

2 Dimensions, designation

2.1 Type RSN

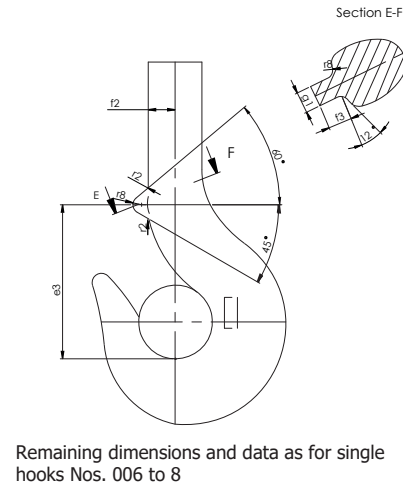
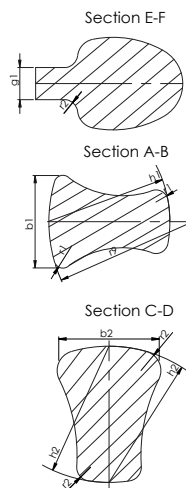
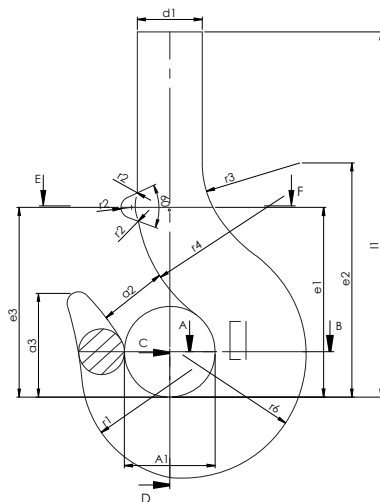
Drop forged (S) unmachined part (R) with nose (N) for single hooks Nos. 006 to 40

For single hooks Nos. 006 to 8

(on these unmachined parts, the nose protrudes from the shank)

For single hooks Nos. 10 to 40

(on these unmachined parts, the nose is partially incorporated in the shank and is the same as that of type RFN)



Remaining dimensions and data as for single hooks Nos. 006 to 8

Designation of a type RSN single hook No. 6 of strength class M:

Single hook DIN 15 401 – RSN 6 - M

Table 1. Dimensions of type RSN single hooks

Single hook No	a ₁	a ₂	a ₃	b ₁	b ₂	d ₁	e ₁	e ₂	e ₃	f ₁	f ₂	f ₃	g ₁	h ₁	h ₂	l ₁	r ₁	r ₂	r ₃	r ₄	r ₅	r ₆	r ₇	r ₈	r ₉	Weight KG
006	25	20	28	13	11	14	60	60	52	14,5	—	—	6,5	17	14	100	2	3	32	53	53	27	26	—	34	0,2
010	28	22	32	16	13	16	67	68	60	16,5	—	—	7	20	17	109	2	3,5	35	60	60	31	30	—	40	0,3
012	30	24	34	19	15	16	71	73	63	18	—	—	7,5	22	19	115	2,5	4	37	63	63	34	33	—	44	0,4
020	34	27	39	21	18	20	81	82	70	20	—	—	8,5	26	22	138	2,5	4,5	40	71	71	39	37	—	52	0,6
025	36	28	41	22	19	20	85	88	74	22	—	—	9	28	24	144	3	5	43	75	75	42	40	—	56	0,8
04	40	32	45	27	22	24	96	100	83	25	—	—	10	34	29	155	3,5	6	46	85	85	49	45	—	68	1,1
05	43	34	49	29	24	24	102	108	89	26	—	—	10,5	37	31	167	4	7	48	90	90	53	48	—	74	1,6
08	48	38	54	35	29	30	115	120	100	29	—	—	12	44	37	186	4,5	8	52	100	100	61	56	—	88	2,3
1	50	40	57	38	32	30	120	128	105	31	—	—	12,5	48	40	197	5	9	55	106	106	65	60	—	96	3,2
1.6	56	45	64	45	38	36	135	146	118	35	—	—	14	56	48	224	6	10	60	118	118	76	68	—	112	4,5
2.5	63	50	72	53	45	42	152	167	132	40	—	—	15	67	58	253	7	10	65	132	132	90	78	—	134	6,3
4	71	56	80	63	53	48	172	190	148	45	—	—	16	80	67	285	8	12	71	150	150	103	90	—	160	8,8
5	80	63	90	71	60	53	194	215	165	51	—	—	18	90	75	318	9	14	80	170	170	114	100	—	180	12,3
■ 6	90	71	101	80	67	60	218	240	185	57	—	—	18	100	85	380	10	16	90	190	190	131	112	—	200	17,1
8	100	80	113	90	75	67	242	268	210	64	—	—	23	112	95	418	11	18	100	212	212	146	125	—	224	24
■ 10	112	90	127	100	85	75	256	286	221	—	46	26	23	125	106	452	12	20	65	165	236	163	140	12	250	34
■ 12	125	100	143	112	95	85	292	316	252	—	53	34	28	140	118	510	14	22	70	185	265	182	160	16	280	47
■ 16	140	112	160	125	106	95	325	357	280	—	58	35	33	160	132	582	16	25	80	210	300	204	180	16	320	66
■ 20	150	125	180	140	118	106	370	405	330	—	68	45	33	180	150	653	18	28	90	240	335	232	200	20	360	95
25	180	140	202	160	132	118	415	455	360	—	74	45	38	200	170	724	20	32	100	270	375	262	224	20	400	136
■ 32	200	160	225	180	150	132	465	510	400	—	80	45	38	224	190	796	22	36	115	300	425	292	250	20	448	187
■ 40	224	180	252	200	170	150	517	567	447	—	93	55	42	250	212	893	25	40	130	335	475	326	280	25	500	264

■ Specially selected for production cranes, e.g. steel works cranes and rolling mill cranes

Table 2. Permissible deviations for type RSN single hooks

Single hook No.	Permissible deviations for dimensions													
	a_1	a_2	a_3	b_1	b_2	d_1	e_3	h_1	h_2	l_1	f_1	f_2	f_3	g_1
006 to 04	+2 0										+1 0			
05 to 2.5	+3 0										+1 0			
4 and 5	+4 0										+2 0			
6 and 8	+5 0										+2 0			
10 to 16	+6 0										+3 0			
20 to 40	+8 0										+3 0			

2.2 Type RF and type RFN

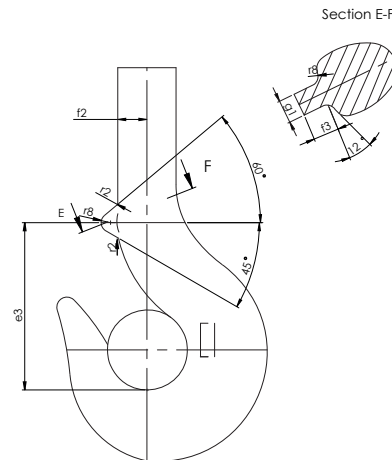
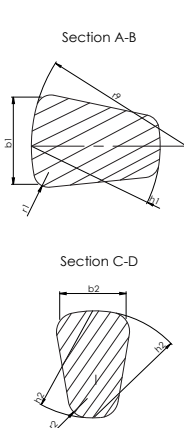
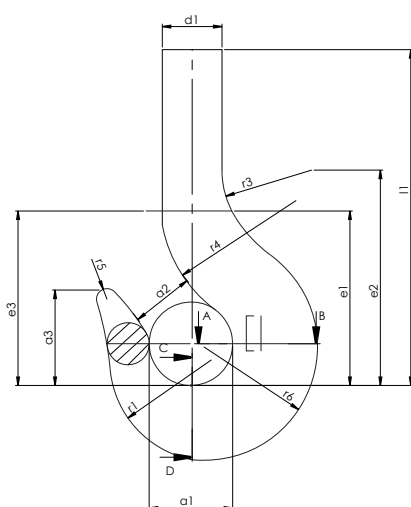
For single hooks Nos. 10 to 250

Type RF

Hammer forged (F) unmachined part (R) without nose

Type RFN

Hammer forged (F) unmachined part (R) with nose (N)



Remaining dimensions and data as for type RF

Designation of a type RFN single hook No. 20 of strength class M in accordance with DIN 15 400
Single hook DIN 15 401 - RFN 20 - M

Table 3. Dimensions of type RF and type RFN single hooks

Single hook No.	a_1	a_2	a_3	b_1	b_2	d_1	e_1	e_2	e_3	f_2	f_3	g_1	h_1	h_2	l_1	r_1	r_2	r_3	r_4	r_5	r_6	r_7	r_8	r_9	Weight KG
10	112	90	127	100	85	75	256	286	221	46	26	23	125	106	460	12	20	65	165	236	163	140	12	250	40
12	125	100	143	112	95	85	292	316	252	53	34	28	140	118	525	14	22	70	185	265	182	160	16	280	55
16	140	112	160	125	106	95	325	357	280	58	35	33	160	132	595	16	25	80	210	300	204	180	16	320	77
20	160	125	180	140	118	106	370	405	330	68	45	33	180	150	665	18	28	90	240	335	232	200	20	360	112
25	180	140	202	160	132	118	415	455	360	74	45	38	200	170	735	20	32	100	270	375	262	224	20	400	160
32	200	160	225	180	150	132	465	510	400	80	45	38	224	190	810	22	36	115	300	425	292	250	20	448	220
40	224	180	252	200	170	150	517	567	447	93	55	42	250	212	905	25	40	130	335	475	326	280	25	500	310
50	250	200	282	224	190	170	575	635	485	100	55	42	280	236	990	28	45	150	370	530	363	315	25	560	430
■ 63	280	224	320	250	212	190	655	710	550	108	60	45	315	265	1120	32	50	160	420	600	408	355	25	630	600
■ 80	315	250	385	280	236	212	727	802	598	113	60	45	355	300	1270	36	56	180	470	670	460	400	25	710	860
■ 100	355	280	402	315	265	236	827	902	688	130	70	50	400	335	1415	40	63	200	530	750	516	450	30	800	1220
■ 125	400	315	450	355	300	265	920	1020	750	138	70	50	450	375	1590	45	71	230	600	850	579	500	30	900	1740
■ 160	450	355	505	400	335	300	1035	1145	825	147	70	55	500	425	1790	50	80	250	675	950	654	560	30	1000	2480
■ 200	500	400	565	450	375	335	1150	1275	900	154	70	55	560	475	2048	56	90	285	750	1060	729	630	30	1120	3420
250	560	450	635	500	425	375	1280	1430	980	164	70	60	630	530	2305	63	100	320	840	1180	815	710	30	1260	4800

■ Specially selected for production cranes, e.g. steel works cranes and rolling mill cranes

Table 4. **Permissible deviations for type RF and type RFN single hooks**

Single hook No	a_1	a_2	a_3	b_1	b_2	d_1	e_3	f_2	f_3	g_1	h_1	h_2	l_1
10 to 16	$\begin{smallmatrix} +10 \\ 0 \end{smallmatrix}$		± 8	$\begin{smallmatrix} +12 \\ 0 \end{smallmatrix}$		$\begin{smallmatrix} +10 \\ 0 \end{smallmatrix}$	± 8		$\begin{smallmatrix} +4 \\ 0 \end{smallmatrix}$			$\begin{smallmatrix} +16 \\ 0 \end{smallmatrix}$	
20 to 32	$\begin{smallmatrix} +12 \\ 0 \end{smallmatrix}$		± 10	$\begin{smallmatrix} +16 \\ 0 \end{smallmatrix}$		$\begin{smallmatrix} +12 \\ 0 \end{smallmatrix}$	± 10		$\begin{smallmatrix} +5 \\ 0 \end{smallmatrix}$			$\begin{smallmatrix} +20 \\ 0 \end{smallmatrix}$	
40 to 63	$\begin{smallmatrix} +16 \\ 0 \end{smallmatrix}$		± 12	$\begin{smallmatrix} +20 \\ 0 \end{smallmatrix}$		$\begin{smallmatrix} +16 \\ 0 \end{smallmatrix}$	± 12		$\begin{smallmatrix} +6 \\ 0 \end{smallmatrix}$			$\begin{smallmatrix} +24 \\ 0 \end{smallmatrix}$	
80 to 125	$\begin{smallmatrix} +20 \\ 0 \end{smallmatrix}$		± 16	$\begin{smallmatrix} +25 \\ 0 \end{smallmatrix}$		$\begin{smallmatrix} +20 \\ 0 \end{smallmatrix}$	± 16		$\begin{smallmatrix} +8 \\ 0 \end{smallmatrix}$			$\begin{smallmatrix} +32 \\ 0 \end{smallmatrix}$	
160 to 250	$\begin{smallmatrix} +25 \\ 0 \end{smallmatrix}$		± 20	$\begin{smallmatrix} +32 \\ 0 \end{smallmatrix}$		$\begin{smallmatrix} +25 \\ 0 \end{smallmatrix}$	± 20		$\begin{smallmatrix} +10 \\ 0 \end{smallmatrix}$			$\begin{smallmatrix} +40 \\ 0 \end{smallmatrix}$	

Standards referred to

DIN 15 400	Lifting hooks for lifting appliances; mechanical properties, lifting capacities, actual stresses and materials
DIN 15 401 Part 2	Lifting hooks for lifting appliances; single hooks, finished parts with threaded shank
DIN 15 404 Part 1	Lifting hooks for lifting appliances; technical delivery conditions for forged lifting hooks
DIN 15 407 Part 1	Lifting hooks for cranes; laminated single hooks for hot-metal ladles and steel casting ladles, synopsis, principal dimensions
DIN 15 407 Part 2	Lifting hooks for cranes; laminated single hooks for hot-metal ladles and steel casting ladles, individual components
DIN 15 411	Lifting appliances; lifting hook suspensions for bottom sheaves

Further standards

DIN 15 402 Part 1	Lifting hooks for lifting appliances; ramshorn hooks, unmachined parts
DIN 15 402 Part 2	Lifting hooks for lifting appliances; ramshorn hooks, finished parts with threaded shank

Previous editions

DIN 687: 12.30, 06.44; DIN 688: 12.30, 02.33; DIN 15 401 Part 1: 07.70

Amendments

The following amendments have been made as compared with the July 1970 editions:

- The series of drop forged single hooks has been extended to include hooks up to hook No.40 inclusive.
- For hammer forged single hooks, the nose thickness g_1 has been specified as final dimension.
- Hammer forged single hooks of size Nos.6 and 8 have been dispensed with.
- DIN 15 400 has been adopted as the basis for material specifications and for the correlation of the lifting capacities to the strength class and to the driving gear groups.
- The radius at the base of the nose has been altered.
- The standard has been completely revised editorially.