

UDC 62.001.3(083) : 621.88

January 1986

	Tabular layouts of article characteristics for bolts, pins, rivets, and keys	DIN 4000 Part 9
<p>Sachmerkmal-Leisten für Bolzen, Stifte, Niete, Splinte, Paßfedern, Keile und Scheibenfedern</p> <p>1 Field of application This standard specifies tabular layouts, in accordance with DIN 4000 Part 1, for standardized and non-standardized bolts, pins, rivets, and keys.</p> <p>2 Tabular layouts The following fasteners are covered here, grouped according to the corresponding tabular layout number:</p> <p>Tabular layout no. 1: Bolts and pins (cf. subclause 3.1)</p> <p>Tabular layout no. 2: Stud bolts (cf. subclause 3.2)</p> <p>Tabular layout no. 3: Rivets (cf. subclause 3.3)</p> <p>Tabular layout no. 4: Split pins and spring cotters (cf. subclause 3.4)</p> <p>Tabular layout no. 5: Parallel keys, taper keys and Woodruff keys (cf. subclause 3.5)</p> <p style="text-align: right;">Continued on pages 2 to 11</p>		

3 Tabular layouts

3.1 Tabular layout no. 1 (for bolts and pins)

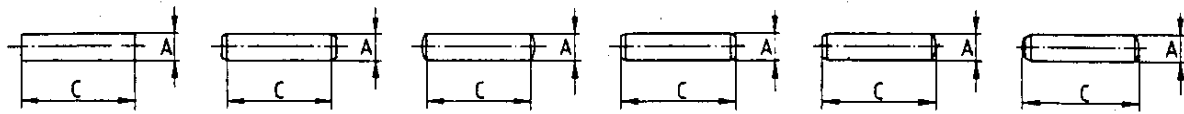


Figure 1 Figure 2 Figure 3 Figure 4 Figure 5 Figure 6

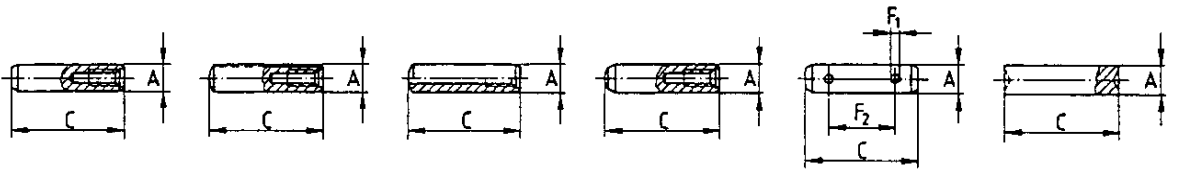


Figure 7 Figure 8 Figure 9 Figure 10 Figure 11 Figure 12

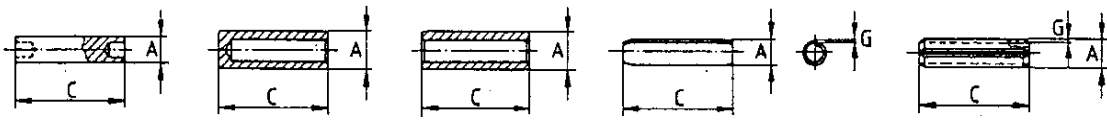


Figure 13 Figure 14 Figure 15 Figure 16 Figure 17

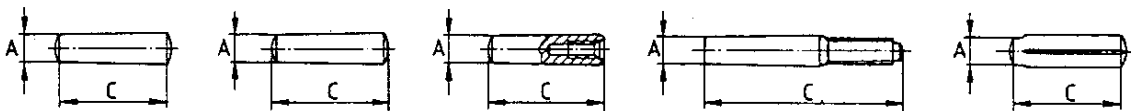


Figure 18 Figure 19 Figure 20 Figure 21 Figure 22

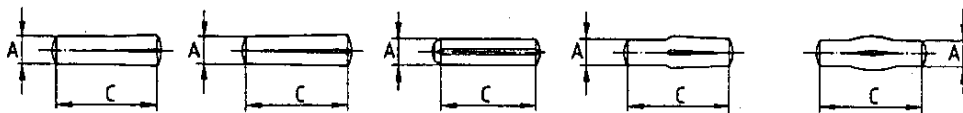


Figure 23 Figure 24 Figure 25 Figure 26 Figure 27

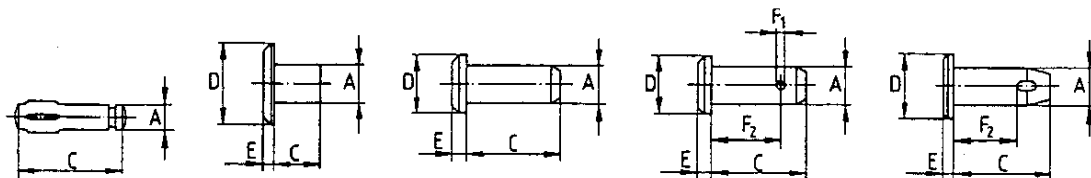


Figure 28 Figure 29 Figure 30 Figure 31 Figure 32

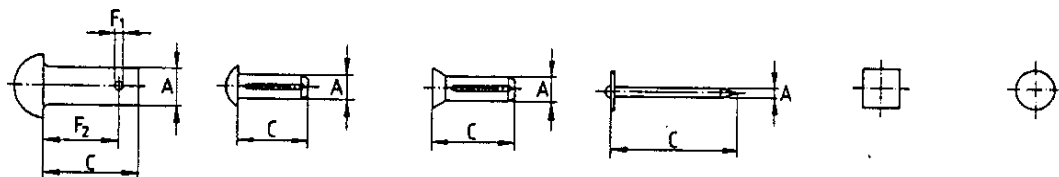


Figure 33 Figure 34 Figure 35 Figure 36 Figure 37

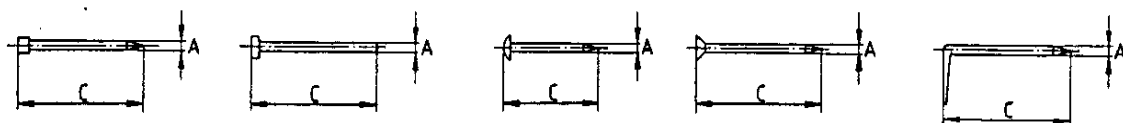


Figure 38 Figure 39 Figure 40 Figure 41 Figure 42

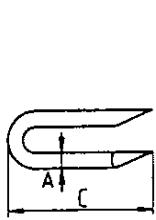


Figure 43

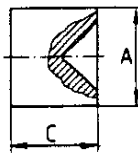


Figure 44

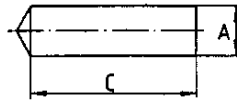


Figure 45

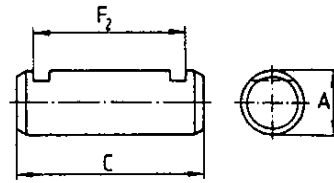


Figure 46

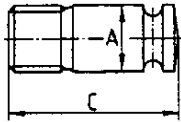


Figure 47

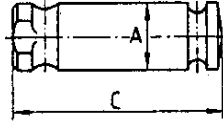


Figure 48

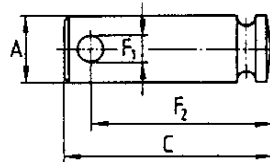


Figure 49

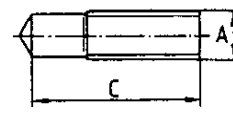


Figure 50

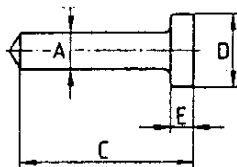


Figure 51

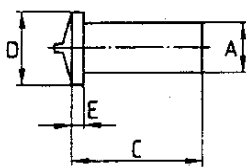


Figure 52

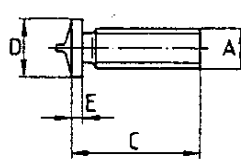


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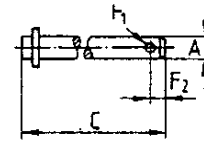


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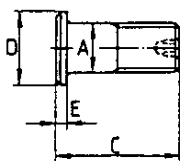


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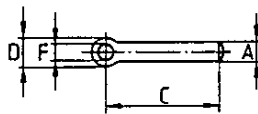


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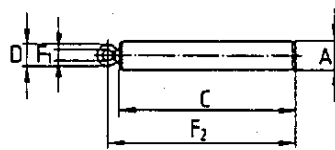


Figure 58

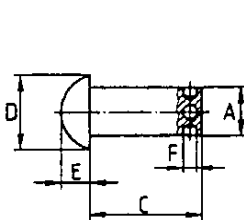


Figure 59

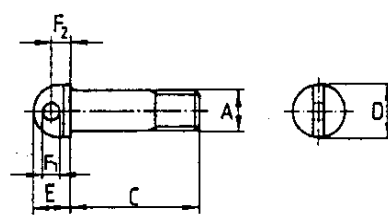


Figure 60

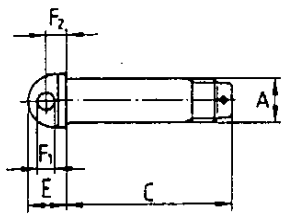


Figure 61

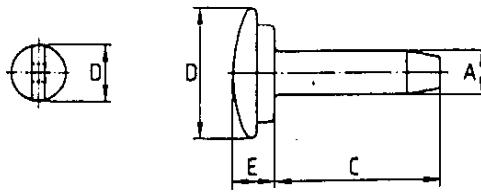


Figure 62

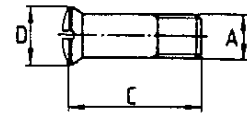


Figure 63

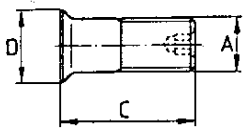


Figure 64

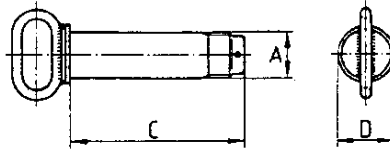


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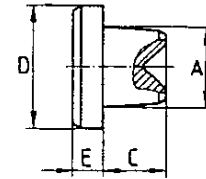


Figure 66

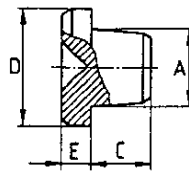
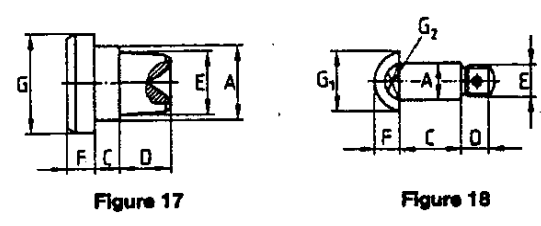
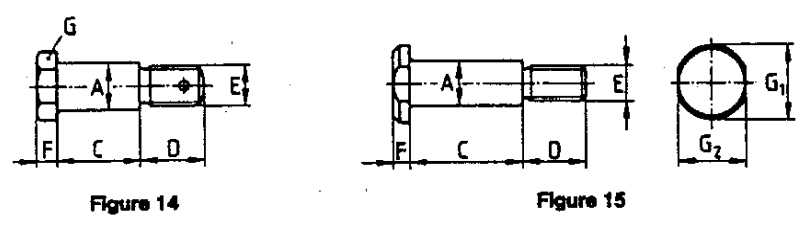
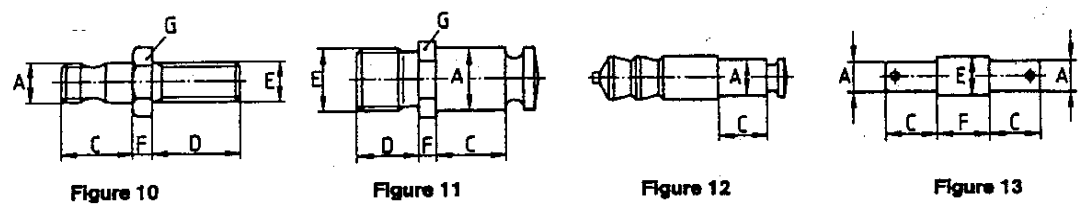
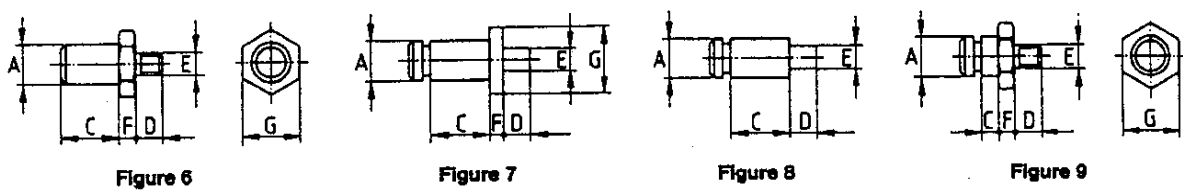
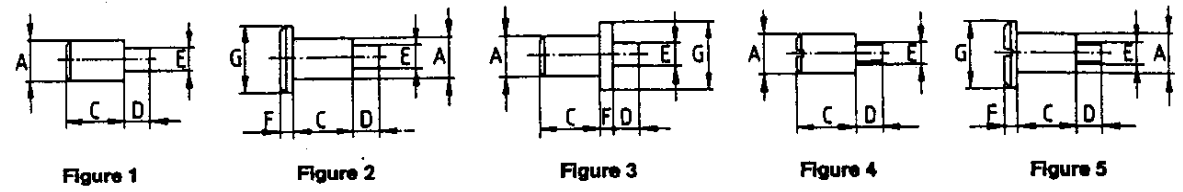


Figure 67

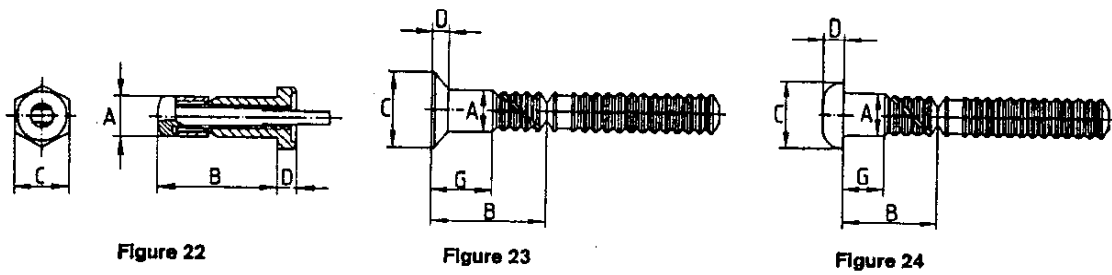
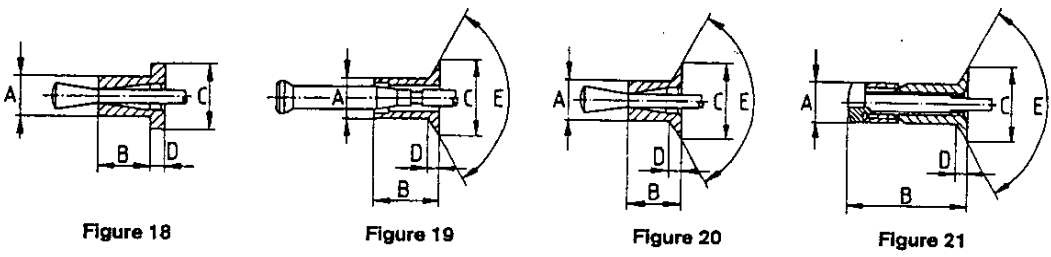
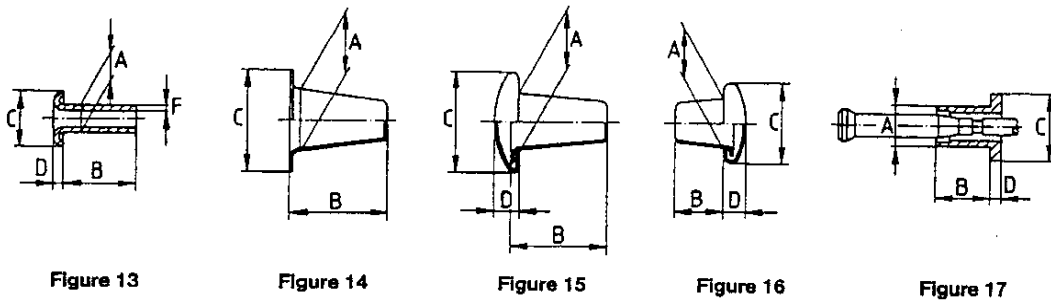
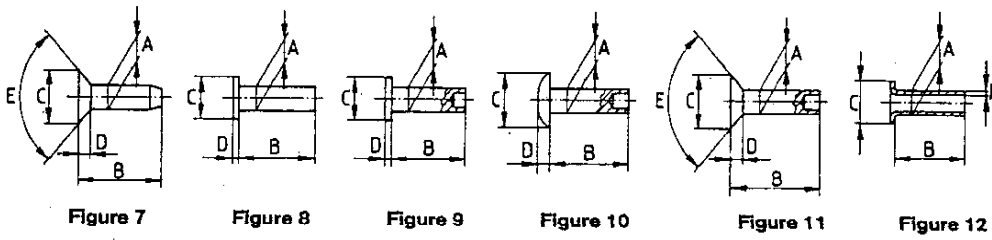
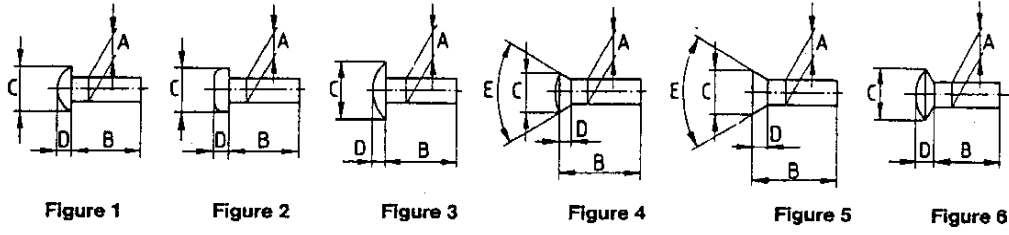
Tabular layout DIN 4000 - 9 - 1									
Code letter	A	B	C	D	E	F	G	H	J
Designation of article characteristic	Nominal diameter/thread size	Limit deviations/tolerance zone for A	Length	Head diameter	Head height	Hole diameter/hole (or notch) distance (F, F ₁ , F ₂)	Thickness	Material	Finish
Symbol									
Unit	mm; -	mm	mm	mm	mm	mm	mm	-	-

3.2 Tabular layout no. 2 (for stud bolts)



Tabular layout DIN 4000 - 9 - 2									
Code letter	A	B	C	D	E	F	G	H	J
Designation of article characteristic	Bolt diameter	Limit deviations/tolerance zone for A	Shoulder length	Stud length	Stud diameter/thread size	Collar length/head height	Head or collar diameter/width across flats (G, G ₁ , G ₂)	Material	Finish
Symbol									
Unit	mm	mm	mm	mm	mm; -	mm	mm	-	-

3.3 Tabular layout no. 3 (for rivets)



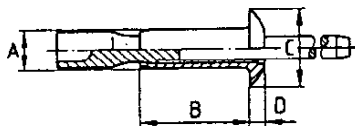


Figure 25

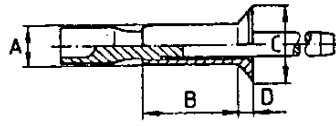


Figure 26

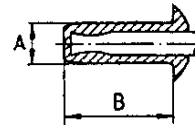


Figure 27

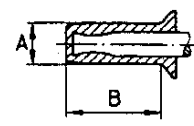


Figure 28

Tabular layout DIN 4000 - 9 - 3									
Code letter	A	B	C	D	E	F	G	H	J
Designation of article characteristic	Nominal diameter	Length	Head diameter/width across flats	Head height	Counter-sink angle	Wall thickness	Grip length	Material	Finish
Symbol									
Unit	mm	mm	mm	mm	°	mm	mm	-	-

3.4 Tabular layout no. 4 (for split pins and spring cotters)

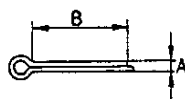


Figure 1

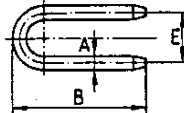


Figure 2

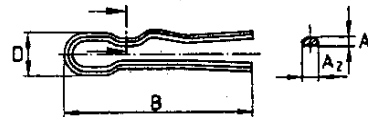


Figure 3

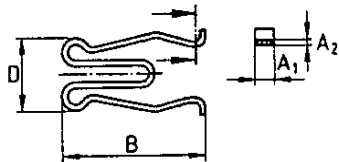


Figure 4

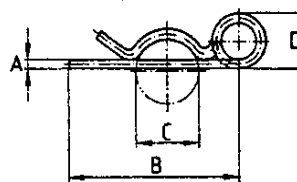


Figure 5

Tabular layout DIN 4000 - 9 - 4									
Code letter	A	B	C	D	E	F	G	H	J
Designation of article characteristic	Nominal diameter/cross-sectional size (A, A ₁ , A ₂)	Nominal length	for diameter range	Width	Centre-to-centre distance			Material	Finish
Symbol						-	-		
Unit	mm	mm	mm	mm	mm	-	-	-	-

3.5 Tabular layout no. 5 (for parallel keys, taper keys and Woodruff keys)

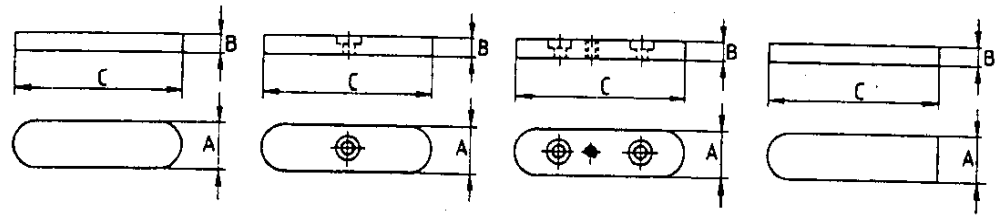


Figure 1

Figure 2

Figure 3

Figure 4

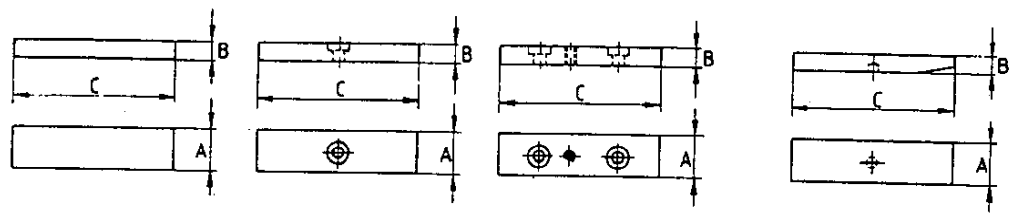


Figure 5

Figure 6

Figure 7

Figure 8

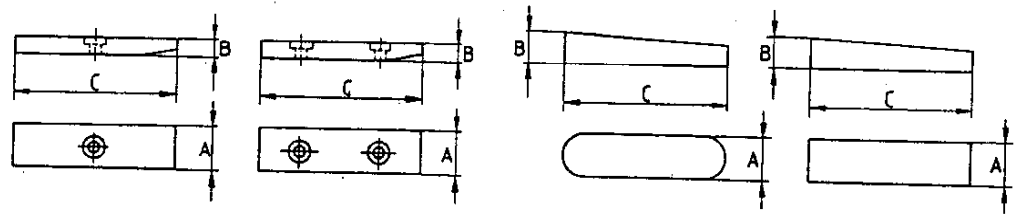


Figure 9

Figure 10

Figure 11

Figure 12

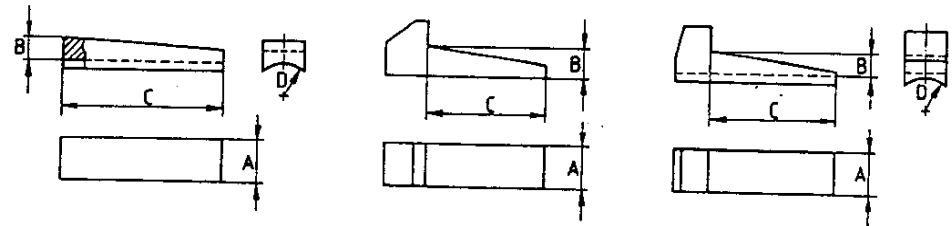


Figure 13

Figure 14

Figure 15

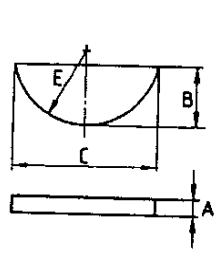


Figure 16

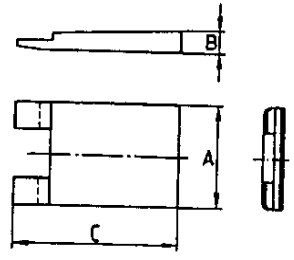


Figure 17

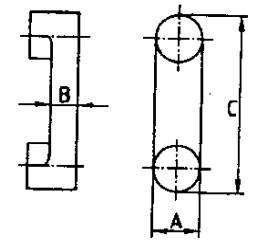


Figure 18

Tabular layout DIN 4000 - 9 - 5									
Code letter	A	B	C	D	E	F	G	H	J
Designation of article characteristic	Width	Height	Length	Radius	Diameter		Additional ordering details as in standard	Material	Finish
Symbol						-			
Unit	mm	mm	mm	mm	mm	-	-	-	-

Appendix A

Standards grouped according to tabular layout number

A.1 Tabular layout DIN 4000-9-1

As in Standard	Abbreviated title	See figure(s)	As in Standard	Abbreviated title	See figure(s)
DIN 1	Taper pins	18	DIN 8273 Pt 2	Balance studs	44
DIN 7	Parallel pins	1, 2, 3	DIN 21 383	Rope attachments, pins	32
DIN 258	Taper pins with external thread	21	DIN 32 500 Pt 1	Studs	50
DIN 1143 Pt 1	Nails for use in automatic nailing machines	41	DIN 32 500 Pt 2	Studs	45
DIN 1144	Nails for wood wool composite panels	36, 37	DIN 32 500 Pt 3	Studs	51
DIN 1151	Round wire nails	37, 41	DIN 32 500 Pt 4	Studs	51
DIN 1152	Round lost head wire nails	38	DIN 32 501 Pt 1	Studs	53
DIN 1157	Decorator's tacks	40	DIN 32 501 Pt 2	Studs	52
DIN 1158	Wall hooks	42	DIN 32 501 Pt 3	Studs	53
DIN 1159	Loop nails with unilateral cut point	43	DIN 32 501 Pt 4	Studs	52
DIN 1160	Clout or slate nails	37	DIN 41 097 Pt 4	Pins	57
DIN 1163	Moulding nails	39	DIN 42 535 Pt 2	Pins	7
DIN 1433	Headless pins	4, 11	DIN 43 119 Pt 1	Revolving bolts	48, 49
DIN 1434	Pins with small head, type m	30, 31	DIN 43 119 Pt 2	Revolving bolts	47
DIN 1435	Pins with small head, type mg	30, 31	DIN 43 161	Pins for overhead equipment	33
DIN 1436	Pins with large head, type mg	30, 31	DIN 44 764	Parallel pins	6
DIN 1443	Clevis pins without head	4, 11	DIN 48 073	Connecting pins	59
DIN 1444	Clevis pins with head	30, 31	DIN 58 325	Joint bolts	29
DIN 1469	Half-length grooved pins with gorge	28	DIN 73 124	Gudgeon pins for diesel engines	15
DIN 1470	Full-length parallel grooved pins with pilot	22	DIN 73 125	Gudgeon pins for petrol engines	14, 15
DIN 1471	Full-length taper grooved pins	24	DIN 81 703	Pins	54
DIN 1472	Half-length grooved pins	23	DIN 82 040	Pins	11
DIN 1473	Full-length parallel grooved pins	25	DIN 82 046	Pins	11
DIN 1474	Half-length reverse grooved pins	26	DIN 82 047	Pins	58
DIN 1475	Third length centre grooved pins	27	DIN 82 101	Pins	60, 61, 63, 65
DIN 1476	Round head grooved pins	34	DIN 82 230	Pins	46
DIN 1477	Countersunk head grooved pins	35	LN 7 Pt 1	Parallel pins	1, 2
DIN 1481	Spring-type straight pins	17	LN 1434	Pins with reduced head	31
DIN 5525	Headless clevis pins for rail vehicles	4, 11	LN 1481	Slotted, heavy duty spring pins	17
DIN 5526	Clevis pins with head for rail vehicles	30, 31	LN 7346	Slotted, light duty spring pins	17
DIN 6325	Parallel pins, hardened	6	LN 9318	Slugs for C-type rivets	6
DIN 7341	Rivet pins	12, 13	LN 9373	Wall hooks	42
DIN 7343	Normal-duty type spiral pins	16	LN 29 796	Pins with protruding head	55
DIN 7344	Heavy-duty type spiral pins	16	LN 29 797	Pins with protruding head	64
DIN 7346	Spring-type straight pins	17	LN 29 946	Pins	31
DIN 7977	Taper pins with thread end (with constant point length)	21	LN 65 616	Rigging pins	62
DIN 7978	Taper pins with internal thread	20	-	Parallel pins, unhardened	5
DIN 7979	Parallel pins with internal thread	7, 10	-	Taper pins, unhardened	19
DIN 8273 Pt 1	Balance studs	66, 67			

A.2 Tabular layout DIN 4000-9-2

DIN 1445	Clevis pins with head	15
DIN 8156	Pins	13
DIN 8157	Pins	13
DIN 8273	Balance studs	17
DIN 42 801	Pins	10
DIN 43 119 Pt 1	Pins	12
DIN 43 119 Pt 2	Pins	11

Page 10 DIN 4000 Part 9

As in Standard	Abbreviated title	See figure(s)	As in Standard	Abbreviated title	See figure(s)
DIN 48 073	Pins	18	LN 9179	Nickel alloy countersunk 100° rivets	5
DIN 58 460	Studs	1	LN 9198	Aluminium alloy universal head rivets	2
DIN 58 461	Studs with collar	3	LN 9199	Countersunk 100° rivets	5
DIN 58 462	Studs with groove	8	LN 9313	Blind rivets	19
DIN 58 463	Studs with collar and groove	7	LN 9314	Flat head blind rivets	17
DIN 58 464	Studs with head	2	LN 9315	Countersunk head blind rivets	19
DIN 58 469	Threaded studs	4	LN 9316	C-type rivets with flat head	18
DIN 58 470	Hexagon threaded studs	6	LN 9317	C-type rivets with countersunk head	20
DIN 58 471	Hexagon threaded studs with groove	9	LN 9320	Hexagon head blind rivets	22
DIN 58 472	Threaded studs with head	5	LN 9321	Countersunk head blind rivets	21
DIN 71 753	Pins	14	VG 4863	Tubular rivets	12
A.3 Tabular layout DIN 4000-9-3			A.4 Tabular layout DIN 4000-9-4		
DIN 124	Round head rivets	1	DIN 94	Split pins	1
DIN 302	Countersunk head rivets	4	DIN 11 024	Spring cotters	5
DIN 660	Round head rivets	1	DIN 43 120	Bow slipper holders	2
DIN 661	Countersunk head rivets	5	DIN EN 2367	Split pins	1
DIN 662	Oval-head rivets	6	DIN IEC 368(CO)79	Split pins	3, 4
DIN 674	Mushroom head rivets	3	LN 94	Split pins	1
DIN 675	Flat countersunk head rivets	7	A.5 Tabular layout DIN 4000-9-5		
DIN 5371	Rivets	7	DIN 268	Tangential keys	12
DIN 6791	Semitubular pan head rivets	10	DIN 271	Tangential keys	12
DIN 6792	Semitubular countersunk head rivets	11	DIN 1573	Keys	17
DIN 7331	Compression rivets	14, 15, 16	DIN 6881	Saddle keys	13
DIN 7337	Break mandrel blind rivets	17, 19	DIN 6883	Parallel keys	12
DIN 7338	Brake and clutch lining rivets	8, 9, 12	DIN 6884	Gib-head parallel keys	14
DIN 7339	One-piece tubular rivets	12	DIN 6885 Pt 1	Parallel keys	1, 2, 3, 4, 5, 6, 7, 8, 9, 10
DIN 7340	Tubular rivets	12, 13	DIN 6885 Pt 2	Parallel keys	1, 2, 3
DIN 29 921	Blind rivets with locking thread	22	DIN 6885 Pt 3	Parallel keys	1, 2, 3, 5
DIN 29 924	Blind rivets with locking thread	21	DIN 6886	Taper keys	11, 12
DIN 65 155	Rivets with protruding head	24	DIN 6887	Gib-head taper keys	14
DIN 65 156	Rivets with protruding head	23	DIN 6888	Woodruff keys	16
DIN 65 158	Blind rivets	25	DIN 6889	Gib-head saddle keys	15
DIN 65 159	Blind rivets	26	DIN 28 134	Double-nose sunk keys	18
LN 7340	Tubular rivets	12, 13	LN 29 545	Keys	12
LN 9178	Nickel alloy universal head rivets	2			

Standards referred to

DIN 4000 Part 1 Tabular layouts of article characteristics: concepts and principles
See standards listed in appendix A.

Previous editions

Supplement 1 to DIN 4000 Part 9: 10.77;
DIN 4000 Part 9: 10.77.

Amendments

The following amendments have been made to the October 1977 edition and Supplement 1 to DIN 4000 Part 9, October 1977 edition.

- a) The information contained in the Supplement has been incorporated into this standard as appendix A.
- b) A number of illustrations has been added taking into account revised and new standards.
- c) Tabular layout no. 4 has been extended to include additional characteristics.
- d) The standard has been editorially revised.

Explanatory notes

The number of places available for each characteristic used in a tabular layout is specified in the table below, which has been taken from DIN 4000 Part 1.

Code letter	A	B	C	D	E	F	G	H	J	
	Maximum number of places per code letter (column)									
1	5	6	5	4	3	8	4	15	15	65
2	5	6	5	5	4	3	8	15	15	66
3	5	5	6	4	3	4	5	15	15	70
4	8	5	10	6	4	1	1	15	15	65
5	3	3	5	2	2	1	3	15	15	49

The number of places specified for each code letter represents the shortest possible entry which can be made for any item in an article characteristics list.

International Patent Classification

F 16 B 3/00
F 16 B 19/00
F 16 B 21/12