections

100
120
140
160
180
200
220
240
260
280

300
320
340
360
380
400
450
500
550
80

HHD

Formcode	1
Description	European wide flange beam
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.40-41
Revision date	07/05/07
By	PVT
PBD file	HHD.PBD
Code	ASTM A6
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
14	It	K=Ix
20	V0	Um
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	m
74	W1	w
75	W2	w
76	W3	w1

Checked variables

SCIA Symbol	Source Symbol
B	b
H	h
S	tw
T	tf
R	r

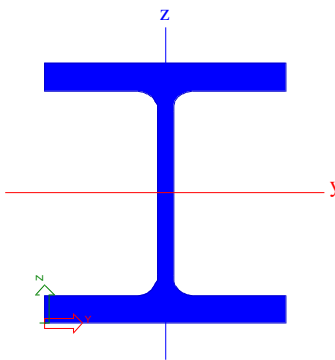
Checked sections

260x114
260x142
260x54
320x158
320x198
320x74
360x134
360x147
360x162
360x179
360x196

400x1086
400x187
400x216
400x237
400x262
400x287
400x314
400x347
400x382
400x421
400x463

400x509
400x551
400x592
400x634
400x677
400x744
400x818
400x900
400x990

HL(SZS)

Formcode	1
Description	European wide flange beam
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.40-41
Revision date	07/05/07
By	PVT
PBD file	HL(SZS).PBD
Code	ASTM A6
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
14	It	K=Ix
20	V0	Um
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	m
74	W1	w
75	W2	w
76	W3	w1

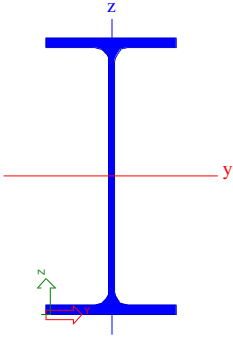
Checked variables

SCIA Symbol	Source Symbol
B	b
H	h
S	tw
T	tf
R	r

Checked sections

1000A
1000B
1000M
1000x296
1100A
1100B
1100M
1100R

ITM

Formcode	1
Description	European I-beams
Source	Profil ARBED Sales programme – Structural Shapes
Revision date	20/02/08
By	PVT
PBD file	ITM.PBD
Code	Euronorm 19-57
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	F
2	iy	ix
3	iz	iy
8	ly	lx
9	lz	ly
10	Wy	Wx
11	Wz	Wy
14	It	Jt
20	V0	U
26	CM	CM
30	Mpy	Wplx x 240 N/mm ²
31	Mpz	Wply x 240 N/mm ²
32	G	G

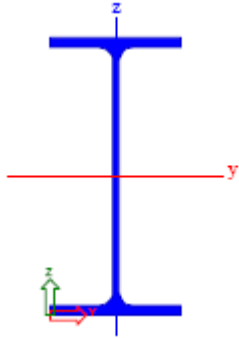
Checked variables

SCIA Symbol	Source Symbol
B	b
H	h
S	a
T	e
R	r

Checked sections

500x191
600x216
600x241

UKB

Formcode	1
Description	I Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	UKB.PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry : Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
14	It	J : Torsional constant
20	V0	Surface area
26	CM	H : Warping constant
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
B	B
H	D
s	t
t	T
R	r1

Checked sections

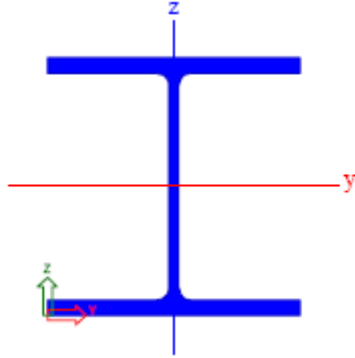
1016/305/222
1016/305/249
1016/305/272
1016/305/314
1016/305/349
1016/305/393
1016/305/437
1016/305/487
127/76/13
152/89/16
178/102/19
203/102/23
203/133/25
203/133/30
254/102/22
254/102/25
254/102/28
254/146/31
254/146/37
254/146/43
305/102/25
305/102/28
305/102/33
305/127/37

305/127/42
305/127/48
305/165/40
305/165/46
305/165/54
356/127/33
356/127/39
356/171/45
356/171/51
356/171/57
356/171/67
406/140/39
406/140/46
406/140/53
406/178/54
406/178/60
406/178/67
406/178/74
406/178/85
457/152/52
457/152/60
457/152/67
457/152/74
457/152/82

457/191/106
457/191/133
457/191/161
457/191/67
457/191/74
457/191/82
457/191/89
457/191/98
533/165/66
533/165/75
533/165/85
533/210/101
533/210/109
533/210/122
533/210/138
533/210/82
533/210/92
533/312/151
533/312/182
533/312/219
533/312/273
610/178/100
610/178/82
610/178/92

610/229/101
610/229/113
610/229/125
610/229/140
610/305/149
610/305/179
610/305/238
686/254/125
686/254/140
686/254/152
686/254/170
762/267/134
762/267/147
762/267/173
762/267/197
838/292/176
838/292/194
838/292/227
914/305/201
914/305/224
914/305/253
914/305/289
914/419/343
914/419/388

UKC

Formcode	1
Description	I Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	UKC.PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry : Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
14	It	J : Torsional constant
20	V0	Surface area
26	CM	H : Warping constant
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
B	B
H	D
s	t
t	T
R	r1

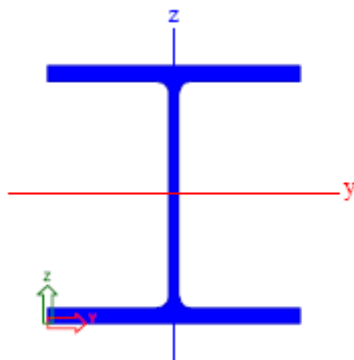
Checked sections

152/152/23
152/152/30
152/152/37
152/152/44
152/152/51
203/203/100
203/203/114
203/203/128
203/203/46
203/203/52
203/203/60
203/203/71

203/203/86
254/254/107
254/254/132
254/254/167
254/254/73
254/254/89
305/305/118
305/305/137
305/305/158
305/305/198
305/305/240
305/305/283

305/305/97
356/368/129
356/368/153
356/368/177
356/368/202
356/406/235
356/406/287
356/406/340
356/406/393
356/406/467
356/406/551
356/406/634

UKBP

Formcode	1
Description	I Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	UKBP.PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry : Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
14	It	J : Torsional constant
20	V0	Surface area
26	CM	H : Warping constant
32	G	Gs : Weight per metre

Checked variables

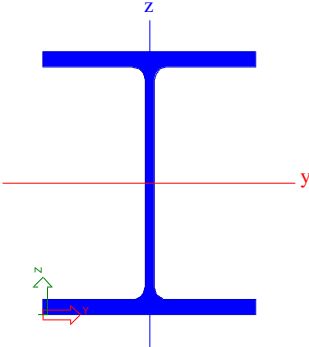
SCIA symbol	Source symbol
B	B
H	D
s	t
t	T
R	r1

Checked sections

203/203/45
203/203/54
254/254/63
254/254/71
254/254/85
305/305/110
305/305/126
305/305/149
305/305/186

305/305/223
305/305/79
305/305/88
305/305/95
356/368/109
356/368/133
356/368/152
356/368/174

W(GERD)

Formcode	1
Description	Brazilian I and H section
Source	PERFIS Gerdau Açominas Edition 2006
Revision date	29/05/09
By	PVT
PBD file	W(GERD).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Área
2	iy	rx
3	iz	ry
6	Sy	$\frac{1}{2} \times Zx$
7	Sz	$\frac{1}{2} \times Zy$
8	ly	lx
9	lz	ly
10	Wy	Wx
11	Wz	Wy
14	It	It
20	V0	u
26	CM	Cw
30	Mpy	Zx x 240 N/mm ²
31	Mpz	Zy x 240 N/mm ²
32	G	Massa linear

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	$\frac{1}{2} \times (h - d')$

Checked sections

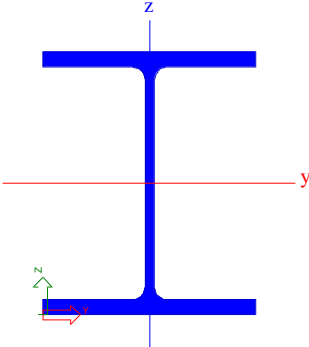
W150x13.0
W150x18.0
W150x22.5
W150x24.0
W150x29.8
W150x37.1
W200x15.0
W200x19.3
W200x22.5
W200x26.6
W200x31.3
W200x35.9
W200x41.7
W200x46.1
W200x52.0
W200x59.0
W200x71.0
W200x86.0
W250x17.9
W250x22.3
W250x25.3

W250x28.4
W250x32.7
W250x38.5
W250x44.8
W250x73.0
W250x80.0
W250x89.0
W250x101.0
W250x115.0
W310x21.0
W310x23.8
W310x28.3
W310x32.7
W310x38.7
W310x44.5
W310x52.0
W310x97.0
W310x107.0
W310x117.0
W360x32.9
W360x39.0

W360x44.0
W360x51.0
W360x57.8
W360x64.0
W360x72.0
W360x79.0
W360x91.0
W360x101.0
W360x110.0
W360x122.0
W410x38.8
W410x46.1
W410x53.0
W410x60.0
W410x67.0
W410x75.0
W410x85.0
W460x52.0
W460x60.0
W460x68.0
W460x74.0

W460x82.0
W460x89.0
W460x97.0
W460x106.0
W530x66.0
W530x72.0
W530x74.0
W530x82.0
W530x85.0
W530x92.0
W530x101.0
W530x109.0
W610x101.0
W610x113.0
W610x125.0
W610x140.0
W610x155.0
W610x174.0

HP(GERD)

Formcode	1
Description	Brazilian I and H section
Source	PERFIS Gerdau Açominas Edition 2006
Revision date	29/05/09
By	PVT
PBD file	HP(GERD).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Área
2	iy	rx
3	iz	ry
6	Sy	$\frac{1}{2} \times Zx$
7	Sz	$\frac{1}{2} \times Zy$
8	ly	lx
9	lz	ly
10	Wy	Wx
11	Wz	Wy
14	It	It
20	V0	u
26	CM	Cw
30	Mpy	Zx x 240 N/mm ²
31	Mpz	Zy x 240 N/mm ²
32	G	Massa linear

Checked variables

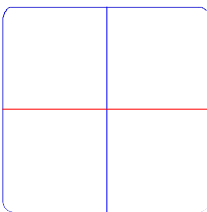
SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	$\frac{1}{2} \times (h - d')$

Checked sections

200x53.0
250x62.0
250x85.0
310x79.0
310x93.0
310x110.0
310x125.0

Rectangular hollow sections

SHS

Formcode	2
Description	Square Hollow Sections
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.22-B.23
Revision date	07/10/99
By	CADS
PBD file	SHS.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	r : Radius of gyration
3	iz	r : Radius of gyration
4	cz	
5	cy	
8	Iy	I : Second Moment of Area
9	Iz	I : Second Moment of Area
10	Wy	Z : Elastic modulus
11	Wz	Z : Elastic modulus
13	Wt	C : Torsional constant
14	It	J : Torsional constant
20	V0	Surface area
32	G	Mass

Checked variables

SCIA symbol	Source symbol
B	D
H	D
S	t
R	
R1	

Checked sections

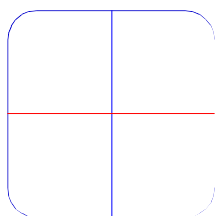
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150/150/6.3
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160/160/5.0
160/160/6.3
160/160/8.0
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180/180/12.5
180/180/16.0
180/180/5.0
180/180/6.3

180/180/8.0
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200/200/12.5
200/200/16.0
200/200/5.0
200/200/6.3
200/200/8.0
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250/250/12.5
250/250/16.0
250/250/6.3
250/250/8.0
260/260/10.0
260/260/12.5
260/260/6.3
260/260/8.0
300/300/10.0
300/300/12.5
300/300/16.0
300/300/6.3
300/300/8.0
350/350/10.0
350/350/12.5
350/350/16.0
350/350/19.0
350/350/22.0
350/350/25.0
350/350/8.0
40/40/2.5
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40/40/4.0
40/40/5.0

400/400/10.0
400/400/12.5
400/400/16.0
400/400/20.0
400/400/22.0
400/400/25.0
400/400/8.0
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450/450/16.0
450/450/19.0
450/450/22.0
450/450/25.0
450/450/28.0
450/450/32.0
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50/50/3.0
50/50/3.2
50/50/4.0
50/50/5.0
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500/500/12.0
500/500/16.0
500/500/19.0
500/500/22.0
500/500/25.0
500/500/28.0
500/500/32.0
500/500/36.0
550/550/16.0
550/550/19.0
550/550/22.0
550/550/25.0
550/550/28.0

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550/550/36.0
550/550/40.0
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60/60/4.0
60/60/5.0
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60/60/8.0
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600/600/28.0
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600/600/36.0
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70/70/5.0
70/70/6.3
70/70/8.0
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80/80/5.0
80/80/6.3
80/80/8.0
90/90/3.6
90/90/5.0
90/90/6.3
90/90/8.0

SHSCF

Formcode	2
Description	Square Hollow Sections – cold formed
Source	BS EN 10219-2:1997 Cold formed welded structural hollow sections of non-alloy and fine grain steels Part 2. pp.16-19
Revision date	07/10/99
By	CADS
PBD file	SHSCF.PBD
Code	BS EN 10219-2:1997
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Cross sectional area
2	iy	i : Radius of gyration
3	iz	i : Radius of gyration
4	cz	
5	cy	
8	Iy	I : Second Moment of Area
9	Iz	I : Second Moment of Area
10	Wy	Wel : Elastic section modulus
11	Wz	Wel : Elastic section modulus
13	Wt	Ct : Torsional modulus constant
14	It	Jt : Torsional inertia
20	V0	As : Superficial area
32	G	Mass

Checked variables

SCIA symbol	Source symbol
B	B
H	B
S	T
R	
R1	

Checked sections

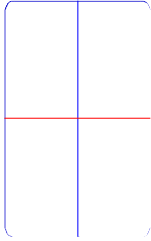
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120/120/6.3
120/120/8.0
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140/140/6.3
140/140/8.0
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150/150/12.0
150/150/12.5
150/150/16.0
150/150/4.0
150/150/5.0
150/150/6.0
150/150/6.3
150/150/8.0
160/160/10.0
160/160/12.0

160/160/12.5
160/160/16.0
160/160/4.0
160/160/5.0
160/160/6.0
160/160/6.3
160/160/8.0
180/180/10.0
180/180/12.0
180/180/12.5
180/180/16.0
180/180/4.0
180/180/5.0
180/180/6.0
180/180/6.3
180/180/8.0
20/20/2.0
200/200/10.0
200/200/12.0
200/200/12.5
200/200/16.0
200/200/4.0
200/200/5.0
200/200/6.0
200/200/6.3
200/200/8.0
220/220/10.0
220/220/12.0
220/220/12.5
220/220/16.0
220/220/5.0
220/220/6.0
220/220/6.3
220/220/8.0
25/25/2.0
25/25/2.5
25/25/3.0

250/250/10.0
250/250/12.0
250/250/12.5
250/250/16.0
250/250/5.0
250/250/6.0
250/250/6.3
250/250/8.0
260/260/10.0
260/260/12.0
260/260/12.5
260/260/16.0
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260/260/6.3
260/260/8.0
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300/300/8.0
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350/350/12.0
350/350/12.5
350/350/16.0
350/350/8.0
40/40/2.0
40/40/2.5
40/40/3.0
40/40/4.0
400/400/10.0
400/400/12.0
400/400/12.5

400/400/16.0
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50/50/3.0
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80/80/8.0
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90/90/4.0
90/90/5.0
90/90/6.0
90/90/6.3
90/90/8.0

RHS

Formcode	2
Description	Rectangular Hollow Sections
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.26-B.28
Revision date	07/10/99
By	CADS
PBD file	RHS.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	Radius of gyration / axis x-x
3	iz	Radius of gyration / axis y-y
4	cz	
5	cy	
8	Iy	Second Moment of Area / axis x-x
9	Iz	Second Moment of Area / axis y-y
10	Wy	Elastic modulus / axis x-x
11	Wz	Elastic modulus / axis y-y
13	Wt	C : Torsional constant
14	It	J : Torsional constant
20	V0	Surface area
32	G	Mass

Checked variables

SCIA symbol	Source symbol
B	B
H	D
S	t
R	
R1	

Checked sections

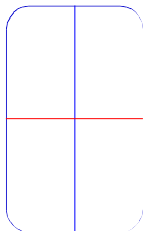
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100/60/5.0
100/60/6.3
100/60/8.0
120/60/3.6
120/60/5.0
120/60/6.3
120/60/8.0
120/80/10.0
120/80/5.0
120/80/6.3
120/80/8.0
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150/100/12.5
150/100/4.0
150/100/5.0
150/100/6.3
150/100/8.0
160/80/10.0
160/80/12.5
160/80/4.0
160/80/5.0
160/80/6.3
160/80/8.0
200/100/10.0
200/100/12.5
200/100/16.0
200/100/5.0
200/100/6.3
200/100/8.0

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200/120/12.5
200/120/16.0
200/120/5.0
200/120/6.3
200/120/8.0
200/150/10.0
200/150/12.5
200/150/16.0
200/150/5.0
200/150/6.3
200/150/8.0
250/100/10.0
250/100/12.5
250/100/16.0
250/100/6.3
250/100/8.0
250/150/10.0
250/150/12.5
250/150/16.0
250/150/5.0
250/150/6.3
250/150/8.0
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260/140/12.5
260/140/16.0
260/140/6.3
260/140/8.0
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300/100/16.0
300/100/6.3
300/100/8.0
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300/200/12.5
300/200/16.0
300/200/6.3

300/200/8.0
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300/250/12.5
300/250/16.0
300/250/6.3
300/250/8.0
350/150/10.0
350/150/12.5
350/150/16.0
350/150/6.3
350/150/8.0
350/250/10.0
350/250/12.5
350/250/16.0
350/250/8.0
400/120/10.0
400/120/12.5
400/120/6.3
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400/200/8.0
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400/300/12.5
400/300/16.0
400/300/8.0
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450/250/12.5
450/250/16.0
450/250/8.0

50/30/2.5
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50/30/3.2
50/30/4.0
50/30/5.0
500/200/10.0
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60/40/4.0
60/40/5.0
60/40/6.3
80/40/3.0
80/40/3.2
80/40/4.0
80/40/5.0
80/40/6.3
80/40/8.0
90/50/3.0
90/50/3.6
90/50/5.0
90/50/6.3
90/50/8.0

RHSCF

Formcode	2
Description	Rectangular Hollow Sections – cold formed
Source	BS EN 10219-2:1997 Cold formed welded structural hollow sections of non-alloy and fine grain steels Part 2. pp.21-26
Revision date	07/10/99
By	CADS
PBD file	RHSCF.PBD
Code	BS EN 10219-2:1997
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Cross sectional area
2	iy	ixx : Radius of gyration
3	iz	iyx : Radius of gyration
4	cz	
5	cy	
8	Iy	Ixx : Second Moment of Area
9	Iz	Iyy : Second Moment of Area
10	Wy	Wel,xx : Elastic section modulus
11	Wz	Wel,yy : Elastic section modulus
13	Wt	Ct : Torsional modulus constant
14	It	Jt : Torsional inertia
20	V0	As : Superficial area
32	G	Mass

Checked variables

SCIA symbol	Source symbol
B	B
H	H
S	T
R	
R1	

Checked sections

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100/40/4.0
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100/60/5.0
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100/80/3.0
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100/80/5.0
100/80/6.0
100/80/6.3
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120/60/4.0
120/60/5.0
120/60/6.0
120/60/6.3
120/60/8.0
120/80/3.0
120/80/4.0
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120/80/6.3
120/80/8.0
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140/80/5.0

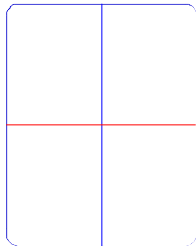
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150/100/6.0
150/100/6.3
150/100/8.0
160/80/10.0
160/80/12.0
160/80/12.5
160/80/4.0
160/80/5.0
160/80/6.0
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160/80/8.0
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180/100/6.3
180/100/8.0
200/100/10.0
200/100/12.0
200/100/12.5
200/100/4.0
200/100/5.0
200/100/6.0
200/100/6.3
200/100/8.0
200/120/10.0
200/120/12.0

200/120/12.5
200/120/4.0
200/120/5.0
200/120/6.0
200/120/6.3
200/120/8.0
250/150/10.0
250/150/12.0
250/150/12.5
250/150/16.0
250/150/5.0
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260/180/10.0
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260/180/8.0
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300/100/8.0
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300/150/16.0
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300/150/6.3
300/150/8.0
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300/200/12.0

300/200/12.5
300/200/16.0
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300/200/6.3
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40/20/3.0
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90/50/2.0
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90/50/5.0

VHP

Formcode	2
Description	Voest structural hollow section (square and rectangular) (Voest-HohlProfile)
Source	VHP- Technische Daten Voest-Alpine Krems 04/99 pp.3-9
Revision date	20/10/99
By	CVL
PBD file	VHP.PBD
Code	EN 10219
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	ix : Radius of gyration
3	iz	iy : Radius of gyration
8	Iy	Jx : Second Moment of Area
9	Iz	Jy : Second Moment of Area
10	Wy	Wx : Elastic section modulus
11	Wz	Wy :Elastic section modulus
13	Wt	WD : Torsional modulus constant
14	It	JD : Torsional inertia constant
32	G	G :Mass

Checked variables

SCIA symbol	Source symbol
B	b
H	a
S	t
R	R

Checked sections

100/100x10.0	120/50x3.0	140/80x10.0	160/160x10.0
100/100x3.0	120/50x4.0	140/80x3.0	160/160x4.0
100/100x4.0	120/50x5.0	140/80x4.0	160/160x6.0
100/100x5.0	120/50x6.0	140/80x5.0	160/160x7.0
100/100x6.0	120/60x3.0	140/80x6.0	160/160x8.0
100/100x7.0	120/60x3.5	140/80x7.0	160/80x10.0
100/100x8.0	120/60x4.0	140/80x8.0	160/80x3.0
100/40x3.0	120/60x5.0	150/100x10.0	160/80x4.0
100/40x4.0	120/60x6.0	150/100x3.0	160/80x5.0
100/40x5.0	120/60x7.0	150/100x4.0	160/80x6.0
100/50x3.0	120/80x3.0	150/100x5.0	160/80x7.0
100/50x4.0	120/80x4.0	150/100x6.0	160/80x8.0
100/50x5.0	120/80x5.0	150/100x7.0	160/90x10.0
100/50x6.0	120/80x6.0	150/100x8.0	160/90x3.0
100/60x3.0	120/80x7.0	150/120x10.0	160/90x4.0
100/60x3.5	120/80x8.0	150/120x3.0	160/90x5.0
100/60x4.0	125/125x10.0	150/120x4.0	160/90x6.0
100/60x5.0	125/125x3.0	150/120x5.0	160/90x7.0
100/60x6.0	125/125x4.0	150/120x6.0	160/90x8.0
100/80x3.0	125/125x5.0	150/120x8.0	165/88x5.0
100/80x4.0	125/125x6.0	150/150x10.0	166/88x10.0
100/80x5.0	125/125x7.0	150/150x3.0	180/100x6.0
100/80x6.0	125/125x8.0	150/150x4.0	180/100x10.0
110/110x10.0	127/127x10.0	150/150x5.0	180/100x3.0
110/110x3.0	130/130x10.0	150/150x6.0	180/100x4.0
110/110x4.0	140/100x3.0	150/150x7.0	180/100x5.0
110/110x5.0	140/100x4.0	150/150x8.0	180/100x7.0
110/110x6.0	140/100x5.0	150/50x3.0	180/100x8.0
110/110x7.0	140/100x6.0	150/50x4.0	180/100x8.8
110/110x8.0	140/100x8.0	150/50x5.0	180/120x10.0
120/100x10.0	140/140x10.0	150/50x6.0	180/120x3.0
120/100x3.0	140/140x3.0	150/75x3.0	180/120x4.0
120/100x4.0	140/140x4.0	150/75x4.0	180/120x5.0
120/100x5.0	140/140x5.0	150/75x5.0	180/120x6.0
120/100x6.0	140/140x6.0	150/75x6.0	180/120x8.0
120/100x7.0	140/140x7.0	150/75x7.0	180/180x10.0
120/100x8.0	140/140x8.0	150/75x8.0	180/180x5.0
120/120x10.0	140/50x3.0	152.4/101.6x10.0	180/180x6.0
120/120x3.0	140/60x3.0	152.4/152.4x10.0	180/180x7.0
120/120x4.0	140/60x4.0	160/100x10.0	180/180x8.0
120/120x5.0	140/60x5.0	160/100x3.0	180/180x8.8
120/120x6.0	140/60x6.0	160/100x4.0	180/80x10.0
120/120x7.0	140/70x3.0	160/100x5.0	180/80x3.0
120/120x8.0	140/70x4.0	160/100x6.0	180/80x4.0
120/40x3.0	140/70x5.0	160/100x8.0	180/80x5.0
120/40x4.0	140/70x6.0	160/120x10.0	180/80x6.0

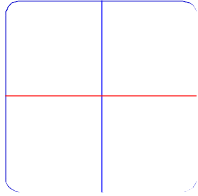
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20/20x2.0
200/100x10.0
200/100x3.0
200/100x4.0
200/100x5.0
200/100x6.0
200/100x7.0
200/100x8.0
200/120x10.0
200/120x4.0
200/120x5.0
200/120x6.0
200/120x7.0
200/120x8.0
200/150x10.0
200/150x4.0
200/150x5.0
200/150x6.0
200/150x7.0
200/150x8.0
200/200x10.0
200/200x5.0
200/200x6.0
200/200x7.0
200/200x8.0
200/80x10.0
200/80x3.0
200/80x4.0
200/80x5.0
200/80x6.0
200/80x8.0
220/120x10.0
220/120x4.0
220/120x5.0
220/120x6.0
220/120x7.0
220/120x8.0

220/140x10.0
220/140x5.0
220/140x6.0
220/140x7.0
220/140x8.0
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220/220x6.0
220/220x7.0
220/220x8.0
25/25x2.0
25/25x2.5
25/25x3.0
250/100x10.0
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250/100x5.0
250/100x6.0
250/100x8.0
250/150x10.0
250/150x5.0
250/150x6.0
250/150x7.0
250/150x8.0
260/140x10.0
260/140x5.0
260/140x6.0
260/140x8.0
28/28x4.0
30/30x2.5
30/30x3.0
30/30x4.0
40/20x3.0
40/30x3.0
40/40x2.0
40/40x2.5
40/40x3.0
40/40x4.0
40/40x5.0
50/20x2.0

50/25x2.0
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50/25x3.0
50/30x2.5
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70/70x6.0
70/70x7.0

75/50x3.0
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80/30x4.0
80/40x3.0
80/40x4.0
80/40x5.0
80/50x3.0
80/50x4.0
80/50x5.0
80/50x6.0
80/60x4.0
80/60x5.0
80/60x6.0
80/80x3.0
80/80x3.5
80/80x4.0
80/80x5.0
80/80x6.0
80/80x7.0
80/80x8.0
90/50x3.0
90/50x5.0
90/50x6.0
90/60x6.0
90/90x3.0
90/90x3.5
90/90x4.0
90/90x5.0
90/90x6.0
90/90x7.0
90/90x8.0

MSH

Formcode	2
Description	Mannesmann structural hollow section (square and rectangular)
Source	Structural hollow sections (MSH) circular – square – rectangular Vallourec & Mannesmann Tubes Edition 1998 pp.29-45
Revision date	20/10/99
By	CVL
PBD file	MSH.PBD
Code	EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	ixx : Radius of gyration
3	iz	iyy : Radius of gyration
8	Iy	Ixx : Second Moment of Area
9	Iz	Iyy : Second Moment of Area
10	Wy	W _{elxx} : Elastic section modulus
11	Wz	W _{elyy} : Elastic section modulus
13	Wt	C _t : Torsional modulus constant
14	I _t	J _t : Torsional inertia constant
20	V0	A _s : Surficial area
32	G	M : Mass

Checked variables

SCIA symbol	Source symbol
B	B
H	H
S	T
R	1.5*T
R1	0.5*T

Checked sections

100x100x10.0	100x80x11.0	120x120x14.2	130x130x14.2
100x100x11.0	100x80x12.5	120x120x16.0	130x130x16.0
100x100x12.5	100x80x4.0	120x120x4.0	130x130x5.0
100x100x14.2	100x80x4.5	120x120x4.5	130x130x5.6
100x100x4.0	100x80x5.0	120x120x5.0	130x130x6.3
100x100x4.5	100x80x5.6	120x120x5.6	130x130x7.1
100x100x5.0	100x80x6.3	120x120x6.3	130x130x8.0
100x100x5.6	100x80x7.1	120x120x7.1	130x130x8.8
100x100x6.3	100x80x8.0	120x120x8.0	140x140x10.0
100x100x7.1	100x80x8.8	120x120x8.8	140x140x11.0
100x100x8.0	110x110x10.0	120x60x10.0	140x140x12.5
100x100x8.8	110x110x11.0	120x60x11.0	140x140x14.2
100x50x10.0	110x110x12.5	120x60x12.5	140x140x16.0
100x50x11.0	110x110x14.2	120x60x3.6	140x140x17.5
100x50x12.5	110x110x4.0	120x60x4.0	140x140x5.0
100x50x3.6	110x110x4.5	120x60x4.5	140x140x5.6
100x50x4.0	110x110x5.0	120x60x5.0	140x140x6.3
100x50x4.5	110x110x5.6	120x60x5.6	140x140x7.1
100x50x5.0	110x110x6.3	120x60x6.3	140x140x8.0
100x50x5.6	110x110x7.1	120x60x7.1	140x140x8.8
100x50x6.3	110x110x8.0	120x60x8.0	140x70x10.0
100x50x7.1	110x110x8.8	120x60x8.8	140x70x11.0
100x50x8.0	110x60x10.0	120x80x10.0	140x70x12.5
100x50x8.8	110x60x11.0	120x80x11.0	140x70x14.2
100x60x10.0	110x60x12.5	120x80x12.5	140x70x4.0
100x60x11.0	110x60x3.6	120x80x14.2	140x70x4.5
100x60x12.5	110x60x4.0	120x80x4.0	140x70x5.0
100x60x3.6	110x60x4.5	120x80x4.5	140x70x5.6
100x60x4.0	110x60x5.0	120x80x5.0	140x70x6.3
100x60x4.5	110x60x5.6	120x80x5.6	140x70x7.1
100x60x5.0	110x60x6.3	120x80x6.3	140x70x8.0
100x60x5.6	110x60x7.1	120x80x7.1	140x70x8.8
100x60x6.3	110x60x8.0	120x80x8.0	140x80x10.0
100x60x7.1	110x60x8.8	120x80x8.8	140x80x11.0
100x60x8.0	120x120x10.0	130x130x10.0	140x80x12.5
100x60x8.8	120x120x11.0	130x130x11.0	140x80x14.2
100x80x10.0	120x120x12.5	130x130x12.5	140x80x4.0

140x80x4.5
140x80x5.0
140x80x5.6
140x80x6.3
140x80x7.1
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160x90x8.8
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180x100x6.3
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180x100x8.8
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180x60x6.3

180x60x7.1
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300x150x12.5
300x150x7.1

300x150x8.0
300x150x8.8
300x200x10.0
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300x200x12.5
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300x200x8.8
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300x300x7.1
300x300x8.0
300x300x8.8
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70x40x6.3
70x40x7.1
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70x40x8.8
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70x50x11.0
70x50x12.5
70x50x3.2
70x50x3.6
70x50x4.0

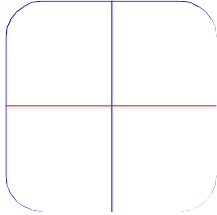
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70x50x5.6
70x50x6.3
70x50x7.1
70x50x8.0
70x50x8.8
70x70x10.0
70x70x11.0
70x70x12.5
70x70x3.2
70x70x3.6
70x70x4.0
70x70x4.5
70x70x5.0
70x70x5.6
70x70x6.3
70x70x7.1
70x70x8.0
70x70x8.8
80x40x10.0
80x40x11.0
80x40x12.5
80x40x2.9
80x40x3.2
80x40x3.6
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80x40x4.5
80x40x5.0
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80x40x6.3
80x40x7.1
80x40x8.0
80x40x8.8

80x50x10.0
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80x50x12.5
80x50x3.2
80x50x3.6
80x50x4.0
80x50x4.5
80x50x5.0
80x50x5.6
80x50x6.3
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80x60x3.6
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80x60x5.0
80x60x5.6
80x60x6.3
80x60x7.1
80x60x8.0
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80x80x4.0
80x80x4.5
80x80x5.0
80x80x5.6

80x80x6.3
80x80x7.1
80x80x8.0
80x80x8.8
90x50x10.0
90x50x11.0
90x50x12.5
90x50x3.2
90x50x3.6
90x50x4.0
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90x50x5.0
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90x90x6.3
90x90x7.1
90x90x8.0
90x90x8.8

QRO

Formcode	2
Description	Square Hollow Sections
Source	<p>Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.137-140 pp.147 pp.150-153 pp.161</p> <p>The nomenclature is according to</p> <p>Materialbezeichnungen für den Datenaustausch im Stahlbau Teil 1</p>

	Empfehlungen des DSTV-Arbeitsausschusses EDV November 1997
Revision date	03/03/00
By	GV, CVL
PBD file	QRO.PBD
Code	DIN 59410
	

Checked properties

Property number	SCIA symbol	Source symbol (DIN1080)
1	A0	A
2	iy	iy
3	iz	iy
8	ly	ly
9	lz	ly
10	Wy	Wy
11	Wz	Wy
13	Wt	Wt
14	It	It
20	V0	U
30	Mply	$W_{pl} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl} \times 240 \text{ N/mm}^2$
32	G	G

Checked variables

SCIA symbol	Source symbol
B	a
H	a
S	t
R	r
R1	r-t

Checked sections

100X10
100X11
100X12.5
100X3.2K
100X3.6
100X3K
100X4
100X4.5
100X4K
100X5
100X5.6
100X5K
100X6.3
100X6.3K
100X7.1
100X7K
100X8
100X8.8
100X8.8K
100X8K
110X10
110X11
110X12.5
110X3.6
110X3K
110X4
110X4.5
110X4K
110X5
110X5.6
110X5K
110X6.3
110X6K
110X7.1
110X7K
110X8
110X8.8
110X8.8K
110X8K
120X10
120X11
120X12.5
120X3.2K
120X3.6
120X3K
120X4
120X4.5
120X4K

120X5
120X5.6
120X5K
120X6.3
120X6.3K
120X7.1
120X7K
120X8
120X8.8
120X8.8K
120X8K
125X3K
125X4K
125X5K
125X6K
125X7K
125X8.8K
125X8K
140X10
140X10K
140X11
140X12.5
140X14.2
140X16
140X3K
140X4K
140X5
140X5.6
140X5K
140X6.3
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140X7.1
140X7K
140X8
140X8.8
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140X8K
150X10
150X10K
150X11
150X12.5
150X14.2
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150X5.6
150X5K
150X6.3

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150X7.1
150X7K
150X8
150X8.8
150X8.8K
150X8K
160X10
160X10K
160X11
160X12.5
160X14.2
160X16
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160X5.6
160X5K
160X6.3
160X6.3K
160X7.1
160X7K
160X8
160X8.8
160X8.8K
160X8K
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180X14.2
180X16
180X4K
180X5K
180X6.3
180X6.3K
180X7.1
180X8
180X8.8
180X8K
200X10
200X10K
200X11
200X12.5
200X12.5K
200X14.2
200X16
200X5K

200X6.3
200X6.3K
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220X5K
220X6.3
220X6.3K
220X7.1
220X8
220X8.8
220X8K
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250X12.5K
250X5K
250X6.3K
250X8K
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25X2K
260X10
260X10K
260X11
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260X14.2
260X16
260X17.5
260X5K
260X6.3K
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260X8.8
260X8K
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280X12.5
280X12.5K
280X6.3K

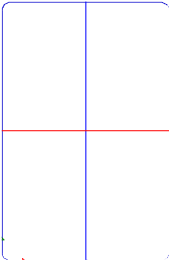
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300X6.3K
300X8K
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30X2.6K
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30X3K
30X4K
320X10
320X10K
320X12.5
320X12.5K
320X16
320X6.3K
320X8K
350X10K
350X12.5K
350X6.3K
350X8K
35X1.5K
35X2K
35X3K
35X4K
360X10
360X12.5
360X16
400X10K
400X12.5
400X12.5K
400X16
400X20
400X8K
40X1.6K
40X2.6

40X2.6K
40X2.9
40X2K
40X3.2
40X3.2K
40X3.6
40X3K
40X4
40X4.5
40X4K
40X5
40X5.6
40X6
45X2K
45X3K
45X4K
50X1.6K
50X2.6
50X2.6K
50X2.9
50X2K
50X3.2
50X3.2K
50X3.6
50X4
50X4.5
50X4K
50X5
50X5.6
50X5K
50X6
55X2K
55X3K
55X4K
60X2.6K
60X2.9
60X2K

60X3.2
60X3.2K
60X3.6
60X3K
60X4
60X4.5
60X4K
60X5
60X5.6
60X5K
60X6.3
60X6.5
60X6K
70X10
70X2.6K
70X3.2
70X3.2K
70X3.6
70X3K
70X4
70X4.5
70X4K
70X5
70X5.6
70X5K
70X6.3
70X6K
70X7.1
70X8
70X8.8
80X10
80X2.6K
80X3.2
80X3.2K
80X3.6
80X3K
80X4

80X4.5
80X4K
80X5
80X5.6
80X5K
80X6.3
80X6.3K
80X7.1
80X7K
80X8
80X8.8
80X8K
90X10
90X3.2K
90X3.6
90X3K
90X4
90X4.5
90X4K
90X5
90X5.6
90X5K
90X6.3
90X6.3K
90X7.1
90X7K
90X8
90X8.8
90X8.8K
90X8K

RRO

Formcode	2
Description	Rectangular Hollow Sections
Source	<p>Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.141-146 pp.148-149 pp.154-160 pp.162-163</p> <p>The nomenclature is according to</p> <p>Materialbezeichnungen für den Datenaustausch im Stahlbau Teil 1 Empfehlungen des DSTV-Arbeitsausschusses EDV November 1997</p>
Revision date	20/03/00
By	FVI/CM
PBD file	RRO.PBD
Code	DIN 59410
	

Checked properties

Property number	SCIA symbol	Source symbol (DIN1080)
1	A0	A
2	iy	iy
3	iz	iz
8	Iy	Iy
9	Iz	Iz
10	Wy	Wy
11	Wz	Wz
13	Wt	Wt
14	It	It
20	V0	U
30	Mply	$W_{ply} \times 240 \text{ N/mm}^2$

31	Mplz	$W_{plz} \times 240 \text{ N/mm}^2$
32	G	G

Checked variables

SCIA symbol	Source symbol
B	b
H	a
S	t
R	r
R1	r-t

Checked sections

100X40X2K
100X40X3K
100X40X4K
100X40X5K
100X50X10
100X50X2K
100X50X3.2
100X50X3.6
100X50X3K
100X50X4
100X50X4.5
100X50X4K
100X50X5
100X50X5.6
100X50X5K
100X50X6.3
100X50X6K
100X50X7.1
100X50X7K
100X50X8
100X50X8.8
100X50X8K
100X60X10
100X60X2.6K
100X60X3.2
100X60X3.2K
100X60X3.6
100X60X4
100X60X4.5
100X60X4K
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100X60X5.6

100X60X5K
100X60X6.3
100X60X6.3K
100X60X7.1
100X60X7K
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100X70X6K
100X70X7K
100X70X8.8K
100X70X8K
100X80X3K
100X80X4K
100X80X5K
100X80X6K
100X80X7K
100X80X8.8K
100X80X8K
110X60X10
110X60X3.2
110X60X3.6
110X60X4
110X60X4.5
110X60X5
110X60X5.6
110X60X6.3
110X60X7.1
110X60X8

110X60X8.8
110X70X3.2K
110X70X4K
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150X100X11

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180X120X8K
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180X80X4K

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180X80X8K
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50X30X2.6K
50X30X2.9

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60X30X3K
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60X40X2.6K
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60X40X2K
60X40X3.2
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60X40X4
60X40X4.5
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60X50X4K
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70X40X6

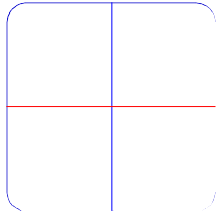
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80X40X4
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80X40X4K

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80X40X5K
80X40X6.3
80X40X6.5
80X40X6K
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80X50X3K
80X50X4K
80X50X5K
80X60X2K
80X60X3K
80X60X4K

80X60X5K
80X60X6K
85X40X2.5K
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90X45X2K
90X45X3K
90X45X4K
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90X50X3.2
90X50X3.2K
90X50X3.6
90X50X4
90X50X4.5

90X50X4K
90X50X5
90X50X5.6
90X50X5K
90X50X6.3
90X50X7.1
90X50X8
90X50X8.8
90X65X2.5K
90X70X3K
90X70X4K
90X70X5K

HSS

Formcode	2
Description	American Rectangular and Square Hollow Strcutural Sections Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	HSS.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	b
H	d
S	tnom
R	2*tnom
R1	tnom

Checked sections

101.6X101.6X12.7
101.6X101.6X3.2
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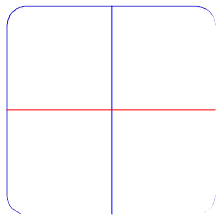
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254X127X7.9
254X127X9.5
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254X152.4X7.9
254X152.4X9.5
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254X76.2X9.5
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HSS(Imp)

Formcode	2
Description	American Rectangular and Square Hollow Strcutural Sections Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	HSS(Imp).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	b
H	d
S	tnom
R	2*tnom
R1	tnom

Checked sections

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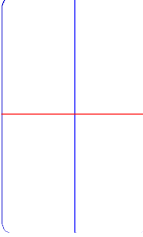
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CFRHS

Formcode	2
Description	Cold formed Square & Rectangular Hollow Sections
Source	Rautaruukki Oyj Structural Hollow Sections EN10219 Ed.2007 pp.15-19
Revision date	15/03/07
By	PVT
PBD file	CFRHS.PBD
Code	EN 10219
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Cross-section area
2	iy	ix: Radius of gyration
3	iz	iy: Radius of gyration
8	Iy	Ix: Moment of inertia
9	Iz	Iy: Moment of inertia
10	Wy	Wx: Section modulus
11	Wz	Wy : Section modulus
13	Wt	Wv : Section modulus in torsion
14	It	Iv : Torsion modulus
20	V0	Au: External surface area
30	Mpy	Wpx x 240 N/mm ²
31	Mpz	Wpy x 240 N/mm ²
32	G	M: Weight

Checked variables

SCIA symbol	Source symbol
B	B
H	H
S	T
R	R
R1	

Checked sections

25X25X2
25X25X2.5
25X25X3
30X30X2
30X30X2.5
30X30X3
40X40X2
40X40X2.5
40X40X3
40X40X4
50X50X2
50X50X2.5
50X50X3
50X50X4
50X50X5
60X60X2
60X60X2.5
60X60X3
60X60X4
60X60X5
70X70X2
70X70X2.5
70X70X3
70X70X4
70X70X5
80X80X2
80X80X2.5
80X80X3
80X80X4
80X80X5
80X80X6
90X90X2
90X90X2.5

90X90X3
90X90X4
90X90X5
90X90X6
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100X100X2.5
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100X100X4
100X100X5
100X100X6
100X100X7.1
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100X100X10
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110X110X4
110X110X5
110X110X6
120X120X3
120X120X4
120X120X5
120X120X5.6
120X120X6
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120X120X10
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140X140X7.1
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160X160X12.5
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180X180X12.5
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200X200X7.1
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200X200X8.8
200X200X10
200X200X12.5

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250X250X8.8
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50X30X2.5

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60X40X3
60X40X4
60X40X5
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70X50X3
70X50X4
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100X60X6

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140X60X5
140X60X6

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140X70X4
140X70X5
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160X80X8.8
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160X120X6

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160X120X10
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180X100X5.6
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180X120X5
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180X120X10
180X120X12.5
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200X80X5
200X80X6
200X80X7.1
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200X80X8.8
200X80X10
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200X100X5
200X100X6
200X100X7.1
200X100X8
200X100X8.8
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200X100X12.5
200X120X5
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220X120X7.1

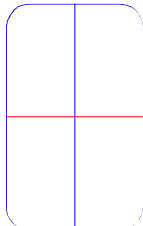
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250X150X10
250X150X12.5

260X140X6
260X140X7.1
260X140X8
260X140X8.8
260X140X10
260X140X12.5
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260X180X7.1
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260X180X10
300X100X5
300X100X6
300X100X7.1

300X100X8
300X100X8.8
300X100X10
300X100X12.5
300X150X6
300X150X7.1
300X150X8
300X150X10
300X150X12.5
300X200X6
300X200X7.1
300X200X8
300X200X8.8
300X200X10

300X200X12.5
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400X100X7.1
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400X100X10
400X200X6
400X200X7.1
400X200X8
400X200X8.8
400X200X10
400X200X12.5

RRK

Formcode	2
Description	Cold formed square and rectangular hollow section
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.56-59
Revision date	07/05/07
By	PVT
PBD file	RRK.PBD
Code	EN 10219-2
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy

3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
13	Wt	Ct
14	It	K=Ix
20	V0	Um
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	m

Checked variables

SCIA Symbol	Source Symbol
B	b
H	h
S	t
R	ra
R1	ri

Checked sections

100/100/10
100/100/3
100/100/4
100/100/5
100/100/6
100/100/8
100/40/3
100/40/4
100/50/3
100/50/6
100/60/3
100/60/4
100/60/6
100/80/4
100/80/6
110/110/4
120/120/10
120/120/3
120/120/4
120/120/5
120/120/6
120/120/8

120/50/4
120/60/3
120/60/4
120/60/6
120/80/4
120/80/5
120/80/8
140/140/10
140/140/5
140/140/6
140/140/8
140/60/5
140/70/4
140/70/6
140/80/4
140/80/6
150/100/10
150/100/3
150/100/4
150/100/6
150/100/8
150/150/10

150/150/4
150/150/5
150/150/6
150/150/8
150/50/4
150/75/5
160/160/10
160/160/4
160/160/5
160/160/6
160/160/8
160/80/10
160/80/4
160/80/5
160/80/8
160/90/6
180/100/10
180/100/5.6
180/180/10
180/180/6
180/180/8
180/80/5

200/100/10
200/100/4
200/100/5
200/100/6
200/100/8
200/120/6.3
200/150/5
200/200/10
200/200/5
200/200/6
200/200/8
200/80/4
220/220/5
220/220/6
220/220/8
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250/150/6
250/150/8
250/250/10
250/250/6
250/250/8
260/260/10

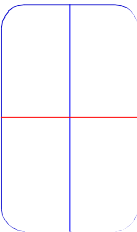
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300/200/10
300/200/12.5
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300/200/8
300/300/10

300/300/12.5
40/40/3
40/40/4
50/30/4
50/50/3
50/50/4
50/50/5
50/50/6
60/40/3
60/60/3

60/60/4
60/60/6
70/70/4
70/70/5
80/40/3
80/40/5
80/50/5
80/60/3
80/60/5
80/80/4

80/80/5
80/80/6
80/80/8
90/50/3
90/50/5
90/90/4
90/90/5
90/90/8

RRW

Formcode	2
Description	Square and rectangular hollow section
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.60-63
Revision date	07/05/07
By	PVT
PBD file	RRW.PBD
Code	EN 10210-2
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz

13	Wt	Ct
14	It	K=Ix
20	V0	Um
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	m

Checked variables

SCIA Symbol	Source Symbol
B	b
H	h
S	t
R	ra
R1	ri

Checked sections

100/100/10
100/100/4
100/100/5
100/100/6
100/100/6.3
100/100/8
100/50/3
100/50/4
100/50/4.5
100/50/5
100/50/6.3
100/50/8
100/60/3.6
100/60/4.5
100/60/5
100/60/6.3
100/60/8
100/80/6
110/110/4
110/110/5
110/110/6.3
110/110/8
110/60/3.6
110/60/4.5
110/60/7.1
120/120/10
120/120/12.5

120/120/4.5
120/120/5
120/120/6.3
120/120/8
120/60/10
120/60/3.6
120/60/4
120/60/4.5
120/60/5
120/60/6.3
120/60/8
120/80/10
120/80/5
120/80/6.3
120/80/8
140/140/10
140/140/12.5
140/140/5
140/140/5.6
140/140/6.3
140/140/7.1
140/140/8
140/140/8.8
140/70/4
140/70/5
140/70/6.3
140/70/7.1

140/80/10
140/80/4
140/80/5
140/80/6.3
140/80/8
150/100/10
150/100/12.5
150/100/5
150/100/6.3
150/100/8
150/150/10
150/150/12.5
150/150/16
150/150/5
150/150/5.6
150/150/6.3
150/150/8
150/50/4
150/50/6
160/160/10
160/160/12.5
160/160/16
160/160/5
160/160/6.3
160/160/8
160/80/10
160/80/12.5

160/80/5
160/80/6.3
160/80/8
160/90/10
160/90/4
160/90/5.6
160/90/7.1
180/100/10
180/100/5.6
180/100/7.1
180/180/10
180/180/12.5
180/180/16
180/180/6.3
180/180/8
180/180/8.8
200/100/10
200/100/12.5
200/100/16
200/100/17.5
200/100/5
200/100/6.3
200/100/8
200/120/10
200/120/12.5
200/120/5
200/120/6.3

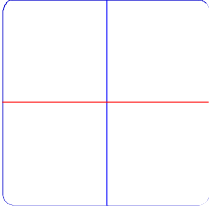
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220/120/6.3
220/120/8
220/220/10
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220/220/8
250/150/10
250/150/12.5
250/150/16
250/150/5
250/150/6.3
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250/250/12.5
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250/250/6.3
250/250/7.1
250/250/8
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260/140/6.3
260/140/8

260/180/10
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260/180/8
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260/260/14.2
260/260/7.1
260/260/8.8
300/200/10
300/200/12.5
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300/200/8
300/300/10
300/300/12.5
300/300/16
300/300/6.3
300/300/8
350/350/10
350/350/12.5
350/350/16
350/350/8
40/40/3
40/40/3.2
40/40/4
40/40/5
400/200/10
400/200/12.5
400/200/16
400/200/7.1
400/200/8

400/400/10
400/400/12.5
400/400/16
450/250/10
450/250/12.5
450/250/16
450/250/8
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50/30/4
50/30/5
50/50/3
50/50/3.2
50/50/4
50/50/5
50/50/6.3
500/200/12.5
500/200/16
500/300/10
500/300/12.5
500/300/16
60/40/3
60/40/4
60/40/5
60/40/6.3
60/60/3
60/60/3.2
60/60/4
60/60/5
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70/40/4
70/70/3.6

70/70/4
70/70/5
70/70/6.3
70/70/8
80/40/3.2
80/40/4
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80/80/4.5
80/80/5
80/80/5.6
80/80/6.3
80/80/7.1
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90/90/7.1
90/90/8

SHS(Ju)

Formcode	2
Description	Jumbo 355 Square Hollow Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	SHS(Ju).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry :Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
13	Wt	C : Torsional modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
B	D
H	D
s	t
R	r1

Checked sections

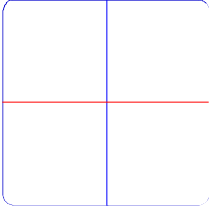
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400/400/40.0
450/450/12.0
450/450/16.0
450/450/19.0
450/450/22.0
450/450/25.0
450/450/28.0
450/450/32.0
450/450/36.0
450/450/40.0
500/500/12.0
500/500/16.0
500/500/19.0
500/500/22.0

500/500/25.0
500/500/28.0
500/500/32.0
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500/500/40.0
500/500/45.0
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650/650/45.0
650/650/50.0
650/650/55.0
650/650/60.0
700/700/16.0
700/700/19.0

700/700/22.0
700/700/25.0
700/700/28.0
700/700/32.0
700/700/36.0
700/700/40.0
700/700/45.0
700/700/50.0
700/700/55.0
700/700/60.0
750/750/16.0
750/750/19.0
750/750/22.0
750/750/25.0
750/750/28.0
750/750/32.0
750/750/36.0
750/750/40.0
750/750/45.0
750/750/50.0
750/750/55.0
750/750/60.0

SHS(Ce)

Formcode	2
Description	Celsius 355 Square Hollow Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	SHS(Ce).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry :Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
13	Wt	C : Torsional modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
B	D
H	D
s	t
R	r1

Checked sections

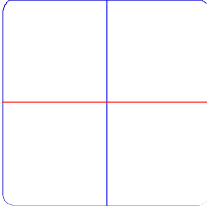
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100/100/4.0
100/100/5.0
100/100/6.3
100/100/8.0
120/120/10.0
120/120/12.5
120/120/5.0
120/120/6.3
120/120/8.0
140/140/10.0
140/140/12.5
140/140/5.0
140/140/6.3
140/140/8.0
150/150/10.0
150/150/12.5
150/150/5.0
150/150/6.3
150/150/8.0
160/160/10.0
160/160/12.5
160/160/14.2
160/160/5.0

160/160/6.3
160/160/8.0
180/180/10.0
180/180/12.5
180/180/14.2
180/180/16.0
180/180/6.3
180/180/8.0
200/200/10.0
200/200/12.5
200/200/14.2
200/200/16.0
200/200/5.0
200/200/6.3
200/200/8.0
250/250/10.0
250/250/12.5
250/250/14.2
250/250/16.0
250/250/6.3
250/250/8.0
260/260/10.0
260/260/12.5
260/260/14.2

260/260/16.0
260/260/6.3
260/260/8.0
300/300/10.0
300/300/12.5
300/300/14.2
300/300/16.0
300/300/6.3
300/300/8.0
350/350/10.0
350/350/12.5
350/350/14.2
350/350/16.0
350/350/8.0
40/40/3.0
40/40/3.2
40/40/4.0
40/40/5.0
400/400/10.0
400/400/12.5
400/400/14.2
400/400/16.0
400/400/20.0
50/50/3.0

50/50/3.2
50/50/4.0
50/50/5.0
50/50/6.3
60/60/3.0
60/60/3.2
60/60/4.0
60/60/5.0
60/60/6.3
60/60/8.0
70/70/3.6
70/70/5.0
70/70/6.3
70/70/8.0
80/80/3.6
80/80/4.0
80/80/5.0
80/80/6.3
80/80/8.0
90/90/3.6
90/90/4.0
90/90/5.0
90/90/6.3
90/90/8.0

SHSCF(Hy)

Formcode	2
Description	Hybox 355 Cold Formed Square Hollow Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	SHSCF(Hy).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry :Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	Iy	Iy : Second Moment of Area
9	Iz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
13	Wt	C : Torsional modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
B	D
H	D
s	t
R	r1

Checked sections

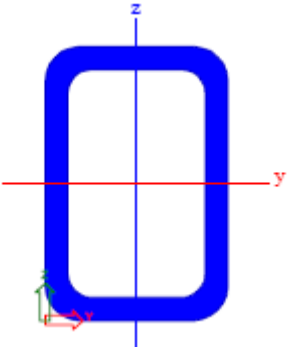
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100/100/4.0
100/100/5.0
100/100/6.0
100/100/8.0
120/120/10.0
120/120/4.0
120/120/5.0
120/120/6.0
120/120/8.0
140/140/10.0
140/140/4.0
140/140/5.0
140/140/6.0
140/140/8.0
150/150/10.0
150/150/4.0
150/150/5.0
150/150/6.0
150/150/8.0
160/160/10.0
160/160/4.0

160/160/5.0
160/160/6.0
160/160/8.0
180/180/10.0
180/180/12.0
180/180/12.5
180/180/5.0
180/180/6.0
180/180/8.0
200/200/10.0
200/200/12.0
200/200/12.5
200/200/5.0
200/200/6.0
200/200/8.0
25/25/2.0
25/25/2.5
25/25/3.0
250/250/10.0
250/250/12.0
250/250/12.5
250/250/6.0

250/250/8.0
30/30/2.5
30/30/3.0
300/300/10.0
300/300/12.0
300/300/12.5
300/300/6.0
300/300/8.0
350/350/10.0
350/350/12.0
350/350/12.5
350/350/8.0
40/40/2.0
40/40/2.5
40/40/3.0
40/40/4.0
400/400/10.0
400/400/12.0
400/400/12.5
400/400/8.0
50/50/2.5
50/50/3.0

50/50/4.0
50/50/5.0
60/60/3.0
60/60/4.0
60/60/5.0
70/70/2.5
70/70/3.0
70/70/3.5
70/70/4.0
70/70/5.0
80/80/3.0
80/80/3.5
80/80/4.0
80/80/5.0
80/80/6.0
90/90/3.0
90/90/3.5
90/90/4.0
90/90/5.0
90/90/6.0

RHS(Ju)

Formcode	2
Description	Jumbo 355 Rectangular Hollow Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	RHS(Ju).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry : Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
13	Wt	C : Torsional modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
B	D
H	D
s	t
R	r1

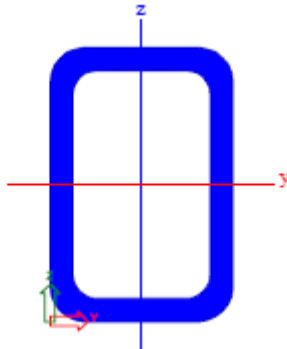
Checked sections

550/350/12.0
550/350/16.0
550/350/19.0
550/350/22.0
550/350/25.0
550/350/28.0
600/400/12.0
600/400/16.0
600/400/19.0
600/400/22.0
600/400/25.0

600/400/28.0
600/400/32.0
600/400/36.0
600/400/40.0
650/450/16.0
650/450/19.0
650/450/22.0
650/450/25.0
650/450/28.0
650/450/32.0
650/450/36.0

650/450/40.0
750/500/16.0
750/500/19.0
750/500/22.0
750/500/25.0
750/500/28.0
750/500/32.0
750/500/36.0
750/500/40.0

RHS(Ce)

Formcode	2
Description	Celcius 355 Rectangular Hollow Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	RHS(Ce).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry :Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	Iy	Iy : Second Moment of Area
9	Iz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
13	Wt	C : Torsional modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

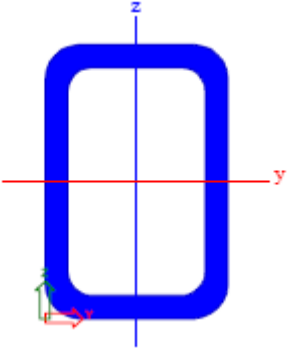
Checked variables

SCIA symbol	Source symbol
B	D
H	D
s	t
R	r1

Checked sections

100/50/3.0	200/120/10.0	300/200/6.3	400/200/14.2
100/50/3.2	200/120/14.2	300/200/8.0	400/200/16.0
100/50/4.0	200/120/5.0	300/250/10.0	400/200/8.0
100/50/5.0	200/120/6.3	300/250/12.5	400/300/10.0
100/50/6.3	200/120/8.0	300/250/14.2	400/300/12.5
100/50/8.0	200/150/10.0	300/250/16.0	400/300/14.2
100/60/3.6	200/150/8.0	300/250/5.0	400/300/16.0
100/60/5.0	250/120/10.0	300/250/6.3	400/300/8.0
100/60/6.3	250/120/12.5	300/250/8.0	450/250/10.0
100/60/8.0	250/120/14.2	350/150/10.0	450/250/12.5
120/60/3.6	250/150/10.0	350/150/12.5	450/250/14.2
120/60/5.0	250/150/12.5	350/150/14.2	450/250/16.0
120/60/6.3	250/150/14.2	350/150/16.0	450/250/8.0
120/60/8.0	250/150/16.0	350/150/5.0	50/30/3.2
120/80/10.0	250/150/5.0	350/150/6.3	500/200/10.0
120/80/5.0	250/150/6.3	350/150/8.0	500/200/12.5
120/80/6.3	250/150/8.0	350/250/10.0	500/200/14.2
120/80/8.0	250/200/10.0	350/250/12.5	500/200/16.0
150/100/10.0	250/200/12.5	350/250/14.2	500/200/8.0
150/100/12.5	250/200/14.2	350/250/16.0	500/300/10.0
150/100/5.0	260/140/10.0	350/250/5.0	500/300/12.5
150/100/6.3	260/140/12.5	350/250/6.3	500/300/14.2
150/100/8.0	260/140/14.2	350/250/8.0	500/300/16.0
150/125/10.0	260/140/16.0	400/120/10.0	500/300/20.0
150/125/12.5	260/140/5.0	400/120/12.5	500/300/8.0
150/125/4.0	260/140/6.3	400/120/14.2	60/40/3.0
150/125/5.0	260/140/8.0	400/120/16.0	60/40/4.0
150/125/6.3	300/100/10.0	400/120/5.0	60/40/5.0
150/125/8.0	300/100/14.2	400/120/6.3	80/40/3.2
160/80/10.0	300/100/8.0	400/120/8.0	80/40/4.0
160/80/4.0	300/150/10.0	400/150/10.0	80/40/5.0
160/80/5.0	300/150/12.5	400/150/12.5	80/40/6.3
160/80/6.3	300/150/14.2	400/150/14.2	80/40/8.0
160/80/8.0	300/150/16.0	400/150/16.0	90/50/3.6
200/100/10.0	300/150/8.0	400/150/5.0	90/50/5.0
200/100/12.5	300/200/10.0	400/150/6.3	90/50/6.3
200/100/5.0	300/200/12.5	400/150/8.0	
200/100/6.3	300/200/14.2	400/200/10.0	
200/100/8.0	300/200/16.0	400/200/12.5	

RHSCF(Hy)

Formcode	2
Description	Hybox 355 Cold Formed Rectangular Hollow Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	RHSCF(Hy).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry :Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
13	Wt	C : Torsional modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
B	D
H	D
s	t
R	r1

Checked sections

100/40/3.0
100/40/4.0
100/40/5.0
100/50/3.0
100/50/4.0
100/50/5.0
100/50/6.0
100/60/3.0
100/60/3.5
100/60/4.0
100/60/5.0
100/60/6.0
100/80/3.0
100/80/4.0
100/80/5.0
120/40/3.0
120/40/4.0
120/40/5.0
120/60/3.0
120/60/3.5
120/60/4.0
120/60/5.0
120/60/6.0
120/80/4.0
120/80/5.0
120/80/6.0
120/80/8.0
140/80/10.0
140/80/3.0
140/80/4.0
140/80/5.0

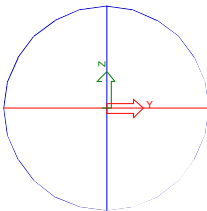
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150/100/10.0
150/100/3.0
150/100/4.0
150/100/5.0
150/100/6.0
150/100/8.0
160/80/4.0
160/80/5.0
160/80/6.0
160/80/8.0
180/100/10.0
180/100/4.0
180/100/5.0
180/100/6.0
180/100/8.0
180/80/10.0
180/80/4.0
180/80/5.0
180/80/6.0
180/80/8.0
200/100/10.0
200/100/4.0
200/100/5.0
200/100/6.0
200/100/8.0
200/120/10.0
200/120/4.0
200/120/5.0
200/120/6.0

200/120/8.0
200/150/10.0
200/150/4.0
200/150/5.0
200/150/6.0
200/150/8.0
250/150/10.0
250/150/12.0
250/150/12.5
250/150/5.0
250/150/6.0
250/150/8.0
300/100/10.0
300/100/12.5
300/100/6.0
300/100/8.0
300/200/10.0
300/200/12.0
300/200/12.5
300/200/6.0
300/200/8.0
400/200/10.0
400/200/12.0
400/200/12.5
400/200/8.0
450/250/10.0
450/250/12.0
450/250/12.5
450/250/8.0
50/25/2.0
50/25/3.0

50/30/2.5
50/30/3.0
50/30/4.0
500/300/10.0
500/300/12.0
500/300/12.5
500/300/8.0
60/30/3.0
60/30/4.0
60/40/3.0
60/40/4.0
60/40/5.0
70/40/3.0
70/40/4.0
70/50/3.0
70/50/4.0
80/40/3.0
80/40/4.0
80/40/5.0
80/50/3.0
80/50/4.0
80/50/5.0
80/60/3.0
80/60/4.0
80/60/5.0
90/50/3.0
90/50/4.0
90/50/5.0

Circular hollow sections

MSRR

Formcode	3
Description	Mannesmann structural hollow section (circular)
Source	Structural hollow sections (MSH) circular – square – rectangular Vallourec & Mannesmann Tubes Edition 1998 pp.10-28
Revision date	20/10/99
By	CVL
PBD file	MSRR.PBD
Code	EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	i : Radius of gyration
8	Iy	I : Second Moment of Area
10	Wy	Wel : Elastic section modulus
13	Wt	Ct : Torsional modulus constant
14	It	Jt : Torsional inertia constant
20	V0	As : Surficial area
32	G	M : Mass

Checked variables

SCIA symbol	Source symbol
D	D
s	T

Checked sections

101.6x10.0	114.3x4.0	139.7x8.0	168.3x16.0
101.6x11.0	114.3x4.5	139.7x8.8	168.3x17.5
101.6x12.5	114.3x5.0	152.4x10.0	168.3x20.0
101.6x14.2	114.3x5.6	152.4x11.0	168.3x25.0
101.6x16.0	114.3x6.3	152.4x12.5	168.3x30.0
101.6x17.5	114.3x7.1	152.4x14.2	168.3x36.0
101.6x20.0	114.3x8.0	152.4x16.0	168.3x4.0
101.6x25.0	114.3x8.8	152.4x17.5	168.3x4.5
101.6x3.6	127.0x10.0	152.4x20.0	168.3x40.0
101.6x30.0	127.0x11.0	152.4x25.0	168.3x45.0
101.6x4.0	127.0x12.5	152.4x30.0	168.3x5.0
101.6x4.5	127.0x14.2	152.4x36.0	168.3x5.6
101.6x5.0	127.0x16.0	152.4x4.5	168.3x50.0
101.6x5.6	127.0x17.5	152.4x40.0	168.3x6.3
101.6x6.3	127.0x20.0	152.4x45.0	168.3x60.0
101.6x7.1	127.0x25.0	152.4x5.0	168.3x7.1
101.6x8.0	127.0x30.0	152.4x5.6	168.3x8.0
101.6x8.8	127.0x36.0	152.4x50.0	168.3x8.8
108.0x10.0	127.0x4.0	152.4x6.3	177.8x10.0
108.0x11.0	127.0x4.5	152.4x7.1	177.8x11.0
108.0x12.5	127.0x40.0	152.4x8.0	177.8x12.5
108.0x14.2	127.0x45.0	152.4x8.8	177.8x14.2
108.0x16.0	127.0x5.0	159.0x10.0	177.8x16.0
108.0x17.5	127.0x5.6	159.0x11.0	177.8x17.5
108.0x20.0	127.0x6.3	159.0x12.5	177.8x20.0
108.0x25.0	127.0x7.1	159.0x14.2	177.8x25.0
108.0x3.6	127.0x8.0	159.0x16.0	177.8x30.0
108.0x30.0	127.0x8.8	159.0x17.5	177.8x36.0
108.0x4.0	139.7x10.0	159.0x20.0	177.8x4.5
108.0x4.5	139.7x11.0	159.0x25.0	177.8x40.0
108.0x5.0	139.7x12.5	159.0x30.0	177.8x45.0
108.0x5.6	139.7x14.2	159.0x36.0	177.8x5.0
108.0x6.3	139.7x16.0	159.0x4.5	177.8x5.6
108.0x7.1	139.7x17.5	159.0x40.0	177.8x50.0
108.0x8.0	139.7x20.0	159.0x45.0	177.8x6.3
108.0x8.8	139.7x25.0	159.0x5.0	177.8x60.0
114.3x10.0	139.7x30.0	159.0x5.6	177.8x7.1
114.3x11.0	139.7x36.0	159.0x50.0	177.8x8.0
114.3x12.5	139.7x4.0	159.0x6.3	177.8x8.8
114.3x14.2	139.7x4.5	159.0x60.0	193.7x10.0
114.3x16.0	139.7x40.0	159.0x7.1	193.7x11.0
114.3x17.5	139.7x45.0	159.0x8.0	193.7x12.5
114.3x20.0	139.7x5.0	159.0x8.8	193.7x14.2
114.3x25.0	139.7x5.6	168.3x10.0	193.7x16.0
114.3x3.6	139.7x50.0	168.3x11.0	193.7x17.5
114.3x30.0	139.7x6.3	168.3x12.5	193.7x20.0
114.3x36.0	139.7x7.1	168.3x14.2	193.7x25.0

193.7x30.0
193.7x36.0
193.7x4.0
193.7x4.5
193.7x40.0
193.7x45.0
193.7x5.0
193.7x5.6
193.7x50.0
193.7x6.3
193.7x60.0
193.7x7.1
193.7x8.0
193.7x8.8
21.3x2.3
21.3x2.6
21.3x2.9
21.3x3.2
21.3x3.6
21.3x4.0
21.3x4.5
21.3x5.0
219.1x10.0
219.1x11.0
219.1x12.5
219.1x14.2
219.1x16.0
219.1x17.5
219.1x20.0
219.1x25.0
219.1x30.0
219.1x36.0
219.1x4.0
219.1x4.5
219.1x40.0
219.1x45.0
219.1x5.0
219.1x5.6
219.1x50.0
219.1x6.3
219.1x60.0
219.1x7.1
219.1x70.0
219.1x8.0
219.1x8.8
244.5x10.0
244.5x11.0
244.5x12.5
244.5x14.2

244.5x16.0
244.5x17.5
244.5x20.0
244.5x25.0
244.5x30.0
244.5x36.0
244.5x4.0
244.5x4.5
244.5x40.0
244.5x45.0
244.5x5.0
244.5x5.6
244.5x50.0
244.5x6.3
244.5x60.0
244.5x7.1
244.5x70.0
244.5x8.0
244.5x8.8
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244.5x90.0
26.9x2.3
26.9x2.6
26.9x2.9
26.9x3.2
26.9x3.6
26.9x4.0
26.9x4.5
26.9x5.0
26.9x5.6
26.9x6.3
267.0x10.0
267.0x100.0
267.0x11.0
267.0x12.5
267.0x14.2
267.0x16.0
267.0x17.5
267.0x20.0
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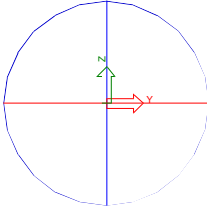
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76.1x8.0
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82.5x12.5
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88.9x20.0
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88.9x3.6
88.9x4.0
88.9x4.5
88.9x5.0
88.9x5.6
88.9x6.3
88.9x7.1
88.9x8.0
88.9x8.8

CHS

Formcode	3
Description	Circular Hollow Sections
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.18-B.20
Revision date	07/10/99
By	CADS
PBD file	CHS.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	r : Radius of gyration
3	iz	r : Radius of gyration
8	Iy	I : Second Moment of Area
9	Iz	I : Second Moment of Area
10	Wy	Z : Elastic modulus
11	Wz	Z : Elastic modulus
13	Wt	C : Torsional constant
14	It	J : Torsional constant J
20	V0	Surface area

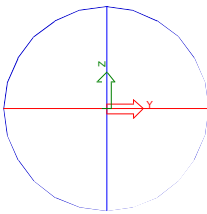
Checked variables

SCIA symbol	Source symbol
D	D
s	t

Checked sections

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114.3/6.3	323.9/6.3	559.0/40.0
139.7/10.0	323.9/8.0	559.0/50.0
139.7/5.0	33.7/2.6	60.3/3.2
139.7/6.3	33.7/3.2	60.3/4.0
139.7/8.0	33.7/4.0	60.3/5.0
168.3/10.0	355.6/10.0	610.0/20.0
168.3/12.5	355.6/12.5	610.0/25.0
168.3/5.0	355.6/16.0	610.0/32.0
168.3/6.3	355.6/20.0	610.0/40.0
168.3/8.0	355.6/25.0	610.0/50.0
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193.7/12.5	355.6/8.0	660.0/25.0
193.7/16.0	406.4/10.0	660.0/32.0
193.7/5.0	406.4/12.5	660.0/40.0
193.7/6.3	406.4/16.0	660.0/50.0
193.7/8.0	406.4/20.0	76.1/3.2
21.3/3.2	406.4/25.0	76.1/4.0
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219.1/8.0	457.0/12.5	
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244.5/20.0	457.0/32.0	
244.5/25.0	457.0/40.0	
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244.5/6.3	457.0/8.0	
244.5/8.0	48.3/3.2	
26.9/3.2	48.3/4.0	
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273.0/16.0	508.0/12.5	
273.0/20.0	508.0/16.0	
273.0/25.0	508.0/20.0	
273.0/5.0	508.0/25.0	
273.0/6.3	508.0/32.0	
273.0/8.0	508.0/40.0	
323.9/10.0	508.0/50.0	
323.9/12.5	508.0/6.3	
323.9/16.0	508.0/8.0	
323.9/20.0	559.0/20.0	

CHSCF

Formcode	3
Description	Circular Hollow Sections – cold formed
Source	BS EN 10219-2:1997 Cold formed welded structural hollow sections of non-alloy and fine grain steels Part 2. pp.10-15
Revision date	07/10/99
By	CADS
PBD file	CHSCF.PBD
Code	BS EN 10219-2:1997
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Cross sectional area
2	iy	i : Radius of gyration
3	iz	i :Radius of gyration
8	Iy	I : Second Moment of Area
9	Iz	I :Second Moment of Area
10	Wy	Wel :Elastic section modulus
11	Wz	Wel :Elastic section modulus
13	Wt	Ct : Torsional modulus constant
14	It	It :Torsional inertia constant
20	V0	As : Superficial area

Checked variables

SCIA symbol	Source symbol
D	D
s	t

Checked sections

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139.7/6.3
139.7/8.0

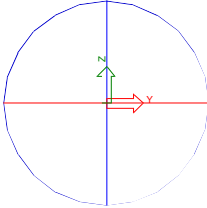
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RO

Formcode	3
Description	Circular hollow section
Source	<p>Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.111-131</p> <p>The nomenclature is according to</p> <p>Materialbezeichnungen für den Datenaustausch im Stahlbau Teil 1 Empfehlungen des DSTV-Arbeitsausschusses EDV November 1997</p>
Revision date	20/03/00
By	GW/BR
PBD file	RO.PBD
Code	DIN 2448 / DIN 2458
	

Checked properties

Property number	SCIA symbol	Source symbol (DIN 1080)
1	A0	A
2	iy	i
8	ly	l
10	Wy	W
13	Wt	2W
14	lt	2l
32	G	G

Checked variables

SCIA symbol	Source symbol
D	D
s	s

Checked sections

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762X8.8
813X10
813X11
813X12.5
813X14.2
813X16
813X17.5
813X20
813X22.2
813X25
813X28
813X30
813X32
813X36
813X4.5
813X40
813X5
813X5.6
813X6.3
813X7.1
813X8
813X8.8
82.5X1.6
82.5X1.8
82.5X10
82.5X11
82.5X12.5
82.5X14.2
82.5X16
82.5X17.5
82.5X2
82.5X2.3
82.5X2.6
82.5X2.9
82.5X20
82.5X22.2

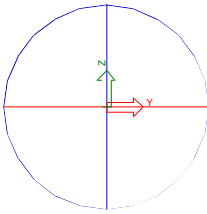
82.5X3.2
82.5X3.6
82.5X4
82.5X4.5
82.5X5
82.5X5.6
82.5X6.3
82.5X7.1
82.5X8
82.5X8.8
864X10
864X11
864X12.5
864X14.2
864X16
864X17.5
864X20
864X22.2
864X25
864X28

864X30
864X32
864X36
864X4.5
864X40
864X5
864X5.6
864X6.3
864X7.1
864X8
864X8.8
88.9X1.6
88.9X1.8
88.9X10
88.9X11
88.9X12.5
88.9X14.2
88.9X16
88.9X17.5
88.9X2

88.9X2.3
88.9X2.6
88.9X2.9
88.9X20
88.9X22.2
88.9X25
88.9X3.2
88.9X3.6
88.9X4
88.9X4.5
88.9X5
88.9X5.6
88.9X6.3
88.9X7.1
88.9X8
88.9X8.8
914X10
914X11
914X12.5
914X14.2

914X16
914X17.5
914X20
914X22.2
914X25
914X28
914X30
914X32
914X36
914X4.5
914X40
914X5
914X5.6
914X6.3
914X7.1
914X8
914X8.8

HSS(CHS)

Formcode	3
Description	American Round Hollow Structural Sections Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	HSS(CHS).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
D	OD
s	(OD-ID)/2

Checked sections

101.6X3.2
101.6X4.8
101.6X5.6
101.6X5.7
101.6X6
101.6X6.4
101.6X8
101.6X8.6
114.3X3.2
114.3X4.8
114.3X6
114.3X8.6
127X12.7
127X3.2
127X4.8
127X6.4
127X6.6
127X7.9
127X9.5

139.7X12.7
139.7X6.6
139.7X9.5
141.3X3.4
141.3X4.8
141.3X6.6
141.3X9.5
152.4X12.7
152.4X3.2
152.4X4.8
152.4X6.4
152.4X7.1
152.4X7.9
152.4X9.5
155.6X12.7
155.6X4.8
155.6X6.4
155.6X7.9
155.6X9.5

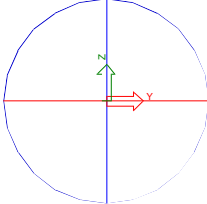
168.3X11
168.3X12.7
168.3X3.2
168.3X4.8
168.3X6.4
168.3X7.1
168.3X7.9
168.3X9.5
174.6X12.7
174.6X4.8
174.6X6.4
174.6X7.9
174.6X9.5
177.8X12.7
177.8X3.2
177.8X4.8
177.8X6.4
177.8X7.9
177.8X9.5

190.5X12.7
190.5X4.8
190.5X6.4
190.5X7.9
190.5X9.5
193.7X3.2
219.1X12.7
219.1X4.8
219.1X6.4
219.1X8.2
219.1X9.5
222.3X12.7
222.3X4.8
222.3X6.4
222.3X7.9
222.3X9.5
244.5X12.7
244.5X4.8
244.5X6.4
244.5X7.9
244.5X9.5
254X12.7
254X15.9
254X4.8
254X6.4
254X7.9
254X9.5
273.1X12.7
273.1X6.4

285.8X12.7
285.8X15.9
285.8X4.8
285.8X6.4
285.8X7.9
285.8X9.5
317.5X12.7
317.5X15.9
317.5X4.8
317.5X6.4
317.5X7.9
317.5X9.5
323.9X12.7
323.9X6.4
323.9X9.5
355.6X12.7
355.6X7.9
355.6X9.5
406.4X11.1
406.4X12.7
406.4X7.9
406.4X9.5
42.2X3.6
457.2X12.7
457.2X9.5
48.3X3.7
508X12.7
508X9.5
60.3X3.2

60.3X3.9
60.3X4.8
60.3X5.5
60.3X6.4
63.5X3.2
63.5X4.8
63.5X6.4
73X3.2
73X4.8
73X5.2
73X6.4
76.2X3
76.2X3.4
76.2X3.9
76.2X4.8
76.2X5.2
76.2X5.5
76.2X6.4
76.2X7.6
88.9X3.2
88.9X4.8
88.9X5.2
88.9X5.5
88.9X6.4
88.9X7.6
88.9X8

HSS(ICHS)

Formcode	3
Description	American Round Hollow Strcutural Sections Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	HSS(CHS).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
D	OD
s	(OD-ID)/2

Checked sections

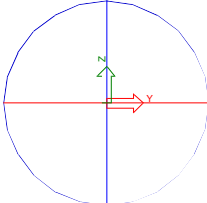
1.660X0.140
1.900X0.145
10.000X0.188
10.000X0.250
10.000X0.312
10.000X0.375
10.000X0.500
10.000X0.625
10.750X0.250
10.750X0.500
11.250X0.188
11.250X0.250
11.250X0.312
11.250X0.375
11.250X0.500
11.250X0.625
12.500X0.188
12.500X0.250
12.500X0.312
12.500X0.375
12.500X0.500
12.500X0.625
12.750X0.250
12.750X0.375
12.750X0.500
14.000X0.312
14.000X0.375
14.000X0.500
16.000X0.312
16.000X0.375
16.000X0.438
16.000X0.500
18.000X0.375
18.000X0.500
2.375X0.125
2.375X0.154
2.375X0.188
2.375X0.218
2.375X0.250

2.500X0.125
2.500X0.188
2.500X0.250
2.875X0.125
2.875X0.188
2.875X0.203
2.875X0.250
20.000X0.375
20.000X0.500
3.000X0.120
3.000X0.134
3.000X0.152
3.000X0.188
3.000X0.203
3.000X0.216
3.000X0.250
3.000X0.300
3.500X0.125
3.500X0.188
3.500X0.203
3.500X0.216
3.500X0.250
3.500X0.300
3.500X0.313
4.000X0.125
4.000X0.188
4.000X0.220
4.000X0.226
4.000X0.237
4.000X0.250
4.000X0.313
4.000X0.337
4.500X0.125
4.500X0.188
4.500X0.237
4.500X0.337
5.000X0.125
5.000X0.188
5.000X0.250

5.000X0.258
5.000X0.312
5.000X0.375
5.000X0.500
5.500X0.258
5.500X0.375
5.500X0.500
5.563X0.134
5.563X0.188
5.563X0.258
5.563X0.375
6.000X0.125
6.000X0.188
6.000X0.250
6.000X0.280
6.000X0.312
6.000X0.375
6.000X0.500
6.125X0.188
6.125X0.250
6.125X0.312
6.125X0.375
6.125X0.500
6.625X0.125
6.625X0.188
6.625X0.250
6.625X0.280
6.625X0.312
6.625X0.375
6.625X0.432
6.625X0.500
6.875X0.188
6.875X0.250
6.875X0.312
6.875X0.375
6.875X0.500
7.000X0.125
7.000X0.188
7.000X0.250

7.000X0.312
7.000X0.375
7.000X0.500
7.500X0.188
7.500X0.250
7.500X0.312
7.500X0.375
7.500X0.500
7.625X0.125
8.625X0.188
8.625X0.250
8.625X0.322
8.625X0.375
8.625X0.500
8.750X0.188
8.750X0.250
8.750X0.312
8.750X0.375
8.750X0.500
9.625X0.188
9.625X0.250
9.625X0.312
9.625X0.375
9.625X0.500

PIPE

Formcode	3
Description	American Steel Pipe Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	PIPE.PBD
Code	ASTM A53/A53M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
D	OD
s	(OD-ID)/2

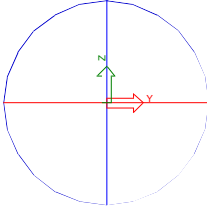
Checked sections

102STD
102XS
102XXS
127STD
127XS
127XXS
13STD
13XS
152STD
152XS
152XXS
19STD
19XS

203STD
203XS
203XXS
254STD
254XS
25STD
25XS
310STD
310XS
32STD
32XS
38STD
38XS

51STD
51XS
51XXS
64STD
64XS
64XXS
75STD
75XS
75XXS
89STD
89XS

PIPE(Imp)

Formcode	3
Description	American Steel Pipe Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	PIPE(Imp).PBD
Code	ASTM A53/A53M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
D	OD
s	(OD-ID)/2

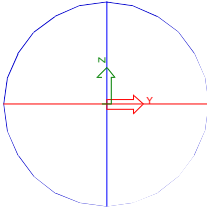
Checked sections

1-1/2STD
1-1/2XS
1-1/4STD
1-1/4XS
1/2STD
1/2XS
10STD
10XS
12STD
12XS
1STD
1XS
2-1/2STD

2-1/2XS
2-1/2XXS
2STD
2XS
2XXS
3-1/2STD
3-1/2XS
3/4STD
3/4XS
3STD
3XS
3XXS
4STD

4XS
4XXS
5STD
5XS
5XXS
6STD
6XS
6XXS
8STD
8XS
8XXS

CFCHS

Formcode	3
Description	Cold formed Circular structural hollow sections
Source	Rautaruukki Oyj Structural Hollow Sections EN10219 Ed.2007 pp.15-19
Revision date	15/03/07
By	PVT
PBD file	CFCHS.PBD
Code	EN 10219
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Cross-section area
2	iy	i : Radius of gyration
3	iz	i : Radius of gyration
8	Iy	I : Moment of inertia
9	Iz	I : Moment of inertia
10	Wy	W : Section modulus
11	Wz	W : Section modulus
13	Wt	Wv : Section modulus in torsion
14	It	Iv : Torsion modulus
20	V0	Au : External Surface area
30	Mpy	Wp x 240 N/mm ²
31	Mpz	Wp x 240 N/mm ²
32	G	M : Weight

Checked variables

SCIA symbol	Source symbol
D	D
s	T

Checked sections

26.9X2	88.9X6.3	139.7X6.3	273X6
26.9X2.5	101.6X2	139.7X8	273X6.3
26.9X2.6	101.6X2.5	139.7X10	273X8
33.7X2	101.6X3	152.4X3	273X10
33.7X2.5	101.6X3.6	152.4X4	273X12.5
33.7X2.6	101.6X4	152.4X5	323.9X4
33.7X3	101.6X5	152.4X6	323.9X5
33.7X3.2	101.6X6	152.4X6.3	323.9X6
42.4X2	101.6X6.3	159X3	323.9X6.3
42.4X2.5	108X2	159X4	323.9X8
42.4X2.6	108X2.5	159X5	323.9X10
42.4X2.9	108X3	159X6	323.9X12.5
42.4X3	108X3.6	159X6.3	355.6X5.6
42.4X3.2	108X4	168.3X3	355.6X6.3
42.4X4	108X5	168.3X3.2	355.6X8
48.3X2	108X6	168.3X4	355.6X10
48.3X2.5	108X6.3	168.3X4.5	355.6X12.5
48.3X2.6	114.3X2	168.3X5	406.4X6.3
48.3X3	114.3X2.5	168.3X6	406.4X8
48.3X3.2	114.3X3	168.3X6.3	406.4X10
48.3X4	114.3X3.6	168.3X8	406.4X12.5
60.3X2	114.3X4	168.3X10	457X6.3
60.3X2.5	114.3X5	193.7X4	457X8
60.3X2.9	114.3X6	193.7X5	457X10
60.3X3	114.3X6.3	193.7X6	457X12.5
60.3X3.2	127X2	193.7X6.3	508X6.3
60.3X4	127X2.5	193.7X8	508X8
60.3X5	127X3	193.7X10	508X10
76.1X2	127X4	193.7X12.5	508X12.5
76.1X2.5	127X5	219.1X4	559X6.3
76.1X2.9	127X6	219.1X4.5	559X8
76.1X3	127X6.3	219.1X5	559X10
76.1X4	133X2	219.1X6	559X12.5
76.1X5	133X2.5	219.1X6.3	610X8
76.1X6	133X3	219.1X8	610X10
76.1X6.3	133X4	219.1X10	610X12.5
88.9X2	133X5	219.1X12.5	610X14.2
88.9X2.5	133X6	244.5X6	660X8
88.9X3	133X6.3	244.5X8	660X10
88.9X3.2	139.7X3	244.5X10	660X12.5
88.9X4	139.7X4	244.5X12.5	660X14.2
88.9X5	139.7X5	273X4	711X8
88.9X6	139.7X6	273X5	711X10

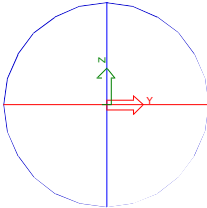
711X12.5
711X14.2
762X8
762X10
762X12.5
762X14.2

813X8
813X10
813X12.5
813X14.2
813X16
914X10

914X12.5
914X14.2
914X16
1016X10
1016X12.5
1016X14.2

1016X16
1219X10
1219X12.5
1219X14.2
1219X16

ROR

Formcode	3
Description	Circular hollow section
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.51-55
Revision date	07/05/07
By	PVT
PBD file	ROR.PBD
Code	EN 10216-1, EN 10297-1
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	i
3	iz	i
8	Iy	I
9	Iz	I
10	Wy	Wel
11	Wz	Wel
20	V0	Um
30	Mpy	Wpl x 240 N/mm ²
31	Mpz	Wpl x 240 N/mm ²
32	G	m

Checked variables

SCIA Symbol	Source Symbol
D	D
S	t

Checked sections

101.6/10.0	139.7/16.0	219.1/10.0	355.6/16.0
101.6/12.5	139.7/25.0	219.1/16.0	355.6/25.0
101.6/3.6	139.7/4.0	219.1/25.0	355.6/40.0
101.6/5.0	139.7/7.1	219.1/4.5	355.6/5.6
101.6/7.1	152.4/10.0	219.1/40.0	355.6/60.0
1016/10.0	152.4/12.5	219.1/6.3	355.6/8.0
1016/20.0	152.4/16.0	244.5/10.0	368/10.0
1016/30.0	152.4/25.0	244.5/16.0	368/16.0
108/10.0	152.4/4.0	244.5/25.0	368/25.0
108/12.5	152.4/4.5	244.5/40.0	368/40.0
108/3.6	152.4/7.1	244.5/5.0	368/60.0
108/5.0	159/10.0	244.5/6.3	368/8.0
108/7.1	159/12.5	26.9/2.3	38/2.3
114.3/10.0	159/16.0	26.9/5.0	38/2.6
114.3/12.5	159/25.0	273/10.0	38/5.0
114.3/16.0	159/4.0	273/16.0	406.4/12.5
114.3/3.6	159/4.5	273/25.0	406.4/16.0
114.3/7.1	159/7.1	273/40.0	406.4/25.0
121/10.0	168.3/10.0	273/5.0	406.4/40.0
121/12.5	168.3/12.5	273/6.3	406.4/6.3
121/16.0	168.3/16.0	298.5/10.0	406.4/60.0
121/4.0	168.3/25.0	298.5/16.0	406.4/8.8
121/7.1	168.3/4.0	298.5/25.0	419/10.0
127/10.0	168.3/4.5	298.5/40.0	419/16.0
127/12.5	168.3/7.1	298.5/7.1	419/25.0
127/16.0	177.8/10.0	323.9/10.0	419/40.0
127/4.0	177.8/16.0	323.9/16.0	419/60.0
127/7.1	177.8/25.0	323.9/25.0	42.4/10.0
133/10.0	177.8/4.5	323.9/40.0	42.4/2.3
133/12.5	177.8/5.0	323.9/5.6	42.4/2.6
133/16.0	193.7/10.0	323.9/60.0	42.4/5.0
133/25.0	193.7/16.0	323.9/7.1	42.4/7.1
133/4.0	193.7/25.0	33.7/2.3	44.5/10.0
133/7.1	193.7/4.5	33.7/2.6	44.5/2.3
139.7/10.0	193.7/5.6	33.7/5.0	44.5/2.6
139.7/12.5	21.3/2.0	355.6/10.0	44.5/5.0

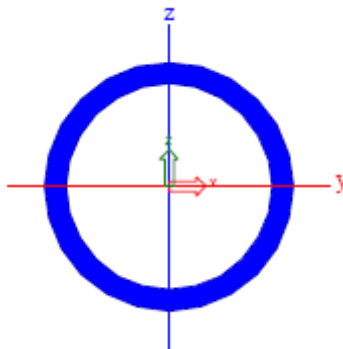
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48.3/7.1
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508/40.0
508/6.3
508/60.0
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54/2.6
54/5.0

54/7.1
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63.5/5.0
63.5/7.1

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76.1/7.1
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762/20.0
762/30.0
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813/30.0
813/8.0

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864/30.0
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88.9/7.1
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95/3.2
95/3.6
95/8.0

CHS(Ju)

Formcode	3
Description	Jumbo 355 Circular Hollow Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	CHS(Ju).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry : Radius of gyration
3	iz	rx : Radius of gyration
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
13	Wt	C : Torsional modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
D	D
s	t

Checked sections

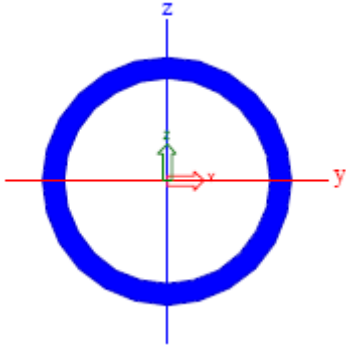
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457.0/36.0
457.0/40.0
508.0/22.0
508.0/25.0

508.0/28.0
508.0/32.0
508.0/36.0
508.0/40.0
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559.0/32.0
559.0/36.0

559.0/40.0
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610.0/40.0
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660.0/32.0
660.0/36.0

660.0/40.0
711.0/28.0
711.0/32.0
711.0/36.0
711.0/40.0

CHS(Ce)

Formcode	3
Description	Celsius 355 Circular Hollow Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	CHS(Ce).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry : Radius of gyration
3	iz	rx : Radius of gyration
8	Iy	Iy : Second Moment of Area
9	Iz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
13	Wt	C : Torsional modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

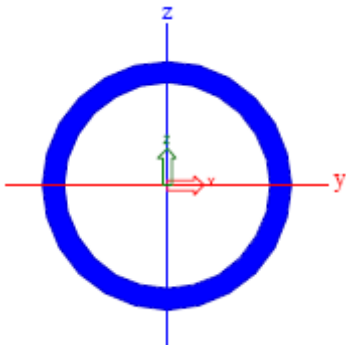
Checked variables

SCIA symbol	Source symbol
D	D
s	t

Checked sections

114.3/3.2	219.1/14.2	323.9/6.3	457.0/8.0
114.3/3.6	219.1/16.0	323.9/8.0	48.3/3.2
114.3/4.0	219.1/5.0	33.7/2.6	48.3/4.0
114.3/5.0	219.1/6.3	33.7/3.2	48.3/5.0
114.3/6.3	219.1/8.0	33.7/4.0	508.0/10.0
139.7/10.0	244.5/10.0	355.6/14.2	508.0/12.5
139.7/5.0	244.5/12.5	355.6/16.0	508.0/14.2
139.7/6.3	244.5/14.2	406.4/10.0	508.0/16.0
139.7/8.0	244.5/16.0	406.4/12.5	60.3/3.2
168.3/10.0	244.5/8.0	406.4/14.2	60.3/4.0
168.3/12.5	26.9/3.2	406.4/16.0	60.3/5.0
168.3/5.0	273.0/10.0	406.4/6.3	76.1/2.9
168.3/6.3	273.0/12.5	406.4/8.0	76.1/3.2
168.3/8.0	273.0/14.2	42.4/2.6	76.1/4.0
193.7/10.0	273.0/16.0	42.4/3.2	76.1/5.0
193.7/12.5	273.0/6.3	42.4/4.0	88.9/3.2
193.7/5.0	273.0/8.0	42.4/5.0	88.9/4.0
193.7/6.3	323.9/10.0	457.0/10.0	88.9/5.0
193.7/8.0	323.9/12.5	457.0/12.5	88.9/6.3
219.1/10.0	323.9/14.2	457.0/14.2	
219.1/12.5	323.9/16.0	457.0/16.0	

CHSCF(Hy)

Formcode	3
Description	Hybox 355 Cold Formed Circular Hollow Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	CHSCF(Hy).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry : Radius of gyration
3	iz	rx : Radius of gyration
8	ly	ly : Second Moment of Area
9	lz	lx : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
13	Wt	C : Torsional modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
D	D
s	t

Checked sections

114.3/3.0	193.7/6.0	273.0/5.0	406.4/16.0
114.3/3.5	193.7/8.0	273.0/6.0	406.4/6.0
114.3/4.0	219.1/10.0	273.0/8.0	406.4/8.0
114.3/5.0	219.1/12.0	323.9/10.0	42.4/4.0
114.3/6.0	219.1/12.5	323.9/12.0	457.0/10.0
139.7/10.0	219.1/16.0	323.9/12.5	457.0/12.0
139.7/4.0	219.1/4.5	323.9/16.0	457.0/12.5
139.7/5.0	219.1/5.0	323.9/5.0	457.0/16.0
139.7/6.0	219.1/6.0	323.9/6.0	457.0/6.0
139.7/8.0	219.1/8.0	323.9/8.0	457.0/8.0
168.3/10.0	244.5/10.0	33.7/3.0	48.3/3.0
168.3/12.5	244.5/12.0	355.6/10.0	48.3/3.5
168.3/4.0	244.5/12.5	355.6/12.0	48.3/4.0
168.3/5.0	244.5/16.0	355.6/12.5	508.0/10.0
168.3/6.0	244.5/5.0	355.6/16.0	508.0/12.0
168.3/8.0	244.5/6.0	355.6/5.0	508.0/12.5
193.7/10.0	244.5/8.0	355.6/6.0	508.0/16.0
193.7/12.5	273.0/10.0	355.6/8.0	508.0/6.0
193.7/4.0	273.0/12.0	406.4/10.0	508.0/8.0
193.7/4.5	273.0/12.5	406.4/12.0	60.3/3.0
193.7/5.0	273.0/16.0	406.4/12.5	60.3/4.0

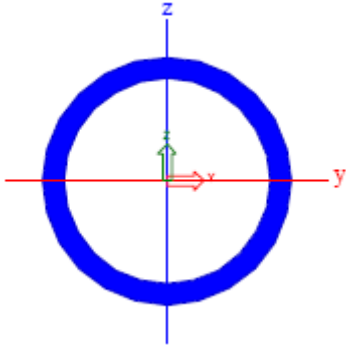
76.1/3.0
76.1/4.0

88.9/3.0
88.9/3.5

88.9/4.0
88.9/5.0

88.9/6.3

LCHS(Ce)

Formcode	3
Description	Celsius Large Circular hollow section
Source	Corus Tubes Celsius LCHS Structural & Conveyer Business Ed.03-2005
Revision date	11/02/10
By	PVT
PBD file	LCHS(Ce).PBD
Code	EN 10210
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A: Area
2	iy	i: Radius of gyration
3	iz	i: Radius of gyration
8	Iy	I: Moment of inertia
9	Iz	I: Moment of inertia
10	Wy	W_{el} : Elastic modulus
11	Wz	W_{el} : Elastic modulus
13	Wt	Ct: Torsional constant
14	It	It: Torsional constant
20	V0	As: Superficial area
30	Mply	W_{pl} x 240 N/mm ²
31	Mplz	W_{pl} x 240 N/mm ²
32	G	M: Mass

Checked variables

SCIA symbol	Source symbol
D	D
s	T

Checked sections

457/6.4
457/7.9
457/8.7
457/9.5
457/10.3
457/11.1
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457/12.7
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1727/11.1

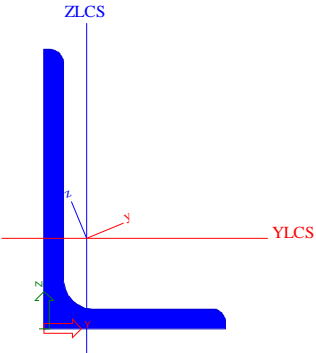
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2134/22.2

Angle sections

RSUA

Formcode	4
Description	Unequal angles
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.38
Revision date	07/10/99
By	CADS
PBD file	RSUA.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Area of section
2	iy	Radius of gyration / Axis x-x
3	iz	Radius of gyration / Axis y-y
4	cz	cx : Distance of centre of gravity
5	cy	cy : Distance of centre of gravity
8	Iy	Second Moment of Area / Axis x-x
9	Iz	Second Moment of Area / Axis y-y
10	Wy	Elastic modulus / Axis x-x
11	Wz	Elastic modulus / Axis y-y
15	I1	Second Moment of Area / Axis u-u
16	I2	Second Moment of Area / Axis v-v
32	G	Mass
37	i1b	Radius of gyration / Axis u-u
38	i2b	Radius of gyration / Axis v-v

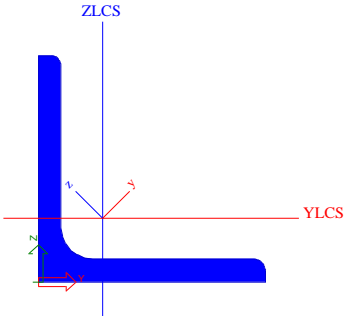
Checked variables

SCIA symbol	Source symbol
B	B
H	A
S	t
T	t
R	r2
R1	r1

Checked sections

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125/75/8
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137/102/7.9
137/102/9.5
150/75/10
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60/30/5
60/30/6
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75/50/8
80/60/6
80/60/7
80/60/8

RSEA

Formcode	4
Description	Equal angles
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.36-B.37
Revision date	07/10/99
By	CADS
PBD file	RSEA.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	Radius of gyration / Axis x-x
3	iz	Radius of gyration / Axis y-y
4	cx	cx : Distance of centre of gravity
5	cy	cy : Distance of centre of gravity
8	Iy	Second Moment of Area / Axis x-x
9	Iz	Second Moment of Area / Axis y-y
10	Wy	Elastic modulus / Axis x-x
11	Wz	Elastic modulus / Axis y-y
15	I1	Second Moment of Area / Axis u-u
16	I2	Second Moment of Area / Axis v-v
32	G	Mass
37	i1b	Radius of gyration / Axis u-u
38	i2b	Radius of gyration / Axis v-v

Checked variables

SCIA symbol	Source symbol
B	A

H	A
S	t
T	t
R	r2
R1	r1

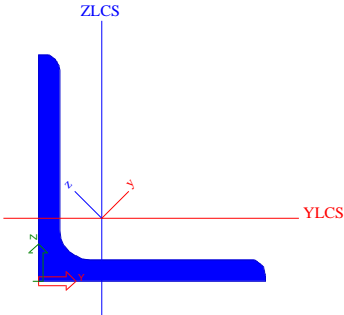
Checked sections

100/100/10
100/100/12
100/100/15
100/100/8
120/120/10
120/120/12
120/120/15
120/120/8
150/150/10
150/150/12
150/150/15
150/150/18
200/200/16
200/200/18
200/200/20
200/200/24
25/25/3
25/25/4

25/25/5
250/250/25
250/250/28
250/250/32
250/250/35
30/30/3
30/30/4
30/30/5
40/40/3
40/40/4
40/40/5
40/40/6
45/45/3
45/45/4
45/45/5
45/45/6
50/50/3
50/50/4

50/50/5
50/50/6
50/50/8
60/60/10
60/60/5
60/60/6
60/60/8
70/70/10
70/70/6
70/70/8
80/80/10
80/80/6
80/80/8
90/90/10
90/90/12
90/90/6
90/90/7
90/90/8

HFLeq

Formcode	4
Description	Equal angles
Source	Staalprofielen Overspannend staal pp.56-57
Revision date	28/03/01
By	GW
PBD file	HFLeq.PBD
Code	EU 56-77 DIN 1028
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
4	cz	z_s
5	cy	y_s
8	ly	I_y
9	lz	I_z
10	Wy	W_y
11	Wz	W_z
15	I1	I_u
16	I2	I_v
37	i1b	i_u
38	i2b	i_v

Checked variables

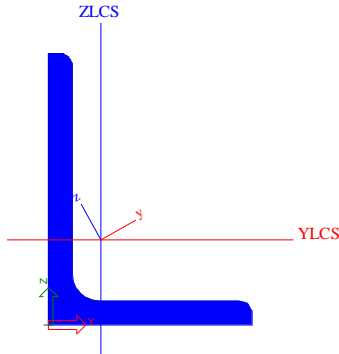
SCIA symbol	Source symbol
B	b
H	h
S	t

T	t
R	r1
R1	r

Checked sections

100x100x10
100x100x12
100x100x8
110x110x10
120x120x10
120x120x12
120x120x15
130x130x12
140x140x10
140x140x13
150x150x10
150x150x12
150x150x15
150x150x18
160x160x15
180x180x16
180x180x18
200x200x16
200x200x18
200x200x20
200x200x24
40x40x4
40x40x5
45x45x4
45x45x5
50x50x5
50x50x6
50x50x8
60x60x5
60x60x6
60x60x8
70x70x7
75x75x7
75x75x8
80x80x10
80x80x8
90x90x7
90x90x9

HFLue

Formcode	4
Description	Unequal angles
Source	Staalprofielen Overspannend staal pp.58-59
Revision date	28/03/01
By	EP
PBD file	HFLue.PBD
Code	EU 57-78 DIN 1029
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
4	cz	z_s
5	cy	y_s
8	ly	I_y
9	lz	I_z
10	Wy	W_y
11	Wz	W_z
15	I1	I_u
16	I2	I_v
37	i1b	i_u
38	i2b	i_v

Checked variables

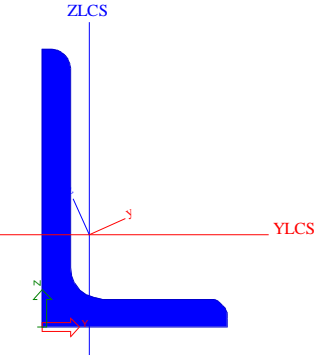
SCIA symbol	Source symbol
B	b
H	h
S	t
T	t
R	r1
R1	r

Checked sections

100x50x6
100x50x8
100x65x9
120x80x10
120x80x8
130x65x10
130x65x8
150x100x10
150x100x12
150x75x11
150x75x9
160x80x12
160x80x10
180x90x10

200x100x10
200x100x12
200x100x14
50x30x4
50x30x5
60x30x5
60x40x5
60x40x6
75x50x7
80x40x6
80x40x8
80x60x7
80x65x8
90x60x8

L

Formcode	4
Description	Winkelstahl
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.48-55
Revision date	29/03/01
By	CVL
PBD file	L.PBD
Code	DIN 1028 - DIN 1029
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
4	cz	e_y
5	cy	e_z
8	ly	I_y
9	lz	I_z
10	Wy	W_y
11	Wz	W_z
15	I1	I_{η}
16	I2	I_{ζ}

Checked variables

SCIA symbol	Source symbol
B	b
H	a
S	s
T	s
R	r2
R1	r1

Checked sections

100X10
100X12
100X50X10
100X50X6
100X50X8
100X65X11
100X65X7
100X65X9
100X75X11
100X75X7
100X75X9
100X8
110X10
120X10
120X11
120X12
120X80X10
120X80X12
120X80X8
130X12
130X65X10
130X65X12
130X65X8
130X90X10
130X90X12
140X13
150X100X10
150X100X12
150X100X14
150X12
150X14
150X15
150X75X11
150X75X9
160X15

160X17
160X80X12
180X16
180X18
180X90X10
180X90X12
200X100X10
200X100X12
200X100X14
200X16
200X18
200X20
200X22
200X24
200X26
200X28
200X30
20X3
250X18
250X20
250X22
250X24
250X26
250X28
25X3
25X4
30X20X3
30X20X4
30X3
30X4
30X5
35X4
35X5
40X20X3
40X20X4

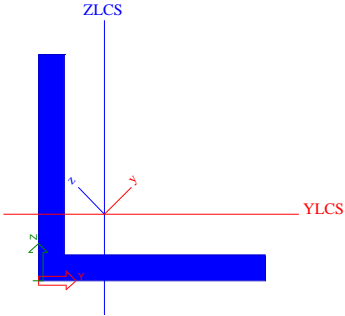
40X25X4
40X4
40X5
45X30X3
45X30X4
45X30X5
45X4
45X5
50X30X4
50X30X5
50X40X4
50X40X5
50X5
50X6
50X7
55X6
60X30X5
60X40X5
60X40X6
60X40X7
60X5
60X6
60X8
65X50X5
65X50X7
65X50X9
65X7
70X50X6
70X6
70X7
70X9
75X50X7
75X50X9
75X55X5
75X55X7

75X55X9
75X7
75X8
80X10
80X40X6

80X40X8
80X6
80X60X7
80X65X10
80X65X8

80X8
90X60X6
90X60X8
90X7
90X9

LS

Formcode	4
Description	Scharfkantiger L-Stahl
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.63
Revision date	16/01/01
By	CVL
PBD file	LS.PBD
Code	DIN 1022
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A

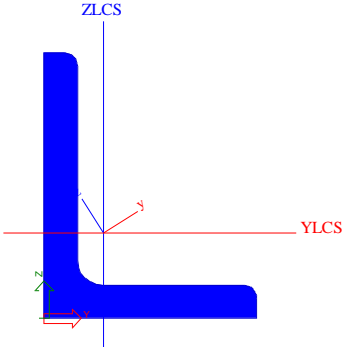
Checked variables

SCIA symbol	Source symbol
D	a
T	ts

Checked sections

20X3
20X4
25X3
25X4
30X3
30X4
35X4
40X4
40X5
45X5
50X5

L(AISC)

Formcode	4
Description	American Single Angles Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	L(AISC).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x

8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	b
H	d
S	t
T	t
R	kdes-t
R1	2*(kdes-t)

Checked sections

102X102X11.1
102X102X12.7
102X102X15.9
102X102X19
102X102X6.4
102X102X7.9
102X102X9.5
102X76X12.7
102X76X15.9
102X76X6.4
102X76X7.9
102X76X9.5
102X89X12.7
102X89X6.4
102X89X7.9
102X89X9.5
127X127X11.1
127X127X12.7
127X127X15.9
127X127X19
127X127X22.2
127X127X7.9
127X127X9.5
127X76X11.1
127X76X12.7

127X76X6.4
127X76X7.9
127X76X9.5
127X89X12.7
127X89X15.9
127X89X19
127X89X6.4
127X89X7.9
127X89X9.5
152X102X11.1
152X102X12.7
152X102X14.3
152X102X15.9
152X102X19
152X102X22.2
152X102X7.9
152X102X9.5
152X152X11.1
152X152X12.7
152X152X14.3
152X152X15.9
152X152X19
152X152X22.2
152X152X25.4
152X152X7.9

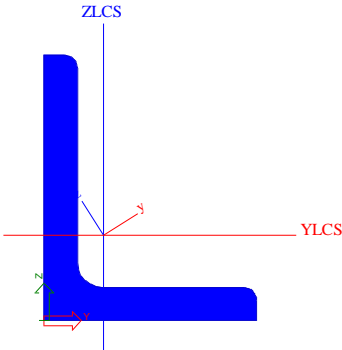
152X152X9.5
152X89X12.7
152X89X7.9
152X89X9.5
178X102X11.1
178X102X12.7
178X102X15.9
178X102X19
178X102X9.5
203X102X11.1
203X102X12.7
203X102X14.3
203X102X15.9
203X102X19
203X102X22.2
203X102X25.4
203X152X11.1
203X152X12.7
203X152X14.3
203X152X15.9
203X152X19
203X152X22.2
203X152X25.4
203X203X12.7
203X203X14.3

203X203X15.9
203X203X19
203X203X22.2
203X203X25.4
203X203X28.6
51X51X3.2
51X51X4.8
51X51X6.4
51X51X7.9
51X51X9.5
64X51X4.8
64X51X6.4
64X51X7.9
64X51X9.5
64X64X12.7
64X64X4.8
64X64X6.4

64X64X7.9
64X64X9.5
76X51X12.7
76X51X4.8
76X51X6.4
76X51X7.9
76X51X9.5
76X64X11.1
76X64X12.7
76X64X4.8
76X64X6.4
76X64X7.9
76X64X9.5
76X76X11.1
76X76X12.7
76X76X4.8
76X76X6.4

76X76X7.9
76X76X9.5
89X64X12.7
89X64X6.4
89X64X7.9
89X64X9.5
89X76X11.1
89X76X12.7
89X76X6.4
89X76X7.9
89X76X9.5
89X89X11.1
89X89X12.7
89X89X6.4
89X89X7.9
89X89X9.5

L(Imp)

Formcode	4
Description	American Single Angles Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	L(Imp).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	b
H	d
S	t
T	t
R	kdes-t
R1	2*(kdes-t)

Checked sections

2-1/2X2-1/2X1/2
2-1/2X2-1/2X1/4
2-1/2X2-1/2X3/16
2-1/2X2-1/2X3/8
2-1/2X2-1/2X5/16
2-1/2X2X1/4
2-1/2X2X3/16
2-1/2X2X3/8
2-1/2X2X5/16
2X2X1/4
2X2X1/8
2X2X3/16
2X2X3/8
2X2X5/16
3-1/2X2-1/2X1/2

3-1/2X2-1/2X1/4
3-1/2X2-1/2X3/8
3-1/2X2-1/2X5/16
3-1/2X3-1/2X1/2
3-1/2X3-1/2X1/4
3-1/2X3-1/2X3/8
3-1/2X3-1/2X5/16
3-1/2X3-1/2X7/16
3-1/2X3X1/2
3-1/2X3X1/4
3-1/2X3X3/8
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3-1/2X3X7/16
3X2-1/2X1/2
3X2-1/2X1/4

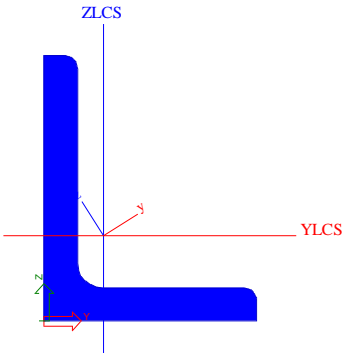
3X2-1/2X3/16
3X2-1/2X3/8
3X2-1/2X5/16
3X2-1/2X7/16
3X2X1/2
3X2X1/4
3X2X3/16
3X2X3/8
3X2X5/16
3X3X1/2
3X3X1/4
3X3X3/16
3X3X3/8
3X3X5/16
3X3X7/16

4X3-1/2X1/2
4X3-1/2X1/4
4X3-1/2X3/8
4X3-1/2X5/16
4X3X1/2
4X3X1/4
4X3X3/8
4X3X5/16
4X3X5/8
4X4X1/2
4X4X1/4
4X4X3/4
4X4X3/8
4X4X5/16
4X4X5/8
4X4X7/16
5X3-1/2X1/2
5X3-1/2X1/4
5X3-1/2X3/4
5X3-1/2X3/8
5X3-1/2X5/16
5X3-1/2X5/8
5X3X1/2
5X3X1/4
5X3X3/8
5X3X5/16
5X3X7/16
5X5X1/2

5X5X3/4
5X5X3/8
5X5X5/16
5X5X5/8
5X5X7/16
5X5X7/8
6X3-1/2X1/2
6X3-1/2X3/8
6X3-1/2X5/16
6X4X1/2
6X4X3/4
6X4X3/8
6X4X5/16
6X4X5/8
6X4X7/16
6X4X7/8
6X4X9/16
6X6X1
6X6X1/2
6X6X3/4
6X6X3/8
6X6X5/16
6X6X5/8
6X6X7/16
6X6X7/8
6X6X9/16
7X4X1/2
7X4X3/4

7X4X3/8
7X4X5/8
7X4X7/16
8X4X1
8X4X1/2
8X4X3/4
8X4X5/8
8X4X7/16
8X4X7/8
8X4X9/16
8X6X1
8X6X1/2
8X6X3/4
8X6X5/8
8X6X7/16
8X6X7/8
8X6X9/16
8X8X1
8X8X1-1/8
8X8X1/2
8X8X3/4
8X8X5/8
8X8X7/8
8X8X9/16

L(CSN)

Formcode	4
Description	Czech Single Angles
Source	
Revision date	
By	
PBD file	L(CSN).PBD
Code	Czech Standard CSN 42 5541 / 42 5545;
	

Checked properties

Checked variables

Checked sections

100/10
100/12
100/6
100/63/10
100/63/8
100/65/10
100/65/12
100/65/7
100/65/8
100/8
110/10
110/70/10
110/70/12
110/70/8
110/8
120/10
120/12
120/8
120/80/10
120/80/12

120/80/8
125/10
125/12
125/14
125/8
125/80/10
125/80/12
125/80/8
130/12
130/14
130/90/10
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140/10
140/12
140/14
140/90/10
140/90/12
140/90/14
140/90/8

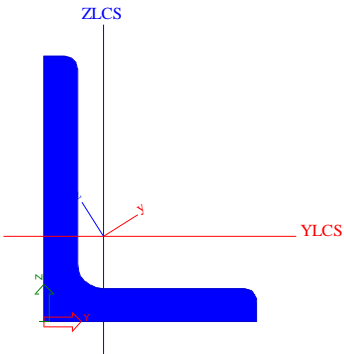
160/10
160/100/10
160/100/12
160/100/14
160/100/16
160/12
160/14
160/16
180/12
180/14
20/3
200/14
200/16
200/20
22/3
25/16/3
25/3
25/4
28/3
30/20/3

30/20/4
30/3
30/4
32/20/3
32/3
32/4
35/3
35/4
36/3
36/4
40/25/3
40/25/4
40/25/5
40/3
40/4
40/5
45/28/4
45/3
45/30/4
45/30/5
45/4
45/5
50/30/4
50/30/5
50/32/3
50/32/4
50/4

50/5
50/6
55/5
55/6
56/36/4
56/36/5
56/4
56/5
56/6
60/40/5
60/40/6
60/40/7
60/6
60/8
63/4
63/40/4
63/40/5
63/40/6
63/5
63/6
65/50/5
65/50/6
65/50/7
65/50/8
65/6
65/8
70/45/5

70/45/6
70/5
70/6
70/7
70/8
75/50/5
75/50/6
75/50/7
75/50/8
80/10
80/50/5
80/50/6
80/50/8
80/6
80/60/6
80/60/7
80/60/8
80/8
90/10
90/56/6
90/56/8
90/6
90/60/6
90/60/8
90/8

L(ARC)

Formcode	4
Description	Equal Leg Angles
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.86-97
Revision date	28/07/05
By	CVL
PBD file	L(ARC).PBD
Code	EN 10056-1: 1998
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
12	lyz	lyz
15	I1	Iu
16	I2	Iv
20	V0	AL

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t
T	t
R	r2
R1	r1

Checked sections

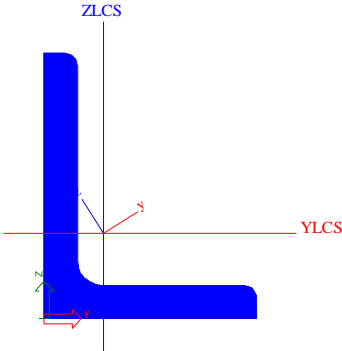
100x100x10
100x100x12
100x100x8
110x110x10
110x110x12
120x120x10
120x120x11
120x120x12
120x120x13
120x120x15
130x130x12
140x140x10
140x140x13
150x150x10
150x150x12
150x150x14
150x150x15
150x150x18
160x160x14
160x160x15
160x160x16

160x160x17
180x180x13
180x180x14
180x180x15
180x180x16
180x180x17
180x180x18
180x180x19
180x180x20
200x200x15
200x200x16
200x200x17
200x200x18
200x200x19
200x200x20
200x200x21
200x200x22
200x200x23
200x200x24
200x200x25
200x200x26

203X203X19
203X203X22.2
203X203X25.4
203X203X28.6
20x20x3
250x250x20
250x250x21
250x250x22
250x250x23
250x250x24
250x250x25
250x250x26
250x250x27
250x250x28
250x250x35
25x25x3
25x25x4
30x30x3
30x30x4
35x35x4
40x40x4

40x40x5
45x45x4.5
50x50x4
50x50x5
50x50x6
60x60x5
60x60x6
60x60x8
65x65x7
70x70x6
70x70x7
75x75x6
75x75x8
80x80x10
80x80x8
90x90x10
90x90x7
90x90x8
90x90x9

L(ARCI)

Formcode	4
Description	Unequal Leg Angles
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.98-100
Revision date	28/07/05
By	CVL
PBD file	L(ARCI).PBD
Code	EN 10056-1: 1998
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
12	lyz	lyz
15	I1	Iu
16	I2	Iv
19	a	α
20	V0	A_L

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t
T	t
R	r2
R1	r1

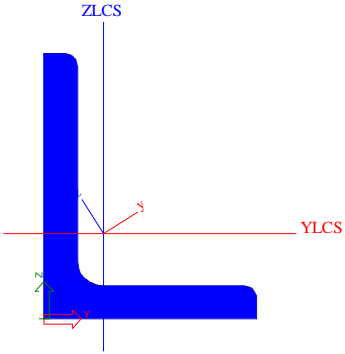
Checked sections

120x80x10
120x80x12
120x80x8
150x100x10
150x100x12
150x100x14

150x75x10
150x75x11
150x75x12
150x75x9
150x90x10
150x90x11

200x100x10
200x100x12
200x100x14

L(ARCUS)

Formcode	4
Description	American Equal Leg Angles Imperial naming convention
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.186-194
Revision date	28/07/05
By	CVL
PBD file	L(ARCUS).PBD
Code	ASTM A6/A6M - 03
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
12	lyz	lyz
15	I1	Iu
16	I2	Iv
20	V0	A _L

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t
T	t
R	r2
R1	r1

Checked sections

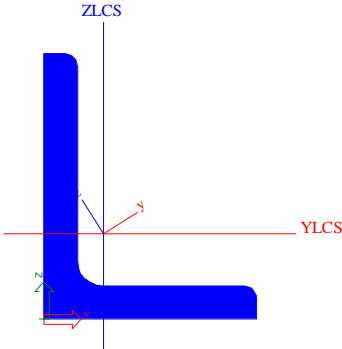
11/2x11/2x1/4
11/2x11/2x1/8
11/2x11/2x3/16
11/2x11/2x5/32
11/4x11/4x1/4
11/4x11/4x1/8
11/4x11/4x3/16
13/4x13/4x1/4
13/4x13/4x1/8
13/4x13/4x3/16
1x1x1/4
1x1x1/8
1x1x3/16
21/2x21/2x1/2
21/2x21/2x1/4
21/2x21/2x3/16
21/2x21/2x3/8

21/2x21/2x5/16
2x2x1/4
2x2x1/8
2x2x3/16
2x2x3/8
2x2x5/16
3/4x3/4x1/8
31/2x31/2x1/2
31/2x31/2x1/4
31/2x31/2x3/8
31/2x31/2x5/16
31/2x31/2x7/16
3x3x1/2
3x3x1/4
3x3x3/16
3x3x3/8
3x3x5/16

3x3x7/16
4x4x1/2
4x4x1/4
4x4x3/4
4x4x3/8
4x4x5/16
4x4x5/8
4x4x7/16
5x5x1/2
5x5x3/4
5x5x3/8
5x5x5/16
5x5x5/8
5x5x7/16
5x5x7/8
6x6x1
6x6x1/2

6x6x3/4
6x6x3/8
6x6x5/16
6x6x5/8
6x6x7/16
6x6x7/8
6x6x9/16
8x8x1
8x8x1/2
8x8x11/8
8x8x3/4
8x8x5/8
8x8x7/8
8x8x9/16

ISEA

Formcode	4
Description	Indian Standard Equal Leg Angles
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 5.1 & 5.2
Revision date	03/03/06
By	CVL
PBD file	ISEA.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
4	Cz	Cx
5	Cy	Cy
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
15	I1	Iu
16	I2	Iv
32	G	M
37	i1b	ru
38	i2b	rv

Checked variables

SCIA symbol	Source symbol
B	B
H	A
S	t
T	t
R	R2
R1	R1

Checked sections

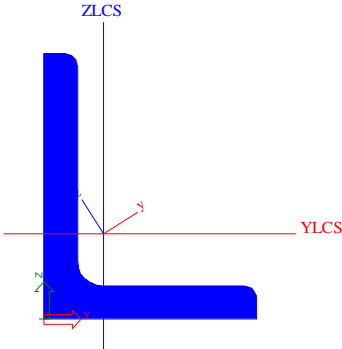
100/100/10
100/100/12
100/100/15
100/100/6
100/100/7
100/100/8
110/110/10
110/110/12
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110/110/8
120/120/10
120/120/12
120/120/15
120/120/8
130/130/10
130/130/12
130/130/16
130/130/8
130/130/9
150/150/10
150/150/12
150/150/15
150/150/16

150/150/18
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40/40/6
45/45/3
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50/50/6
50/50/7
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55/55/5
55/55/6
55/55/8
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60/60/4
60/60/5
60/60/6
60/60/8
65/65/10

65/65/5
65/65/6
65/65/8
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70/70/5
70/70/6
70/70/7
70/70/8
75/75/10
75/75/5
75/75/6
75/75/8
80/80/10
80/80/12
80/80/6
80/80/8
90/90/10
90/90/12
90/90/6
90/90/8

ISUA

Formcode	4
Description	Indian Standard Unequal Leg Angles
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 6.1 & 6.2
Revision date	03/03/06
By	CVL
PBD file	ISUA.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
4	Cz	Cx
5	Cy	Cy
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
15	I1	Iu
16	I2	Iv
32	G	M
37	i1b	ru
38	i2b	rv

Checked variables

SCIA symbol	Source symbol
B	B
H	A
S	t
T	t
R	R2
R1	R1

Checked sections

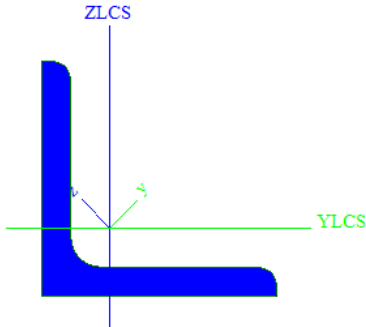
100/50/10
100/50/6
100/50/7
100/50/8
100/65/10
100/65/6
100/65/7
100/65/8
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100/75/12
100/75/6
100/75/8
120/80/10
120/80/12
120/80/8
125/75/10
125/75/12
125/75/6
125/75/8
125/95/10
125/95/12
125/95/6
125/95/8
135/65/10
135/65/12
135/65/8
150/115/10
150/115/12

150/115/16
150/115/8
150/75/10
150/75/12
150/75/15
150/75/8
150/75/9
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150/90/12
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200/100/10
200/100/12
200/100/15
200/100/16
200/150/10
200/150/12
200/150/15
200/150/16
200/150/18
200/150/20
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30/20/4
30/20/5
40/20/3
40/20/4
40/20/5
40/25/3
40/25/4

40/25/5
40/25/6
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50/30/5
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80/50/8
80/60/6
80/60/7
80/60/8
90/60/10
90/60/12
90/60/6
90/60/8
90/65/10
90/65/6
90/65/7
90/65/8

LNPeq

Formcode	4
Description	Equal leg angle
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.45-47
Revision date	07/05/07
By	PVT
PBD file	LNPeq.PBD
Code	EN 10 056-1
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
4	Cz	e
5	Cy	e
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
15	I1	Iu
16	I2	Iv
20	V0	Um
32	G	m
37	i1b	Iu
38	i2b	Iv
74	W1	w1
75	W2	w2

Checked variables

SCIA Symbol	Source Symbol
B	a
H	a
S	t
T	t
R	r
R1	r1

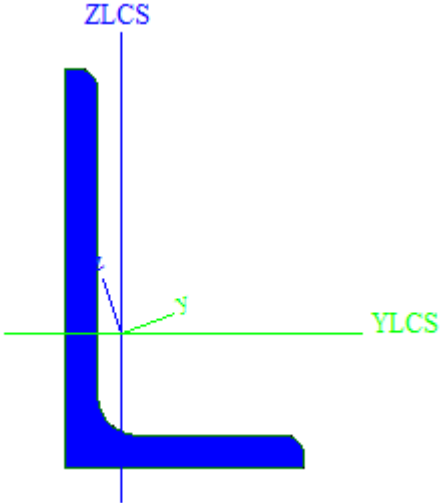
Checked sections

100/10
100/12
100/14
110/10
120/10
120/12
120/15
130/12
140/13
140/15
150/14
150/16
160/15
160/17

160/20
180/16
180/18
180/20
200/16
200/18
200/20
200/22
200/24
200/26
40/4
40/5
45/5
50/5

50/6
50/8
55/6
60/10
60/6
60/8
65/7
70/7
70/9
75/8
80/10
80/12
80/8
90/9

LNPue

Formcode	4
Description	Unequal leg angle
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.45-47
Revision date	07/05/07
By	PVT
PBD file	LNPue.PBD
Code	EN 10 056-1
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
4	Cz	ey
5	Cy	ez
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
15	I1	Iu
16	I2	Iv
20	V0	Um
32	G	m
37	i1b	Iu
38	i2b	Iv
74	W1	w1
75	W2	w2
76	W3	w3

Checked variables

SCIA Symbol	Source Symbol
B	b
H	a
S	t
T	t
R	r
R1	r1

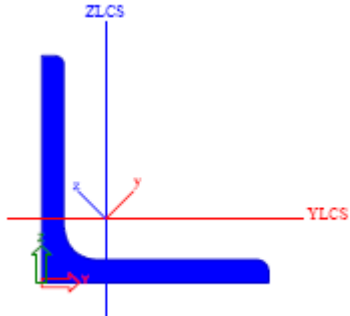
Checked sections

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100/50/6
100/50/8
100/65/11
100/65/7
100/65/9
100/75/9
120/80/10
120/80/12
120/80/8
130/65/10
130/65/12
130/65/8

150/100/10
150/100/12
150/100/14
150/75/11
150/75/9
160/80/10
160/80/12
160/80/14
200/100/10
200/100/12
200/100/14
200/100/16
50/30/4

50/30/5
60/30/5
60/30/7
60/40/5
60/40/6
60/40/7
70/50/6
75/50/6
75/50/7
80/40/6
80/40/8
90/60/6
90/60/8

UKA(EA)

Formcode	4
Description	Equal Angle Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	UKA(EA).PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry : Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
14	It	J : Torsional constant
15	I1	Iv : Second Moment of Area
16	I2	Iu : Second Moment of Area
19	V0	Surface area
32	G	Gs : Weight per metre
37	I1b	rv : Radius of gyration
38	I2b	ru : Radius of gyration

Checked variables

SCIA symbol	Source symbol
B	D
H	D
t	t
R	r1
R1	r2

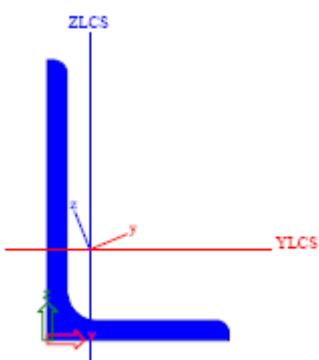
Checked sections

100/100/10.0
100/100/12.0
100/100/15.0
100/100/8.0
120/120/10.0
120/120/12.0
120/120/15.0

120/120/8.0
150/150/10.0
150/150/12.0
150/150/15.0
150/150/18.0
200/200/16.0
200/200/18.0

200/200/20.0
200/200/24.0
90/90/10.0
90/90/12.0
90/90/7.0
90/90/8.0

UKA(UA)

Formcode	4
Description	Unequal Angle Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	UKA(UA).PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry :Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
14	It	J : Torsional constant
15	I1	Iv :Second Moment of Area
16	I2	Iu : Second Moment of Area
19	V0	Surface area
32	G	Gs : Weight per metre
37	I1b	rv :Radius of gyration
38	I2b	ru : Radius of gyration

Checked variables

SCIA symbol	Source symbol
B	B
H	D
t	t
R	r1
R1	r2

Checked sections

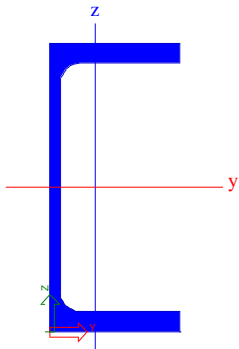
100/65/10.0
100/65/7.0
100/65/8.0
100/75/10.0
100/75/12.0
100/75/8.0
125/75/10.0

125/75/12.0
125/75/8.0
150/75/10.0
150/75/12.0
150/75/15.0
150/90/10.0
150/90/12.0

150/90/15.0
200/100/10.0
200/100/12.0
200/100/15.0
200/150/12.0
200/150/15.0
200/150/18.0

Channel sections

PFC

Formcode	5
Description	Parallel Flange Channel section
Source	Parallel Flange Channels Section Properties and Member Capacities to BS 5950 part 1:1990 pp.16-19
Revision date	07/10/99
By	CADS
PBD file	PFC.PBD
Code	BS 5950 part 1:1990
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	Radius of gyration /axis x-x
3	iz	Radius of gyration /axis y-y
4	cz	
5	cy	Cy
8	Iy	Second Moment of Area/axis x-x
9	Iz	Second Moment of Area/axis y-y
10	Wy	Elastic modulus / axis x-x
11	Wz	Elastic modulus / axis y-y
14	It	J : Torsional constant
20	V0	Surface area
32	G	Mass

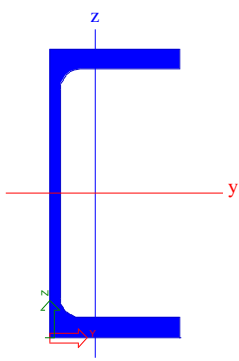
Checked variables

SCIA symbol	Source symbol
H	D
B	B
A	t
E	T
R	r

Checked sections

100/50/10
125/65/15
150/75/18
150/90/24
180/75/20
180/90/26
200/75/23
200/90/30
230/75/26
230/90/32
260/75/28
260/90/35
300/100/46
300/90/41
380/100/54
430/100/64

PFC(ARC)

Formcode	5
Description	Parallel Flange Channel section
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.148-149
Revision date	28/07/05
By	CVL
PBD file	PFC(ARC).PBD
Code	BS 4-1: 1993
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A_L
26	CM	lw
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	G
74	W1	e_{min}

Checked variables

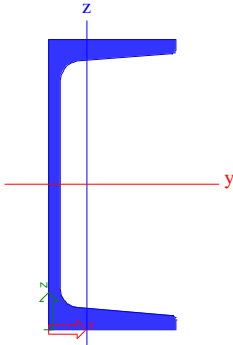
SCIA symbol	Source symbol
H	h
B	b
T1	tw
T2	tf
R	r

Checked sections

100x50x10
125x65x15
150x75x18
150x90x24
180x75x20
180x90x26
200x75x23
200x90x30
230x75x26

230x90x32
260x75x28
260x90x35
300x100x46
300x90x41
380x100x54
430x100x64

RSC

Formcode	5
Description	Channel section
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.30-B.33
Revision date	07/10/99
By	CADS
PBD file	RSC.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	Radius of gyration /axis x-x
3	iz	Radius of gyration /axis y-y
4	cz	
5	cy	Cy
8	Iy	Second Moment of Area/axis x-x
9	Iz	Second Moment of Area/axis y-y
10	Wy	Elastic modulus / axis x-x
11	Wz	Elastic modulus / axis y-y
14	It	J : Torsional constant
20	V0	Surface area
26	CM	H : Warping constant
32	G	Mass

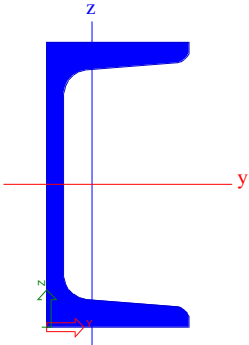
Checked variables

SCIA symbol	Source symbol
H	D
B	B
S	t
T	T
R	r1
R1	r2

Checked sections

102/51/10.42
127/64/14.90
152/76/17.88
152/89/23.84
178/76/20.84
178/89/26.81
203/76/23.82
203/89/29.78
229/76/26.06
229/89/32.76
254/76/28.29
254/89/35.74
305/102/46.18
305/89/41.69
381/102/55.10
432/102/65.54
76/38/6.70

U

Formcode	5
Description	Rundkantiger U-Stahl
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.46-47
Revision date	07/03/00
By	CVL
PBD file	U.PBD
Code	DIN 1026
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
5	cy	e_z
6	Sy	S_y
8	Iy	I_y
9	Iz	I_z
10	Wy	W_y
11	Wz	W_z
14	It	I_T

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_s
T	t_g
R	r_1
R1	r_2

Checked sections

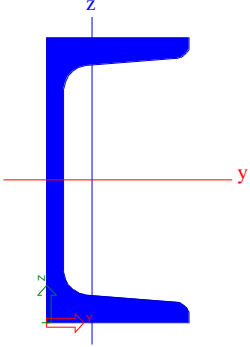
100
120
140
160
180
200

220
240
260
280
30
300

30X15
320
350
380
40
400

40X20
50
50X25
60
65
80

U(ARC)

Formcode	5
Description	European Channels with taper flanges
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.84-85
Revision date	28/07/05
By	CVL
PBD file	U(ARC).PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A _L
26	CM	Iw
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	G

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	tw
T	tf
R	r ₁
R1	r ₂

Checked sections

40x20
50x25
60x30
65x42

UPN

Formcode	5
Description	European standard channels
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.82-83
Revision date	28/07/05
By	CVL
PBD file	UPN.PBD
Code	DIN 1026-1:2000; NF A 45-202 (1983)

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
8	ly	I_y
9	lz	I_z
10	Wy	$W_{el,y}$
11	Wz	$W_{el,z}$
14	It	I_t
20	V0	A_L
26	CM	I_w
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$
32	G	G

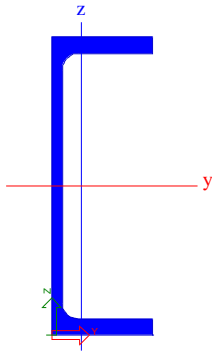
Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r_1
R1	r_2

Checked sections

100
120
140
160
180
200
220
240
260
280
300
320
350
380
400
80

UAP

Formcode	5
Description	Channels with parallel flanges
Source	Profil ARBED Sales programme – Structural Shapes Edition Octobre 1995 pp.36-37
Revision date	07/03/00
By	CVL
PBD file	UAP.PBD
Code	NF A 45-255
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
5	cy	y_s
8	ly	I_y
9	lz	I_z
10	Wy	W_y
11	Wz	W_z
14	It	I_T
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$

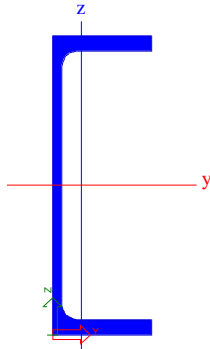
Checked variables

SCIA symbol	Source symbol
B	b
H	h
A	t_w
E	t_f
R	r

Checked sections

100
130
150
175
200
220
250
300
80

UPE

Formcode	5
Description	U Profil mit parallel verlaufenden Flanschseiten
Source	Bauen mit Stahl Thema UPE, UNP, UAP Tabelle 1 Salzgitter AG
Revision date	07/03/00
By	CVL
PBD file	UPE.PBD
Code	DIN 1026-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
5	cy	ey
8	ly	I_y
9	lz	I_z
10	Wy	W_y
11	Wz	W_z
14	It	I_T
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$

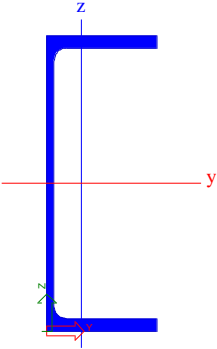
Checked variables

SCIA symbol	Source symbol
B	b
H	h
T1	t_w
T2	t_f
R	r

Checked sections

100
120
140
160
180
200
220
240
270
300
330
360
400
80

UPE(CSN)

Formcode	5
Description	Channels with parallel flanges
Source	CD-ROM Database Ferona Version 3.0 1999
Revision date	06/08/01
By	CVL
PBD file	UPE(CSN).PBD
Code	ESN 42 5572
	

Checked properties

Property number	SCIA symbol	Source symbol
2	iy	iv
3	iz	ix
8	ly	Jv
9	lz	Jx
10	Wy	Wv
11	Wz	Jx
14	It	I _T

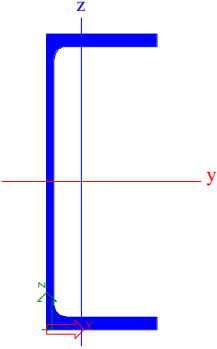
Checked variables

SCIA symbol	Source symbol
B	b
H	h
T1	t1
T2	t2
R	R

Checked sections

100
120
140
160
180
200
220
240
270
300
400
50
65
80

UPE(ARC)

Formcode	5
Description	Channels with parallel flanges
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.80-81
Revision date	28/07/05
By	CVL
PBD file	UPE(ARC).PBD
Code	DIN 1026-2 :2002-10
	 A technical drawing of a UPE(ARC) channel section. The section is shown in blue. It has a vertical web and two horizontal flanges. A coordinate system is overlaid on the section: a vertical blue line labeled 'z' at the top, a horizontal red line labeled 'y' at the right, and a green line labeled 'z' at the bottom. The 'z' axis is vertical, and the 'y' axis is horizontal.

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A _L
26	CM	Iw
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	G
74	W1	e _{min}

Checked variables

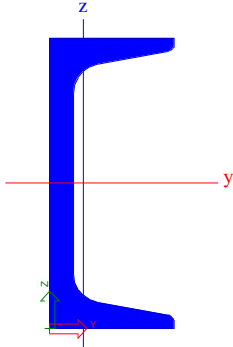
SCIA symbol	Source symbol
B	b
H	h
T1	tw
T2	tf
R	R

Checked sections

100
120
140
160
180
200
220
240

270
300
330
360
400
80

C

Formcode	5
Description	American Standard Channels Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	C.PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf
R1	

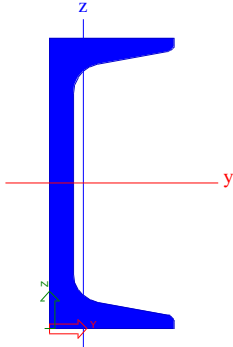
Checked sections

100X10.8
100X6.7
100X8
130X10.4
130X13
150X12.2
150X15.6
150X19.3
180X14.6
180X18.2
180X22

200X17.1
200X20.5
200X27.9
230X19.9
230X22
230X30
250X22.8
250X30
250X37
250X45
310X30.8

310X37
310X45
380X50.4
380X60
380X74
75X5.2
75X6.1
75X7.4
75X8.9

C(Imp)

Formcode	5
Description	American Standard Channels Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	C(Imp).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf
R1	

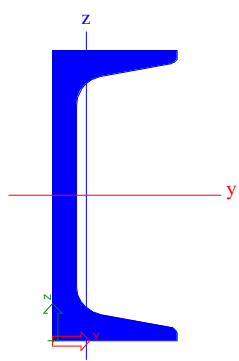
Checked sections

10X15.3
10X20
10X25
10X30
12X20.7
12X25
12X30
15X33.9
15X40
15X50
3X3.5

3X4.1
3X5
3X6
4X4.5
4X5.4
4X7.25
5X6.7
5X9
6X10.5
6X13
6X8.2

7X12.25
7X14.75
7X9.8
8X11.5
8X13.75
8X18.75
9X13.4
9X15
9X20

C(ARC)

Formcode	5
Description	American Standard Channels Imperial naming convention
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.178-181
Revision date	28/07/05
By	CVL
PBD file	C(ARC).PBD
Code	ASTM A6/A6M -03
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A _L
26	CM	Iw
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	G

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	tw
T	tf

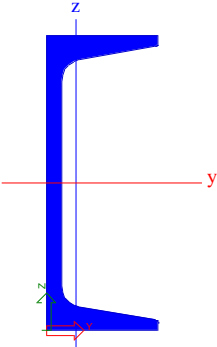
Checked sections

10x15.3
10x20
10x25
10x30
12x20.7
12x25
12x30
15x33.9
15x40
15x50

3x4.1
3x5
3x6
4x5.4
4x7.2
5x6.7
5x9
6x10.5
6x13
6x8.2

7x12.25
7x14.75
7x9.8
8x11.5
8x13.7
8x18.5
9x13.4
9x15
9x20

MC

Formcode	5
Description	American Miscellaneous Channels Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	MC.PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

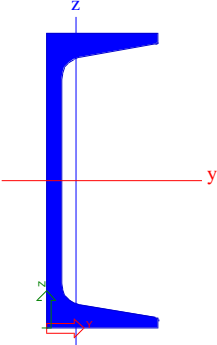
Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf
R1	

Checked sections

150X17.9
150X22.5
150X22.8
150X24.3
150X26.8
180X28.4
180X33.8
200X12.6
200X27.8
200X29.8
200X31.8
200X33.9
230X35.6
230X37.8
250X12.5
250X33
250X37
250X42.4
250X50
250X61.2
310X15.8
310X46
310X52
310X60
310X67
310X74
330X47.3
330X52
330X60
330X74
460X63.5
460X68.2
460X77.2
460X86

MC(Imp)

Formcode	5
Description	American Miscellaneous Channels Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	MC(Imp).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

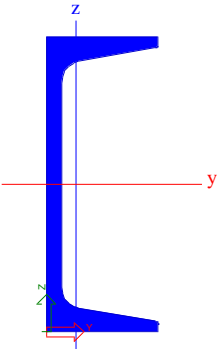
Checked sections

10X22
10X25
10X28.5
10X33.6
10X41.1
10X8.4
12X10.6
12X31
12X35
12X40
12X45
12X50

13X31.8
13X35
13X40
13X50
18X42.7
18X45.8
18X51.9
18X58
6X12
6X15.1
6X15.3
6X16.3

6X18
7X19.1
7X22.7
8X18.7
8X20
8X21.4
8X22.8
8X8.5
9X23.9
9X25.4

MC(ARC)

Formcode	5
Description	American Miscellaneous Channels Imperial naming convention
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.182-185
Revision date	28/07/05
By	CVL
PBD file	MC(ARC).PBD
Code	ASTM A6/A6M - 03
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A _L
26	CM	Iw
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	G

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	tw
T	tf

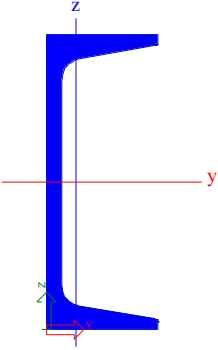
Checked sections

10x22
10x25
10x28.5
10x33.6
10x41.1
10x8.4
12x10.6
12x31
12x35
12x40
12x45
12x50

13x31.8
13x35
13x40
13x50
18x42.7
18x45.8
18x51.9
18x58
6x12
6x15.1
6x15.3
6x16.3

6x18
7x19.1
7x22.7
8x18.7
8x20
8x21.4
8x22.8
8x8.5
9x23.9
9x25.4

CH

Formcode	5
Description	British Channels with taper flanges
Source	CD-ROM Database Arcelor Group Sales Programme - Structural Shapes Edition 01-2004 pp.150-151
Revision date	28/07/05
By	CVL
PBD file	CH.PBD
Code	BS 4-1: 1993
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wel,y
11	Wz	Wel,z
14	It	It
20	V0	A_L
26	CM	Iw
30	Mpy	Wply x 240 N/mm ²
31	Mpz	Wplz x 240 N/mm ²
32	G	G

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	tw
T	tf
R	r1
R1	r2

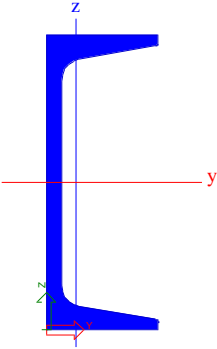
Checked sections

102x51x10
127x64x15
152x76x18
152x89x24
178x76x21
178x89x27

203x76x24
203x89x30
229x76x26
229x89x33
245x76x28
245x89x36

305x102x46
305x102x55
305x89x42
432x102x65
76x38x7

ISMC

Formcode	5
Description	Indian Standard Medium Weight Channels
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 4.1
Revision date	03/03/06
By	CVL
PBD file	ISMC.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
5	Cy	Cy
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
32	G	M

Checked variables

SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	R1
R1	R2

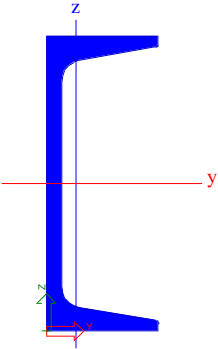
Checked sections

100/50/10
125/65/13
125/66/14
150/75/17
150/76/18
175/75/20
175/76/23

200/75/22
200/76/24
225/80/26
225/82/31
250/80/31
250/82/34
250/83/38

300/90/36
300/92/42
300/93/46
350/100/43
400/100/50
75/40/7

ISJC

Formcode	5
Description	Indian Standard Junior Channels
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 4.1
Revision date	03/03/06
By	CVL
PBD file	ISJC.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
5	Cy	Cy
8	Iy	Ix
9	Iz	Iy
10	Wy	Zx
11	Wz	Zy
32	G	M

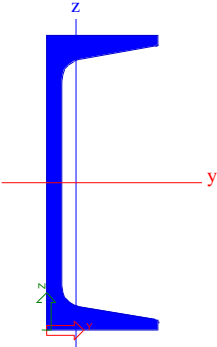
Checked variables

SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	R1
R1	R2

Checked sections

100/45/6
125/50/8
150/55/10
175/60/11
200/70/14

ISLC

Formcode	5
Description	Indian Standard Light Weight Channels
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 4.1
Revision date	03/03/06
By	CVL
PBD file	ISLC.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
5	Cy	Cy
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
32	G	M

Checked variables

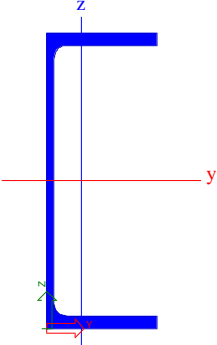
SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	R1
R1	R2

Checked sections

100/50/8
125/65/10.7
125/65/11
150/75/14
150/75/16
175/75/18
200/75/21
200/75/22

225/90/24
250/100/28
300/100/33
300/90/33
350/100/39
400/100/46
75/40/6

ISMCP

Formcode	5
Description	Indian Standard Parallel Flange Channels
Source	Indian Standard IS 808: 1989 Dimensions for hot rolled steel beam, column, channel and angle sections (Third Revision) Table 4.2
Revision date	03/03/06
By	CVL
PBD file	ISMCP.PBD
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	a
2	iy	rx
3	iz	ry
5	Cy	Cy
8	ly	lx
9	lz	ly
10	Wy	Zx
11	Wz	Zy
32	G	M

Checked variables

SCIA symbol	Source symbol
B	B
H	D
S	t
T	T
R	R1
R1	R2

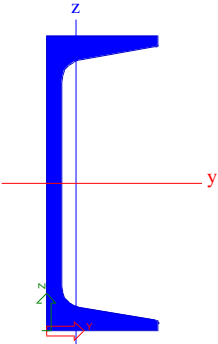
Checked sections

100/50/10
125/65/13
125/66/14
150/75/17
150/76/18
175/75/20
175/77/22

200/75/22
200/76/24
225/80/26
225/83/31
250/80/31
250/82/34
250/84/38

300/90/36
300/92/42
300/94/46
350/100/43
400/100/50
75/40/7

UNP

Formcode	5
Description	Channel section with inclined flanges
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.30-31
Revision date	07/05/07
By	PVT
PBD file	UNP.PBD
Code	DIN 1026-1
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
5	Cy	e
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
14	It	K=Ix
20	V0	Um
30	Mpy	Wply x 240 N/mm ²

31	Mpz	Wplz x 240 N/mm ²
32	G	m
74	W1	w

Checked variables

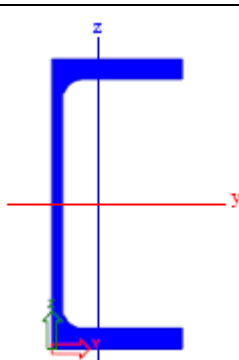
SCIA Symbol	Source Symbol
B	b
H	h
S	tw
T	tf
R	r
R1	r1

Checked sections

100
120
140
160
180
200
220
240
260

280
300
320
350
380
400
65
80

UKPFC

Formcode	5
Description	Parallel Flange Channel Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	UKPFC.PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry : Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
B	B
H	D
s	t
t	T
R	r1

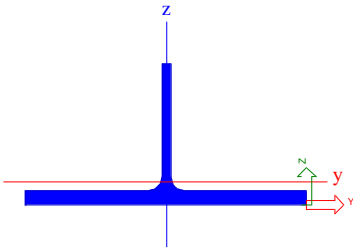
Checked sections

100/50/10.20
125/65/14.80
150/75/17.90
150/90/23.90
180/75/20.30
180/90/26.10
200/75/23.40
200/90/29.70

230/75/25.70
230/90/32.20
260/75/27.60
260/90/34.80
300/100/45.50
300/90/41.40
380/100/54.00
430/100/64.40

Tee sections

UCT

Formcode	6
Description	Structural Tee cut from universal columns
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.54-B.55
Revision date	07/10/99
By	CADS
PBD file	UCT.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area
2	iy	Radius of gyration /axis x-x
3	iz	Radius of gyration /axis y-y
4	cz	Cx

8	ly	Second Moment of Area/axis x-x
9	lz	Second Moment of Area/axis y-y
10	Wy	Elastic modulus / axis x-x
11	Wz	Elastic modulus / axis y-y
14	It	J : Torsional constant
32	G	Mass

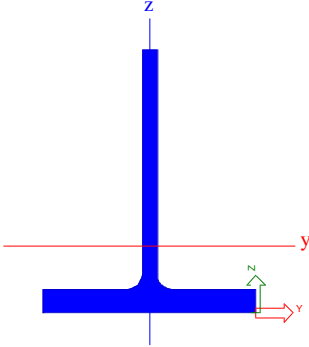
Checked variables

SCIA symbol	Source symbol
B	B
H	d
T	T
S	t
R	r

Checked sections

152/76/12
152/76/15
152/76/19
203/102/23
203/102/26
203/102/30
203/102/36
203/102/43
254/127/37
254/127/45
254/127/54
254/127/66
305/152/49
305/152/59
305/152/69
305/152/79
368/178/101
368/178/65
368/178/77
368/178/89
406/178/118

UBT

Formcode	6
Description	Structural Tee cut from universal beams
Source	BS 5950 part 1 : 1990 & EN 10210-2 Section Tables pp.B.50-B.53
Revision date	07/10/99
By	CADS
PBD file	UBT.PBD
Code	BS 5950 part 1 : 1990 & EN 10210-2
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area
2	iy	Radius of gyration /axis x-x
3	iz	Radius of gyration /axis y-y
4	cz	Cx
8	Iy	Second Moment of Area/axis x-x
9	Iz	Second Moment of Area/axis y-y
10	Wy	Elastic modulus / axis x-x
11	Wz	Elastic modulus / axis y-y
32	G	Mass

Checked variables

SCIA symbol	Source symbol
B	B
H	d
T	T
S	t
R	r

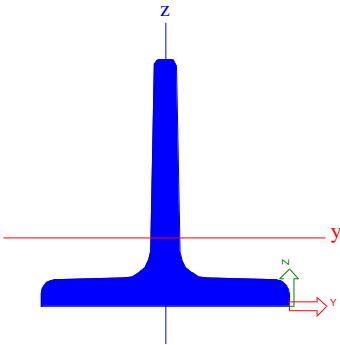
Checked sections

102/127/11
102/127/13
102/127/14
102/152/13
102/152/14
102/152/17
127/152/19
127/152/21
127/152/24
127/178/17
127/178/20
133/102/13
133/102/15
140/203/20
140/203/23
146/127/16
146/127/19
146/127/22
152/229/26
152/229/30
152/229/34
152/229/37

152/229/41
165/152/20
165/152/23
165/152/27
171/178/23
171/178/26
171/178/29
171/178/34
178/203/27
178/203/30
178/203/34
178/203/37
191/229/34
191/229/37
191/229/41
191/229/45
191/229/49
210/267/41
210/267/46
210/267/51
210/267/55
210/267/61

229/305/51
229/305/57
229/305/63
229/305/70
254/343/63
254/343/70
254/343/76
254/343/85
267/381/67
267/381/74
267/381/87
267/381/99
292/419/113
292/419/88
292/419/97
305/305/119
305/305/75
305/305/90
305/457/101
305/457/112
305/457/127

T

Formcode	6
Description	Rundkantiger T-Stahl
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.62-63
Revision date	16/01/01
By	CVL
PBD file	T.PBD
Code	DIN1024
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
4	cz	ey
8	ly	ly
9	lz	lz
10	Wy	Wy
11	Wz	Wz

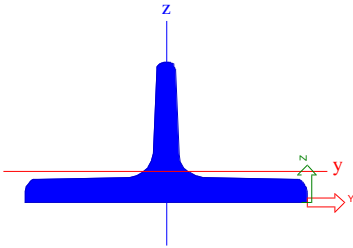
Checked variables

SCIA symbol	Source symbol
B	b
H	h
T	ts
S	ts
R	r1
R1	r2
R2	r3

Checked sections

100
120
140
20
25
30
35
40
45
50
60
70
80
90

TB

Formcode	6
Description	Rundkantiger T-Stahl
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.63
Revision date	16/01/01
By	CVL
PBD file	TB.PBD
Code	DIN 1024
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	iy
3	iz	iz
4	cz	ey
8	ly	ly
9	lz	lz
10	Wy	Wy
11	Wz	Wz

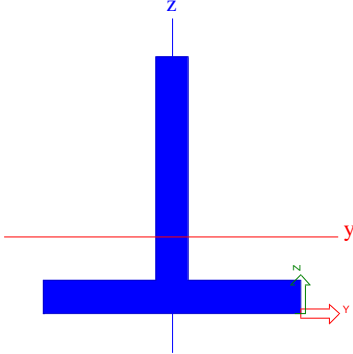
Checked variables

SCIA symbol	Source symbol
B	b
H	h
T	ts
S	ts
R	r1
R1	r2
R2	r3

Checked sections

30
35
40
50
60

TPS

Formcode	6
Description	Scharfkantiger T-Stahl
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.63
Revision date	16/01/01
By	CVL
PBD file	TPS.PBD
Code	DIN 59051
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A

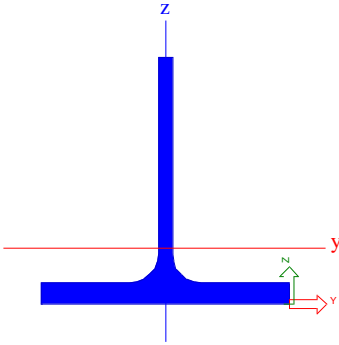
Checked variables

SCIA symbol	Source symbol
B	b
H	h
T	tg
S	ts

Checked sections

20
25
30
35
40

IPET

Formcode	6
Description	Structural Tee from IPE section
Source	Staalprofielen Overspannend staal pp.52-53
Revision date	04/04/01
By	GV
PBD file	IPET.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
4	cz	z_s
8	ly	I_y
9	lz	I_z
10	Wy	$W_{y,el}$
11	Wz	$W_{z,el}$
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$

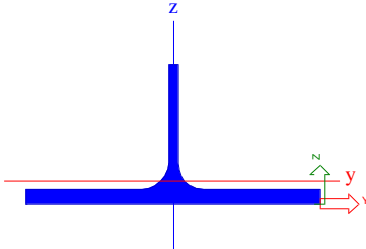
Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r

Checked sections

100
120
140
160
180
200
220
240
270
300
330
360
400
450
500
550
600
80

HEAT

Formcode	6
Description	Structural Tee from HEA section
Source	Staalprofielen Overspannend staal pp.52-53
Revision date	04/04/01
By	GV
PBD file	HEAT.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
4	cz	z_s
8	ly	I_y
9	lz	I_z
10	Wy	$W_{y,el}$
11	Wz	$W_{z,el}$
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$

Checked variables

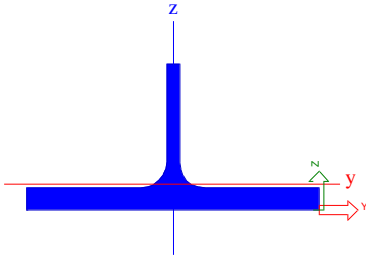
SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r

Checked sections

100
1000
120
140
160
180
200
220
240
260
280
300

320
340
360
400
450
500
550
600
650
700
800
900

HEBT

Formcode	6
Description	Structural Tee from HEB section
Source	Staalprofielen Overspannend staal pp.54-55
Revision date	04/04/01
By	KC
PBD file	HEBT.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
4	cz	z_s
8	ly	l_y

9	Iz	I_z
10	Wy	$W_{y,el}$
11	Wz	$W_{z,el}$
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$

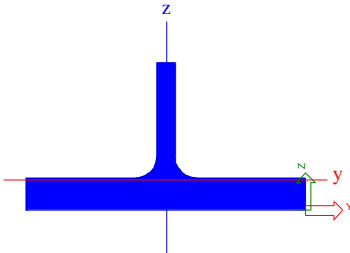
Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r

Checked sections

100
1000
120
140
160
180
200
220
240
260
280
300
320
340
360
400
450
500
550
600
650
700
800
900

HEMT

Formcode	6
Description	Structural Tee from HEM section
Source	Staalprofielen Overspannend staal pp.54-55
Revision date	04/04/01
By	KC
PBD file	HEMT.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	i_y
3	iz	i_z
4	cz	z_s
8	ly	I_y
9	lz	I_z
10	Wy	$W_{y,el}$
11	Wz	$W_{z,el}$
30	Mply	$W_{pl,y} \times 240 \text{ N/mm}^2$
31	Mplz	$W_{pl,z} \times 240 \text{ N/mm}^2$

Checked variables

SCIA symbol	Source symbol
B	b
H	h
S	t_w
T	t_f
R	r

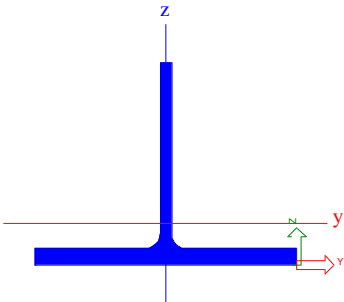
Checked sections

100
1000
120
140
160
180
200
220

240
260
280
300
320
340
360
400

450
500
550
600
650
700
800
900

WT

Formcode	6
Description	American WT shapes Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	WT.PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx

9	Iz	Iy
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf

Checked sections

100X11.25
100X13.3
100X15.65
100X17.95
100X20.85
100X23.05
100X26
100X29.5
100X35.5
100X43
100X50
100X7.5
100X9.65
125X11.15
125X12.65
125X14.2
125X16.35
125X19.25
125X22.4
125X24.55
125X29
125X33.5
125X36.5
125X40
125X44.5
125X50.5
125X57.5

125X65.5
125X74.5
125X8.95
125X83.5
155X10.5
155X101
155X11.9
155X113
155X126.5
155X14.15
155X141.5
155X156.5
155X16.35
155X171
155X187.5
155X19.35
155X207.5
155X22.25
155X227
155X250
155X26
155X30
155X33.5
155X37
155X39.5
155X43
155X48.5

155X53.5
155X58.5
155X64.5
155X71.5
155X79
155X89.5
180X108
180X118.5
180X131
180X143.5
180X157
180X16.45
180X173.5
180X19.5
180X191
180X210.5
180X22
180X231.5
180X25.5
180X254.5
180X275.5
180X28.9
180X296
180X317
180X32
180X338.5
180X36

180X372
180X39.5
180X409
180X45.5
180X450
180X495
180X50.5
180X543
180X55
180X601
180X61
180X67
180X73.5
180X81
180X89.5
180X98
205X19.4
205X23.05
205X26.5
205X30
205X33.5
205X37.5
205X42.5
205X50
205X57
205X66
205X74.5
230X106.5
230X117.5
230X130
230X26
230X30
230X34
230X37
230X41
230X44.5
230X48.5
230X53
230X56.5
230X64
230X72
230X79
230X88.5
230X96.5
265X109.5
265X124
265X136
265X150
265X33

265X36
265X37
265X41
265X42.5
265X46
265X50.5
265X54.5
265X61.5
265X69
265X75
265X82.5
265X91
265X98
305X108.5
305X120.5
305X131
305X142.5
305X153.5
305X170.5
305X186
305X207.5
305X227.5
305X249
305X275.5
305X41
305X46
305X50.5
305X56.5
305X62.5
305X70
305X76.5
305X77.5
305X87
305X97.5
345X108.5
345X120
345X132.5
345X144.5
345X161.5
345X175
345X192
345X209.5
345X228.5
345X250
345X274
345X401
345X62.5
345X70
345X76

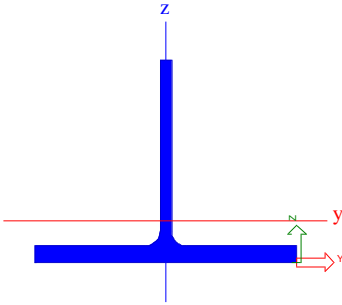
345X85
345X96
380X110
380X128.5
380X142
380X157
380X175
380X194.5
380X217
380X242
380X265.5
380X291
380X67
380X73.5
380X80.5
380X86.5
380X92.5
380X98
420X105
420X113
420X125.5
420X149.5
420X164.5
420X179.5
420X196
420X216.5
420X236.5
420X249
420X288
420X88
420X96.5
460X100.5
460X111.5
460X119
460X126.5
460X135.5
460X144.5
460X156.5
460X171
460X172.5
460X182.5
460X190.5
460X193.5
460X208.5
460X223
460X244
460X267
460X292.5
460X326.5

460X392
460X483.5
460X594
500X111
500X124.5
500X136
500X148
500X157
500X160.5
500X175
500X185.5
500X196.5
500X206

500X207.5
500X221.5
500X241.5
500X243
500X247
500X269.5
500X277
500X292
500X295.5
500X321
500X374
500X441.5
50X9.65

550X171.5
550X195
550X216.5
550X249.5
65X11.9
65X14.05
75X11.25
75X12
75X14.9
75X18.55
75X6.5
75X6.75
75X9

WT(Imp)

Formcode	6
Description	American WT shapes Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	WT(Imp).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y

5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf

Checked sections

10.5X100.5
10.5X22
10.5X24
10.5X25
10.5X27.5
10.5X28.5
10.5X31
10.5X34
10.5X36.5
10.5X41.5
10.5X46.5
10.5X50.5
10.5X55.5
10.5X61
10.5X66
10.5X73.5
10.5X83
10.5X91
12X103.5
12X114.5
12X125
12X139.5
12X153
12X167.5
12X185

12X27.5
12X31
12X34
12X38
12X42
12X47
12X51.5
12X52
12X58.5
12X65.5
12X73
12X81
12X88
12X96
13.5X108.5
13.5X117.5
13.5X129
13.5X140.5
13.5X153.5
13.5X168
13.5X184
13.5X269.5
13.5X42
13.5X47
13.5X51

13.5X57
13.5X64.5
13.5X73
13.5X80.5
13.5X89
13.5X97
15X105.5
15X117.5
15X130.5
15X146
15X163
15X178.5
15X195.5
15X45
15X49.5
15X54
15X58
15X62
15X66
15X74
15X86.5
15X95.5
16.5X100.5
16.5X110.5
16.5X120.5

16.5X131.5
16.5X145.5
16.5X159
16.5X177
16.5X193.5
16.5X59
16.5X65
16.5X70.5
16.5X76
16.5X84.5
18X105
18X115
18X116
18X122.5
18X128
18X130
18X140
18X150
18X164
18X179.5
18X196.5
18X219.5
18X263.5
18X325
18X399
18X67.5
18X75
18X80
18X85
18X91
18X97
2.5X8
2.5X9.5
20X105.5
20X107.5
20X117.5
20X124.5
20X132
20X138.5
20X139
20X148.5
20X162
20X163.5
20X165.5
20X181
20X186
20X196
20X198.5
20X215.5

20X251.5
20X296.5
20X74.5
20X83.5
20X91.5
20X99.5
22X115
22X131
22X145
22X167.5
2X6.5
3X10
3X12.5
3X4.25
3X4.5
3X6
3X7.5
3X8
4X10.5
4X12
4X14
4X15.5
4X17.5
4X20
4X24
4X29
4X33.5
4X5
4X6.5
4X7.5
4X9
5X11
5X13
5X15
5X16.5
5X19.5
5X22.5
5X24.5
5X27
5X30
5X34
5X38.5
5X44
5X50
5X56
5X6
5X7.5
5X8.5
5X9.5

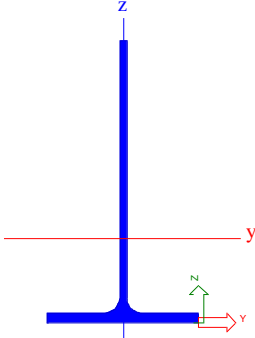
6X105
6X11
6X115
6X126
6X13
6X139.5
6X15
6X152.5
6X168
6X17.5
6X20
6X22.5
6X25
6X26.5
6X29
6X32.5
6X36
6X39.5
6X43.5
6X48
6X53
6X60
6X68
6X7
6X76
6X8
6X85
6X9.5
6X95
7X105.5
7X11
7X116.5
7X128.5
7X13
7X141.5
7X15
7X155.5
7X17
7X171
7X185
7X19
7X199
7X21.5
7X213
7X227.5
7X24
7X250
7X26.5
7X275

7X30.5
7X302.5
7X332.5
7X34
7X365
7X37
7X404
7X41
7X45
7X49.5
7X54.5
7X60
7X66
7X72.5
7X79.5

7X88
7X96.5
8X13
8X15.5
8X18
8X20
8X22.5
8X25
8X28.5
8X33.5
8X38.5
8X44.5
8X50
9X17.5
9X20

9X23
9X25
9X27.5
9X30
9X32.5
9X35.5
9X38
9X43
9X48.5
9X53
9X59.5
9X65
9X71.5
9X79
9X87.5

MT

Formcode	6
Description	American MT shapes Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	MT.PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

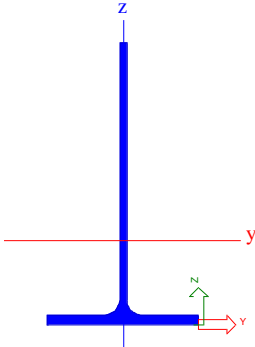
Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf

Checked sections

100X4.6
100X4.85
125X5.6
125X5.95
125X6.7
155X7.45
155X8.05
155X8.8
50X4.45
65X14.05
75X2.75
75X3.3

MT(Imp)

Formcode	6
Description	American MT shapes Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	MT(Imp).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

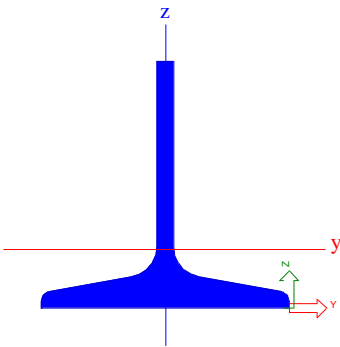
Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf

Checked sections

2.5X9.45
2X3
3X1.85
3X2.2
4X3.1
4X3.25
5X3.75
5X4
5X4.5
6X5
6X5.4
6X5.9

ST

Formcode	6
Description	American S shapes Metric naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	ST.PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf
R1	

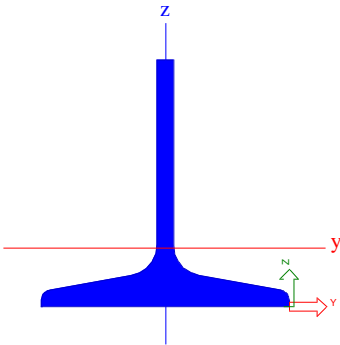
Checked sections

100X13.7
100X17
125X18.9
125X26
155X23.65
155X26
155X30.35
155X37
190X32
190X37

230X40.7
230X52
255X49.1
255X56
255X64
255X71.5
305X59.5
305X67
305X74.5
305X79

305X90
37.5X4.25
37.5X5.6
50X5.75
50X7.05
65X7.5
75X12.85
75X9.3

ST(Imp)

Formcode	6
Description	American S shapes Imperial naming convention
Source	CD - Shapes Database U.S. Customary & Metric Units Version 3.0 , 2001 AISC
Revision date	12/09/02
By	CVL
PBD file	ST(Imp).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	rx
3	iz	ry
4	cz	y
5	cy	x
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
19	a	ATAN(tan_alpha)
22	Dy	e0
26	CM	Cw
30	Mply	Zx x 240 N/mm ²
31	Mplz	Zy x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	kdes-tf
R1	

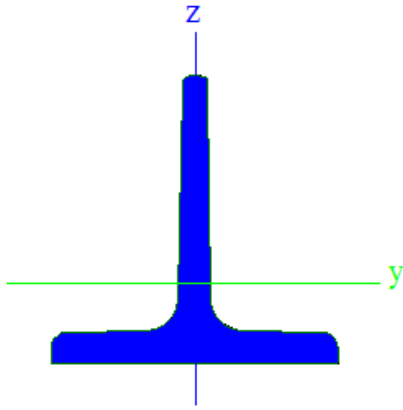
Checked sections

1.5X2.85
1.5X3.75
10X33
10X37.5
10X43
10X48
12X40
12X45
12X50
12X53

12X60.5
2.5X5
2X3.85
2X4.75
3X6.25
3X8.63
4X11.5
4X9.2
5X12.7
5X17.5

6X15.9
6X17.5
6X20.4
6X25
7.5X21.45
7.5X25
9X27.35
9X35

TPH

Formcode	6
Description	T section with high web
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.42
Revision date	07/05/07
By	PVT
PBD file	TPH.PBD
Code	EN 10 055, DIN 1024
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
4	Cz	ey
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
14	It	K=Ix
20	V0	Um
32	G	m
74	W1	w

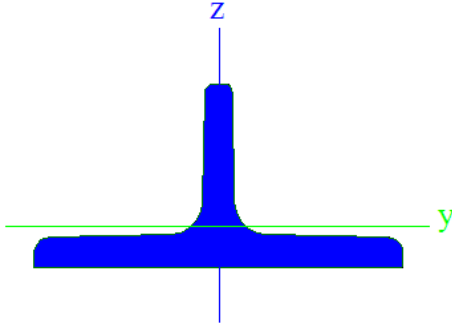
Checked variables

SCIA Symbol	Source Symbol
B	b
H	h
S	tw
T	tf
R	r
R1	r1
R2	r2

Checked sections

100
120
140
50
60
70
80
90

TPB

Formcode	6
Description	T section with wide flange
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.42
Revision date	07/05/07
By	PVT
PBD file	TPB.PBD
Code	EN 10 055, DIN 1024
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
4	Cz	ey
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
14	It	K=Ix
20	V0	Um
32	G	m
74	W1	w

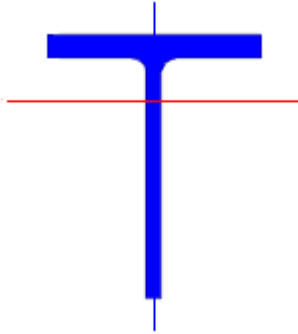
Checked variables

SCIA Symbol	Source Symbol
B	b
H	h
S	tw
T	tf
R	r
R1	r1
R2	r2

Checked sections

100/50
120/60
80/40

UKT(UB)

Formcode	6
Description	Structural Tee cut from universal beam
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	UKT(UB).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry :Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity (measured from top)
6	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
14	It	J : Torsional constant
32	G	Gs : Weight per metre

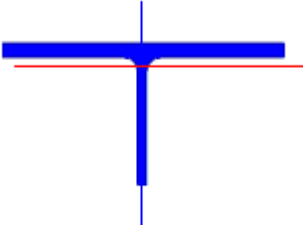
Checked variables

SCIA symbol	Source symbol
B	B
H	D
t	T
s	t
R	r1

Checked sections

102/127/11	146/127/19	178/203/27	210/267/46
102/127/13	146/127/22	178/203/30	210/267/51
102/127/14	152/229/26	178/203/34	210/267/55
102/152/13	152/229/30	178/203/37	210/267/61
102/152/14	152/229/34	178/203/43	210/267/69
102/152/17	152/229/37	178/305/41	229/305/51
127/152/19	152/229/41	178/305/46	229/305/57
127/152/21	165/152/20	178/305/50	229/305/63
127/152/24	165/152/23	191/229/34	229/305/70
127/178/17	165/152/27	191/229/37	254/343/63
127/178/20	165/267/33	191/229/41	305/305/119
133/102/13	165/267/37	191/229/45	305/305/75
133/102/15	165/267/42	191/229/49	305/305/90
140/203/20	171/178/23	191/229/53	312/267/109
140/203/23	171/178/26	191/229/67	312/267/137
140/203/27	171/178/29	191/229/81	312/267/75
146/127/16	171/178/34	210/267/41	312/267/91

UKT(UC)

Formcode	6
Description	Structural Tee cut from universal column
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	UKT(UC).PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry :Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity (measured from top)
6	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
13	Wt	C : Torsional modulus
14	It	J : Torsional constant
20	V0	Surface area
32	G	Gs : Weight per metre

Checked variables

SCIA symbol	Source symbol
B	B
H	D
t	T
s	t
R	r1

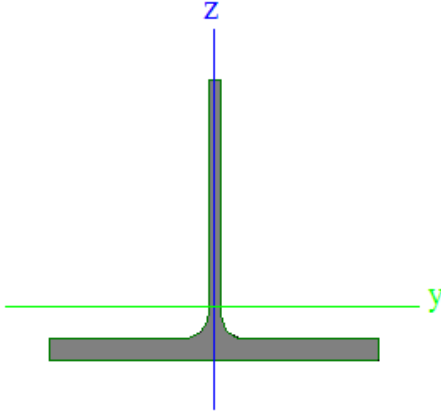
Checked sections

152/76/12
152/76/15
152/76/19
152/76/22
152/76/26
203/102/23
203/102/26
203/102/30

203/102/36
203/102/43
203/102/50
203/102/57
203/102/64
254/127/37
254/127/45
254/127/54

254/127/66
254/127/84
305/152/49
305/152/59
305/152/69
305/152/79

WT(GERD)

Formcode	6
Description	Structural Tee cut from I shape
Source	PERFIS Gerdau Açominas Edition 2006
Revision date	22/06/09
By	PVT
PBD file	WT(GERD).PBD
Code	ASTM A6/A6M
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Área
2	iy	rx
3	iz	ry
4	cz	dx
8	ly	lx
9	lz	ly
10	Wy	Wx
11	Wz	Wy
32	G	Massa Linear

Checked variables

SCIA symbol	Source symbol
B	bf
H	d
S	tw
T	tf
R	d-tf-d'

Checked sections

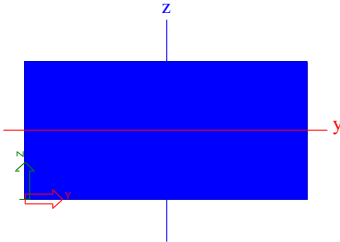
75x6,5
75x9,0
75x12,0
100x7,5
100x9,65
100x11,25
100x13,3
100x15,65
125x8,95
125x11,15
125x12,65
125x14,2
125x16,35
125x19,25
125x22,4
155x10,5
155x11,9
155x14,15
155x16,35
155x19,35
155x22,25
155x26,0
180x16,45
180x19,5
180x22,0
180x25,5
180x28,9

180x32,0
180x36,0
180x39,5
205x19,4
205x23,05
205x26,5
205x30,0
205x33,5
205x37,5
205x42,5
230x26,0
230x30,0
230x34,0
230x37,0
230x41,0
230x44,5
230x48,5
230x53,0
265x33,0
265x36,0
265x37,0
265x41,0
265x42,5
265x46,0
265x50,5
265x54,5
305x50,5

305x56,5
305x62,5
305x70,0
305x77,5
305x87,0
75x11,25
75x14,9
75x18,55
100x17,95
100x20,85
100x23,05
100x26,0
100x29,5
100x35,5
100x43,0
125x36,5
125x40,0
125x44,5
125x50,5
125x57,5
155x48,5
155x53,5
155x58,5
180x45,5
180x50,5
180x55,0
180x61,0

Full Rectangular Sections

FL

Formcode	7
Description	Flat bar (Flachstahl)
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.68-69
Revision date	16/09/02
By	CVL
PBD file	FL.PBD
Code	DIN 1017
	

Checked properties

Property number	SCIA symbol	Source symbol

Checked variables

SCIA symbol	Source symbol
B	b
H	s

Checked sections

100X10
100X11
100X12
100X13
100X14
100X15
100X16
100X20
100X25
100X30
100X40
100X5
100X50
100X6
100X6.5
100X60
100X8
10X5
110X10
110X11
110X12
110X13
110X14
110X15
110X16
110X20
110X25
110X30
110X40
110X50
110X8
110X9
11X5
11X6
120X10
120X11
120X12
120X13
120X15
120X16
120X20
120X25
120X30
120X40
120X50
120X60
120X8
12X5

12X6
130X10
130X11
130X12
130X13
130X14
130X15
130X16
130X20
130X25
130X30
130X40
130X50
130X8
130X9
13X5
13X6
13X6.5
13X7
13X8
13X9
140X10
140X12
140X15
140X16
140X20
140X25
140X30
140X35
140X40
140X50
140X8
14X5
14X6
14X7
14X8
150X10
150X11
150X12
150X13
150X14
150X15
150X16
150X20
150X25
150X30
150X40
150X50

150X60
150X8
15X10
15X5
15X6
15X7
15X8
16X10
16X11
16X5
16X6
16X6.5
16X7
16X8
16X9
17X11
17X5
17X6
17X7
17X8
18X10
18X11
18X5
18X6
18X6.5
18X7
18X8
18X9
19X11
19X13
19X5
19X6
19X7
19X8
19X9
20X10
20X12
20X13
20X15
20X5
20X6
20X6.5
20X7
20X8
20X9
22X10
22X11
22X12

22X13
22X14
22X15
22X17
22X5
22X6
22X6.5
22X7
22X8
25X10
25X12
25X13
25X14
25X15
25X16
25X5
25X6
25X6.5
25X7
25X8
26X10
26X12
26X13
26X14
26X15
26X16
26X18
26X20
26X5
26X6
26X6.5
26X7
26X8
28X10
28X12
28X13
28X14
28X16
28X18
28X5
28X6
28X6.5
28X7
28X8
30X10
30X12
30X13
30X14
30X15

30X16
30X18
30X20
30X22
30X25
30X5
30X6
30X6.5
30X7
30X8
30X9
32X10
32X12
32X13
32X14
32X15
32X16
32X20
32X22
32X25
32X5
32X6
32X6.5
32X8
35X10
35X12
35X13
35X14
35X15
35X16
35X18
35X20
35X22
35X25
35X5
35X6
35X6.5
35X7
35X8
38X10
38X5
38X6
38X6.5
38X8
38x12
38x13
38x14
38x15
38x16

38x18
38x20
38x22
38x25
40X10
40X12
40X13
40X14
40X15
40X16
40X18
40X20
40X22
40X25
40X30
40X5
40X6
40X6.5
40X7
40X8
40X9
45X10
45X12
45X13
45X14
45X15
45X16
45X20
45X22
45X25
45X30
45X5
45X6
45X6.5
45X7
45X8
50X10
50X12
50X13
50X14
50X15
50X16
50X18
50X20
50X22
50X25
50X30
50X40
50X5

50X6
50X6.5
50X7
50X8
50X9
55X10
55X12
55X13
55X14
55X15
55X16
55X18
55X20
55X22
55X25
55X30
55X5
55X6
55X6.5
55X8
60X10
60X12
60X13
60X15
60X16
60X18
60X20
60X22
60X25
60X30
60X35
60X40
60X5
60X50
60X6
60X6.5
60X7
60X8
60X9
65X10
65X12
65X13
65X15

65X16
65X20
65X22
65X25
65X30
65X40
65X5
65X6
65X6.5
65X8
65X9
70X10
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70X13
70X15
70X16
70X18
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70X22
70X25
70X30
70X35
70X40
70X5
70X50
70X6
70X6.5
70X7
70X8
75X10
75X12
75X13
75X15
75X16
75X20
75X25
75X30
75X35
75X40
75X5
75X6
75X6.5
75X60

75X8
80X10
80X11
80X12
80X13
80X15
80X16
80X20
80X25
80X30
80X35
80X40
80X5
80X50
80X6
80X6.5
80X60
80X7
80X8
90X10
90X11
90X12
90X13
90X15
90X16
90X18
90X20
90X25
90X30
90X40
90X5
90X50
90X6
90X6.5
90X60
90X8
90X9

BRFL

Formcode	7
Description	Wide Flat bar (Breitflachstahl)
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.71
Revision date	16/09/02
By	CVL
PBD file	BRFL.PBD
Code	DIN 59200

Checked properties

Property number	SCIA symbol	Source symbol

Checked variables

SCIA symbol	Source symbol
B	b
H	s

Checked sections

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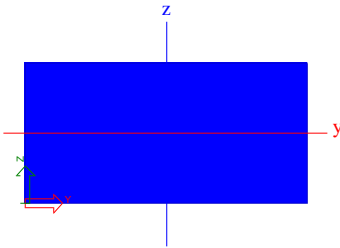
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S(RAIL)

Formcode	7
Description	Rectangular Rail section
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.166
Revision date	16/09/02
By	CVL
PBD file	S(RAIL).PBD
Code	
	

Checked properties

Remark : the properties are introduced taking into account a 25% reduction of the rail height h.

Property number	SCIA symbol	Source symbol

Checked variables

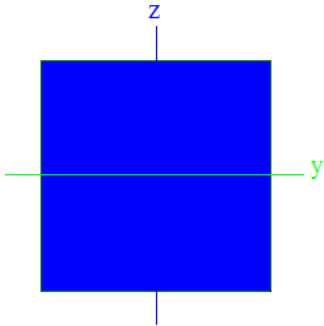
Remark : the variables are introduced taking into account a 25% reduction of the rail height h.

SCIA symbol	Source symbol
B	b
H	h

Checked sections

50X30
60X30
60X40
65X45
70X40

VKT

Formcode	7
Description	Square bar
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.49
Revision date	07/05/07
By	PVT
PBD file	VKT.PBD
Code	
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	i
3	iz	i
8	ly	l
9	lz	l
10	Wy	Wel
11	Wz	Wel
20	V0	Um
30	Mpy	Wpl x 240 N/mm ²
31	Mpz	Wpl x 240 N/mm ²
32	G	m

Checked variables

SCIA Symbol	Source Symbol
B	b
H	b

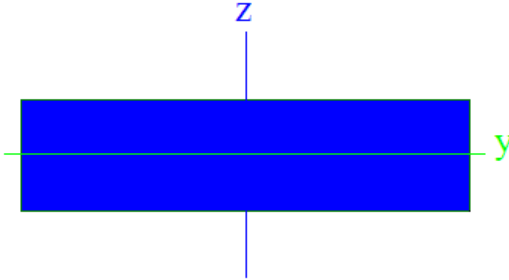
Checked sections

10
100
110
12
120
130
14
140
15
150
16
160
18

180
20
200
220
240
25
250
260
280
30
300
320
35

350
380
40
400
420
45
450
50
500
60
70
80
90

FLA

Formcode	7
Description	Flat bar
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.66
Revision date	07/05/07
By	PVT
PBD file	FLA.PBD
Code	
	

Checked properties

Property number	SCIA Symbol	Source Symbol
32	G	m

Checked variables

SCIA Symbol	Source Symbol
B	b
H	t

Checked sections

100/10	110/80	130/60	150/50
100/12	120/10	130/8	150/6
100/15	120/100	130/80	150/60
100/16	120/12	140/10	150/8
100/18	120/15	140/100	150/80
100/20	120/16	140/12	20/10
100/25	120/18	140/15	20/12
100/30	120/20	140/16	20/15
100/35	120/25	140/18	20/16
100/4	120/30	140/20	20/18
100/40	120/35	140/25	20/04
100/45	120/4	140/30	20/05
100/5	120/40	140/35	20/06
100/50	120/45	140/4	20/08
100/6	120/5	140/40	25/10
100/60	120/50	140/45	25/12
100/8	120/6	140/5	25/15
100/80	120/60	140/50	25/16
110/10	120/8	140/6	25/18
110/100	120/80	140/60	25/20
110/12	130/10	140/8	25/04
110/15	130/100	140/80	25/05
110/16	130/12	150/10	25/06
110/18	130/15	150/100	25/08
110/20	130/16	150/12	30/10
110/25	130/18	150/15	30/12
110/30	130/20	150/16	30/15
110/35	130/25	150/18	30/16
110/4	130/30	150/20	30/18
110/40	130/35	150/25	30/20
110/45	130/4	150/30	30/25
110/5	130/40	150/35	30/04
110/50	130/45	150/4	30/05
110/6	130/5	150/40	30/06
110/60	130/50	150/45	30/08
110/8	130/6	150/5	35/10

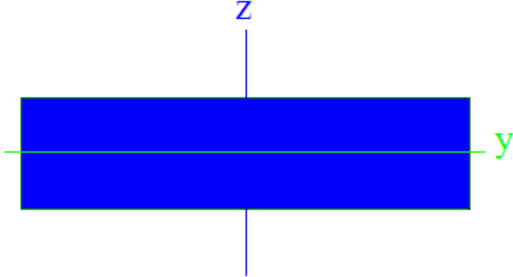
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FLB

Formcode	7
Description	Wide flat bar
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.66
Revision date	07/05/07
By	PVT
PBD file	FLB.PBD
Code	
	

Checked properties

Property number	SCIA Symbol	Source Symbol
32	G	m

Checked variables

SCIA Symbol	Source Symbol
B	b
H	t

Checked sections

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300/100

300/12
300/15
300/16
300/18
300/20
300/25
300/30
300/35
300/4
300/40
300/45
300/5
300/50
300/6
300/60
300/8
300/80
350/10
350/100
350/12
350/15
350/16
350/18
350/20
350/25
350/30
350/35
350/4
350/40
350/45
350/5
350/50
350/6
350/60
350/8
350/80
400/10
400/100
400/12
400/15
400/16
400/18
400/20
400/25

400/30
400/35
400/4
400/40
400/45
400/5
400/50
400/6
400/60
400/8
400/80
450/10
450/100
450/12
450/15
450/16
450/18
450/20
450/25
450/30
450/35
450/4
450/40
450/45
450/5
450/50
450/6
450/60
450/8
450/80
500/10
500/100
500/12
500/15
500/16
500/18
500/20
500/25
500/30
500/35
500/4
500/40
500/45
500/5

500/50
500/6
500/60
500/8
500/80
550/10
550/100
550/12
550/15
550/16
550/18
550/20
550/25
550/30
550/35
550/4
550/40
550/45
550/5
550/50
550/6
550/60
550/8
550/80
600/10
600/100
600/12
600/15
600/16
600/18
600/20
600/25
600/30
600/35
600/4
600/40
600/45
600/5
600/50
600/6
600/60
600/8
600/80
650/10

650/100
650/12
650/15
650/16
650/18
650/20
650/25
650/30
650/35
650/4
650/40
650/45
650/5
650/50
650/6
650/60
650/8
650/80
700/10
700/100
700/12
700/15
700/16
700/18
700/20
700/25
700/30
700/35
700/4
700/40
700/45
700/5
700/50
700/6
700/60
700/8
700/80
750/10
750/100
750/12
750/15
750/16
750/18
750/20

750/25
750/30
750/35
750/4
750/40
750/45
750/5
750/50
750/6
750/60
750/8
750/80
800/10
800/100
800/12
800/15
800/16
800/18
800/20
800/25
800/30
800/35
800/4
800/40
800/45
800/5
800/50
800/6
800/60
800/8
800/80
850/10
850/100
850/12
850/15
850/16
850/18
850/20
850/25
850/30
850/35
850/4
850/40
850/45

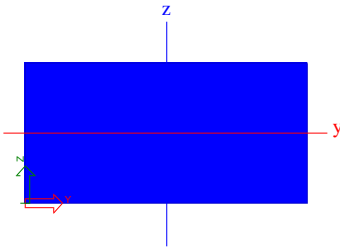
850/5
850/50
850/6
850/60
850/8
850/80
900/10
900/100
900/12
900/15
900/16

900/18
900/20
900/25
900/30
900/35
900/4
900/40
900/45
900/5
900/50
900/6

900/60
900/8
900/80
950/10
950/100
950/12
950/15
950/16
950/18
950/20
950/25

950/30
950/35
950/4
950/40
950/45
950/5
950/50
950/6
950/60
950/8
950/80

KSN(RAIL)

Formcode	7
Description	Rectangular Rail section
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.71
Revision date	07/05/07
By	PVT
PBD file	KSN(RAIL).PBD
Code	
	

Checked properties

Remark : the properties are introduced taking into account a 25% reduction of the rail height h.

Property number	SCIA Symbol	Source Symbol
32	G	m

Checked variables

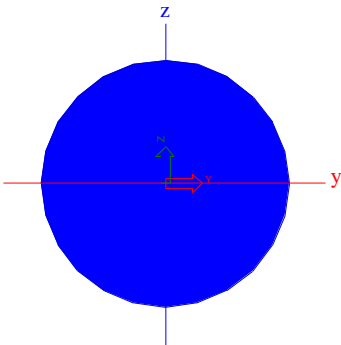
SCIA Symbol	Source Symbol
B	b
H	h

Checked sections

50/30
60/40

Full Circular sections

RD

Formcode	11
Description	Full Circular section
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.64
Revision date	16/09/02
By	CVL
PBD file	RD.PBD
Code	DIN 1013 T1
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	F

Checked variables

SCIA symbol	Source symbol
D	d

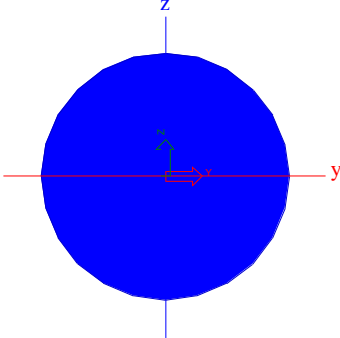
Checked sections

10
100
110
12
120
13
130
14
140
15
150
16
160
17
170
18
180
19
190

20
200
21
22
23
24
25
26
27
28
30
31
32
34
35
36
37
38
40

42
44
45
47
48
50
52
53
55
60
63
65
70
75
8
80
85
90
95

RND

Formcode	11
Description	Round bar
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.28
Revision date	07/05/07
By	PVT
PBD file	RND.PBD
Code	
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	i
3	iz	i
8	ly	I
9	lz	I
10	Wy	Wel
11	Wz	Wel
20	V0	Um
30	Mpy	Wpl x 240 N/mm ²
31	Mpz	Wpl x 240 N/mm ²
32	G	m

Checked variables

SCIA Symbol	Source Symbol
D	D

Checked sections

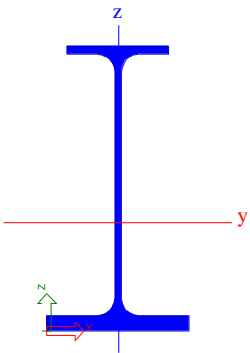
10
100
110
12
120
130
14
140
15
150
16
160
170
18
180

190
20
200
22
220
24
240
25
250
26
260
28
280
30
300

320
35
350
380
40
400
420
45
450
50
500
60
70
80
90

Asymmetric I sections

IPY

Formcode	101
Description	Rolled Asymmetric I section
Source	CBLIA Centre Belgo-Luxembourgeois d'Information de l'acier 6e uitgave 1973
Revision date	16/09/02
By	CVL
PBD file	IPY.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol

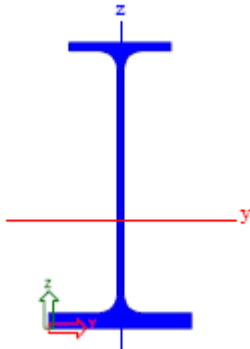
Checked variables

SCIA symbol	Source symbol

Checked sections

160A
160B
200A
200B
240A
240B
270A
270B
270C

ASB

Formcode	1
Description	Asymmetric I Sections
Source	Corus Advance Sections CADS Section Tables V2.31
Revision date	14/12/07
By	CADS
PBD file	ASB.PBD
Code	BS 5950 part 1 : 2000
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag : Area of section
2	iy	ry : Radius of gyration
3	iz	rx : Radius of gyration
4	cz	Cx : Centre of gravity (measured from top flange)
5	cy	Cy : Centre of gravity
8	ly	Iy : Second Moment of Area
9	lz	Ix : Second Moment of Area
10	Wy	Zy : Elastic modulus
11	Wz	Zx : Elastic modulus
14	It	J : Torsional constant
20	V0	Surface area
26	CM	H : Warping constant
32	G	Gs : Weight per metre

Checked variables

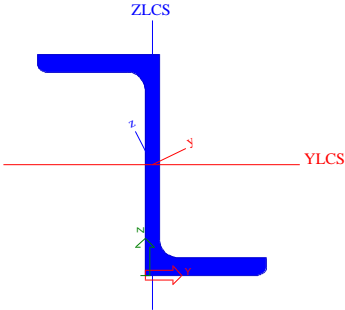
SCIA symbol	Source symbol
Bt	B
Bb	Bb
H	D
s	t
tt	T
tb	Tb
R	r1

Checked sections

280/100
280/105
280/124
280/136
280/74
300/153
300/155
300/185
300/196
300/249

Rolled Z sections

Z

Formcode	102
Description	Rolled Z section
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.60
Revision date	16/09/02
By	CVL
PBD file	Z.PBD
Code	DIN 1027
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	F
2	iy	i_y
3	iz	i_z
8	ly	I_y
9	lz	I_z
10	Wy	W_y
11	Wz	W_z
12	lyz	I_{yz}
14	It	I_T
15	I1	I_ζ
16	I2	I_η
26	CM	C_M

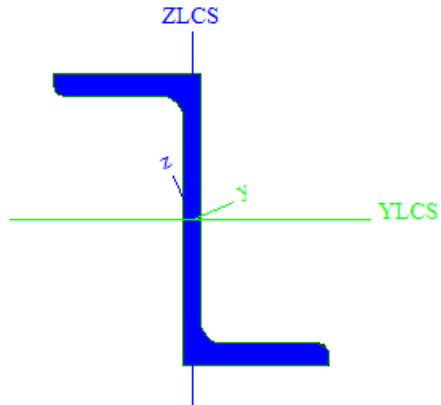
Checked variables

SCIA symbol	Source symbol
H	h
B	b
T	t_g
S	t_s
R1	r_1
R2	r_2

Checked sections

100
120
140
160
180
200
30
40
50
60
80

ZNP

Formcode	102
Description	Z section
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.70
Revision date	07/05/07
By	PVT
PBD file	ZNP.PBD
Code	DIN 1027
	

Checked properties

Property number	SCIA Symbol	Source Symbol
1	A0	A
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wely
11	Wz	Welz
15	I1	Iu
16	I2	Iv
20	V0	Um
32	G	m
37	i1b	iu
38	i2b	iv
74	W1	w

Checked variables

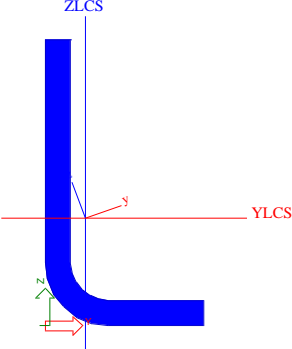
SCIA Symbol	Source Symbol
H	h
B	c1
T	tf
S	tw
R1	r
R2	r1

Checked sections

100
120
140
160
60
80

Cold formed sections

KL

Formcode	111
Description	Cold formed angles
Source	Standard sections Voest-Alpine Krems 08/97 pp.7-11
Revision date	03/06/00
By	FVI
PBD file	KL_VAK.PBD
Code	DIN 59413
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A : Area of section
2	iy	ix : Radius of gyration
3	iz	iy : Radius of gyration
8	Iy	Jx : Second Moment of Area
9	Iz	Jy : Second Moment of Area
10	Wy	Wx : Elastic section modulus
11	Wz	Wy : Elastic section modulus
32	G	G : Mass

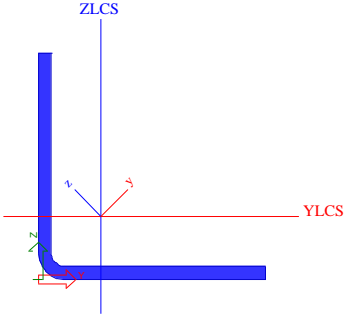
Checked variables

SCIA symbol	Source symbol
B	b
H	a
S	t
R	R

Checked sections

100X100X3.0	180X180X6.0	35X35X3.0	60X60X2.0
100X100X4.0	180X180X7.0	35X35X4.0	60X60X3.0
100X100X5.0	180X180X8.0	35X70X4.0	60X60X4.0
100X100X6.0	200X200X6.0	40X100X4.0	60X60X5.0
100X100X7.0	200X200X7.0	40X100X5.0	60X60X6.0
100X100X8.0	200X200X8.0	40X100X6.0	60X80X3.0
100X150X5.0	20X20X1.5	40X40X1.5	60X80X4.0
100X150X6.0	20X20X2.0	40X40X2.0	60X80X5.0
100X150X7.0	20X30X1.5	40X40X3.0	60X80X6.0
100X150X8.0	20X30X2.0	40X40X4.0	60X80X7.0
100X200X6.0	20X30X3.0	40X60X2.0	60X80X8.0
100X200X7.0	20X35X3.0	40X60X2.5	70X70X2.5
100X200X8.0	20X35X4.0	40X60X3.0	70X70X3.0
10X15X1.0	20X40X1.5	40X60X4.0	70X70X4.0
10X15X1.5	20X40X2.0	40X60X5.0	70X70X5.0
10X20X1.5	20X40X2.5	40X70X3.0	70X70X6.0
10X20X2.0	20X40X3.0	40X70X4.0	70X70X7.0
10X30X1.0	225X225X6.0	40X70X5.0	75X150X5.0
10X30X1.5	225X225X7.0	40X80X3.0	75X150X6.0
10X30X2.0	225X225X8.0	40X80X4.0	75X150X7.0
120X120X4.0	25X25X1.5	40X80X5.0	75X150X8.0
120X120X5.0	25X25X2.0	40X80X6.0	80X160X5.0
120X120X6.0	25X25X2.5	45X45X2.0	80X160X6.0
120X120X7.0	25X40X3.0	45X45X2.5	80X160X7.0
120X120X8.0	25X50X2.5	45X45X3.0	80X160X8.0
120X160X6.0	25X50X3.0	45X45X4.0	80X80X3.0
120X160X7.0	30X30X1.5	45X45X5.0	80X80X4.0
120X160X8.0	30X30X2.0	50X100X4.0	80X80X5.0
150X150X5.0	30X30X2.5	50X100X5.0	80X80X6.0
150X150X6.0	30X30X3.0	50X100X6.0	80X80X7.0
150X150X7.0	30X40X3.0	50X100X7.0	80X80X8.0
150X150X8.0	30X40X4.0	50X100X8.0	90X90X3.0
150X200X6.0	30X45X3.0	50X50X2.0	90X90X4.0
150X200X7.0	30X45X4.0	50X50X2.5	90X90X5.0
150X200X8.0	30X50X2.0	50X50X3.0	90X90X6.0
15X15X1.5	30X50X2.5	50X50X4.0	90X90X7.0
15X15X2.0	30X50X3.0	50X50X5.0	90X90X8.0
15X25X1.5	30X50X4.0	50X90X5.0	
15X25X2.0	30X60X2.5	50X90X6.0	
15X30X1.5	30X60X3.0	50X90X7.0	
15X30X2.0	30X70X3.0	50X90X8.0	
15X30X2.5	30X70X4.0	60X120X4.0	
175X225X6.0	30X70X5.0	60X120X5.0	
175X225X7.0	35X35X1.5	60X120X6.0	
175X225X8.0	35X35X2.0	60X120X7.0	
180X180X5.0	35X35X2.5	60X120X8.0	

CFLeq

Formcode	111
Description	Cold Formed Angle section
Source	CD-Rom Database Staalprofielen januari 2000 Staalprofielen deel 5 (Over)spannend staal Staalbouwkundig Genootschap 1998
Revision date	16/09/02
By	CVL
PBD file	CFLeq.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	ir_y
3	iz	ir_z
4	cz	z_zp
5	cy	y_zp
8	ly	l_y
9	lz	l_zz
10	Wy	W_y1_el, W_y2_el
11	Wz	W_z1_el, W_z2_el
14	It	l_t
15	I1	l_u
16	I2	l_v
19	a	alfa
20	V0	A_L
22	Dy	u_o, y_o
23	Dz	v_o, z_o
26	CM	l_wa
30	Mpy	W_y_pl x 240 N/mm ²

31	Mpz	W _z pl x 240 N/mm ²
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Checked variables

SCIA symbol	Source symbol
D	h ₁
T	t ₁
B	B ₁
R	r ₁

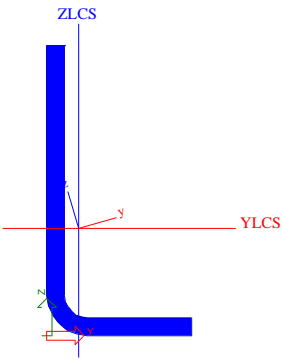
Checked sections

15x15x1.5
15x15x2
15x15x3
20x20x2
20x20x3
25x25x2
25x25x3
30x30x2

30x30x3
35x35x2
35x35x3
35x35x4
40x40x2
40x40x3
40x40x4
50x50x2

50x50x3
50x50x4
50x50x5
60x60x3
60x60x4
65x65x3
70x70x4
80x80x5

CFLue

Formcode	111
Description	Cold Formed Angle section
Source	CD-Rom Database Staalprofielen januari 2000 Staalprofielen deel 5 (Over)spannend staal Staalbouwkundig Genootschap 1998
Revision date	16/09/02
By	CVL
PBD file	CFLue.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	ir_y
3	iz	ir_z
4	cz	z_zp
5	cy	y_zp
8	ly	l_y
9	lz	l_zz
10	Wy	W_y1_el, W_y2_el
11	Wz	W_z1_el, W_z2_el
14	lt	l_t
15	l1	l_u
16	l2	l_v
19	a	alfa
20	V0	A_L
22	Dy	u_o, y_o
23	Dz	v_o, z_o
26	CM	l_wa
30	Mpy	W_y_pl x 240 N/mm ²
31	Mpz	W_z_pl x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
D	h_1
T	t_1
B	B_1
R	r_1

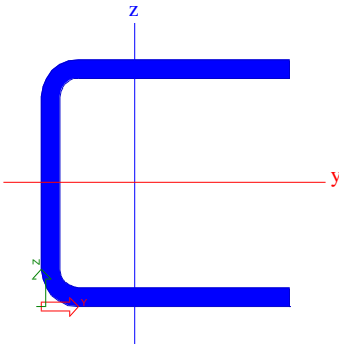
Checked sections

100x50x3
100x50x4
20x15x2
25x15x2
30x15x2
30x15x3
30x20x2
30x20x3
30x25x3
35x25x3
40x20x2

40x20x3
40x25x2
40x25x3
40x30x2
40x30x3
50x20x2
50x25x3
50x30x2
50x30x3
50x40x2
50x40x3

60x30x3
60x40x3
60x40x4
70x40x3
70x50x4
75x40x3
80x40x3
80x40x4
80x50x3
80x50x4
90x40x3

CFUeq

Formcode	112
Description	Cold Formed Channel section
Source	CD-Rom Database Staalprofielen januari 2000 Staalprofielen deel 5 (Over)spannend staal Staalbouwkundig Genootschap 1998
Revision date	16/09/02
By	CVL
PBD file	CFUeq.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	ir_y
3	iz	ir_z
4	cz	z_zp
5	cy	y_zp
8	ly	l_y
9	lz	l_zz
10	Wy	W_y1_el, W_y2_el
11	Wz	W_z1_el, W_z2_el
14	It	l_t
15	I1	l_u
16	I2	l_v
19	a	alfa
20	V0	A_L
22	Dy	u_o, y_o
23	Dz	v_o, z_o
26	CM	l_wa
30	Mpy	W_y_pl x 240 N/mm ²
31	Mpz	W_z_pl x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
H	h_1
S	t_1
B	B_1
R	r_1

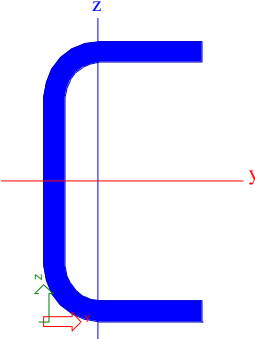
Checked sections

100x100x100x4
10x10x10x1.5
12x12x12x1.5
12x12x12x2
15x15x15x1.5
15x15x15x2
18x18x18x1.5
18x18x18x2
20x20x20x1.5
20x20x20x2
20x20x20x3
22x22x22x2
23x23x23x1.5
23x23x23x2
25x25x25x1.5

25x25x25x2
25x25x25x2.5
25x25x25x3
28x28x28x1.5
30x30x30x1.5
30x30x30x2
30x30x30x2.5
30x30x30x3
32x32x32x2
35x35x35x3
36x36x36x2
40x40x40x2
40x40x40x3
40x40x40x4
40x40x40x5

45x45x45x3
50x50x50x2
50x50x50x3
50x50x50x4
50x50x50x5
60x60x60x3
60x60x60x4
60x60x60x5
70x70x70x4
80x80x80x4

CFUue

Formcode	112
Description	Cold Formed Channel section
Source	CD-Rom Database Staalprofielen januari 2000 Staalprofielen deel 5 (Over)spannend staal Staalbouwkundig Genootschap 1998
Revision date	16/09/02
By	CVL
PBD file	CFUue.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	ir_y
3	iz	ir_z
4	cz	z_zp
5	cy	y_zp
8	ly	l_y
9	lz	l_zz
10	Wy	W_y1_el, W_y2_el
11	Wz	W_z1_el, W_z2_el
14	lt	l_t
15	l1	l_u
16	l2	l_v
19	a	alfa
20	V0	A_L
22	Dy	u_o, y_o
23	Dz	v_o, z_o
26	CM	l_wa
30	Mpy	W_y_pl x 240 N/mm ²

31	Mpz	W_z_pl x 240 N/mm ²
----	-----	--------------------------------

Checked variables

SCIA symbol	Source symbol
H	h_1
S	t_1
B	B_1
R	r_1

Checked sections

10x20x10x2
12x36x12x2
15x20x15x2
15x25x15x1.5
15x25x15x2
15x30x15x2
15x30x15x3
15x40x15x2
19x13x19x1.5
20x15x20x1.5
20x30x20x2
20x30x20x3
20x34x20x2
20x40x20x2
20x40x20x3
20x45x20x4
20x50x20x1.5
20x50x20x2
20x50x20x3
20x70x20x2
25x15x25x2
25x20x25x2
25x40x25x2
25x40x25x3
25x50x25x2
25x50x25x3
25x70x25x3
30x100x30x3
30x100x30x4
30x20x30x1.5
30x20x30x2
30x35x30x3
30x40x30x2
30x40x30x3
30x50x30x2

30x50x30x3
30x55x30x2
30x55x30x5
30x60x30x2
30x60x30x3
30x60x30x4
30x70x30x2
30x70x30x2.5
30x70x30x3
30x80x30x3
30x90x30x2.25
30x90x30x3
32x44x32x3
35x180x35x4
35x22x35x2
35x25x35x2
35x70x35x3
35x70x35x4
40x100x40x3
40x100x40x4
40x100x40x5
40x140x40x3
40x20x40x2
40x30x40x2
40x30x40x3
40x45x40x2
40x50x40x2
40x50x40x3
40x50x40x4
40x60x40x2
40x60x40x3
40x60x40x4
40x65x40x4
40x65x40x5
40x70x40x3

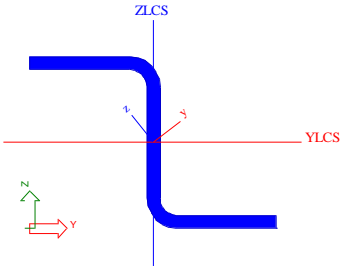
40x70x40x4
40x80x40x3
40x80x40x4
40x90x40x3
40x90x40x4
41x133x41x3
42.5x65x42.5x4
42x65x42x5
45x80x45x3
45x80x45x4
45x80x45x5
45x80x45x6
48x33x48x3
50x100x50x3
50x100x50x4
50x100x50x5
50x100x50x6
50x110x50x3
50x110x50x4
50x110x50x5
50x120x50x3
50x120x50x4
50x120x50x5
50x120x50x6
50x140x50x4
50x140x50x5
50x150x50x4
50x150x50x5
50x160x50x4
50x160x50x5
50x180x50x4
50x30x50x2
50x30x50x3
50x37x50x3
50x40x50x3

50x60x50x3
50x70x50x4
50x80x50x3
50x80x50x4
50x80x50x5
50x80x50x6
54x28x54x3
60x100x60x4
60x100x60x5
60x100x60x6
60x120x60x4
60x120x60x5

60x120x60x6
60x140x60x4
60x140x60x5
60x140x60x6
60x160x60x4
60x160x60x5
60x160x60x6
60x180x60x4
60x180x60x5
60x200x60x4
60x200x60x5
60x200x60x6

60x40x60x3
60x80x60x6
65x140x65x6
65x160x65x6
70x160x70x4
70x160x70x5
70x200x70x5
70x50x70x4
80x140x80x3
80x140x80x4
80x200x80x4
80x200x80x5

CFZ

Formcode	113
Description	Cold Formed Z section
Source	CD-Rom Database Staalprofielen januari 2000 Staalprofielen deel 5 (Over)spannend staal Staalbouwkundig Genootschap 1998
Revision date	16/09/02
By	CVL
PBD file	CFZ.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	ir_y
3	iz	ir_z
4	cz	z_zp
5	cy	y_zp

8	ly	I_y
9	lz	I_zz
10	Wy	W_y1_el, W_y2_el
11	Wz	W_z1_el, W_z2_el
14	It	I_t
15	I1	I_u
16	I2	I_v
19	a	alfa
20	V0	A_L
22	Dy	u_o, y_o
23	Dz	v_o, z_o
26	CM	I_wa
30	Mpy	W_y_pl x 240 N/mm ²
31	Mpz	W_z_pl x 240 N/mm ²

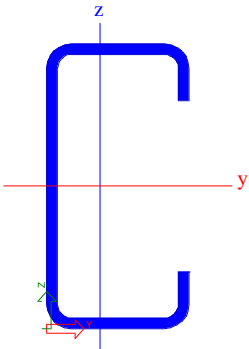
Checked variables

SCIA symbol	Source symbol
B	b_1/2+t_1/2
H	h_1
S	t_1
R	r_1

Checked sections

20x30x20x2
20x40x30x3
30x40x30x3
30x50x30x3

CFC

Formcode	114
Description	Cold Formed C section
Source	CD-Rom Database Staalprofielen januari 2000 Staalprofielen deel 5 (Over)spannend staal Staalbouwkundig Genootschap 1998
Revision date	16/09/02
By	CVL
PBD file	CFC.PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	ir_y
3	iz	ir_z
4	cz	z_zp
5	cy	y_zp
8	ly	l_y
9	lz	l_zz
10	Wy	W_y1_el, W_y2_el
11	Wz	W_z1_el, W_z2_el
14	lt	l_t
15	l1	l_u
16	l2	l_v
19	a	alfa
20	V0	A_L
22	Dy	u_o, y_o
23	Dz	v_o, z_o
26	CM	l_wa
30	Mpy	W_y_pl x 240 N/mm ²
31	Mpz	W_z_pl x 240 N/mm ²

Checked variables

SCIA symbol	Source symbol
B	b_1
D	t_1
R	r_1
H	h_1
A	

Checked sections

100x50x16x3
25x25x7.5x2
25x25x7x1.5
30x15x8x2
30x30x10x2
30x30x8.5x2
30x50x10x2
40x20x10x2
80x40x16x2
80x40x16x3

CFOmega

Formcode	115
Description	Cold Formed Ω section
Source	CD-Rom Database Staalprofielen januari 2000 Staalprofielen deel 5 (Over)spannend staal Staalbouwkundig Genootschap 1998
Revision date	16/09/02
By	CVL
PBD file	CFOmega.PBD
Code	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	A
2	iy	ir_y
3	iz	ir_z
4	cz	z_zp
5	cy	y_zp
8	ly	l_y
9	lz	l_zz
10	Wy	W_y1_el, W_y2_el
11	Wz	W_z1_el, W_z2_el
14	It	I_t
15	I1	I_u
16	I2	I_v
19	a	alfa
20	V0	A_L
22	Dy	u_o, y_o
23	Dz	v_o, z_o
26	CM	I_wa
30	Mpy	W_y_pl x 240 N/mm ²
31	Mpz	W_z_pl x 240 N/mm ²

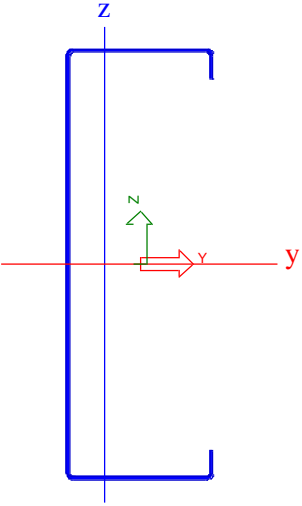
Checked variables

SCIA symbol	Source symbol
B	b_2
H	h_1
A1	$b_1/2 - b_2/2 + t_1$
A2	$b_1/2 - b_2/2 + t_1$
R	r_1
S	t_1

Checked sections

45x20x20x2
45x40x24.5x2
48x35x25x2
55x47x30x2
65x40x30x2.5
70x38x38x2.5
72x40x30x2
75x60x37x3
85x25x40x2.5

C(MET)

Formcode	114
Description	Cold Formed C section
Source	Metsec Building Products Limited ZED Purlins & C-sections 2001
Revision date	16/12/02
By	CVL
PBD file	C(MET).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Area
8	ly	lxx
9	lz	lyy

Checked variables

SCIA symbol	Source symbol
D	D
T	t
B	B
R	t
L	L

Checked sections

142/14
142/15
142/16
142/18
142/20
172/14
172/15
172/16
172/18
172/20
172/23
172/25

202/15
202/16
202/18
202/20
202/23
202/25
232/16
232/18
232/20
232/23
232/25
262/18

262/20
262/23
262/25
262/29
302/23
302/25
302/29
342/25
342/29
342/32

Z(MET)

Formcode	119
Description	Cold Formed ZED section asymmetric lips
Source	Metsec Building Products Limited ZED Purlins & C-sections 2001
Revision date	16/12/02
By	CVL
PBD file	Z(MET).PBD
Code	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Area
8	Iy	Ixx
9	Iz	Iyy

Checked variables

SCIA symbol	Source symbol
D	D
T	t
TF	Top Flange
BF	Bottom Flange
R	t
TL	B
BL	A

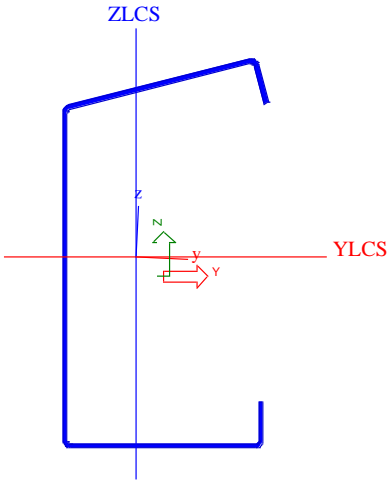
Checked sections

142/14
142/15
142/16
142/18
142/20
172/14
172/15
172/16
172/18
172/20
172/23
172/25

202/15
202/16
202/18
202/20
202/23
202/25
232/16
232/18
232/20
232/23
232/25
262/18

262/20
262/23
262/25
262/29
302/23
302/25
302/29
342/25
342/29
342/32

E(MET)

Formcode	116
Description	Cold Formed section - eave beam
Source	Metsec Building Products Limited ZED Purlins & C-sections 2001
Revision date	16/12/02
By	CVL
PBD file	E(MET).PBD
Code	
	

Checked properties

Checked variables

SCIA symbol	Source symbol
D	A
T	t
B	100 mm
R	t
L	23 mm
A	Angle

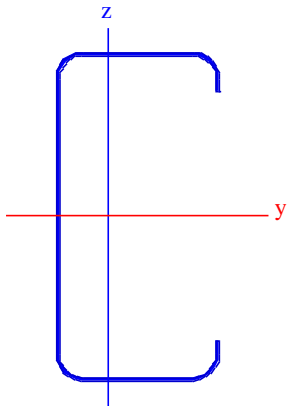
Checked sections

170/20/0
170/20/2
170/20/4
170/20/6
170/20/8
170/20/10
170/20/12
170/20/14
170/20/16
170/20/18
170/20/20
170/20/22
170/20/24
170/20/26
170/20/28
170/20/30
170/23/0
170/23/2
170/23/4
170/23/6
170/23/8
170/23/10
170/23/12
170/23/14
170/23/16
170/23/18
170/23/20
170/23/22
170/23/24
170/23/26
170/23/28
170/23/30
230/20/0
230/20/2
230/20/4
230/20/6
230/20/8
230/20/10
230/20/12
230/20/14
230/20/16
230/20/18
230/20/20
230/20/22

230/20/24
230/20/26
230/20/28
230/20/30
230/25/0
230/25/2
230/25/4
230/25/6
230/25/8
230/25/10
230/25/12
230/25/14
230/25/16
230/25/18
230/25/20
230/25/22
230/25/24
230/25/26
230/25/28
230/25/30
270/25/0
270/25/2
270/25/4
270/25/6
270/25/8
270/25/10
270/25/12
270/25/14
270/25/16
270/25/18
270/25/20
270/25/22
270/25/24
270/25/26
270/25/28
270/25/30
270/29/0
270/29/2
270/29/4
270/29/6
270/29/8
270/29/10
270/29/12
270/29/14

270/29/16
270/29/18
270/29/20
270/29/22
270/29/24
270/29/26
270/29/28
270/29/30
330/29/0
330/29/2
330/29/4
330/29/6
330/29/8
330/29/10
330/29/12
330/29/14
330/29/16
330/29/18
330/29/20
330/29/22
330/29/24
330/29/26
330/29/28
330/29/30
330/32/0
330/32/2
330/32/4
330/32/6
330/32/8
330/32/10
330/32/12
330/32/14
330/32/16
330/32/18
330/32/20
330/32/22
330/32/24
330/32/26
330/32/28
330/32/30

SADEFC

Formcode	114
Description	Cold Formed C section
Source	SADEF Building profiles – Standard range September 2008
Revision date	12/01/10
By	PVT
PBD file	SADEFC.PBD
Code	
	

Checked properties

Checked variables

SCIA symbol	Source symbol
H	h
T	t
B	b
R	ri
L	c

Remark:

The thickness is inputted directly as the core thickness since the properties are also related to this thickness value

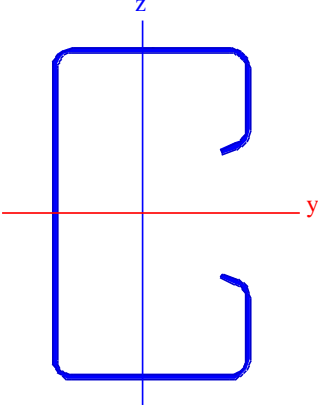
Checked sections

100x1.00
100x1.25
100x1.50
100x1.75
100x2.00
100x2.50
150x1.25
150x1.50
150x1.75
150x2.00

150x2.50
170x1.25
170x1.50
170x1.75
170x2.00
170x2.50
170x3.00
200x1.50
200x2.00
200x2.50

200x3.00
200x3.50
200x4.00
80x1.00
80x1.25
80x1.50
80x2.00
80x2.50

SADEFCP

Formcode	117
Description	Cold Formed C-plus section
Source	SADEF Building profiles – Standard range September 2008
Revision date	12/01/10
By	PVT
PBD file	SADEFCP.PBD
Code	
	

Checked properties

Checked variables

SCIA symbol	Source symbol
D	h
T	t
B	b
R	ri
B1	t + 12 mm
D1	c
RR	0.349 rad

Remark:

The thickness is inputted directly as the core thickness since the properties are also related to this thickness value

Checked sections

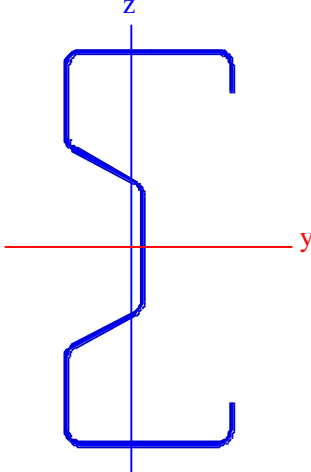
150x2.00
150x2.50
150x3.00
150x4.00
200x1.50
200x2.00
200x2.50
200x3.00
200x4.00
200x5.00
220x2.00

220x2.50
220x3.00
220x4.00
220x5.00
250x2.00
250x2.50
250x3.00
250x4.00
250x5.00
300x2.00
300x2.50

300x3.00
300x3.50
300x4.00
300x5.00
350x2.00
350x2.50
350x3.00
350x3.50
350x4.00
350x5.00
400x2.00

400x2.50
400x3.00
400x3.50
400x4.00
450x2.00
450x2.50
450x3.00
450x4.00
450x5.00

SADEFS

Formcode	121
Description	Cold Formed Sigma section
Source	SADEF Building profiles – Standard range September 2008
Revision date	12/01/10
By	PVT
PBD file	SADEFS.PBD
Code	
	

Checked properties

Checked variables

SCIA symbol	Source symbol
B	b
B1	26 mm
D	k
D1	h_E
D2	
D3	c
T	t
R	ri

Remark:

The thickness is inputted directly as the core thickness since the properties are also related to this thickness value

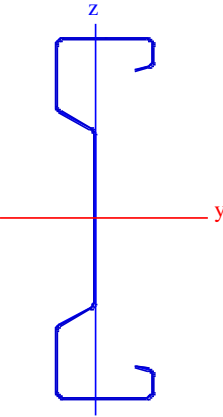
Checked sections

140x1.25
140x1.50
140x1.75
140x2.00
140x2.50
140x3.00
140x4.00

170x1.25
170x1.50
170x1.75
170x2.00
170x2.50
170x3.00
170x4.00

200x1.25
200x1.50
200x1.75
200x2.00
200x2.50
200x3.00
200x4.00

SADEFSP

Formcode	123
Description	Cold Formed Sigma Plus section
Source	SADEF Building profiles – Standard range September 2008
Revision date	12/01/10
By	PVT
PBD file	SADEFSP.PBD
Code	
	

Checked properties

Checked variables

SCIA symbol	Source symbol
B	b
B1	26 mm
B2	t + 12 mm
D	h
D1	h_E
D2	
D3	c

T	t
R	ri
RR	0.35 rad

Remark:

The thickness is inputted directly as the core thickness since the properties are also related to this thickness value

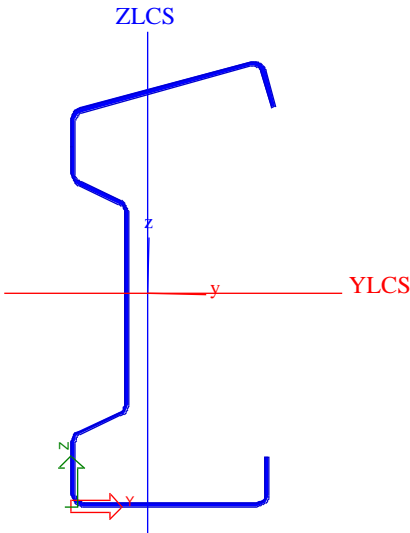
Checked sections

220x1.25
220x1.50
220x1.75
220x2.00
250x1.50
250x1.75
250x2.00
250x2.50
250x3.00
250x4.00
300x1.50
300x1.75

300x2.00
300x2.50
300x3.00
300x3.50
300x4.00
300x5.00
350x1.75
350x2.00
350x2.50
350x3.00
350x3.50
350x4.00

350x5.00
400x2.00
400x2.50
400x3.00
400x3.50
400x4.00
450x2.00
450x2.50
450x3.00
450x4.00
450x5.00

SADEFSE

Formcode	124
Description	Cold Formed Sigma section – eave beam
Source	SADEF Modern Steel Prorducts Bouwcomponenten en bouwsystemen voor de industriebouw April 2002
Revision date	03/01/03
By	CVL
PBD file	SADEFSE.PBD
Code	
	

Checked properties

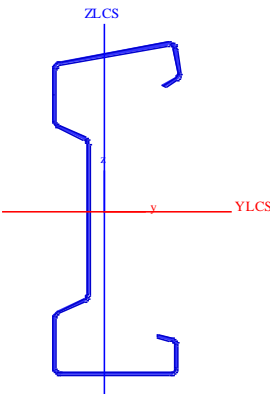
Checked variables

SCIA symbol	Source symbol
B	B
B1	26.5 mm
D	H
D1	H_E
D2	
D3	C
T	t
A	alfa
R	4 mm

Checked sections

200X2.00D00
200X2.00D03
200X2.00D06
200X2.00D10
200X2.00D15
200X2.00D20

SADEFSEP

Formcode	125
Description	Cold Formed Sigma Plus section – eave beam
Source	SADEF Modern Steel Prducts Bouwcomponenten en bouwsystemen voor de industriebouw April 2002
Revision date	03/01/03
By	CVL
PBD file	SADEFSEP.PBD
Code	
	

Checked properties

Checked variables

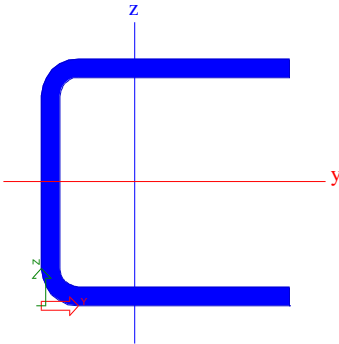
SCIA symbol	Source symbol
B	B
B1	K
B2	t + 12 mm
D	H
D1	H _E
D2	
D3	C
T	t

A	alfa
R	4 mm
R2	0.35 rad

Checked sections

250X2.5D00
250X2.5D03
250X2.5D06
250X2.5D10
250X2.5D15
250X2.5D20
300X3.0D00
300X3.0D03
300X3.0D06
300X3.0D10
300X3.0D15
300X3.0D20
350X4.0D00
350X4.0D03
350X4.0D06
350X4.0D10
350X4.0D15
350X4.0D20

SADEFU

Formcode	112
Description	Cold Formed Channel section
Source	SADEF Building profiles – Standard range September 2008
Revision date	12/01/10
By	PVT
PBD file	SADEFU.PBD
Code	
	

Checked properties

Checked variables

SCIA symbol	Source symbol
H	h
T	t
B	b
R	ri

Remark:

The thickness is inputted directly as the core thickness since the properties are also related to this thickness value

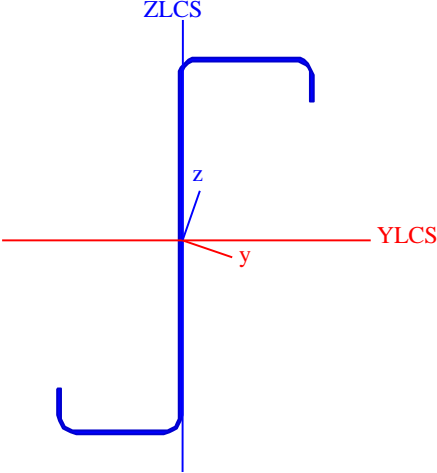
Checked sections

100x1.25
100x1.50
100x1.75
100x2.00
100x2.50
150x1.25
150x1.50

150x1.75
150x2.00
150x2.50
200x4.50
210x5.50
210x6.50
210x7.00

230x6.00
230x7.00
230x8.00
260x7.00
260x8.00
300x7.00
300x8.00

SADEFZ

Formcode	118
Description	Cold Formed ZED section
Source	SADEF Building profiles – Standard range September 2008
Revision date	12/01/10
By	PVT
PBD file	SADEFZ.PBD
Code	
	

Checked properties

Checked variables

SCIA symbol	Source symbol
B1	b1
B2	b2
L1	c
H	h
T	t
R	ri

Remark:

The thickness is inputted directly as the core thickness since the properties are also related to this thickness value

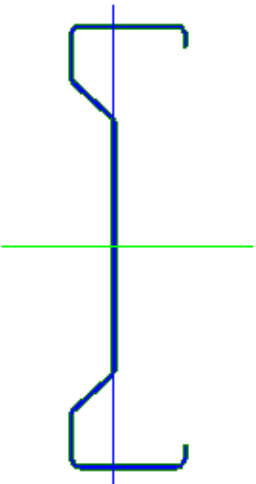
Checked sections

180x1.25
180x1.50
180x1.75
180x2.00
180x2.50
200x1.50
200x1.75
200x2.00
200x2.50
200x3.00
200x4.00
250x1.50

250x1.75
250x2.00
250x2.50
250x3.00
250x3.50
250x4.00
300x2.00
300x2.50
300x3.00
300x3.50
300x4.00
300x5.00

350x2.00
350x2.50
350x3.00
350x3.50
350x4.00
370x2.00
370x2.50
370x3.00
370x4.00
370x5.00

MBA(PDF)

Formcode	121
Description	Cold Formed Sigma section
Source	Technisches Handbuch Profil du Futur MultiBeam & ZED sections
Revision date	05/03/04
By	CVL
PBD file	MBA(PDF).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Area
2	iy	iy
3	iz	iz
8	ly	lxx
9	lz	lyy
10	Wy	Wz
11	Wz	Wz

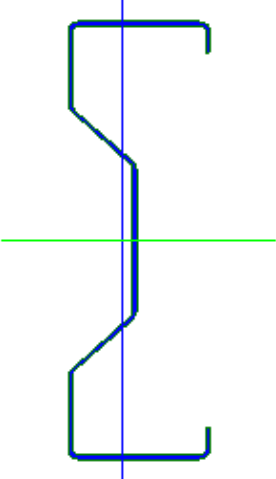
Checked variables

SCIA symbol	Source symbol
B	b
B1	25 mm
D	h
D1	34 mm
D2	14 mm
D4	120 mm 150 mm 190 mm
T	t
R	2*t

Checked sections

230/160
230/180
260/180
260/200
260/240
260/270
260/320
300/180
300/240
300/270
300/320

MBB(PDF)

Formcode	121
Description	Cold Formed Sigma section
Source	Technisches Handbuch Profil du Futur MultiBeam & ZED sections
Revision date	05/03/04
By	CVL
PBD file	MBB(PDF).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Area
2	iy	iy
3	iz	iz
8	Iy	Ixx
9	Iz	Iyy
10	Wy	Wz
11	Wz	Wz

Checked variables

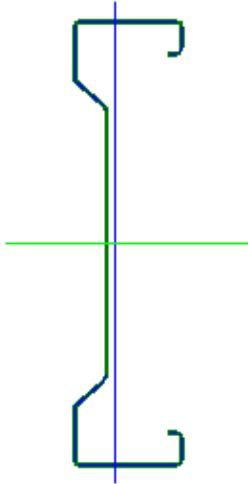
SCIA symbol	Source symbol
B	b
B1	25 mm
D	h
D1	34 mm

D2	12 mm
D4	10 mm 30 mm 60 mm 90 mm
T	t
R	2*t

Checked sections

120/150
140/150
170/155
200/160

MBC(PDF)

Formcode	122
Description	Cold Formed Sigma section
Source	Technisches Handbuch Profil du Futur MultiBeam & ZED sections
Revision date	05/03/04
By	CVL
PBD file	MBC(PDF).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Area
2	iy	iy
3	iz	iz
8	Iy	Ixx
9	Iz	Iyy
10	Wy	Wz
11	Wz	Wz

Checked variables

SCIA symbol	Source symbol
B	b
B1	25 mm
D	h
D1	48 mm
D2	28 mm
D4	182 mm 212 mm
T	t
R	2*t

Checked sections

320/200
320/240
320/270
320/320
320/400
350/200
350/240
350/270
350/320
350/400

Z(PDF)

Formcode	120
Description	Cold formed ZED section
Source	Technisches Handbuch Profil du Futur MultiBeam & ZED sections
Revision date	05/03/04
By	CVL
PBD file	Z(PDF).PBD
Code	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Area

Checked variables

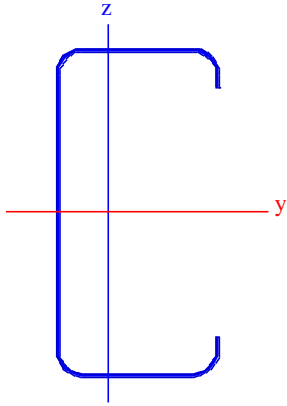
SCIA symbol	Source symbol
D	h
T	t
TF	b1
BF	b2
R	= t
TL	c1
BL	c2

Checked sections

140.150
170.150
180.150 (*)
180.200 (*)
200.150 (*)
200.200 (*)
220.150
240.180
260.180
260.200
260.240
260.270
260.320
300.180
300.200
300.240
300.270
300.320

(*) taken from 'Wirtschaftliche Palette'.

C(ICEC)

Formcode	114
Description	ICEC C Purlin
Source	ICEC Purlin & Girt sections
Revision date	12/02/10
By	PVT
PBD file	C(ICEC).PBD
Code	
	

Checked properties

Checked variables

SCIA symbol	Source symbol
s	t
r	4,75 mm
B	tfs
H	d
c	L

Checked sections

165X65X65X19X1.55
165X65X65X20X1.75
165X65X65X20X2
165X65X65X20X2.25
165X65X65X21X2.65
165X65X65X22X3
203X65X65X19X1.55
203X65X65X20X1.75

203X65X65X21X2
203X65X65X21X2.25
203X65X65X22X2.65
203X65X65X23X3
255X70X70X19X1.55
255X70X70X20X1.75
255X70X70X20X2
255X70X70X20X2.25

255X70X70X21X2.65
255X70X70X22X3
300X80X80X19X1.55
300X80X80X20X1,75
300X80X80X20X2
300X80X80X21X2.25
300X80X80X22X2.65
300X80X80X23X3

Z(ICEC)

Formcode	126
Description	ICEC Z Purlin
Source	ICEC Purlin & Girt sections
Revision date	12/02/10
By	PVT
PBD file	Z(ICEC).PBD
Code	

Checked properties

Checked variables

SCIA symbol	Source symbol
D	d
T	t
TF	tfs
BF	tfi
R	4,75 mm
TL	L
BL	L
A	40 deg

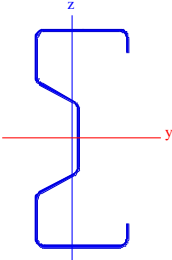
Checked sections

165X65X65X19X1.55
165X65X65X20X1.75
165X65X65X20X2
165X65X65X20X2.25
165X65X65X21X2.65
165X65X65X22X3
203X65X65X20X1.55
203X65X65X21X1.75

203X65X65X21X2
203X65X65X21X2.25
203X65X65X22X2.65
203X65X65X23X3
255X70X70X19X1.55
255X70X70X20X1.75
255X70X70X20X2
255X70X70X20X2.25

255X70X70X21X2.65
255X70X70X22X3
300X80X80X19X1.55
300X80X80X20X1.75
300X80X80X20X2
300X80X80X21X2.25
300X80X80X22X2.65
300X80X80X23X3

A(ATLAS)

Formcode	121
Description	Cold Formed Sigma section
Source	Atlas Ward Multibeamprofile MK II Edition 2009
Revision date	26/05/09
By	PVT
PBD file	A(ATLAS).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wy
11	Wz	Wz
32	G	G

Checked variables

SCIA symbol	Source symbol
B	b
B1	25 mm
D	h
D1	d
D4	
D3	c
T	t
R	r

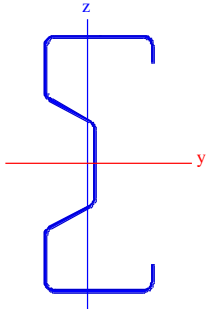
Remarks:

- D4 is calculated as the steg height ($h - 110$ mm) added with two times the extra length of the rounding.
- The thickness is inputted directly as the core thickness since the properties are also related to this thickness value

Checked sections

140/150
140/200
170/150
170/175
170/200
200/150
200/175
200/200
230/150
230/175
230/200
230/250
260/175
260/200
260/250
260/320

B(ATLAS)

Formcode	121
Description	Cold Formed Sigma section
Source	Atlas Ward Multibeamprofile MK II Edition 2009
Revision date	26/05/09
By	PVT
PBD file	B(ATLAS).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Ag
2	iy	iy
3	iz	iz
8	ly	ly
9	lz	lz
10	Wy	Wy
11	Wz	Wz
32	G	G

Checked variables

SCIA symbol	Source symbol
B	b
B1	25 mm
D	h
D1	d
D4	
D3	c
T	t
R	r

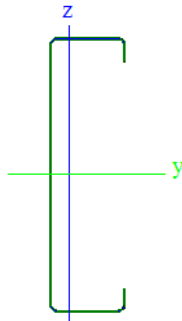
Remarks:

- D4 is calculated as the steg height ($h - 110 \text{ mm}$) added with two times the extra length of the rounding.
- The thickness is inputted directly as the core thickness since the properties are also related to this thickness value

Checked sections

120/150
140/150
140/200
170/150
170/200
200/150
200/200

C(AISI)

Formcode	114
Description	Cold Formed C section
Source	AISI Cold-Formed Steel Design Manual Ed. 2002
Revision date	30/01/09
By	PVT
PBD file	C(AISI).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Area
2	iy	rx
3	iz	ry
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
14	It	J
26	CM	Cw
32	G	wt/ft

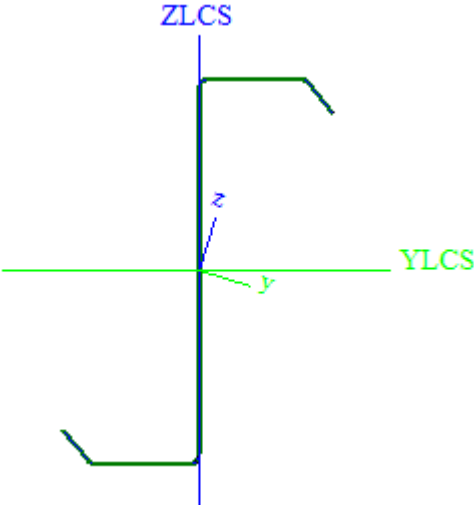
Checked variables

SCIA symbol	Source symbol
s	t
r	R
B	B
H	D
c	d

Checked sections

9CS2.5x059
9CS2.5x070

Z(AISI)

Formcode	126
Description	Cold Formed ZED section both lips inclined
Source	AISI Cold-Formed Steel Design Manual Ed. 2002
Revision date	27/02/09
By	PVT
PBD file	Z(AISI).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
1	A0	Area
2	iy	rx
3	iz	ry
8	ly	lx
9	lz	ly
10	Wy	Sx
11	Wz	Sy
12	lyz	lxy
14	It	J
15	I1	Ix2
16	I2	Iy2
19	a	90 deg - θ
26	CM	Cw
32	G	wt/ft

Checked variables

SCIA symbol	Source symbol
D	D
T	t
TF	B
BF	B
R	R
TL	d
BL	d
A	90 deg - γ

Checked sections

8ZS2.25x059
8ZS2.25x070

Z(IDE)

Formcode	118
Description	Cold Formed ZED section
Source	Joris IDE Galvanised Profiles
Revision date	12/02/10
By	PVT
PBD file	Z(IDE).PBD
Code	

Checked properties

Property number	SCIA symbol	Source symbol
8	ly	lx
9	lz	ly
10	Wy	Wx
11	Wz	Wy
32	G	Weight

Checked variables

SCIA symbol	Source symbol
B1	B1
B2	B2
L1	C
H	H
T	Thickness
R	Taken as T

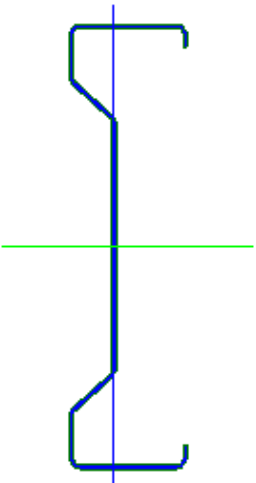
Checked sections

140x1.5
140x2
140x2.5
160x1.5
160x2
160x2.5
180x1.5

180x2
180x2.5
200x1.5
200x2
200x2.5
220x2
220x2.5

250x2
250x2.5
250x3
300x2
300x2.5
300x3

S(IDE)

Formcode	121
Description	Cold Formed Sigma section
Source	Joris IDE Galvanised Profiles
Revision date	12/02/10
By	PVT
PBD file	S(IDE).PBD
Code	
	

Checked properties

Property number	SCIA symbol	Source symbol
8	Iy	Ix
9	Iz	Iy
10	Wy	Wx
11	Wz	Wy
32	G	Weight

Checked variables

SCIA symbol	Source symbol
B	B3
B1	25 mm
D	H
D1	34 mm
D3	12 mm
D4	30 mm 60 mm 90 mm 120 mm

T	Thickness
R	Taken as T

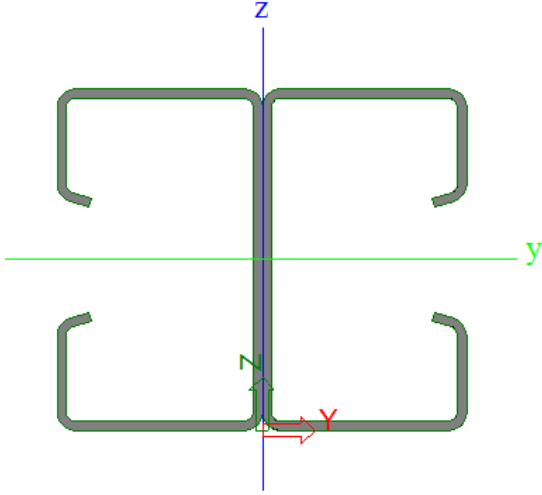
Checked sections

140x1.5
140x2
140x2.5
170x1.5

170x2
170x2.5
200x1.5
200x2

200x2.5
230x1.5
230x2
230x2.5

SADEFIP

Formcode	127
Description	Cold Formed I-plus section
Source	SADEF Building profiles – Standard range September 2008
Revision date	07/12/10
By	PVT
PBD file	SADEFIP.PBD
Code	
	

Checked properties

Remark:

Property 145 is set to indicate that the properties should not be recalculated by Scia Engineer. In this way the inertia about the weak axis is taken as the sum of the inertia of both sections instead of the inertia of the combined pair.

Checked variables

SCIA symbol	Source symbol
D	h
T	t

B	b
R	ri
B1	t + 12 mm
D1	c
RR	0.349 rad
a = 0 mm	

Remark:

The thickness is inputted directly as the core thickness since the properties are also related to this thickness value

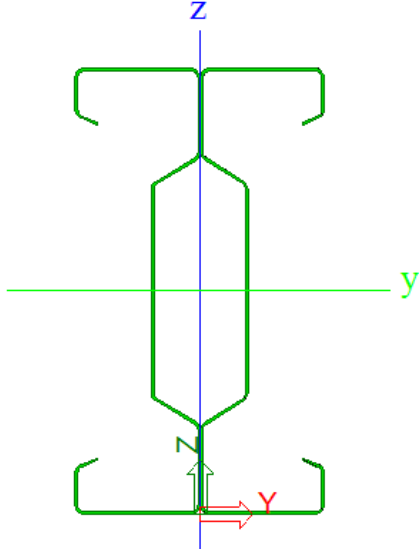
Checked sections

150x2.00
150x2.50
150x3.00
150x4.00
200x1.50
200x2.00
200x2.50
200x3.00
200x4.00
200x5.00
220x2.00
220x2.50
220x3.00
220x4.00

220x5.00
250x2.00
250x2.50
250x3.00
250x4.00
250x5.00
300x2.00
300x2.50
300x3.00
300x3.50
300x4.00
300x5.00
350x2.00
350x2.50

350x3.00
350x3.50
350x4.00
350x5.00
400x2.00
400x2.50
400x3.00
400x3.50
400x4.00
450x2.00
450x2.50
450x3.00
450x4.00
450x5.00

SADEFISP

Formcode	128
Description	Cold Formed IS-plus section
Source	SADEF Building profiles – Standard range September 2008
Revision date	07/12/10
By	PVT
PBD file	SADEFISP.PBD
Code	
	

Checked properties

Remark:

Property 145 is set to indicate that the properties should not be recalculated by Scia Engineer. In this way the inertia about the weak axis is taken as the sum of the inertia of both sections instead of the inertia of the combined pair.

Checked variables

SCIA symbol	Source symbol
B	b
B1	26 mm
B2	t + 12 mm
D	h
D1	h_E
D2	
D3	c
T	t
R	r_i
RR	0.35 rad
a = 0 mm	

Remark:

The thickness is inputted directly as the core thickness since the properties are also related to this thickness value

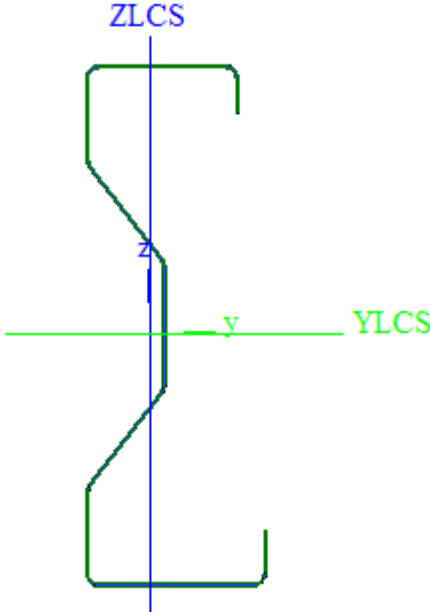
Checked sections

250x1.50
250x1.75
250x2.00
250x2.50
250x3.00
250x4.00
300x1.50
300x1.75
300x2.00
300x2.50
300x3.00

300x3.50
300x4.00
300x5.00
350x1.75
350x2.00
350x2.50
350x3.00
350x3.50
350x4.00
350x5.00
400x2.00

400x2.50
400x3.00
400x3.50
400x4.00
450x2.00
450x2.50
450x3.00
450x4.00
450x5.00

S(FRISO)

Formcode	129
Description	Cold Formed Sigma section asymmetric
Source	Frisomat / Asymmetric Sigma sections
Revision date	06/12/10
By	PVT
PBD file	S(FRISO).PBD
Code	
	

Checked properties

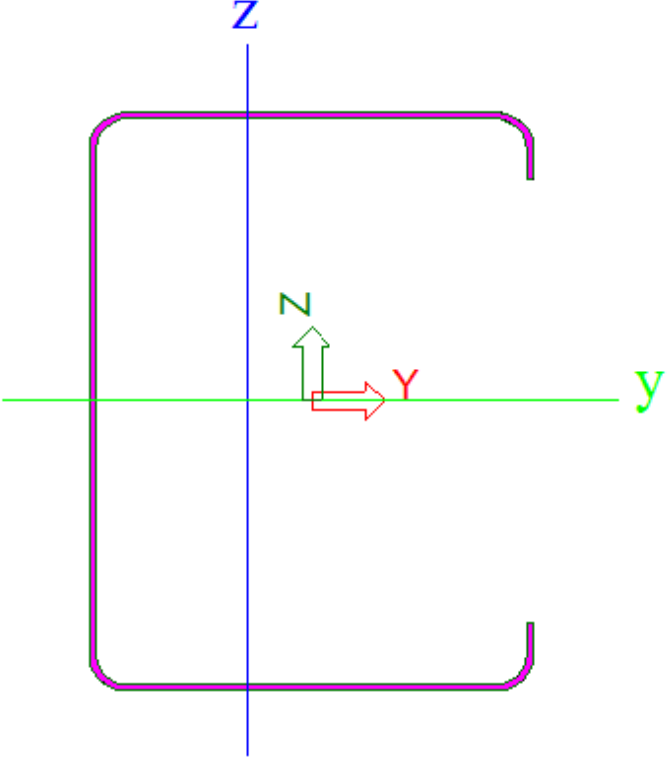
Checked variables

SCIA symbol	Source symbol
B	b1
B1	d
D	h
D1	h1
D4	Hin
D3	c1
T	t
R	ri
BT	b2
PL	c2

Checked sections

320x20
320x25
320x30
320x35
320x40
320x45
320x50
400x25
400x30
400x35
400x40
400x45
400x50

S(SSMA)

Formcode	114
Description	SSMA Stud - Cold Formed C section with lips
Source	AISI Manual Cold-Formed Steel Design Edition 2008
Revision date	12/02/11
By	PVT
PBD file	S(SSMA).PBD
Code	
	

Checked properties

Checked variables

SCIA symbol	Source symbol
s	thk
r	R
B	Flg
H	d
c	Lip

Checked sections

1000S162-43
1000S162-54
1000S162-68
1000S162-97
1000S200-43
1000S200-54
1000S200-68
1000S200-97
1000S250-118
1000S250-43
1000S250-54
1000S250-68
1000S250-97
1150S162-43
1150S162-54
1150S162-68
1150S162-97
1150S200-43
1150S200-54
1150S200-68
1150S200-97
1200S162-54
1200S162-68
1200S162-97
1200S200-54
1200S200-68
1200S200-97
1200S250-118
1200S250-54
1200S250-68
1200S250-97
1350S200-54
1350S200-68
1350S200-97
1350S250-54
1350S250-68
1350S250-97
1400S200-54
1400S200-68
1400S200-97
1400S250-54
1400S250-68
1400S250-97
162S125-18
162S125-27
162S125-30
162S125-33
250S125-18
250S125-27

250S125-30
250S125-33
250S125-43
250S125-54
250S125-68
250S137-33
250S137-43
250S137-54
250S137-68
250S162-33
250S162-43
250S162-54
250S162-68
250S200-33
250S200-43
250S200-54
250S200-68
250S250-43
250S250-54
250S250-68
350S125-18
350S125-27
350S125-30
350S125-33
350S125-43
350S125-54
350S125-68
350S162-33
350S162-43
350S162-54
350S162-68
350S200-43
350S200-54
350S200-68
350S200-97
362S125-18
362S125-27
362S125-30
362S125-33
362S125-43
362S125-54
362S125-68
362S137-33
362S137-43
362S137-54
362S137-68
362S162-33
362S162-43
362S162-54

362S162-68
362S162-97
362S200-33
362S200-43
362S200-54
362S200-68
362S200-97
362S250-43
362S250-54
362S250-68
362S250-97
400S125-18
400S125-27
400S125-30
400S125-33
400S125-43
400S125-54
400S125-68
400S137-33
400S137-43
400S137-54
400S137-68
400S162-33
400S162-43
400S162-54
400S162-68
400S162-97
400S200-33
400S200-43
400S200-54
400S200-68
400S200-97
400S250-43
400S250-54
400S250-68
400S250-97
550S125-18
550S125-27
550S125-30
550S125-33
550S125-43
550S125-54
550S125-68
550S162-33
550S162-43
550S162-54
550S162-68
550S200-33
550S200-43

550S200-54
550S200-68
600S125-18
600S125-27
600S125-30
600S125-33
600S125-43
600S125-54
600S125-68
600S137-33
600S137-43
600S137-54
600S137-68
600S137-97
600S162-33
600S162-43
600S162-54
600S162-68
600S162-97
600S200-33
600S200-43
600S200-54
600S200-68
600S200-97
600S250-118
600S250-43

600S250-54
600S250-68
600S250-97
725S162-33
725S162-43
725S162-54
725S162-68
725S162-97
725S200-43
725S200-54
725S200-68
725S200-97
725S250-43
725S250-54
725S250-68
725S250-97
800S125-33
800S125-43
800S125-54
800S125-68
800S137-33
800S137-43
800S137-54
800S137-68
800S137-97
800S162-33

800S162-43
800S162-54
800S162-68
800S162-97
800S200-33
800S200-43
800S200-54
800S200-68
800S200-97
800S250-118
800S250-43
800S250-54
800S250-68
800S250-97
925S162-43
925S162-54
925S162-68
925S162-97
925S200-43
925S200-54
925S200-68
925S200-97
925S250-43
925S250-54
925S250-68
925S250-97

T(SSMA)

Formcode	112
Description	SSMA Track - Cold Formed C section without lips
Source	AISI Manual Cold-Formed Steel Design Edition 2008
Revision date	12/02/11
By	PVT
PBD file	T(SSMA).PBD
Code	

Checked properties

Checked variables

SCIA symbol	Source symbol
T	thk
B	R
B	Flg
H	d

Checked sections

1000T125-33
1000T125-43
1000T125-54
1000T125-68
1000T125-97
1000T200-33
1000T200-43
1000T200-54
1000T200-68
1000T200-97
1000T300-33
1000T300-43
1000T300-54
1000T300-68
1000T300-97
1150T125-33
1150T125-43
1150T125-54
1150T125-68
1150T125-97
1150T200-33
1150T200-43
1150T200-54
1150T200-68
1150T200-97
1150T300-33
1150T300-43
1150T300-54
1150T300-68
1150T300-97
1200T125-33
1200T125-43
1200T125-54
1200T125-68
1200T125-97
1200T200-33
1200T200-43
1200T200-54
1200T200-68
1200T200-97
1200T300-33
1200T300-43
1200T300-54
1200T300-68
1200T300-97
1350T125-33
1350T125-43
1350T125-54
1350T125-68

1350T125-97
1350T200-33
1350T200-43
1350T200-54
1350T200-68
1350T200-97
1400T125-33
1400T125-43
1400T125-54
1400T125-68
1400T125-97
1400T200-33
1400T200-43
1400T200-54
1400T200-68
1400T200-97
1400T300-33
1400T300-43
1400T300-54
1400T300-68
1400T300-97
250T125-33
250T125-43
250T125-54
250T125-68
250T125-97
250T200-33
250T200-43
250T200-54
250T200-68
250T200-97
350T125-33
350T125-43
350T125-54
350T125-68
350T125-97
362T125-33
362T125-43
362T125-54
362T125-68
362T125-97
362T200-33
362T200-43
362T200-54
362T200-68
362T200-97
362T300-33
362T300-43
362T300-54

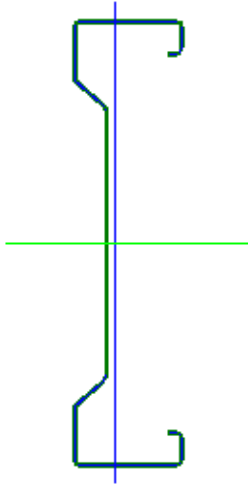
362T300-68
362T300-97
400T125-33
400T125-43
400T125-54
400T125-68
400T125-97
400T200-33
400T200-43
400T200-54
400T200-68
400T200-97
400T300-33
400T300-43
400T300-54
400T300-68
400T300-97
550T125-33
550T125-43
550T125-54
550T125-68
550T125-97
600T125-27
600T125-33
600T125-43
600T125-54
600T125-68
600T125-97
600T200-33
600T200-43
600T200-54
600T200-68
600T200-97
600T300-33
600T300-43
600T300-54
600T300-68
600T300-97
725T125-33
725T125-43
725T125-54
725T125-68
725T125-97
800T125-33
800T125-43
800T125-54
800T125-68
800T125-97
800T200-33

800T200-43
800T200-54
800T200-68
800T200-97
800T300-33
800T300-43
800T300-54
800T300-68

800T300-97
925T125-33
925T125-43
925T125-54
925T125-68
925T125-97
925T200-33
925T200-43

925T200-54
925T200-68
925T200-97
925T300-33
925T300-43
925T300-54
925T300-68
925T300-97

C(HHM)

Formcode	122
Description	Cold Formed Sigma section
Source	H.Hardeman b.v. C300 Sigma sections 2011
Revision date	04/10/11
By	PVT
PBD file	C(HHM).PBD
Code	
	

Checked properties

Checked variables

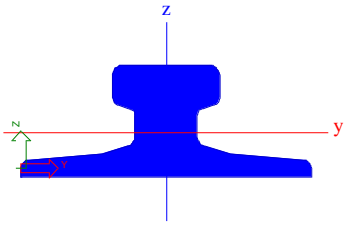
SCIA symbol	Source symbol
B	B
B1	25 mm
D	H
D1	43.3 mm
D4	H2
D3	20 mm
T	t
R	5 mm
PL	10 mm

Checked sections

300/200x1.25
300/200x1.50
300/200x2.00
300/200x2.50
300/200x3.00

Rail sections

SA

Formcode	150
Description	Rail section - Form A
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.165
Revision date	16/09/02
By	CVL
PBD file	SA.PBD
Code	DIN 536 T1
	

Checked properties

Remark : the properties are introduced taking into account a 25% reduction of the rail height h_3 .

Property number	SCIA symbol	Source symbol
1	A0	F_a
4	cZ	e_{xa}
8	Iy	J_{xa}
9	Iz	J_{ya}
10	Wy	W_{xa}

Checked variables

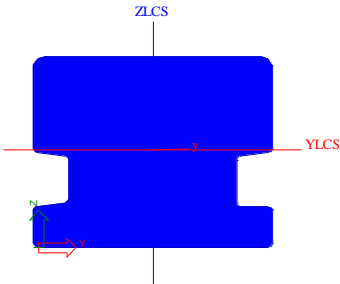
SCIA symbol	Source symbol
H1	h_1
H2	h_2
H3	h_3
B1	b_1

B2	b_2
B3	b_3
K	k
F1	f_1
F2	f_2
F3	f_3
R1	r_1
R2	r_2
R3	r_3
R4	r_4
R5	r_5
A	

Checked sections

100
120
45
55
65
75

SF

Formcode	151
Description	Rail section - Form B
Source	Stahl im Hochbau Handbuch für die Anwendung von Stahl im Hoch- und Tiefbau 14.Auflage Band I / Teil 1 pp.166
Revision date	16/09/02
By	CVL
PBD file	SF.PBD
Code	DIN 536 T2
	

Checked properties

Remark : the properties are introduced taking into account a 25% reduction of the rail height h3.

Property number	SCIA symbol	Source symbol
1	A0	A
4	cz	e_x
8	ly	J_x
9	lz	J_y
10	Wy	W_x
11	Wz	W_y

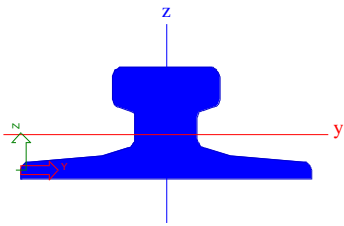
Checked variables

SCIA symbol	Source symbol
B	k
K	k
H	80 mm
B3	k- 30 mm
F1	19 mm
F3	17 mm
H1	40 mm
H2	42 mm
R1	5 mm
R2	2 mm
R3	2.5 mm

Checked sections

100
120

KSA

Formcode	150
Description	Rail section
Source	Stahlbau Zentrum Schweiz Konstruktionstabellen 9.Ausgabe 2005 pp.70
Revision date	07/05/07
By	PVT
PBD file	KSA.PBD
Code	DIN 536/1
	

Checked properties

Remark : the properties are introduced taking into account a 25% reduction of the rail height h2.

Property number	SCIA Symbol	Source Symbol
1	A0	Aa
4	Cz	eya
8	Iy	Iya
9	Iz	Iza
10	Wy	Welya

Checked variables

SCIA Symbol	Source Symbol
H1	h
H2	h1
H3	h2
B1	b1
B2	b2
B3	d
K	k
F1	t1
F2	t2

F3	t3
R1	r1
R2	r2
R3	r3
R4	r4
R5	r5
A	a

Checked sections

100
120
45
55
65
75