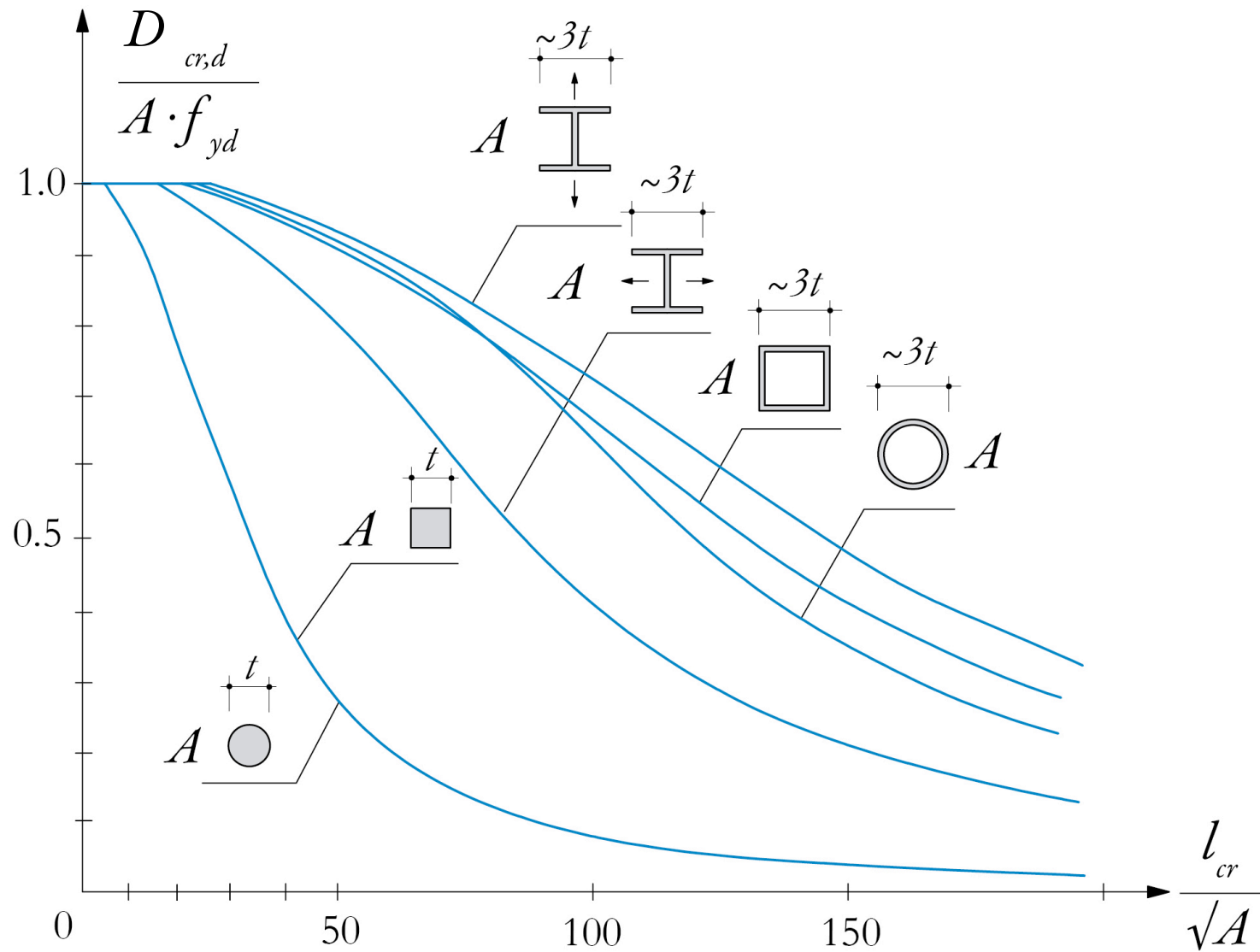


Stahlsorte	Dicke $t$ in [mm]			
	$t \leq 40$ mm		$40 \text{ mm} \leq t \leq 100$ mm	
	$f_y$ [N/mm <sup>2</sup> ]	$f_t$ [N/mm <sup>2</sup> ]	$f_y$ [N/mm <sup>2</sup> ]	$f_t$ [N/mm <sup>2</sup> ]
S 235	235	360	215	340
S 275	275	430	255	410
S 355	355	510	335	490
S 460	460	550	430	530

$E = 210000 \text{ N/mm}^2$

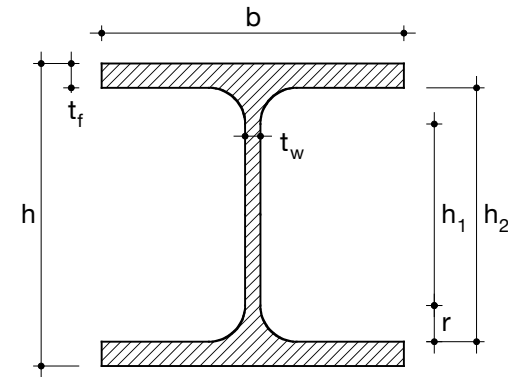
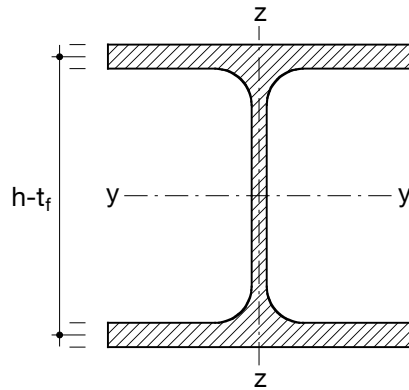
Festigkeitseigenschaften der Baustähle



Knickkurven von Stahlstützen

# HEA - Träger

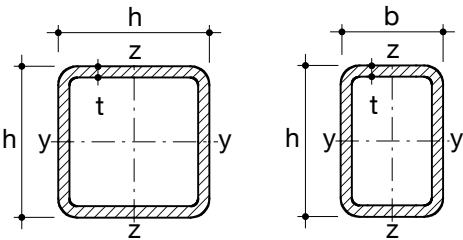
## Profilés HEA



HEA	Statische Werte			Profilmasse							HEA
	m kg/m	A mm <sup>2</sup>	A <sub>v</sub> mm <sup>2</sup>	h mm	b mm	t <sub>w</sub> mm	t <sub>f</sub> mm	r mm	h <sub>1</sub> mm	h <sub>2</sub> mm	
<b>100</b>	16.7	2120	752	96	100	5.0	8.0	12	56	80	<b>100</b>
<b>120</b>	19.9	2530	842	114	120	5.0	8.0	12	74	98	<b>120</b>
<b>140</b>	24.7	3140	1011	133	140	5.5	8.5	12	91	116	<b>140</b>
<b>160</b>	30.4	3880	1324	152	160	6.0	9.0	15	104	134	<b>160</b>
<b>180</b>	35.5	4530	1452	171	180	6.0	9.5	15	121	152	<b>180</b>
<b>200</b>	42.3	5380	1805	190	200	6.5	10.0	18	134	170	<b>200</b>
<b>220</b>	50.5	6430	2063	210	220	7.0	11.0	18	152	188	<b>220</b>
<b>240</b>	60.3	7680	2514	230	240	7.5	12.0	21	164	206	<b>240</b>
<b>260</b>	68.2	8680	2874	250	260	7.5	12.5	24	176	225	<b>260</b>
<b>280</b>	76.4	9730	3178	270	280	8.0	13.0	24	196	244	<b>280</b>
<b>300</b>	88.3	11300	3775	290	300	8.5	14.0	27	208	262	<b>300</b>
<b>320</b>	97.6	12400	4077	310	300	9.0	15.5	27	224	279	<b>320</b>
<b>340</b>	105.0	13300	4448	330	300	9.5	16.5	27	242	297	<b>340</b>
<b>360</b>	112.0	14300	4920	350	300	10.0	17.5	27	260	315	<b>360</b>
<b>400</b>	125.0	15900	5735	390	300	11.0	19.0	27	298	352	<b>400</b>
<b>450</b>	140.0	17800	6576	440	300	11.5	21.0	27	344	398	<b>450</b>
<b>500</b>	155.0	19800	7518	490	300	12.0	23.0	27	390	444	<b>500</b>
<b>550</b>	166.0	21200	8396	540	300	12.5	24.0	27	438	492	<b>550</b>
<b>600</b>	178.0	22600	9275	590	300	13.0	25.0	27	486	540	<b>600</b>
<b>650</b>	190.0	24200	10355	640	300	13.5	26.0	27	534	588	<b>650</b>
<b>700</b>	204.0	26000	11650	690	300	14.5	27.0	27	582	636	<b>700</b>
<b>800</b>	224.0	28600	13900	790	300	15.0	28.0	30	674	734	<b>800</b>
<b>900</b>	252.0	32100	16380	890	300	16.0	30.0	30	770	830	<b>900</b>
<b>1000</b>	272.0	34700	18472	990	300	16.5	31.0	30	868	928	<b>1000</b>

# RHS

Quadratische/rechteckige Hohlprofile  
Normallänge: 12 m



RHS			Stat. Werte	
			m	A
h	b	t	kg/m	mm <sup>2</sup>
40	40	4.0	4.39	559
50	50	4.0	5.64	719
		5.0	6.85	873
60	60	4.0	6.9	879
		5.0	8.42	1070
70	70	5.0	9.99	1270
80	80	4.5	10.5	1340
		5.0	11.6	1470
		6.3	14.2	1810
90	90	3.6	9.66	1230
		5.0	13.1	1670
		6.3	16.2	2070
		8.0	20.1	2560
100	100	4.0	11.9	1520
		5.0	14.7	1870
		6.3	18.2	2320
		8.0	22.6	2880
		10.0	27.4	3490
120	120	4.5	16.1	2060
		5.0	17.8	2270
		6.3	22.2	2820
		8.0	27.6	3520
		10.0	33.7	4290
140	140	5.0	21.0	2670
		5.6	23.4	2980
		8.0	32.6	4160
		10.0	40.0	5090
150	150	5.0	22.6	2870
		5.6	25.1	3200
		8.0	35.1	4480
		10.0	43.1	5490
		12.5	52.7	6710

RHS			Stat. Werte	
			m	A
h	b	t	kg/m	mm <sup>2</sup>
160	160	6.3	30.1	3830
		10.0	46.3	5890
180	180	5.0	27.3	3470
		6.3	34.0	4330
		8.0	42.7	5440
		10.0	52.5	6690
		12.5	64.4	8210
		16.0	80.2	10200
200	200	5.0	30.4	3870
		6.3	38.0	4840
		8.0	47.7	6080
		10.0	58.8	7490
		12.5	72.3	9210
		16.0	90.3	11500
220	220	6.3	41.9	5340
		10.0	65.1	8290
250	250	6.3	47.9	6100
		8.0	60.3	7680
		10.0	74.5	9490
		12.5	91.9	11700
		16.0	115.0	14700
260	260	8.0	62.8	8000
		12.5	95.8	12200
300	300	10.0	90.2	11500
		16.0	141.0	17900
350	350	10.0	106.0	13500
		16.0	166.0	21100
400	400	10.0	122.0	15500
		12.5	151.0	19200
		16.0	191.0	24300

RHS			Stat. Werte	
			m	A
h	b	t	kg/m	mm <sup>2</sup>
50	30	4.0	4.39	559
60	40	4.0	5.64	719
		5.0	6.85	873
80	40	4.0	6.9	879
		5.0	8.42	1070
90	50	5.0	9.99	1270
100	50	4.0	8.78	1120
		5.0	10.8	1370
		5.6	11.9	1520
		8.0	16.3	2080
100	60	3.6	8.53	1090
		5.0	11.6	1470
		6.3	14.2	1810
		8.0	17.5	2240
120	60	4.0	10.7	1360
		5.0	13.1	1670
		6.3	16.2	2070
		8.0	20.1	2560
120	80	5.0	14.7	1870
		6.3	18.2	2320
		8.0	22.6	2880
		10.0	27.4	3490
140	80	5.0	16.3	2070
		8.0	25.1	3200
150	100	5.0	18.6	2370
		6.3	23.1	2950
		8.0	28.9	3680
		10.0	35.3	4490
160	80	5.0	17.8	2270
		6.3	22.2	2820
		8.0	27.6	3520
		10.0	33.7	4290
		12.5	40.9	5210

RHS			Stat. Werte	
			m	A
h	b	t	kg/m	mm <sup>2</sup>
180	100	5.6	23.4	2980
		10.0	40.0	5090
200	100	5.0	22.6	2870
		6.3	28.1	3580
		8.0	35.1	4480
		10.0	43.1	5490
		12.5	52.7	6710
		16.0	65.2	8300
200	120	6.3	30.1	3830
		10.0	46.3	5890
250	150	6.3	38.0	4840
		8.0	47.7	6080
		10.0	58.8	7490
		12.5	72.3	9210
		16.0	90.3	11500
260	180	8.0	52.7	6720
300	100	8.0	47.7	6080
300	200	8.0	60.3	7680
		10.0	74.5	9490
		12.5	91.9	11700
		16.0	115.0	14700
350	250	10.0	90.2	11500
400	200	10.0	90.2	11500
		12.5	112.0	14200
		16.0	141.0	17900
450	250	10.0	106.0	13500
		16.0	166.0	21100
500	300	10.0	122.0	15500
		16.0	191.0	24300

# ROR

ROR		Stat. Werte	
		m	A
d	t	kg/m	mm <sup>2</sup>
21.3	2.0	0.95	121
26.9	2.3	1.4	178
	5.0	2.7	344
33.7	2.3	1.78	227
	2.6	1.99	254
	5.0	3.54	451
38.0	2.3	2.02	258
	2.6	2.27	289
	5.0	4.07	518
42.4	2.3	2.27	290
	2.6	2.55	325
	5.0	4.61	587
	7.1	6.18	787
	10.0	7.99	1020
44.5	2.3	2.39	305
	2.6	2.69	342
	5.0	4.87	620
	7.1	6.55	834
	10.0	8.51	1080
48.3	2.3	2.61	332
	2.6	2.93	373
	5.0	5.34	680
	7.1	7.21	919
	10.0	9.45	1200
51.0	2.6	3.1	395
	5.0	5.67	723
	7.1	7.69	979
	10.0	10.1	1290
54.0	2.6	3.3	420
	5.0	6.04	770
	7.1	8.21	1050
	10.0	10.9	1380

ROR		Stat. Werte	
		m	A
d	t	kg/m	mm <sup>2</sup>
57.0	2.6	3.49	444
	2.9	3.87	493
	5.0	6.41	817
	7.1	8.74	1110
	10.0	11.6	1418
60.3	2.9	4.11	523
	5.0	6.82	869
	7.1	9.32	1190
	10.0	12.4	1580
63.5	2.9	4.33	552
	5.0	7.21	919
	7.1	9.88	1260
	10.0	13.2	1680
70.0	2.9	4.8	611
	5.0	8.01	1020
	7.1	11	1400
	10.0	14.8	1880
76.1	2.9	5.24	667
	5.0	8.77	1120
	7.1	12.1	1540
	10.0	16.3	2080
82.5	3.2	6.26	797
	5.0	9.56	1220
	7.1	13.2	1680
	10.0	17.9	2280
88.9	3.2	6.76	862
	5.0	10.3	1320
	7.1	14.3	1820
	10.0	19.5	2480
	12.5	23.6	3000

ROR		Stat. Werte	
		m	A
d	t	kg/m	mm <sup>2</sup>
95.0	3.2	7.25	923
	3.6	8.11	1034
	8.0	17.2	2190
	10.0	21	2670
	12.5	25.4	3240
101.6	3.6	8.7	1110
	5.0	11.9	1520
	7.1	16.5	2110
	10.0	22.6	2880
	12.5	27.5	3500
108.0	3.6	9.27	1180
	5.0	12.7	1620
	7.1	17.7	2250
	10.0	24.2	3080
	12.5	29.4	3750

ROR		Stat. Werte	
		m	A
d	t	kg/m	mm <sup>2</sup>
114.3	3.6	9.83	1250
	7.1	18.8	2390
	10.0	25.7	3280
	12.5	31.4	4000
	16.0	38.8	4940
121.0	4.0	11.5	1470
	7.1	19.9	2540
	10.0	27.4	3490
	12.5	33.5	4260
	16.0	41.4	5280
127.0	4.0	12.1	1550
	7.1	21.0	2670
	10.0	28.9	3680
	12.5	35.3	4500
	16.0	43.8	5580
133.0	4.0	12.7	1620
	7.1	22.0	2810
	10.0	30.3	3860
	12.5	37.1	4730
	16.0	46.2	5880
	25.0	66.6	8480
139.7	4.0	13.4	1710
	7.1	23.2	2960
	10.0	32.0	4070
	12.5	39.2	5000
	16.0	48.8	6220
	25.0	70.7	9010
152.4	4.0	14.6	1860
	4.5	16.4	2090
	7.1	25.4	3240
	10.0	35.1	4470
	12.5	43.1	5490
	16.0	53.8	6860
	25.0	78.5	10000

ROR		Stat. Werte	
		m	A
d	t	kg/m	mm <sup>2</sup>
159.0	4.0	15.3	1950
	4.5	17.1	2180
	7.1	26.6	3390
	10.0	36.7	4680
	12.5	45.2	5750
	16.0	56.4	7190
	25.0	82.6	10500
168.3	4.0	16.2	2060
	4.5	18.2	2320
	7.1	28.2	3600
	10.0	39.0	4970
	12.5	48.0	6120
	16.0	60.1	7660
	25.0	88.4	11300
177.8	4.5	19.2	2450
	5.0	21.3	2710
	10.0	41.4	5270
	16.0	63.8	8130
	25.0	94.2	12000
193.7	4.5	21.0	2670
	5.6	26.0	3310
	10.0	45.3	5770
	16.0	70.1	8930
	25.0	104.0	13200
219.1	4.5	23.8	3030
	6.3	33.1	4210
	10.0	51.6	6570
	16.0	80.1	10200
	25.0	120.0	15200
	40.0	177.0	22500

ROR		Stat. Werte	
		m	A
d	t	kg/m	mm <sup>2</sup>
244.5	5.0	29.5	3760
	6.3	37.0	4710
	10.0	57.8	7370
	16.0	90.2	11500
	25.0	135.0	17200
	40.0	202.0	25700
273.0	5.0	33.0	4210
	6.3	41.4	5280
	10.0	64.9	8260
	16.0	101.0	12900
	25.0	153.0	19500
	40.0	230.0	29300
298.5	7.1	51.0	6500
	10.0	71.1	9060
	16.0	111.0	14200
	25.0	169.0	21500
	40.0	255.0	32500
323.9	5.6	44.0	5600
	7.1	55.5	7070
	10.0	77.4	9860
	16.0	121.0	15500
	25.0	184.0	23500
	40.0	280.0	35700
	60.0	390.0	49700

