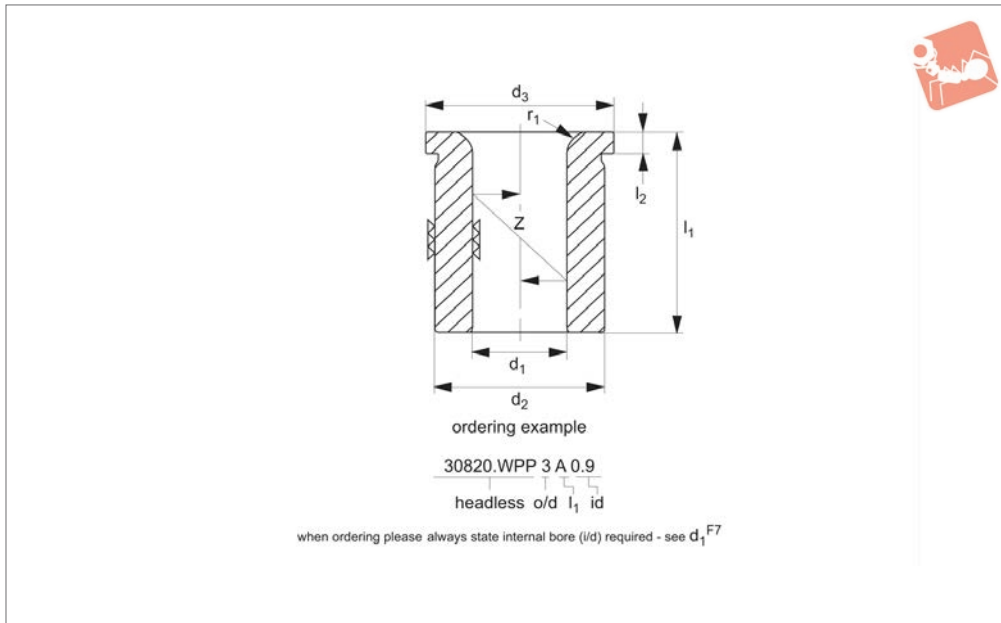




Headed Drill Bushes - DIN 172A

short

Tenons, Locating Pads & Drill



30820.1

TENONS, LOCATING PADS & DRILL BUSHES

Material

High grade steel. Hardened 740 +HV10.
Hole, d₁ ground ISO tolerance F7.
o/d-d₂ ground ISO tolerance n6, to fit standard hole tolerance H₇. Length l₁ to ±0,2 for lengths 6 to 30mm.

Technical Notes

d₁ dimension tolerance to F7.

Key to dimensions l₁:

- l₁ short
- l₁ medium
- l₁ long

Table of lengths l₁:

- A- 6mm
- B- 8mm

- C- 9mm
- D- 10mm
- E- 12mm
- F- 16mm
- H- 20mm
- J- 25mm
- K- 28mm
- L- 30mm
- M- 35mm
- N- 36mm
- P- 40mm
- R- 45mm
- S- 56mm
- T- 67mm
- W- 78mm

Tips

Sizes 48,0 i/d and above are made to order

Please note sizes d₁ <0,9 prices available on request.

Important Notes

Drill bushes produced to standard DIN increments for internal bores:
i/d's 0,9mm to 15,0mm - 0,1mm increments e.g. 1,1 mm, 1,2mm etc.
i/d's 15,1mm and over -0,5mm increments.

Ordering drill bushes to DIN standard increments offers a cost advantage, as non-standard bores are machined to order as specials.

Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH3A0.9	0.9	short	A	6	3	1	6	2
30820.WPH3A1.0	1.0	short	A	6	3	1	6	2
30820.WPH4A1.1	1.1	short	A	6	4	1	7	2
30820.WPH4A1.2	1.2	short	A	6	4	1	7	2
30820.WPH4A1.3	1.3	short	A	6	4	1	7	2
30820.WPH4A1.4	1.4	short	A	6	4	1	7	2
30820.WPH4A1.5	1.5	short	A	6	4	1	7	2
30820.WPH4A1.6	1.6	short	A	6	4	1	7	2
30820.WPH4A1.7	1.7	short	A	6	4	1	7	2
30820.WPH4A1.8	1.8	short	A	6	4	1	7	2
30820.WPH5A2.0	2.0	short	A	6	5	1	8	2
30820.WPH5A2.1	2.1	short	A	6	5	1	8	2
30820.WPH5A2.2	2.2	short	A	6	5	1	8	2
30820.WPH5A2.3	2.3	short	A	6	5	1	8	2
30820.WPH5A2.4	2.4	short	A	6	5	1	8	2
30820.WPH5A2.5	2.5	short	A	6	5	1	8	2
30820.WPH5A2.6	2.6	short	A	6	5	1	8	2
30820.WPH6B2.7	2.7	short	B	8	6	1	9	2.5



Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH6B2.8	2.8	short	B	8	6	1	9	2.5
30820.WPH6B2.9	2.9	short	B	8	6	1	9	2.5
30820.WPH6B3.0	3.0	short	B	8	6	1	9	2.5
30820.WPH6B3.1	3.1	short	B	8	6	1	9	2.5
30820.WPH6B3.2	3.2	short	B	8	6	1	9	2.5
30820.WPH6B3.3	3.3	short	B	8	6	1	9	2.5
30820.WPH7B3.4	3.4	short	B	8	7	1	10	2.5
30820.WPH7B3.5	3.5	short	B	8	7	1	10	2.5
30820.WPH7B3.6	3.6	short	B	8	7	1	10	2.5
30820.WPH7B3.7	3.7	short	B	8	7	1	10	2.5
30820.WPH7B3.8	3.8	short	B	8	7	1	10	2.5
30820.WPH7B3.9	3.9	short	B	8	7	1	10	2.5
30820.WPH7B4.0	4.0	short	B	8	7	1	10	2.5
30820.WPH8B4.1	4.1	short	B	8	8	1	11	2.5
30820.WPH8B4.2	4.2	short	B	8	8	1	11	2.5
30820.WPH8B4.3	4.3	short	B	8	8	1	11	2.5
30820.WPH8B4.4	4.4	short	B	8	8	1	11	2.5
30820.WPH8B4.5	4.5	short	B	8	8	1	11	2.5
30820.WPH8B4.6	4.6	short	B	8	8	1	11	2.5
30820.WPH8B4.7	4.7	short	B	8	8	1	11	2.5
30820.WPH8B4.8	4.8	short	B	8	8	1	11	2.5
30820.WPH8B4.9	4.9	short	B	8	8	1	11	2.5
30820.WPH8B5.0	5.0	short	B	8	8	1	11	2.5
30820.WPH10D5.1	5.1	short	D	10	10	1.5	13	3
30820.WPH10D5.2	5.2	short	D	10	10	1.5	13	3
30820.WPH10D5.3	5.3	short	D	10	10	1.5	13	3
30820.WPH10D5.4	5.4	short	D	10	10	1.5	13	3
30820.WPH10D5.5	5.5	short	D	10	10	1.5	13	3
30820.WPH10D5.6	5.6	short	D	10	10	1.5	13	3
30820.WPH10D5.7	5.7	short	D	10	10	1.5	13	3
30820.WPH10D5.8	5.8	short	D	10	10	1.5	13	3
30820.WPH10D5.9	5.9	short	D	10	10	1.5	13	3
30820.WPH10D6.0	6.0	short	D	10	10	1.5	13	3
30820.WPH12D6.1	6.1	short	D	10	12	1.5	15	3
30820.WPH12D6.2	6.2	short	D	10	12	1.5	15	3
30820.WPH12D6.3	6.3	short	D	10	12	1.5	15	3
30820.WPH12D6.4	6.4	short	D	10	12	1.5	15	3
30820.WPH12D6.5	6.5	short	D	10	12	1.5	15	3
30820.WPH12D6.6	6.6	short	D	10	12	1.5	15	3
30820.WPH12D6.7	6.7	short	D	10	12	1.5	15	3
30820.WPH12D6.8	6.8	short	D	10	12	1.5	15	3
30820.WPH12D6.9	6.9	short	D	10	12	1.5	15	3
30820.WPH12D7.0	7.0	short	D	10	12	1.5	15	3
30820.WPH12D7.1	7.1	short	D	10	12	1.5	15	3
30820.WPH12D7.2	7.2	short	D	10	12	1.5	15	3
30820.WPH12D7.3	7.3	short	D	10	12	1.5	15	3
30820.WPH12D7.4	7.4	short	D	10	12	1.5	15	3
30820.WPH12D7.5	7.5	short	D	10	12	1.5	15	3
30820.WPH12D7.6	7.6	short	D	10	12	1.5	15	3
30820.WPH12D7.7	7.7	short	D	10	12	1.5	15	3
30820.WPH12D7.8	7.8	short	D	10	12	1.5	15	3
30820.WPH12D7.9	7.9	short	D	10	12	1.5	15	3
30820.WPH12D8.0	8.0	short	D	10	12	1.5	15	3
30820.WPH15E8.1	8.1	short	E	12	15	2	18	3
30820.WPH15E8.2	8.2	short	E	12	15	2	18	3
30820.WPH15E8.3	8.3	short	E	12	15	2	18	3
30820.WPH15E8.4	8.4	short	E	12	15	2	18	3
30820.WPH15E8.5	8.5	short	E	12	15	2	18	3
30820.WPH15E8.6	8.6	short	E	12	15	2	18	3
30820.WPH15E8.7	8.7	short	E	12	15	2	18	3
30820.WPH15E8.8	8.8	short	E	12	15	2	18	3
30820.WPH15E8.9	8.9	short	E	12	15	2	18	3
30820.WPH15E9.0	9.0	short	E	12	15	2	18	3
30820.WPH15E9.1	9.1	short	E	12	15	2	18	3
30820.WPH15E9.2	9.2	short	E	12	15	2	18	3
30820.WPH15E9.3	9.3	short	E	12	15	2	18	3
30820.WPH15E9.4	9.4	short	E	12	15	2	18	3
30820.WPH15E9.5	9.5	short	E	12	15	2	18	3



Headed Drill Bushes - DIN 172A

short

Tenons, Locating Pads & Drill



Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH15E9.6	9.6	short	E	12	15	2	18	3
30820.WPH15E9.7	9.7	short	E	12	15	2	18	3
30820.WPH15E9.8	9.8	short	E	12	15	2	18	3
30820.WPH15E9.9	9.9	short	E	12	15	2	18	3
30820.WPH15E10.0	10.0	short	E	12	15	2	18	3
30820.WPH18E10.1	10.1	short	E	12	18	2	22	4
30820.WPH18E10.2	10.2	short	E	12	18	2	22	4
30820.WPH18E10.3	10.3	short	E	12	18	2	22	4
30820.WPH18E10.4	10.4	short	E	12	18	2	22	4
30820.WPH18E10.5	10.5	short	E	12	18	2	22	4
30820.WPH18E10.6	10.6	short	E	12	18	2	22	4
30820.WPH18E10.7	10.7	short	E	12	18	2	22	4
30820.WPH18E10.8	10.8	short	E	12	18	2	22	4
30820.WPH18E10.9	10.9	short	E	12	18	2	22	4
30820.WPH18E11.0	11.0	short	E	12	18	2	22	4
30820.WPH18E11.1	11.1	short	E	12	18	2	22	4
30820.WPH18E11.2	11.2	short	E	12	18	2	22	4
30820.WPH18E11.3	11.3	short	E	12	18	2	22	4
30820.WPH18E11.4	11.4	short	E	12	18	2	22	4
30820.WPH18E11.5	11.5	short	E	12	18	2	22	4
30820.WPH18E11.6	11.6	short	E	12	18	2	22	4
30820.WPH18E11.7	11.7	short	E	12	18	2	22	4
30820.WPH18E11.8	11.8	short	E	12	18	2	22	4
30820.WPH18E11.9	11.9	short	E	12	18	2	22	4
30820.WPH18E12.0	12.0	short	E	12	18	2	22	4
30820.WPH22F12.1	12.1	short	F	16	22	2	26	4
30820.WPH22F12.2	12.2	short	F	16	22	2	26	4
30820.WPH22F12.3	12.3	short	F	16	22	2	26	4
30820.WPH22F12.4	12.4	short	F	16	22	2	26	4
30820.WPH22F12.5	12.5	short	F	16	22	2	26	4
30820.WPH22F12.6	12.6	short	F	16	22	2	26	4
30820.WPH22F12.7	12.7	short	F	16	22	2	26	4
30820.WPH22F12.8	12.8	short	F	16	22	2	26	4
30820.WPH22F12.9	12.9	short	F	16	22	2	26	4
30820.WPH22F13.0	13.0	short	F	16	22	2	26	4
30820.WPH22F13.1	13.1	short	F	16	22	2	26	4
30820.WPH22F13.2	13.2	short	F	16	22	2	26	4
30820.WPH22F13.3	13.3	short	F	16	22	2	26	4
30820.WPH22F13.4	13.4	short	F	16	22	2	26	4
30820.WPH22F13.5	13.5	short	F	16	22	2	26	4
30820.WPH22F13.6	13.6	short	F	16	22	2	26	4
30820.WPH22F13.7	13.7	short	F	16	22	2	26	4
30820.WPH22F13.8	13.8	short	F	16	22	2	26	4
30820.WPH22F13.9	13.9	short	F	16	22	2	26	4
30820.WPH22F14.0	14.0	short	F	16	22	2	26	4
30820.WPH22F14.1	14.1	short	F	16	22	2	26	4
30820.WPH22F14.2	14.2	short	F	16	22	2	26	4
30820.WPH22F14.3	14.3	short	F	16	22	2	26	4
30820.WPH22F14.4	14.4	short	F	16	22	2	26	4
30820.WPH22F14.5	14.5	short	F	16	22	2	26	4
30820.WPH22F14.6	14.6	short	F	16	22	2	26	4
30820.WPH22F14.7	14.7	short	F	16	22	2	26	4
30820.WPH22F14.8	14.8	short	F	16	22	2	26	4
30820.WPH22F14.9	14.9	short	F	16	22	2	26	4
30820.WPH22F15.0	15.0	short	F	16	22	2	26	4
30820.WPH26F15.5	15.5	short	F	16	26	2	30	4
30820.WPH26F16.0	16.0	short	F	16	26	2	30	4
30820.WPH26F16.5	16.5	short	F	16	26	2	30	4
30820.WPH26F17.0	17.0	short	F	16	26	2	30	4
30820.WPH26F17.5	17.5	short	F	16	26	2	30	4
30820.WPH26F18.0	18.0	short	F	16	26	2	30	4
30820.WPH30H18.5	18.5	short	H	20	30	3	34	5
30820.WPH30H19.0	19.0	short	H	20	30	3	34	5
30820.WPH30H19.5	19.5	short	H	20	30	3	34	5
30820.WPH30H20.0	20.0	short	H	20	30	3	34	5
30820.WPH30H20.5	20.5	short	H	20	30	3	34	5
30820.WPH30H21.0	21.0	short	H	20	30	3	34	5
30820.WPH30H21.5	21.5	short	H	20	30	3	34	5

TENONS, LOCATING PADS & DRILL BUSHES



Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH30H22.0	22.0	short	H	20	30	3	34	5
30820.WPH35H22.5	22.5	short	H	20	35	3	39	5
30820.WPH35H23.0	23.0	short	H	20	35	3	39	5
30820.WPH35H23.5	23.5	short	H	20	35	3	39	5
30820.WPH35H24.0	24.0	short	H	20	35	3	39	5
30820.WPH35H24.5	24.5	short	H	20	35	3	39	5
30820.WPH35H25.0	25.0	short	H	20	35	3	39	5
30820.WPH35H25.5	25.5	short	H	20	35	3	39	5
30820.WPH35H26.0	26.0	short	H	20	35	3	39	5
30820.WPH42J26.5	26.5	short	J	25	42	3	46	5
30820.WPH42J27.0	27.0	short	J	25	42	3	46	5
30820.WPH42J27.5	27.5	short	J	25	42	3	46	5
30820.WPH42J28.0	28.0	short	J	25	42	3	46	5
30820.WPH42J28.5	28.5	short	J	25	42	3	46	5
30820.WPH42J29.0	29.0	short	J	25	42	3	46	5
30820.WPH42J29.5	29.5	short	J	25	42	3	46	5
30820.WPH42J30.0	30.0	short	J	25	42	3	46	5
30820.WPH48J30.5	30.5	short	J	25	48	3	52	5
30820.WPH48J31.0	31.0	short	J	25	48	3	52	5
30820.WPH48J31.5	31.5	short	J	25	48	3	52	5
30820.WPH48J32.0	32.0	short	J	25	48	3	52	5
30820.WPH48J32.5	32.5	short	J	25	48	3	52	5
30820.WPH48J33.0	33.0	short	J	25	48	3	52	5
30820.WPH48J33.5	33.5	short	J	25	48	3	52	5
30820.WPH48J34.0	34.0	short	J	25	48	3	52	5
30820.WPH48J34.5	34.5	short	J	25	48	3	52	5
30820.WPH48J35.0	35.0	short	J	25	48	3	52	5
30820.WPH62L42.5	42.5	short	L	30	62	3.5	66	6
30820.WPH62L43.0	43.0	short	L	30	62	3.5	66	6
30820.WPH62L43.5	43.5	short	L	30	62	3.5	66	6
30820.WPH62L44.0	44.0	short	L	30	62	3.5	66	6
30820.WPH62L44.5	44.5	short	L	30	62	3.5	66	6
30820.WPH62L45.0	45.0	short	L	30	62	3.5	66	6
30820.WPH62L45.5	45.5	short	L	30	62	3.5	66	6
30820.WPH62L46.0	46.0	short	L	30	62	3.5	66	6
30820.WPH62L46.5	46.5	short	L	30	62	3.5	66	6
30820.WPH62L47.0	47.0	short	L	30	62	3.5	66	6
30820.WPH62L47.5	47.5	short	L	30	62	3.5	66	6
30820.WPH62L48.0	48.0	short	L	30	62	3.5	66	6
30820.WPH70L48.5	48.5	short	L	30	70	3.5	74	6
30820.WPH70L49.0	49.0	short	L	30	70	3.5	74	6
30820.WPH70L49.5	49.5	short	L	30	70	3.5	74	6
30820.WPH70L50.0	50.0	short	L	30	70	3.5	74	6
30820.WPH70L50.5	50.5	short	L	30	70	3.5	74	6
30820.WPH70L51.0	51.0	short	L	30	70	3.5	74	6
30820.WPH70L51.5	51.5	short	L	30	70	3.5	74	6
30820.WPH70L52.0	52.0	short	L	30	70	3.5	74	6
30820.WPH70L52.5	52.5	short	L	30	70	3.5	74	6
30820.WPH70L53.0	53.0	short	L	30	70	3.5	74	6
30820.WPH70L53.5	53.5	short	L	30	70	3.5	74	6
30820.WPH70L54.0	54.0	short	L	30	70	3.5	74	6
30820.WPH70L54.5	54.5	short	L	30	70	3.5	74	6
30820.WPH70L55.0	55.0	short	L	30	70	3.5	74	6
30820.WPH78M55.5	55.5	short	M	35	78	4	82	6
30820.WPH78M56.0	56.0	short	M	35	78	4	82	6
30820.WPH78M56.5	56.5	short	M	35	78	4	82	6
30820.WPH78M57.0	57.0	short	M	35	78	4	82	6
30820.WPH78M57.5	57.5	short	M	35	78	4	82	6
30820.WPH78M58.0	58.0	short	M	35	78	4	82	6
30820.WPH78M58.5	58.5	short	M	35	78	4	82	6
30820.WPH78M59.0	59.0	short	M	35	78	4	82	6
30820.WPH78M59.5	59.5	short	M	35	78	4	82	6
30820.WPH78M60.0	60.0	short	M	35	78	4	82	6
30820.WPH78M60.5	60.5	short	M	35	78	4	82	6
30820.WPH78M61.0	61.0	short	M	35	78	4	82	6
30820.WPH78M61.5	61.5	short	M	35	78	4	82	6
30820.WPH78M62.0	62.0	short	M	35	78	4	82	6
30820.WPH78M62.5	62.5	short	M	35	78	4	82	6



Headed Drill Bushes - DIN 172A short

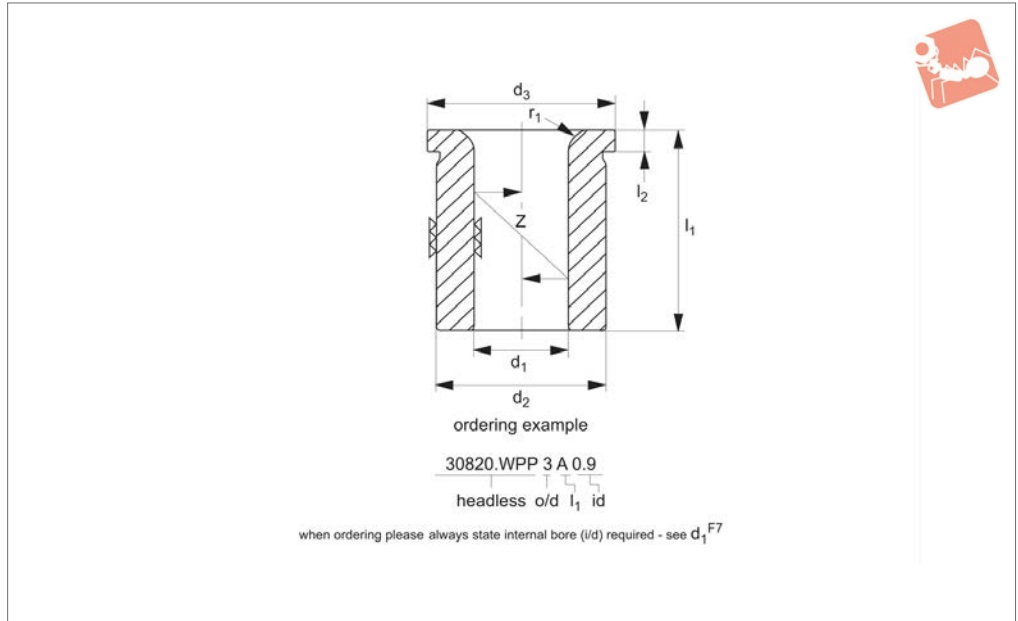


Tenons, Locating Pads & Drill

Order No.	i/d - d_1	Length gen	Length letter	Length mm	d_2	r_1	d_3	l_2
30820.WPH78M63.0	63.0	short	M	35	78	4	82	6



30820.2



Material

High grade steel. Hardened 740 +HV10.
Hole, d₁ ground ISO tolerance F7.
o/d-d₂ ground ISO tolerance n6, to fit standard hole tolerance H₇. Length l₁ to ±0,2 for lengths 6 to 30mm.

Technical Notes

d₁ dimension tolerance to F7.

Key to dimensions l₁:

- l₁ short
- l₁ medium
- l₁ long

Table of lengths l₁:

- A- 6mm
- B- 8mm

- C- 9mm
- D- 10mm
- E- 12mm
- F- 16mm
- H- 20mm
- J- 25mm
- K- 28mm
- L- 30mm
- M- 35mm
- N- 36mm
- P- 40mm
- R- 45mm
- S- 56mm
- T- 67mm
- W- 78mm

Tips

Sizes 48,0 i/d and above are made to order

Please note sizes d₁ <0,9 prices available on request.

Important Notes

Drill bushes produced to standard DIN increments for internal bores:
i/d's 0,9mm to 15,0mm - 0,1mm increments e.g. 1,1 mm, 1,2mm etc.
i/d's 15,1mm and over -0,5mm increments.

Ordering drill bushes to DIN standard increments offers a cost advantage, as non-standard bores are machined to order as specials.

Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH3C0.9	0.9	medium	C	9	3	1	6	2
30820.WPH3C1.0	1.0	medium	C	9	3	1	6	2
30820.WPH4C1.1	1.1	medium	C	9	4	1	7	2
30820.WPH4C1.2	1.2	medium	C	9	4	1	7	2
30820.WPH4C1.3	1.3	medium	C	9	4	1	7	2
30820.WPH4C1.4	1.4	medium	C	9	4	1	7	2
30820.WPH4C1.5	1.5	medium	C	9	4	1	7	2
30820.WPH4C1.6	1.6	medium	C	9	4	1	7	2
30820.WPH4C1.7	1.7	medium	C	9	4	1	7	2
30820.WPH4C1.8	1.8	medium	C	9	4	1	7	2
30820.WPH5C1.9	1.9	medium	C	9	5	1	8	2
30820.WPH5C2.0	2.0	medium	C	9	5	1	8	2
30820.WPH5C2.1	2.1	medium	C	9	5	1	8	2
30820.WPH5C2.2	2.2	medium	C	9	5	1	8	2
30820.WPH5C2.3	2.3	medium	C	9	5	1	8	2
30820.WPH5C2.4	2.4	medium	C	9	5	1	8	2
30820.WPH5C2.5	2.5	medium	C	9	5	1	8	2
30820.WPH5C2.6	2.6	medium	C	9	5	1	8	2



Headed Drill Bushes - DIN 172A

medium

Tenons, Locating Pads & Drill



Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH6E2.7	2.7	medium	E	12	6	1	9	2.5
30820.WPH6E2.8	2.8	medium	E	12	6	1	9	2.5
30820.WPH6E2.9	2.9	medium	E	12	6	1	9	2.5
30820.WPH6E3.0	3.0	medium	E	12	6	1	9	2.5
30820.WPH6E3.1	3.1	medium	E	12	6	1	9	2.5
30820.WPH6E3.2	3.2	medium	E	12	6	1	9	2.5
30820.WPH6E3.3	3.3	medium	E	12	6	1	9	2.5
30820.WPH7E3.4	3.4	medium	E	12	7	1	10	2.5
30820.WPH7E3.5	3.5	medium	E	12	7	1	10	2.5
30820.WPH7E3.6	3.6	medium	E	12	7	1	10	2.5
30820.WPH7E3.7	3.7	medium	E	12	7	1	10	2.5
30820.WPH7E3.8	3.8	medium	E	12	7	1	10	2.5
30820.WPH7E3.9	3.9	medium	E	12	7	1	10	2.5
30820.WPH7E4.0	4.0	medium	E	12	7	1	10	2.5
30820.WPH8E4.1	4.1	medium	E	12	8	1	11	2.5
30820.WPH8E4.2	4.2	medium	E	12	8	1	11	2.5
30820.WPH8E4.3	4.3	medium	E	12	8	1	11	2.5
30820.WPH8E4.4	4.4	medium	E	12	8	1	11	2.5
30820.WPH8E4.5	4.5	medium	E	12	8	1	11	2.5
30820.WPH8E4.6	4.6	medium	E	12	8	1	11	2.5
30820.WPH8E4.7	4.7	medium	E	12	8	1	11	2.5
30820.WPH8E4.8	4.8	medium	E	12	8	1	11	2.5
30820.WPH8E4.9	4.9	medium	E	12	8	1	11	2.5
30820.WPH8E5.0	5.0	medium	E	12	8	1	11	2.5
30820.WPH10F5.1	5.1	medium	F	16	10	1.5	13	3
30820.WPH10F5.2	5.2	medium	F	16	10	1.5	13	3
30820.WPH10F5.3	5.3	medium	F	16	10	1.5	13	3
30820.WPH10F5.4	5.4	medium	F	16	10	1.5	13	3
30820.WPH10F5.5	5.5	medium	F	16	10	1.5	13	3
30820.WPH10F5.6	5.6	medium	F	16	10	1.5	13	3
30820.WPH10F5.7	5.7	medium	F	16	10	1.5	13	3
30820.WPH10F5.8	5.8	medium	F	16	10	1.5	13	3
30820.WPH10F5.9	5.9	medium	F	16	10	1.5	13	3
30820.WPH10F6.0	6.0	medium	F	16	10	1.5	13	3
30820.WPH12F6.1	6.1	medium	F	16	12	1.5	15	3
30820.WPH12F6.2	6.2	medium	F	16	12	1.5	15	3
30820.WPH12F6.3	6.3	medium	F	16	12	1.5	15	3
30820.WPH12F6.4	6.4	medium	F	16	12	1.5	15	3
30820.WPH12F6.5	6.5	medium	F	16	12	1.5	15	3
30820.WPH12F6.6	6.6	medium	F	16	12	1.5	15	3
30820.WPH12F6.7	6.7	medium	F	16	12	1.5	15	3
30820.WPH12F6.8	6.8	medium	F	16	12	1.5	15	3
30820.WPH12F6.9	6.9	medium	F	16	12	1.5	15	3
30820.WPH12F7.0	7.0	medium	F	16	12	1.5	15	3
30820.WPH12F7.1	7.1	medium	F	16	12	1.5	15	3
30820.WPH12F7.2	7.2	medium	F	16	12	1.5	15	3
30820.WPH12F7.3	7.3	medium	F	16	12	1.5	15	3
30820.WPH12F7.4	7.4	medium	F	16	12	1.5	15	3
30820.WPH12F7.5	7.5	medium	F	16	12	1.5	15	3
30820.WPH12F7.6	7.6	medium	F	16	12	1.5	15	3
30820.WPH12F7.7	7.7	medium	F	16	12	1.5	15	3
30820.WPH12F7.8	7.8	medium	F	16	12	1.5	15	3
30820.WPH12F7.9	7.9	medium	F	16	12	1.5	15	3
30820.WPH12F8.0	8.0	medium	F	16	12	1.5	15	3
30820.WPH15H8.1	8.1	medium	H	20	15	2	18	3
30820.WPH15H8.2	8.2	medium	H	20	15	2	18	3
30820.WPH15H8.3	8.3	medium	H	20	15	2	18	3
30820.WPH15H8.4	8.4	medium	H	20	15	2	18	3
30820.WPH15H8.5	8.5	medium	H	20	15	2	18	3
30820.WPH15H8.6	8.6	medium	H	20	15	2	18	3
30820.WPH15H8.7	8.7	medium	H	20	15	2	18	3
30820.WPH15H8.8	8.8	medium	H	20	15	2	18	3
30820.WPH15H8.9	8.9	medium	H	20	15	2	18	3
30820.WPH15H9.0	9.0	medium	H	20	15	2	18	3
30820.WPH15H9.1	9.1	medium	H	20	15	2	18	3
30820.WPH15H9.2	9.2	medium	H	20	15	2	18	3
30820.WPH15H9.3	9.3	medium	H	20	15	2	18	3
30820.WPH15H9.4	9.4	medium	H	20	15	2	18	3

TENONS, LOCATING PADS & DRILL BUSHES



Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH15H9.5	9.5	medium	H	20	15	2	18	3
30820.WPH15H9.6	9.6	medium	H	20	15	2	18	3
30820.WPH15H9.7	9.7	medium	H	20	15	2	18	3
30820.WPH15H9.8	9.8	medium	H	20	15	2	18	3
30820.WPH15H9.9	9.9	medium	H	20	15	2	18	3
30820.WPH15H10.0	10.0	medium	H	20	15	2	18	3
30820.WPH18H10.1	10.1	medium	H	20	18	2	22	4
30820.WPH18H10.2	10.2	medium	H	20	18	2	22	4
30820.WPH18H10.3	10.3	medium	H	20	18	2	22	4
30820.WPH18H10.4	10.4	medium	H	20	18	2	22	4
30820.WPH18H10.5	10.5	medium	H	20	18	2	22	4
30820.WPH18H10.6	10.6	medium	H	20	18	2	22	4
30820.WPH18H10.7	10.7	medium	H	20	18	2	22	4
30820.WPH18H10.8	10.8	medium	H	20	18	2	22	4
30820.WPH18H10.9	10.9	medium	H	20	18	2	22	4
30820.WPH18H11.0	11.0	medium	H	20	18	2	22	4
30820.WPH18H11.1	11.1	medium	H	20	18	2	22	4
30820.WPH18H11.2	11.2	medium	H	20	18	2	22	4
30820.WPH18H11.3	11.3	medium	H	20	18	2	22	4
30820.WPH18H11.4	11.4	medium	H	20	18	2	22	4
30820.WPH18H11.5	11.5	medium	H	20	18	2	22	4
30820.WPH18H11.6	11.6	medium	H	20	18	2	22	4
30820.WPH18H11.7	11.7	medium	H	20	18	2	22	4
30820.WPH18H11.8	11.8	medium	H	20	18	2	22	4
30820.WPH18H11.9	11.9	medium	H	20	18	2	22	4
30820.WPH18H12.0	12.0	medium	H	20	18	2	22	4
30820.WPH22K12.1	12.1	medium	K	28	22	2	26	4
30820.WPH22K12.2	12.2	medium	K	28	22	2	26	4
30820.WPH22K12.3	12.3	medium	K	28	22	2	26	4
30820.WPH22K12.4	12.4	medium	K	28	22	2	26	4
30820.WPH22K12.5	12.5	medium	K	28	22	2	26	4
30820.WPH22K12.6	12.6	medium	K	28	22	2	26	4
30820.WPH22K12.7	12.7	medium	K	28	22	2	26	4
30820.WPH22K12.8	12.8	medium	K	28	22	2	26	4
30820.WPH22K12.9	12.9	medium	K	28	22	2	26	4
30820.WPH22K13.0	13.0	medium	K	28	22	2	26	4
30820.WPH22K13.1	13.1	medium	K	28	22	2	26	4
30820.WPH22K13.2	13.2	medium	K	28	22	2	26	4
30820.WPH22K13.3	13.3	medium	K	28	22	2	26	4
30820.WPH22K13.4	13.4	medium	K	28	22	2	26	4
30820.WPH22K13.5	13.5	medium	K	28	22	2	26	4
30820.WPH22K13.6	13.6	medium	K	28	22	2	26	4
30820.WPH22K13.7	13.7	medium	K	28	22	2	26	4
30820.WPH22K13.8	13.8	medium	K	28	22	2	26	4
30820.WPH22K13.9	13.9	medium	K	28	22	2	26	4
30820.WPH22K14.0	14.0	medium	K	28	22	2	26	4
30820.WPH22K14.1	14.1	medium	K	28	22	2	26	4
30820.WPH22K14.2	14.2	medium	K	28	22	2	26	4
30820.WPH22K14.3	14.3	medium	K	28	22	2	26	4
30820.WPH22K14.4	14.4	medium	K	28	22	2	26	4
30820.WPH22K14.5	14.5	medium	K	28	22	2	26	4
30820.WPH22K14.6	14.6	medium	K	28	22	2	26	4
30820.WPH22K14.7	14.7	medium	K	28	22	2	26	4
30820.WPH22K14.8	14.8	medium	K	28	22	2	26	4
30820.WPH22K14.9	14.9	medium	K	28	22	2	26	4
30820.WPH22K15.0	15.0	medium	K	28	22	2	26	4
30820.WPH26K15.5	15.5	medium	K	28	26	2	30	4
30820.WPH26K16.0	16.0	medium	K	28	26	2	30	4
30820.WPH26K16.5	16.5	medium	K	28	26	2	30	4
30820.WPH26K17.0	17.0	medium	K	28	26	2	30	4
30820.WPH26K17.5	17.5	medium	K	28	26	2	30	4
30820.WPH26K18.0	18.0	medium	K	28	26	2	30	4
30820.WPH30N18.5	18.5	medium	N	36	30	3	34	5
30820.WPH30N19.0	19.0	medium	N	36	30	3	34	5
30820.WPH30N19.5	19.5	medium	N	36	30	3	34	5
30820.WPH30N20.0	20.0	medium	N	36	30	3	34	5
30820.WPH30N20.5	20.5	medium	N	36	30	3	34	5
30820.WPH30N21.0	21.0	medium	N	36	30	3	34	5



Headed Drill Bushes - DIN 172A

medium

Tenons, Locating Pads & Drill



Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH30N21.5	21.5	medium	N	36	30	3	34	5
30820.WPH30N22.0	22.0	medium	N	36	30	3	34	5
30820.WPH35N22.5	22.5	medium	N	36	35	3	39	5
30820.WPH35N23.0	23.0	medium	N	36	35	3	39	5
30820.WPH35N23.5	23.5	medium	N	36	35	3	39	5
30820.WPH35N24.0	24.0	medium	N	36	35	3	39	5
30820.WPH35N24.5	24.5	medium	N	36	35	3	39	5
30820.WPH35N25.0	25.0	medium	N	36	35	3	39	5
30820.WPH35N25.5	25.5	medium	N	36	35	3	39	5
30820.WPH35N26.0	26.0	medium	N	36	35	3	39	5
30820.WPH42R26.5	26.5	medium	R	45	42	3	46	5
30820.WPH42R27.0	27.0	medium	R	45	42	3	46	5
30820.WPH42R27.5	27.5	medium	R	45	42	3	46	5
30820.WPH42R28.0	28.0	medium	R	45	42	3	46	5
30820.WPH42R28.5	28.5	medium	R	45	42	3	46	5
30820.WPH42R29.0	29.0	medium	R	45	42	3	46	5
30820.WPH42R29.5	29.5	medium	R	45	42	3	46	5
30820.WPH42R30.0	30.0	medium	R	45	42	3	46	5
30820.WPH48R30.5	30.5	medium	R	45	48	3	52	5
30820.WPH48R31.0	31.0	medium	R	45	48	3	52	5
30820.WPH48R31.5	31.5	medium	R	45	48	3	52	5
30820.WPH48R32.0	32.0	medium	R	45	48	3	52	5
30820.WPH48R32.5	32.5	medium	R	45	48	3	52	5
30820.WPH48R33.0	33.0	medium	R	45	48	3	52	5
30820.WPH48R33.5	33.5	medium	R	45	48	3	52	5
30820.WPH48R34.0	34.0	medium	R	45	48	3	52	5
30820.WPH48R34.5	34.5	medium	R	45	48	3	52	5
30820.WPH48R35.0	35.0	medium	R	45	48	3	52	5
30820.WPH55S35.5	35.5	medium	S	56	55	3.5	59	5
30820.WPH55S36.5	36.5	medium	S	56	55	3.5	59	5
30820.WPH55S37.0	37.0	medium	S	56	55	3.5	59	5
30820.WPH55S37.5	37.5	medium	S	56	55	3.5	59	5
30820.WPH55S38.0	38.0	medium	S	56	55	3.5	59	5
30820.WPH55S38.5	38.5	medium	S	56	55	3.5	59	5
30820.WPH55S39.0	39.0	medium	S	56	55	3.5	59	5
30820.WPH55S39.5	39.5	medium	S	56	55	3.5	59	5
30820.WPH55S40.5	40.5	medium	S	56	55	3.5	59	5
30820.WPH55S41.5	41.5	medium	S	56	55	3.5	59	5
30820.WPH62S42.5	42.5	medium	S	56	62	3.5	66	6
30820.WPH62S43.0	43.0	medium	S	56	62	3.5	66	6
30820.WPH62S43.5	43.5	medium	S	56	62	3.5	66	6
30820.WPH62S44.0	44.0	medium	S	56	62	3.5	66	6
30820.WPH62S44.5	44.5	medium	S	56	62	3.5	66	6
30820.WPH62S45.0	45.0	medium	S	56	62	3.5	66	6
30820.WPH62S45.5	45.5	medium	S	56	62	3.5	66	6
30820.WPH62S46.0	46.0	medium	S	56	62	3.5	66	6
30820.WPH62S46.5	46.5	medium	S	56	62	3.5	66	6
30820.WPH62S47.0	47.0	medium	S	56	62	3.5	66	6
30820.WPH62S47.5	47.5	medium	S	56	62	3.5	66	6
30820.WPH62S48.0	48.0	medium	S	56	62	3.5	66	6
30820.WPH70S48.5	48.5	medium	S	56	70	3.5	74	6
30820.WPH70S49.0	49.0	medium	S	56	70	3.5	74	6
30820.WPH70S49.5	49.5	medium	S	56	70	3.5	74	6
30820.WPH70S50.0	50.0	medium	S	56	70	3.5	74	6
30820.WPH70S50.5	50.5	medium	S	56	70	3.5	74	6
30820.WPH70S51.0	51.0	medium	S	56	70	3.5	74	6
30820.WPH70S51.5	51.5	medium	S	56	70	3.5	74	6
30820.WPH70S52.0	52.0	medium	S	56	70	3.5	74	6
30820.WPH70S52.5	52.5	medium	S	56	70	3.5	74	6
30820.WPH70S53.0	53.0	medium	S	56	70	3.5	74	6
30820.WPH70S53.5	53.5	medium	S	56	70	3.5	74	6
30820.WPH70S54.0	54.0	medium	S	56	70	3.5	74	6
30820.WPH70S54.5	54.5	medium	S	56	70	3.5	74	6
30820.WPH70S55.0	55.0	medium	S	56	70	3.5	74	6
30820.WPH78T55.5	55.5	medium	T	67	78	4	82	6
30820.WPH78T56.0	56.0	medium	T	67	78	4	82	6
30820.WPH78T56.5	56.5	medium	T	67	78	4	82	6
30820.WPH78T57.0	57.0	medium	T	67	78	4	82	6

TENONS, LOCATING PADS & DRILL BUSHES

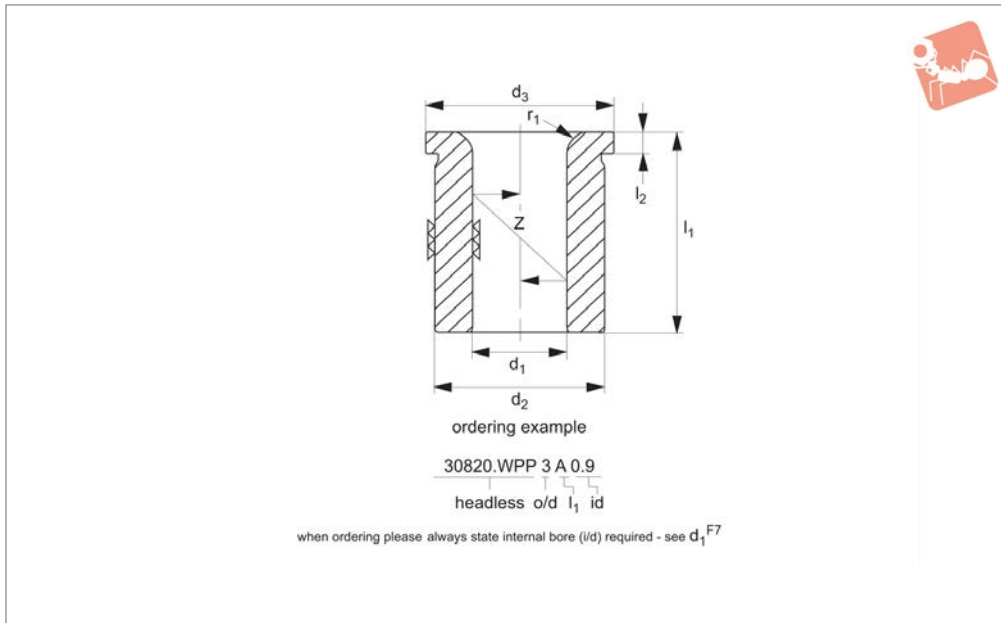


Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH78T57.5	57.5	medium	T	67	78	4	82	6
30820.WPH78T58.0	58.0	medium	T	67	78	4	82	6
30820.WPH78T58.5	58.5	medium	T	67	78	4	82	6
30820.WPH78T59.0	59.0	medium	T	67	78	4	82	6
30820.WPH78T59.5	59.5	medium	T	67	78	4	82	6
30820.WPH78T60.0	60.0	medium	T	67	78	4	82	6
30820.WPH78T60.5	60.5	medium	T	67	78	4	82	6
30820.WPH78T61.0	61.0	medium	T	67	78	4	82	6
30820.WPH78T61.5	61.5	medium	T	67	78	4	82	6
30820.WPH78T62.0	62.0	medium	T	67	78	4	82	6
30820.WPH78T62.5	62.5	medium	T	67	78	4	82	6
30820.WPH78T63.0	63.0	medium	T	67	78	4	82	6



Headed Drill Bushes - DIN 172A long

Tenons, Locating Pads & Drill



30820.3

TENONS, LOCATING PADS & DRILL BUSHES

Material

High grade steel. Hardened 740 +HV10.
Hole, d₁ ground ISO tolerance F7.
o/d-d₂ ground ISO tolerance n6, to fit standard hole tolerance H₇. Length l₁ to ±0,2 for lengths 6 to 30mm.

Technical Notes

d₁ dimension tolerance to F7.

Key to dimensions l₁:

- l₁ short
- l₁ medium
- l₁ long

Table of lengths l₁:

- A- 6mm
- B- 8mm

- C- 9mm
- D- 10mm
- E- 12mm
- F- 16mm
- H- 20mm
- J- 25mm
- K- 28mm
- L- 30mm
- M- 35mm
- N- 36mm
- P- 40mm
- R- 45mm
- S- 56mm
- T- 67mm
- W- 78mm

Tips

Sizes 48,0 i/d and above are made to order

Please note sizes d₁ <0,9 prices available on request.

Important Notes

Drill bushes produced to standard DIN increments for internal bores:
i/d's 0,9mm to 15,0mm - 0,1mm increments e.g. 1,1 mm, 1,2mm etc.
i/d's 15,1mm and over -0,5mm increments.

Ordering drill bushes to DIN standard increments offers a cost advantage, as non-standard bores are machined to order as specials.

Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH6F2.7	2.7	long	F	16	6	1	9	2.5
30820.WPH6F2.8	2.8	long	F	16	6	1	9	2.5
30820.WPH6F2.9	2.9	long	F	16	6	1	9	2.5
30820.WPH6F3.0	3.0	long	F	16	6	1	9	2.5
30820.WPH6F3.1	3.1	long	F	16	6	1	9	2.5
30820.WPH6F3.2	3.2	long	F	16	6	1	9	2.5
30820.WPH6F3.3	3.3	long	F	16	6	1	9	2.5
30820.WPH7F3.4	3.4	long	F	16	7	1	10	2.5
30820.WPH7F3.5	3.5	long	F	16	7	1	10	2.5
30820.WPH7F3.6	3.6	long	F	16	7	1	10	2.5
30820.WPH7F3.7	3.7	long	F	16	7	1	10	2.5
30820.WPH7F3.8	3.8	long	F	16	7	1	10	2.5
30820.WPH7F3.9	3.9	long	F	16	7	1	10	2.5
30820.WPH7F4.0	4.0	long	F	16	7	1	10	2.5
30820.WPH8F4.1	4.1	long	F	16	8	1	11	2.5
30820.WPH8F4.2	4.2	long	F	16	8	1	11	2.5
30820.WPH8F4.3	4.3	long	F	16	8	1	11	2.5
30820.WPH8F4.4	4.4	long	F	16	8	1	11	2.5



Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH8F4.5	4.5	long	F	16	8	1	11	2.5
30820.WPH8F4.6	4.6	long	F	16	8	1	11	2.5
30820.WPH8F4.7	4.7	long	F	16	8	1	11	2.5
30820.WPH8F4.8	4.8	long	F	16	8	1	11	2.5
30820.WPH8F4.9	4.9	long	F	16	8	1	11	2.5
30820.WPH8F5.0	5.0	long	F	16	8	1	11	2.5
30820.WPH10H5.1	5.1	long	H	20	10	1.5	13	3
30820.WPH10H5.2	5.2	long	H	20	10	1.5	13	3
30820.WPH10H5.3	5.3	long	H	20	10	1.5	13	3
30820.WPH10H5.4	5.4	long	H	20	10	1.5	13	3
30820.WPH10H5.5	5.5	long	H	20	10	1.5	13	3
30820.WPH10H5.6	5.6	long	H	20	10	1.5	13	3
30820.WPH10H5.7	5.7	long	H	20	10	1.5	13	3
30820.WPH10H5.8	5.8	long	H	20	10	1.5	13	3
30820.WPH10H5.9	5.9	long	H	20	10	1.5	13	3
30820.WPH10H6.0	6.0	long	H	20	10	1.5	13	3
30820.WPH12H6.1	6.1	long	H	20	12	1.5	15	3
30820.WPH12H6.2	6.2	long	H	20	12	1.5	15	3
30820.WPH12H6.3	6.3	long	H	20	12	1.5	15	3
30820.WPH12H6.4	6.4	long	H	20	12	1.5	15	3
30820.WPH12H6.5	6.5	long	H	20	12	1.5	15	3
30820.WPH12H6.6	6.6	long	H	20	12	1.5	15	3
30820.WPH12H6.7	6.7	long	H	20	12	1.5	15	3
30820.WPH12H6.8	6.8	long	H	20	12	1.5	15	3
30820.WPH12H6.9	6.9	long	H	20	12	1.5	15	3
30820.WPH12H7.0	7.0	long	H	20	12	1.5	15	3
30820.WPH12H7.1	7.1	long	H	20	12	1.5	15	3
30820.WPH12H7.2	7.2	long	H	20	12	1.5	15	3
30820.WPH12H7.3	7.3	long	H	20	12	1.5	15	3
30820.WPH12H7.4	7.4	long	H	20	12	1.5	15	3
30820.WPH12H7.5	7.5	long	H	20	12	1.5	15	3
30820.WPH12H7.6	7.6	long	H	20	12	1.5	15	3
30820.WPH12H7.7	7.7	long	H	20	12	1.5	15	3
30820.WPH12H7.8	7.8	long	H	20	12	1.5	15	3
30820.WPH12H7.9	7.9	long	H	20	12	1.5	15	3
30820.WPH12H8.0	8.0	long	H	20	12	1.5	15	3
30820.WPH15J8.1	8.1	long	J	25	15	2	18	3
30820.WPH15J8.2	8.2	long	J	25	15	2	18	3
30820.WPH15J8.3	8.3	long	J	25	15	2	18	3
30820.WPH15J8.4	8.4	long	J	25	15	2	18	3
30820.WPH15J8.5	8.5	long	J	25	15	2	18	3
30820.WPH15J8.6	8.6	long	J	25	15	2	18	3
30820.WPH15J8.7	8.7	long	J	25	15	2	18	3
30820.WPH15J8.8	8.8	long	J	25	15	2	18	3
30820.WPH15J8.9	8.9	long	J	25	15	2	18	3
30820.WPH15J9.0	9.0	long	J	25	15	2	18	3
30820.WPH15J9.1	9.1	long	J	25	15	2	18	3
30820.WPH15J9.2	9.2	long	J	25	15	2	18	3
30820.WPH15J9.3	9.3	long	J	25	15	2	18	3
30820.WPH15J9.4	9.4	long	J	25	15	2	18	3
30820.WPH15J9.5	9.5	long	J	25	15	2	18	3
30820.WPH15J9.6	9.6	long	J	25	15	2	18	3
30820.WPH15J9.7	9.7	long	J	25	15	2	18	3
30820.WPH15J9.8	9.8	long	J	25	15	2	18	3
30820.WPH15J9.9	9.9	long	J	25	15	2	18	3
30820.WPH15J10.0	10.0	long	J	25	15	2	18	3
30820.WPH18J10.1	10.1	long	J	25	18	2	22	4
30820.WPH18J10.2	10.2	long	J	25	18	2	22	4
30820.WPH18J10.3	10.3	long	J	25	18	2	22	4
30820.WPH18J10.4	10.4	long	J	25	18	2	22	4
30820.WPH18J10.5	10.5	long	J	25	18	2	22	4
30820.WPH18J10.6	10.6	long	J	25	18	2	22	4
30820.WPH18J10.7	10.7	long	J	25	18	2	22	4
30820.WPH18J10.8	10.8	long	J	25	18	2	22	4
30820.WPH18J10.9	10.9	long	J	25	18	2	22	4
30820.WPH18J11.0	11.0	long	J	25	18	2	22	4
30820.WPH18J11.1	11.1	long	J	25	18	2	22	4
30820.WPH18J11.2	11.2	long	J	25	18	2	22	4



Headed Drill Bushes - DIN 172A

long



Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH18J11.3	11.3	long	J	25	18	2	22	4
30820.WPH18J11.4	11.4	long	J	25	18	2	22	4
30820.WPH18J11.5	11.5	long	J	25	18	2	22	4
30820.WPH18J11.6	11.6	long	J	25	18	2	22	4
30820.WPH18J11.7	11.7	long	J	25	18	2	22	4
30820.WPH18J11.8	11.8	long	J	25	18	2	22	4
30820.WPH18J11.9	11.9	long	J	25	18	2	22	4
30820.WPH18J12.0	12.0	long	J	25	18	2	22	4
30820.WPH22N12.1	12.1	long	N	36	22	2	26	4
30820.WPH22N12.2	12.2	long	N	36	22	2	26	4
30820.WPH22N12.3	12.3	long	N	36	22	2	26	4
30820.WPH22N12.4	12.4	long	N	36	22	2	26	4
30820.WPH22N12.5	12.5	long	N	36	22	2	26	4
30820.WPH22N12.6	12.6	long	N	36	22	2	26	4
30820.WPH22N12.7	12.7	long	N	36	22	2	26	4
30820.WPH22N12.8	12.8	long	N	36	22	2	26	4
30820.WPH22N12.9	12.9	long	N	36	22	2	26	4
30820.WPH22N13.0	13.0	long	N	36	22	2	26	4
30820.WPH22N13.1	13.1	long	N	36	22	2	26	4
30820.WPH22N13.2	13.2	long	N	36	22	2	26	4
30820.WPH22N13.3	13.3	long	N	36	22	2	26	4
30820.WPH22N13.4	13.4	long	N	36	22	2	26	4
30820.WPH22N13.5	13.5	long	N	36	22	2	26	4
30820.WPH22N13.6	13.6	long	N	36	22	2	26	4
30820.WPH22N13.7	13.7	long	N	36	22	2	26	4
30820.WPH22N13.8	13.8	long	N	36	22	2	26	4
30820.WPH22N13.9	13.9	long	N	36	22	2	26	4
30820.WPH22N14.0	14.0	long	N	36	22	2	26	4
30820.WPH22N14.1	14.1	long	N	36	22	2	26	4
30820.WPH22N14.2	14.2	long	N	36	22	2	26	4
30820.WPH22N14.3	14.3	long	N	36	22	2	26	4
30820.WPH22N14.4	14.4	long	N	36	22	2	26	4
30820.WPH22N14.5	14.5	long	N	36	22	2	26	4
30820.WPH22N14.6	14.6	long	N	36	22	2	26	4
30820.WPH22N14.7	14.7	long	N	36	22	2	26	4
30820.WPH22N14.8	14.8	long	N	36	22	2	26	4
30820.WPH22N14.9	14.9	long	N	36	22	2	26	4
30820.WPH22N15.0	15.0	long	N	36	22	2	26	4
30820.WPH26N15.5	15.5	long	N	36	26	2	30	4
30820.WPH26N16.0	16.0	long	N	36	26	2	30	4
30820.WPH26N16.5	16.5	long	N	36	26	2	30	4
30820.WPH26N17.0	17.0	long	N	36	26	2	30	4
30820.WPH26N17.5	17.5	long	N	36	26	2	30	4
30820.WPH26N18.0	18.0	long	N	36	26	2	30	4
30820.WPH30R18.5	18.5	long	R	45	30	3	34	5
30820.WPH30R19.0	19.0	long	R	45	30	3	34	5
30820.WPH30R19.5	19.5	long	R	45	30	3	34	5
30820.WPH30R20.0	20.0	long	R	45	30	3	34	5
30820.WPH30R20.5	20.5	long	R	45	30	3	34	5
30820.WPH30R21.0	21.0	long	R	45	30	3	34	5
30820.WPH30R21.5	21.5	long	R	45	30	3	34	5
30820.WPH30R22.0	22.0	long	R	45	30	3	34	5
30820.WPH35R22.5	22.5	long	R	45	35	3	39	5
30820.WPH35R23.0	23.0	long	R	45	35	3	39	5
30820.WPH35R23.5	23.5	long	R	45	35	3	39	5
30820.WPH35R24.0	24.0	long	R	45	35	3	39	5
30820.WPH35R24.5	24.5	long	R	45	35	3	39	5
30820.WPH35R25.0	25.0	long	R	45	35	3	39	5
30820.WPH35R25.5	25.5	long	R	45	35	3	39	5
30820.WPH35R26.0	26.0	long	R	45	35	3	39	5
30820.WPH42S26.5	26.5	long	S	56	42	3	46	5
30820.WPH42S27.0	27.0	long	S	56	42	3	46	5
30820.WPH42S27.5	27.5	long	S	56	42	3	46	5
30820.WPH42S28.0	28.0	long	S	56	42	3	46	5
30820.WPH42S28.5	28.5	long	S	56	42	3	46	5
30820.WPH42S29.0	29.0	long	S	56	42	3	46	5
30820.WPH42S29.5	29.5	long	S	56	42	3	46	5
30820.WPH42S30.0	30.0	long	S	56	42	3	46	5

TENONS, LOCATING PADS & DRILL BUSHES

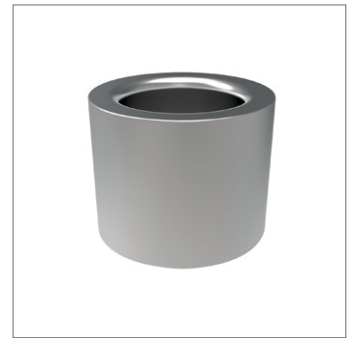
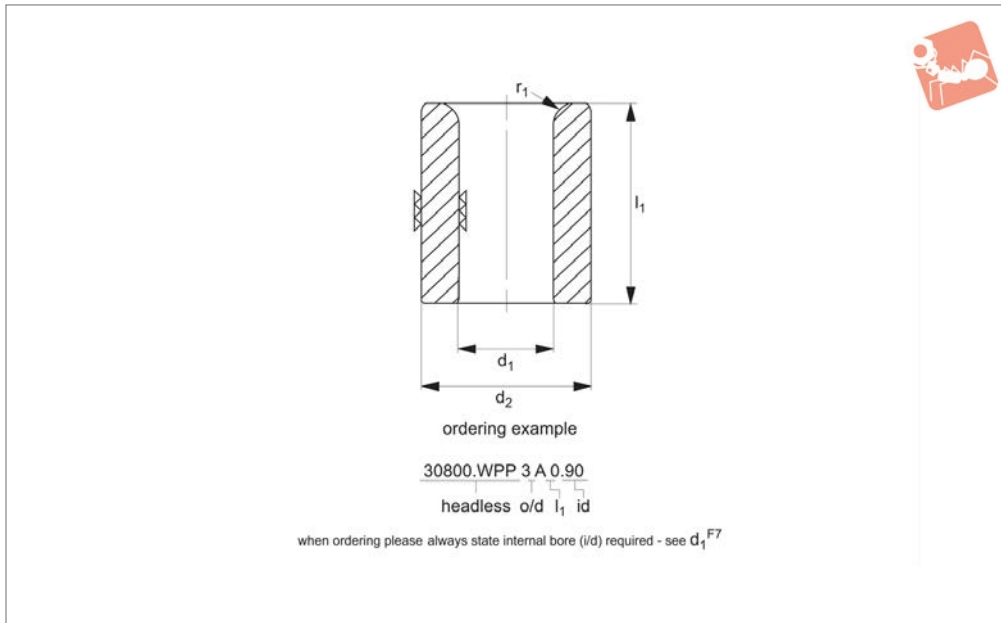


Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH48S30.5	30.5	long	S	56	48	3	52	5
30820.WPH48S31.0	31.0	long	S	56	48	3	52	5
30820.WPH48S31.5	31.5	long	S	56	48	3	52	5
30820.WPH48S32.0	32.0	long	S	56	48	3	52	5
30820.WPH48S32.5	32.5	long	S	56	48	3	52	5
30820.WPH48S33.0	33.0	long	S	56	48	3	52	5
30820.WPH48S33.5	33.5	long	S	56	48	3	52	5
30820.WPH48S34.0	34.0	long	S	56	48	3	52	5
30820.WPH48S34.5	34.5	long	S	56	48	3	52	5
30820.WPH48S35.0	35.0	long	S	56	48	3	52	5
30820.WPH55T35.5	35.5	long	T	67	55	3.5	59	5
30820.WPH55T36.0	36.0	long	T	67	55	3.5	59	5
30820.WPH55T36.5	36.5	long	T	67	55	3.5	59	5
30820.WPH55T37.0	37.0	long	T	67	55	3.5	59	5
30820.WPH55T37.5	37.5	long	T	67	55	3.5	59	5
30820.WPH55T38.0	38.0	long	T	67	55	3.5	59	5
30820.WPH55T38.5	38.5	long	T	67	55	3.5	59	5
30820.WPH55T39.0	39.0	long	T	67	55	3.5	59	5
30820.WPH55T39.5	39.5	long	T	67	55	3.5	59	5
30820.WPH55T40.0	40.0	long	T	67	55	3.5	59	5
30820.WPH55T40.5	40.5	long	T	67	55	3.5	59	5
30820.WPH55T41.5	41.5	long	T	67	55	3.5	59	5
30820.WPH55T42.0	42.0	long	T	67	55	3.5	59	5
30820.WPH62T42.5	42.5	long	T	67	62	3.5	66	6
30820.WPH62T43.0	43.0	long	T	67	62	3.5	66	6
30820.WPH62T43.5	43.5	long	T	67	62	3.5	66	6
30820.WPH62T44.0	44.0	long	T	67	62	3.5	66	6
30820.WPH62T44.5	44.5	long	T	67	62	3.5	66	6
30820.WPH62T45.0	45.0	long	T	67	62	3.5	66	6
30820.WPH62T45.5	45.5	long	T	67	62	3.5	66	6
30820.WPH62T46.0	46.0	long	T	67	62	3.5	66	6
30820.WPH62T46.5	46.5	long	T	67	62	3.5	66	6
30820.WPH62T47.0	47.0	long	T	67	62	3.5	66	6
30820.WPH62T47.5	47.5	long	T	67	62	3.5	66	6
30820.WPH62T48.0	48.0	long	T	67	62	3.5	66	6
30820.WPH70T48.5	48.5	long	T	67	70	3.5	74	6
30820.WPH70T49.0	49.0	long	T	67	70	3.5	74	6
30820.WPH70T49.5	49.5	long	T	67	70	3.5	74	6
30820.WPH70T50.0	50.0	long	T	67	70	3.5	74	6
30820.WPH70T50.5	50.5	long	T	67	70	3.5	74	6
30820.WPH70T51.0	51.0	long	T	67	70	3.5	74	6
30820.WPH70T51.5	51.5	long	T	67	70	3.5	74	6
30820.WPH70T52.0	52.0	long	T	67	70	3.5	74	6
30820.WPH70T52.5	52.5	long	T	67	70	3.5	74	6
30820.WPH70T53.0	53.0	long	T	67	70	3.5	74	6
30820.WPH70T53.5	53.5	long	T	67	70	3.5	74	6
30820.WPH70T54.0	54.0	long	T	67	70	3.5	74	6
30820.WPH70T54.5	54.5	long	T	67	70	3.5	74	6
30820.WPH70T55.0	55.0	long	T	67	70	3.5	74	6
30820.WPH78W55.5	55.5	long	W	78	78	4	82	6
30820.WPH78W56.0	56.0	long	W	78	78	4	82	6
30820.WPH78W56.5	56.5	long	W	78	78	4	82	6
30820.WPH78W57.0	57.0	long	W	78	78	4	82	6
30820.WPH78W57.5	57.5	long	W	78	78	4	82	6
30820.WPH78W58.0	58.0	long	W	78	78	4	82	6
30820.WPH78W58.5	58.5	long	W	78	78	4	82	6
30820.WPH78W59.0	59.0	long	W	78	78	4	82	6
30820.WPH78W59.5	59.5	long	W	78	78	4	82	6
30820.WPH78W60.0	60.0	long	W	78	78	4	82	6
30820.WPH78W60.5	60.5	long	W	78	78	4	82	6
30820.WPH78W61.0	61.0	long	W	78	78	4	82	6
30820.WPH78W61.5	61.5	long	W	78	78	4	82	6
30820.WPH78W62.0	62.0	long	W	78	78	4	82	6
30820.WPH78W62.5	62.5	long	W	78	78	4	82	6
30820.WPH78W63.0	63.0	long	W	78	78	4	82	6



Headless Drill Bushes - DIN 179 short

Tenons, Locating Pads & Drill



30800.1

TENONS, LOCATING PADS & DRILL BUSHES

Material

High grade steel. Hardened 740 +HV10.
Hole, d₁ ground ISO tolerance F7.
o/d-d₂ ground ISO tolerance n6, to fit standard hole tolerance H₇. Length l₁ to ±0,2 for lengths 6 to 30mm.

Technical Notes

d₁ dimension tolerance to F7.

Key to dimensions l₁:

- l₁ short
- l₁ medium
- l₁ long

Table of lengths l₁:

- A- 6mm
- B- 8mm
- C- 9mm
- D- 10mm
- E- 12mm
- F- 16mm
- H- 20mm
- J- 25mm
- K- 28mm
- L- 30mm
- M- 35mm
- N- 36mm
- P- 40mm
- R- 45mm
- S- 56mm

- T- 67mm
- W- 78mm

Tips

Sizes 48,0 i/d and above are made to order.

Please note sizes d₁ <0,9 prices available on request.

Important Notes

Drill bushes produced to standard DIN increments for internal bores:
i/d's 0,9mm to 15,0mm - 0,1mm increments e.g. 1,1 mm, 1,2mm etc.
i/d's 15,1mm and over -0,5mm increments.

Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP3A0.9	0.9	short	A	6	3	1
30800.WPP3A1.0	1.0	short	A	6	3	1
30800.WPP4A1.1	1.1	short	A	6	4	1
30800.WPP4A1.2	1.2	short	A	6	4	1
30800.WPP4A1.3	1.3	short	A	6	4	1
30800.WPP4A1.4	1.4	short	A	6	4	1
30800.WPP4A1.5	1.5	short	A	6	4	1
30800.WPP4A1.6	1.6	short	A	6	4	1
30800.WPP4A1.7	1.7	short	A	6	4	1
30800.WPP4A1.8	1.8	short	A	6	4	1
30800.WPP5A1.9	1.9	short	A	6	5	1
30800.WPP5A2.0	2.0	short	A	6	5	1
30800.WPP5A2.1	2.1	short	A	6	5	1
30800.WPP5A2.2	2.2	short	A	6	5	1
30800.WPP5A2.3	2.3	short	A	6	5	1
30800.WPP5A2.4	2.4	short	A	6	5	1
30800.WPP5A2.5	2.5	short	A	6	5	1
30800.WPP5A2.6	2.6	short	A	6	5	1
30800.WPP6B2.7	2.7	short	B	8	6	1
30800.WPP6B2.8	2.8	short	B	8	6	1



Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP6B2.9	2.9	short	B	8	6	1
30800.WPP6B3.0	3.0	short	B	8	6	1
30800.WPP6B3.1	3.1	short	B	8	6	1
30800.WPP6B3.2	3.2	short	B	8	6	1
30800.WPP6B3.3	3.3	short	B	8	6	1
30800.WPP7B3.4	3.4	short	B	8	7	1
30800.WPP7B3.5	3.5	short	B	8	7	1
30800.WPP7B3.6	3.6	short	B	8	7	1
30800.WPP7B3.7	3.7	short	B	8	7	1
30800.WPP7B3.8	3.8	short	B	8	7	1
30800.WPP7B3.9	3.9	short	B	8	7	1
30800.WPP7B4.0	4.0	short	B	8	7	1
30800.WPP8B4.1	4.1	short	B	8	8	1
30800.WPP8B4.2	4.2	short	B	8	8	1
30800.WPP8B4.3	4.3	short	B	8	8	1
30800.WPP8B4.4	4.4	short	B	8	8	1
30800.WPP8B4.5	4.5	short	B	8	8	1
30800.WPP8B4.6	4.6	short	B	8	8	1
30800.WPP8B4.7	4.7	short	B	8	8	1
30800.WPP8B4.8	4.8	short	B	8	8	1
30800.WPP8B4.9	4.9	short	B	8	8	1
30800.WPP8B5.0	5.0	short	B	8	8	1
30800.WPP10D5.1	5.1	short	D	10	10	1.5
30800.WPP10D5.2	5.2	short	D	10	10	1.5
30800.WPP10D5.3	5.3	short	D	10	10	1.5
30800.WPP10D5.4	5.4	short	D	10	10	1.5
30800.WPP10D5.5	5.5	short	D	10	10	1.5
30800.WPP10D5.6	5.6	short	D	10	10	1.5
30800.WPP10D5.7	5.7	short	D	10	10	1.5
30800.WPP10D5.8	5.8	short	D	10	10	1.5
30800.WPP10D5.9	5.9	short	D	10	10	1.5
30800.WPP10D6.0	6.0	short	D	10	10	1.5
30800.WPP12D6.1	6.1	short	D	10	12	1.5
30800.WPP12D6.2	6.2	short	D	10	12	1.5
30800.WPP12D6.3	6.3	short	D	10	12	1.5
30800.WPP12D6.4	6.4	short	D	10	12	1.5
30800.WPP12D6.5	6.5	short	D	10	12	1.5
30800.WPP12D6.6	6.6	short	D	10	12	1.5
30800.WPP12D6.7	6.7	short	D	10	12	1.5
30800.WPP12D6.8	6.8	short	D	10	12	1.5
30800.WPP12D6.9	6.9	short	D	10	12	1.5
30800.WPP12D7.0	7.0	short	D	10	12	1.5
30800.WPP12D7.1	7.1	short	D	10	12	1.5
30800.WPP12D7.2	7.2	short	D	10	12	1.5
30800.WPP12D7.3	7.3	short	D	10	12	1.5
30800.WPP12D7.4	7.4	short	D	10	12	1.5
30800.WPP12D7.5	7.5	short	D	10	12	1.5
30800.WPP12D7.6	7.6	short	D	10	12	1.5
30800.WPP12D7.7	7.7	short	D	10	12	1.5
30800.WPP12D7.8	7.8	short	D	10	12	1.5
30800.WPP12D7.9	7.9	short	D	10	12	1.5
30800.WPP12D8.0	8.0	short	D	10	12	1.5
30800.WPP15E8.1	8.1	short	E	12	15	2
30800.WPP15E8.2	8.2	short	E	12	15	2
30800.WPP15E8.3	8.3	short	E	12	15	2
30800.WPP15E8.4	8.4	short	E	12	15	2
30800.WPP15E8.5	8.5	short	E	12	15	2
30800.WPP15E8.6	8.6	short	E	12	15	2
30800.WPP15E8.7	8.7	short	E	12	15	2
30800.WPP15E8.8	8.8	short	E	12	15	2
30800.WPP15E8.9	8.9	short	E	12	15	2
30800.WPP15E9.0	9.0	short	E	12	15	2
30800.WPP15E9.1	9.1	short	E	12	15	2
30800.WPP15E9.2	9.2	short	E	12	15	2
30800.WPP15E9.3	9.3	short	E	12	15	2
30800.WPP15E9.4	9.4	short	E	12	15	2
30800.WPP15E9.5	9.5	short	E	12	15	2
30800.WPP15E9.6	9.6	short	E	12	15	2



Headless Drill Bushes - DIN 179

short



Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP15E9.7	9.7	short	E	12	15	2
30800.WPP15E9.8	9.8	short	E	12	15	2
30800.WPP15E9.9	9.9	short	E	12	15	2
30800.WPP15E10.0	10.0	short	E	12	15	2
30800.WPP18E10.1	10.1	short	E	12	18	2
30800.WPP18E10.2	10.2	short	E	12	18	2
30800.WPP18E10.3	10.3	short	E	12	18	2
30800.WPP18E10.4	10.4	short	E	12	18	2
30800.WPP18E10.5	10.5	short	E	12	18	2
30800.WPP18E10.6	10.6	short	E	12	18	2
30800.WPP18E10.7	10.7	short	E	12	18	2
30800.WPP18E10.8	10.8	short	E	12	18	2
30800.WPP18E10.9	10.9	short	E	12	18	2
30800.WPP18E11.0	11.0	short	E	12	18	2
30800.WPP18E11.1	11.1	short	E	12	18	2
30800.WPP18E11.2	11.2	short	E	12	18	2
30800.WPP18E11.3	11.3	short	E	12	18	2
30800.WPP18E11.4	11.4	short	E	12	18	2
30800.WPP18E11.5	11.5	short	E	12	18	2
30800.WPP18E11.6	11.6	short	E	12	18	2
30800.WPP18E11.7	11.7	short	E	12	18	2
30800.WPP18E11.8	11.8	short	E	12	18	2
30800.WPP18E11.9	11.9	short	E	12	18	2
30800.WPP18E12.0	12.0	short	E	12	18	2
30800.WPP22F12.1	12.1	short	F	16	22	2
30800.WPP22F12.2	12.2	short	F	16	22	2
30800.WPP22F12.3	12.3	short	F	16	22	2
30800.WPP22F12.4	12.4	short	F	16	22	2
30800.WPP22F12.5	12.5	short	F	16	22	2
30800.WPP22F12.6	12.6	short	F	16	22	2
30800.WPP22F12.7	12.7	short	F	16	22	2
30800.WPP22F12.8	12.8	short	F	16	22	2
30800.WPP22F12.9	12.9	short	F	16	22	2
30800.WPP22F13.0	13.0	short	F	16	22	2
30800.WPP22F13.1	13.1	short	F	16	22	2
30800.WPP22F13.2	13.2	short	F	16	22	2
30800.WPP22F13.3	13.3	short	F	16	22	2
30800.WPP22F13.4	13.4	short	F	16	22	2
30800.WPP22F13.5	13.5	short	F	16	22	2
30800.WPP22F13.6	13.6	short	F	16	22	2
30800.WPP22F13.7	13.7	short	F	16	22	2
30800.WPP22F13.8	13.8	short	F	16	22	2
30800.WPP22F13.9	13.9	short	F	16	22	2
30800.WPP22F14.0	14.0	short	F	16	22	2
30800.WPP22F14.1	14.1	short	F	16	22	2
30800.WPP22F14.2	14.2	short	F	16	22	2
30800.WPP22F14.3	14.3	short	F	16	22	2
30800.WPP22F14.4	14.4	short	F	16	22	2
30800.WPP22F14.5	14.5	short	F	16	22	2
30800.WPP22F14.6	14.6	short	F	16	22	2
30800.WPP22F14.7	14.7	short	F	16	22	2
30800.WPP22F14.8	14.8	short	F	16	22	2
30800.WPP22F14.9	14.9	short	F	16	22	2
30800.WPP22F15.0	15.0	short	F	16	22	2
30800.WPP26F15.5	15.5	short	F	16	26	2
30800.WPP26F16.0	16.0	short	F	16	26	2
30800.WPP26F16.5	16.5	short	F	16	26	2
30800.WPP26F17.0	17.0	short	F	16	26	2
30800.WPP26F17.5	17.5	short	F	16	26	2
30800.WPP26F18.0	18.0	short	F	16	26	2
30800.WPP30H18.5	18.5	short	H	20	30	3
30800.WPP30H19.0	19.0	short	H	20	30	3
30800.WPP30H19.5	19.5	short	H	20	30	3
30800.WPP30H20.0	20.0	short	H	20	30	3
30800.WPP30H20.5	20.5	short	H	20	30	3
30800.WPP30H21.0	21.0	short	H	20	30	3
30800.WPP30H21.5	21.5	short	H	20	30	3
30800.WPP30H22.0	22.0	short	H	20	30	3

TENONS, LOCATING PADS & DRILL BUSHES

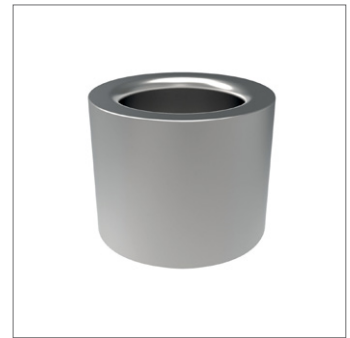
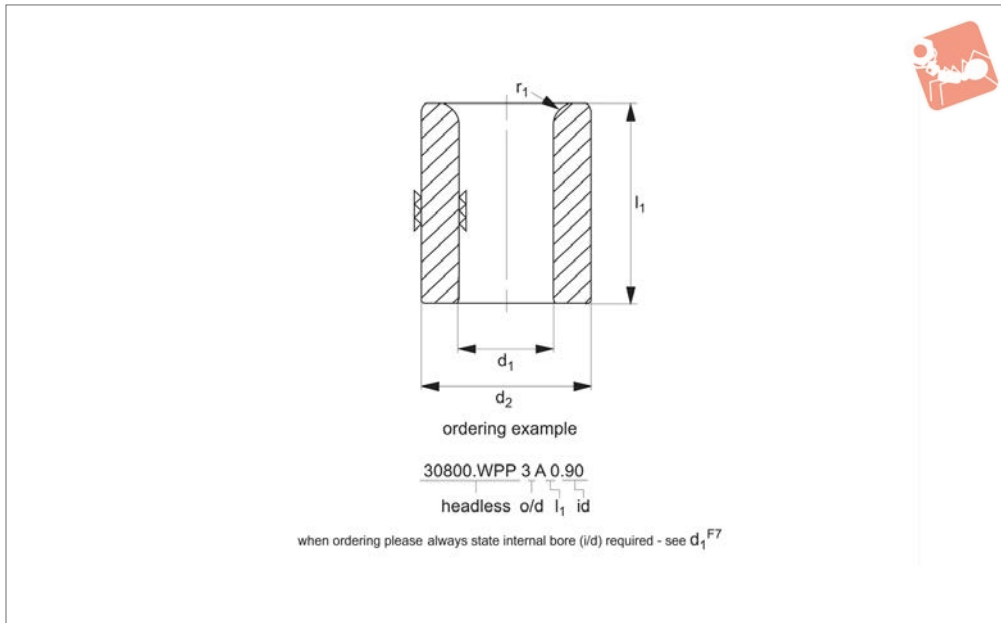


Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP35H22.5	22.5	short	H	20	35	3
30800.WPP35H23.0	23.0	short	H	20	35	3
30800.WPP35H23.5	23.5	short	H	20	35	3
30800.WPP35H24.0	24.0	short	H	20	35	3
30800.WPP35H24.5	24.5	short	H	20	35	3
30800.WPP35H25.0	25.0	short	H	20	35	3
30800.WPP35H25.5	25.5	short	H	20	35	3
30800.WPP35H26.0	26.0	short	H	20	35	3
30800.WPP42J26.5	26.5	short	J	25	42	3
30800.WPP42J27.0	27.0	short	J	25	42	3
30800.WPP42J27.5	27.5	short	J	25	42	3
30800.WPP42J28.0	28.0	short	J	25	42	3
30800.WPP42J28.5	28.5	short	J	25	42	3
30800.WPP42J29.0	29.0	short	J	25	42	3
30800.WPP42J29.5	29.5	short	J	25	42	3
30800.WPP42J30.0	30.0	short	J	25	42	3
30800.WPP48J30.5	30.5	short	J	25	48	3
30800.WPP48J31.0	31.0	short	J	25	48	3
30800.WPP48J31.5	31.5	short	J	25	48	3
30800.WPP48J32.0	32.0	short	J	25	48	3
30800.WPP48J32.5	32.5	short	J	25	48	3
30800.WPP48J33.0	33.0	short	J	25	48	3
30800.WPP48J33.5	33.5	short	J	25	48	3
30800.WPP48J34.0	34.0	short	J	25	48	3
30800.WPP48J34.5	34.5	short	J	25	48	3
30800.WPP48J35.0	35.0	short	J	25	48	3
30800.WPP70L55.0	55.0	short	L	30	70	3.5
30800.WPP78M55.5	55.5	short	M	35	78	4
30800.WPP78M56.0	56.0	short	M	35	78	4



Headless Drill Bushes - DIN 179 medium

Tenons, Locating Pads & Drill



30800.2

TENONS, LOCATING PADS & DRILL BUSHES

Material

High grade steel. Hardened 740 +HV10.
Hole, d₁ ground ISO tolerance F7.
o/d-d₂ ground ISO tolerance n6, to fit standard hole tolerance H₇. Length l₁ to ±0,2 for lengths 6 to 30mm.

Technical Notes

d₁ dimension tolerance to F7.

Key to dimensions l₁:

- l₁ short
- l₁ medium
- l₁ long

Table of lengths l₁:

- A- 6mm
- B- 8mm
- C- 9mm
- D- 10mm
- E- 12mm
- F- 16mm
- H- 20mm
- J- 25mm
- K- 28mm
- L- 30mm
- M- 35mm
- N- 36mm
- P- 40mm
- R- 45mm
- S- 56mm

- T- 67mm
- W- 78mm

Tips

Sizes 48,0 i/d and above are made to order.

Please note sizes d₁ < 0,9 prices available on request.

Important Notes

Drill bushes produced to standard DIN increments for internal bores:

i/d's 0,9mm to 15,0mm - 0,1mm increments e.g. 1,1 mm, 1,2mm etc.

i/d's 15,1mm and over -0,5mm increments.

Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP3C0.9	0.9	medium	C	9	3	1
30800.WPP3C1.0	1.0	medium	C	9	3	1
30800.WPP4C1.1	1.1	medium	C	9	4	1
30800.WPP4C1.2	1.2	medium	C	9	4	1
30800.WPP4C1.3	1.3	medium	C	9	4	1
30800.WPP4C1.4	1.4	medium	C	9	4	1
30800.WPP4C1.5	1.5	medium	C	9	4	1
30800.WPP4C1.6	1.6	medium	C	9	4	1
30800.WPP4C1.7	1.7	medium	C	9	4	1
30800.WPP4C1.8	1.8	medium	C	9	4	1
30800.WPP5C1.9	1.9	medium	C	9	5	1
30800.WPP5C2.0	2.0	medium	C	9	5	1
30800.WPP5C2.1	2.1	medium	C	9	5	1
30800.WPP5C2.2	2.2	medium	C	9	5	1
30800.WPP5C2.3	2.3	medium	C	9	5	1
30800.WPP5C2.4	2.4	medium	C	9	5	1
30800.WPP5C2.5	2.5	medium	C	9	5	1
30800.WPP5C2.6	2.6	medium	C	9	5	1
30800.WPP6E2.7	2.7	medium	E	12	6	1
30800.WPP6E2.8	2.8	medium	E	12	6	1



Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP6E2.9	2.9	medium	E	12	6	1
30800.WPP6E3.0	3.0	medium	E	12	6	1
30800.WPP6E3.1	3.1	medium	E	12	6	1
30800.WPP6E3.2	3.2	medium	E	12	6	1
30800.WPP6E3.3	3.3	medium	E	12	6	1
30800.WPP7E3.4	3.4	medium	E	12	7	1
30800.WPP7E3.5	3.5	medium	E	12	7	1
30800.WPP7E3.6	3.6	medium	E	12	7	1
30800.WPP7E3.7	3.7	medium	E	12	7	1
30800.WPP7E3.8	3.8	medium	E	12	7	1
30800.WPP7E3.9	3.9	medium	E	12	7	1
30800.WPP7E4.0	4.0	medium	E	12	7	1
30800.WPP8E4.1	4.1	medium	E	12	8	1
30800.WPP8E4.2	4.2	medium	E	12	8	1
30800.WPP8E4.3	4.3	medium	E	12	8	1
30800.WPP8E4.4	4.4	medium	E	12	8	1
30800.WPP8E4.5	4.5	medium	E	12	8	1
30800.WPP8E4.6	4.6	medium	E	12	8	1
30800.WPP8E4.7	4.7	medium	E	12	8	1
30800.WPP8E4.8	4.8	medium	E	12	8	1
30800.WPP8E4.9	4.9	medium	E	12	8	1
30800.WPP8E5.0	5.0	medium	E	12	8	1
30800.WPP10F5.1	5.1	medium	F	16	10	1.5
30800.WPP10F5.2	5.2	medium	F	16	10	1.5
30800.WPP10F5.3	5.3	medium	F	16	10	1.5
30800.WPP10F5.4	5.4	medium	F	16	10	1.5
30800.WPP10F5.5	5.5	medium	F	16	10	1.5
30800.WPP10F5.6	5.6	medium	F	16	10	1.5
30800.WPP10F5.7	5.7	medium	F	16	10	1.5
30800.WPP10F5.8	5.8	medium	F	16	10	1.5
30800.WPP10F5.9	5.9	medium	F	16	10	1.5
30800.WPP10F6.0	6.0	medium	F	16	10	1.5
30800.WPP12F6.1	6.1	medium	F	16	12	1.5
30800.WPP12F6.2	6.2	medium	F	16	12	1.5
30800.WPP12F6.3	6.3	medium	F	16	12	1.5
30800.WPP12F6.4	6.4	medium	F	16	12	1.5
30800.WPP12F6.5	6.5	medium	F	16	12	1.5
30800.WPP12F6.6	6.6	medium	F	16	12	1.5
30800.WPP12F6.7	6.7	medium	F	16	12	1.5
30800.WPP12F6.8	6.8	medium	F	16	12	1.5
30800.WPP12F6.9	6.9	medium	F	16	12	1.5
30800.WPP12F7.0	7.0	medium	F	16	12	1.5
30800.WPP12F7.1	7.1	medium	F	16	12	1.5
30800.WPP12F7.2	7.2	medium	F	16	12	1.5
30800.WPP12F7.3	7.3	medium	F	16	12	1.5
30800.WPP12F7.4	7.4	medium	F	16	12	1.5
30800.WPP12F7.5	7.5	medium	F	16	12	1.5
30800.WPP12F7.6	7.6	medium	F	16	12	1.5
30800.WPP12F7.7	7.7	medium	F	16	12	1.5
30800.WPP12F7.8	7.8	medium	F	16	12	1.5
30800.WPP12F7.9	7.9	medium	F	16	12	1.5
30800.WPP12F8.0	8.0	medium	F	16	12	1.5
30800.WPP15H8.1	8.1	medium	H	20	15	2
30800.WPP15H8.2	8.2	medium	H	20	15	2
30800.WPP15H8.3	8.3	medium	H	20	15	2
30800.WPP15H8.4	8.4	medium	H	20	15	2
30800.WPP15H8.5	8.5	medium	H	20	15	2
30800.WPP15H8.6	8.6	medium	H	20	15	2
30800.WPP15H8.7	8.7	medium	H	20	15	2
30800.WPP15H8.8	8.8	medium	H	20	15	2
30800.WPP15H8.9	8.9	medium	H	20	15	2
30800.WPP15H9.0	9.0	medium	H	20	15	2
30800.WPP15H9.1	9.1	medium	H	20	15	2
30800.WPP15H9.2	9.2	medium	H	20	15	2
30800.WPP15H9.3	9.3	medium	H	20	15	2
30800.WPP15H9.4	9.4	medium	H	20	15	2
30800.WPP15H9.5	9.5	medium	H	20	15	2
30800.WPP15H9.6	9.6	medium	H	20	15	2



Headless Drill Bushes - DIN 179

medium

Tenons, Locating Pads & Drill



Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP15H9.7	9.7	medium	H	20	15	2
30800.WPP15H9.8	9.8	medium	H	20	15	2
30800.WPP15H9.9	9.9	medium	H	20	15	2
30800.WPP15H10.0	10.0	medium	H	20	15	2
30800.WPP18H10.1	10.1	medium	H	20	18	2
30800.WPP18H10.2	10.2	medium	H	20	18	2
30800.WPP18H10.3	10.3	medium	H	20	18	2
30800.WPP18H10.4	10.4	medium	H	20	18	2
30800.WPP18H10.5	10.5	medium	H	20	18	2
30800.WPP18H10.6	10.6	medium	H	20	18	2
30800.WPP18H10.7	10.7	medium	H	20	18	2
30800.WPP18H10.8	10.8	medium	H	20	18	2
30800.WPP18H10.9	10.9	medium	H	20	18	2
30800.WPP18H11.0	11.0	medium	H	20	18	2
30800.WPP18H11.1	11.1	medium	H	20	18	2
30800.WPP18H11.2	11.2	medium	H	20	18	2
30800.WPP18H11.3	11.3	medium	H	20	18	2
30800.WPP18H11.4	11.4	medium	H	20	18	2
30800.WPP18H11.5	11.5	medium	H	20	18	2
30800.WPP18H11.6	11.6	medium	H	20	18	2
30800.WPP18H11.7	11.7	medium	H	20	18	2
30800.WPP18H11.8	11.8	medium	H	20	18	2
30800.WPP18H11.9	11.9	medium	H	20	18	2
30800.WPP18H12.0	12.0	medium	H	20	18	2
30800.WPP22K12.1	12.1	medium	K	28	22	2
30800.WPP22K12.2	12.2	medium	K	28	22	2
30800.WPP22K12.3	12.3	medium	K	28	22	2
30800.WPP22K12.4	12.4	medium	K	28	22	2
30800.WPP22K12.5	12.5	medium	K	28	22	2
30800.WPP22K12.6	12.6	medium	K	28	22	2
30800.WPP22K12.7	12.7	medium	K	28	22	2
30800.WPP22K12.8	12.8	medium	K	28	22	2
30800.WPP22K12.9	12.9	medium	K	28	22	2
30800.WPP22K13.0	13.0	medium	K	28	22	2
30800.WPP22K13.1	13.1	medium	K	28	22	2
30800.WPP22K13.2	13.2	medium	K	28	22	2
30800.WPP22K13.3	13.3	medium	K	28	22	2
30800.WPP22K13.4	13.4	medium	K	28	22	2
30800.WPP22K13.5	13.5	medium	K	28	22	2
30800.WPP22K13.6	13.6	medium	K	28	22	2
30800.WPP22K13.7	13.7	medium	K	28	22	2
30800.WPP22K13.8	13.8	medium	K	28	22	2
30800.WPP22K13.9	13.9	medium	K	28	22	2
30800.WPP22K14.0	14.0	medium	K	28	22	2
30800.WPP22K14.1	14.1	medium	K	28	22	2
30800.WPP22K14.2	14.2	medium	K	28	22	2
30800.WPP22K14.3	14.3	medium	K	28	22	2
30800.WPP22K14.4	14.4	medium	K	28	22	2
30800.WPP22K14.5	14.5	medium	K	28	22	2
30800.WPP22K14.6	14.6	medium	K	28	22	2
30800.WPP22K14.7	14.7	medium	K	28	22	2
30800.WPP22K14.8	14.8	medium	K	28	22	2
30800.WPP22K14.9	14.9	medium	K	28	22	2
30800.WPP22K15.0	15.0	medium	K	28	22	2
30800.WPP26K15.5	15.5	medium	K	28	26	2
30800.WPP26K16.0	16.0	medium	K	28	26	2
30800.WPP26K16.5	16.5	medium	K	28	26	2
30800.WPP26K17.0	17.0	medium	K	28	26	2
30800.WPP26K17.5	17.5	medium	K	28	26	2
30800.WPP26K18.0	18.0	medium	K	28	26	2
30800.WPP30N18.5	18.5	medium	N	36	30	3
30800.WPP30N19.0	19.0	medium	N	36	30	3
30800.WPP30N19.5	19.5	medium	N	36	30	3
30800.WPP30N20.0	20.0	medium	N	36	30	3
30800.WPP30N20.5	20.5	medium	N	36	30	3
30800.WPP30N21.0	21.0	medium	N	36	30	3
30800.WPP30N21.5	21.5	medium	N	36	30	3
30800.WPP30N22.0	22.0	medium	N	36	30	3

TENONS, LOCATING PADS & DRILL BUSHES

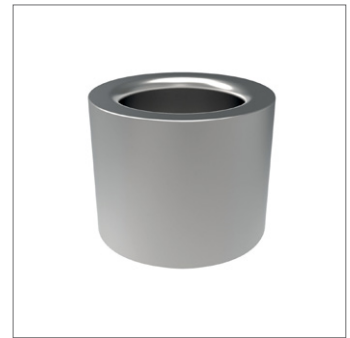
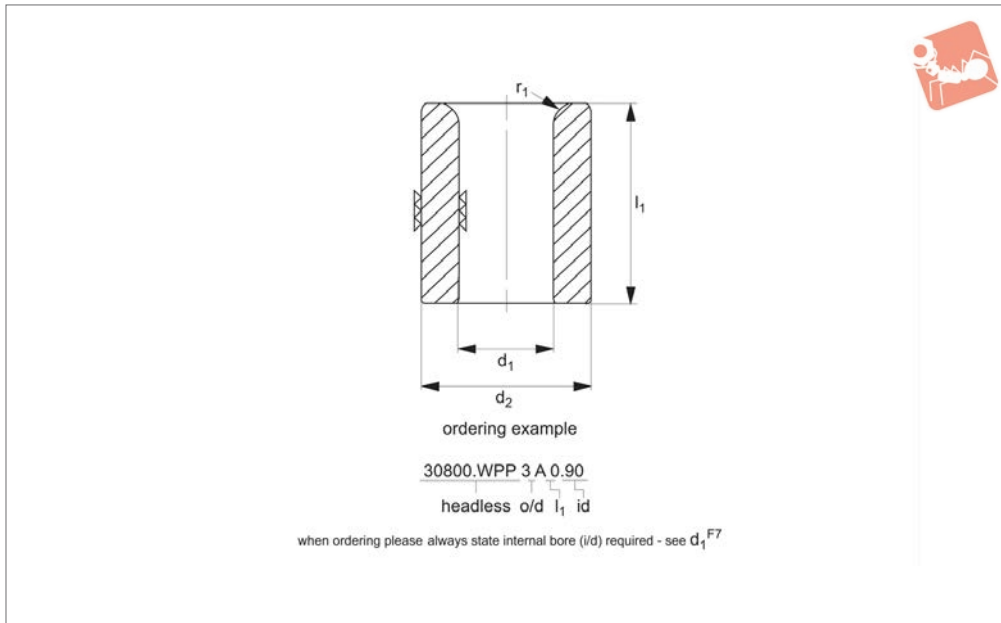


Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP35N22.5	22.5	medium	N	36	35	3
30800.WPP35N23.0	23.0	medium	N	36	35	3
30800.WPP35N23.5	23.5	medium	N	36	35	3
30800.WPP35N24.0	24.0	medium	N	36	35	3
30800.WPP35N24.5	24.5	medium	N	36	35	3
30800.WPP35N25.0	25.0	medium	N	36	35	3
30800.WPP35N25.5	25.5	medium	N	36	35	3
30800.WPP35N26.0	26.0	medium	N	36	35	3
30800.WPP42R26.5	26.5	medium	R	45	42	3
30800.WPP42R27.0	27.0	medium	R	45	42	3
30800.WPP42R27.5	27.5	medium	R	45	42	3
30800.WPP42R28.0	28.0	medium	R	45	42	3
30800.WPP42R28.5	28.5	medium	R	45	42	3
30800.WPP42R29.0	29.0	medium	R	45	42	3
30800.WPP42R29.5	29.5	medium	R	45	42	3
30800.WPP42R30.0	30.0	medium	R	45	42	3
30800.WPP48R30.5	30.5	medium	R	45	48	3
30800.WPP48R31.0	31.0	medium	R	45	48	3
30800.WPP48R31.5	31.5	medium	R	45	48	3
30800.WPP48R32.0	32.0	medium	R	45	48	3
30800.WPP48R32.5	32.5	medium	R	45	48	3
30800.WPP48R33.0	33.0	medium	R	45	48	3
30800.WPP48R33.5	33.5	medium	R	45	48	3
30800.WPP48R34.0	34.0	medium	R	45	48	3
30800.WPP48R34.5	34.5	medium	R	45	48	3
30800.WPP48R35.0	35.0	medium	R	45	48	3
30800.WPP78T55.5	55.5	medium	T	67	78	4
30800.WPP78T56.0	56.0	medium	T	67	78	4
30800.WPP78T56.5	56.5	medium	T	67	78	4
30800.WPP78T57.0	57.0	medium	T	67	78	4
30800.WPP78T57.5	57.5	medium	T	67	78	4
30800.WPP78T58.0	58.0	medium	T	67	78	4
30800.WPP78T58.5	58.5	medium	T	67	78	4
30800.WPP78T59.0	59.0	medium	T	67	78	4
30800.WPP78T59.5	59.5	medium	T	67	78	4
30800.WPP78T60.0	60.0	medium	T	67	78	4
30800.WPP78T60.5	60.5	medium	T	67	78	4
30800.WPP78T61.0	61.0	medium	T	67	78	4
30800.WPP78T61.5	61.5	medium	T	67	78	4
30800.WPP78T62.0	62.0	medium	T	67	78	4
30800.WPP78T62.5	62.5	medium	T	67	78	4
30800.WPP78T63.0	63.0	medium	T	67	78	4



Headless Drill Bushes - DIN 179 long

Tenons, Locating Pads & Drill



30800.3

TENONS, LOCATING PADS & DRILL BUSHES

Material

High grade steel. Hardened 740 +HV10.
Hole, d₁ ground ISO tolerance F7.
o/d-d₂ ground ISO tolerance n6, to fit standard hole tolerance H₇. Length l₁ to ±0,2 for lengths 6 to 30mm.

Technical Notes

d₁ dimension tolerance to F7.

Key to dimensions l₁:

- l₁ short
- l₁ medium
- l₁ long

Table of lengths l₁:

- A- 6mm
- B- 8mm
- C- 9mm
- D- 10mm
- E- 12mm
- F- 16mm
- H- 20mm
- J- 25mm
- K- 28mm
- L- 30mm
- M- 35mm
- N- 36mm
- P- 40mm
- R- 45mm
- S- 56mm

- T- 67mm
- W- 78mm

Tips

Sizes 48,0 i/d and above are made to order.

Please note sizes d₁ < 0,9 prices available on request.

Important Notes

Drill bushes produced to standard DIN increments for internal bores:

i/d's 0,9mm to 15,0mm - 0,1mm increments e.g. 1,1 mm, 1,2mm etc.

i/d's 15,1mm and over -0,5mm increments.

Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP6F2.7	2.7	long	F	16	6	1
30800.WPP6F2.8	2.8	long	F	16	6	1
30800.WPP6F2.9	2.9	long	F	16	6	1
30800.WPP6F3.0	3.0	long	F	16	6	1
30800.WPP6F3.1	3.1	long	F	16	6	1
30800.WPP6F3.2	3.2	long	F	16	6	1
30800.WPP6F3.3	3.3	long	F	16	6	1
30800.WPP7F3.4	3.4	long	F	16	7	1
30800.WPP7F3.5	3.5	long	F	16	7	1
30800.WPP7F3.6	3.6	long	F	16	7	1
30800.WPP7F3.7	3.7	long	F	16	7	1
30800.WPP7F3.8	3.8	long	F	16	7	1
30800.WPP7F3.9	3.9	long	F	16	7	1
30800.WPP7F4.0	4.0	long	F	16	7	1
30800.WPP8F4.1	4.1	long	F	16	8	1
30800.WPP8F4.2	4.2	long	F	16	8	1
30800.WPP8F4.3	4.3	long	F	16	8	1
30800.WPP8F4.4	4.4	long	F	16	8	1
30800.WPP8F4.5	4.5	long	F	16	8	1
30800.WPP8F4.6	4.6	long	F	16	8	1



Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP8F4.7	4.7	long	F	16	8	1
30800.WPP8F4.8	4.8	long	F	16	8	1
30800.WPP8F4.9	4.9	long	F	16	8	1
30800.WPP8F5.0	5.0	long	F	16	8	1
30800.WPP10H5.1	5.1	long	H	20	10	1.5
30800.WPP10H5.2	5.2	long	H	20	10	1.5
30800.WPP10H5.3	5.3	long	H	20	10	1.5
30800.WPP10H5.4	5.4	long	H	20	10	1.5
30800.WPP10H5.5	5.5	long	H	20	10	1.5
30800.WPP10H5.6	5.6	long	H	20	10	1.5
30800.WPP10H5.7	5.7	long	H	20	10	1.5
30800.WPP10H5.8	5.8	long	H	20	10	1.5
30800.WPP10H5.9	5.9	long	H	20	10	1.5
30800.WPP10H6.0	6.0	long	H	20	10	1.5
30800.WPP12H6.1	6.1	long	H	20	12	1.5
30800.WPP12H6.2	6.2	long	H	20	12	1.5
30800.WPP12H6.3	6.3	long	H	20	12	1.5
30800.WPP12H6.4	6.4	long	H	20	12	1.5
30800.WPP12H6.5	6.5	long	H	20	12	1.5
30800.WPP12H6.6	6.6	long	H	20	12	1.5
30800.WPP12H6.7	6.7	long	H	20	12	1.5
30800.WPP12H6.8	6.8	long	H	20	12	1.5
30800.WPP12H6.9	6.9	long	H	20	12	1.5
30800.WPP12H7.0	7.0	long	H	20	12	1.5
30800.WPP12H7.1	7.1	long	H	20	12	1.5
30800.WPP12H7.2	7.2	long	H	20	12	1.5
30800.WPP12H7.3	7.3	long	H	20	12	1.5
30800.WPP12H7.4	7.4	long	H	20	12	1.5
30800.WPP12H7.5	7.5	long	H	20	12	1.5
30800.WPP12H7.6	7.6	long	H	20	12	1.5
30800.WPP12H7.7	7.7	long	H	20	12	1.5
30800.WPP12H7.8	7.8	long	H	20	12	1.5
30800.WPP12H7.9	7.9	long	H	20	12	1.5
30800.WPP12H8.0	8.0	long	H	20	12	1.5
30800.WPP15J8.1	8.1	long	J	25	15	2
30800.WPP15J8.2	8.2	long	J	25	15	2
30800.WPP15J8.3	8.3	long	J	25	15	2
30800.WPP15J8.4	8.4	long	J	25	15	2
30800.WPP15J8.5	8.5	long	J	25	15	2
30800.WPP15J8.6	8.6	long	J	25	15	2
30800.WPP15J8.7	8.7	long	J	25	15	2
30800.WPP15J8.8	8.8	long	J	25	15	2
30800.WPP15J8.9	8.9	long	J	25	15	2
30800.WPP15J9.0	9.0	long	J	25	15	2
30800.WPP15J9.1	9.1	long	J	25	15	2
30800.WPP15J9.2	9.2	long	J	25	15	2
30800.WPP15J9.3	9.3	long	J	25	15	2
30800.WPP15J9.4	9.4	long	J	25	15	2
30800.WPP15J9.5	9.5	long	J	25	15	2
30800.WPP15J9.6	9.6	long	J	25	15	2
30800.WPP15J9.7	9.7	long	J	25	15	2
30800.WPP15J9.8	9.8	long	J	25	15	2
30800.WPP15J9.9	9.9	long	J	25	15	2
30800.WPP15J10.0	10.0	long	J	25	15	2
30800.WPP18J10.1	10.1	long	J	25	18	2
30800.WPP18J10.2	10.2	long	J	25	18	2
30800.WPP18J10.3	10.3	long	J	25	18	2
30800.WPP18J10.4	10.4	long	J	25	18	2
30800.WPP18J10.5	10.5	long	J	25	18	2
30800.WPP18J10.6	10.6	long	J	25	18	2
30800.WPP18J10.7	10.7	long	J	25	18	2
30800.WPP18J10.8	10.8	long	J	25	18	2
30800.WPP18J10.9	10.9	long	J	25	18	2
30800.WPP18J11.0	11.0	long	J	25	18	2
30800.WPP18J11.1	11.1	long	J	25	18	2
30800.WPP18J11.2	11.2	long	J	25	18	2
30800.WPP18J11.3	11.3	long	J	25	18	2
30800.WPP18J11.4	11.4	long	J	25	18	2



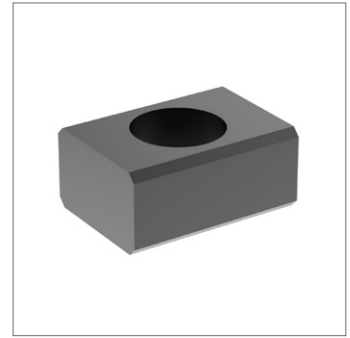
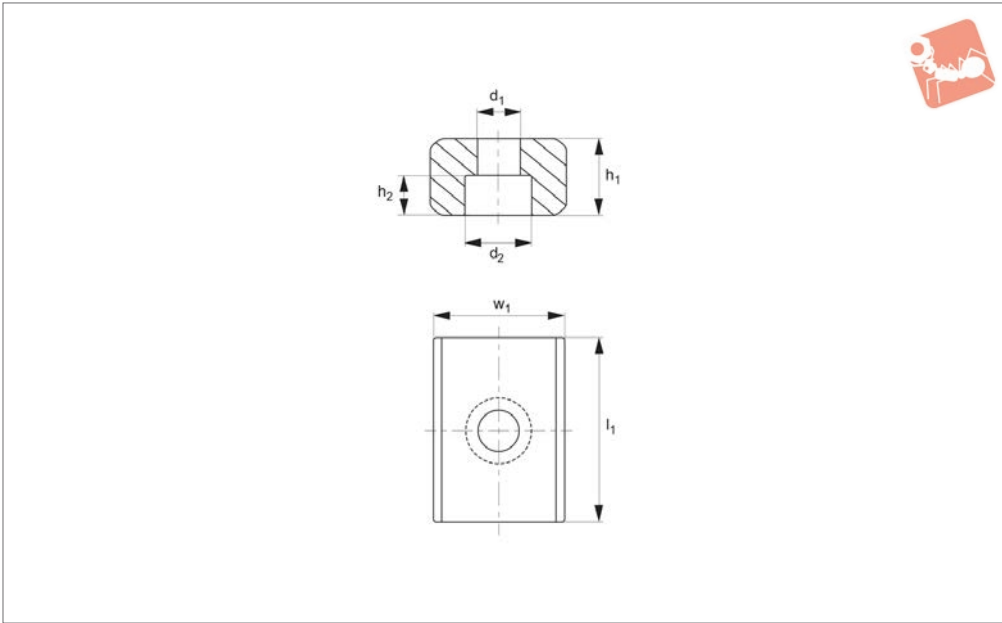
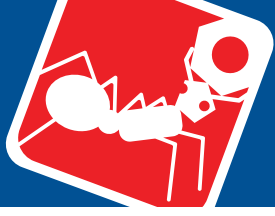
Headless Drill Bushes - DIN 179 long



Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP18J11.5	11.5	long	J	25	18	2
30800.WPP18J11.6	11.6	long	J	25	18	2
30800.WPP18J11.7	11.7	long	J	25	18	2
30800.WPP18J11.8	11.8	long	J	25	18	2
30800.WPP18J11.9	11.9	long	J	25	18	2
30800.WPP18J12.0	12.0	long	J	25	18	2
30800.WPP22N12.1	12.1	long	N	36	22	2
30800.WPP22N12.2	12.2	long	N	36	22	2
30800.WPP22N12.3	12.3	long	N	36	22	2
30800.WPP22N12.4	12.4	long	N	36	22	2
30800.WPP22N12.5	12.5	long	N	36	22	2
30800.WPP22N12.6	12.6	long	N	36	22	2
30800.WPP22N12.7	12.7	long	N	36	22	2
30800.WPP22N12.8	12.8	long	N	36	22	2
30800.WPP22N12.9	12.9	long	N	36	22	2
30800.WPP22N13.0	13.0	long	N	36	22	2
30800.WPP22N13.1	13.1	long	N	36	22	2
30800.WPP22N13.2	13.2	long	N	36	22	2
30800.WPP22N13.3	13.3	long	N	36	22	2
30800.WPP22N13.4	13.4	long	N	36	22	2
30800.WPP22N13.5	13.5	long	N	36	22	2
30800.WPP22N13.6	13.6	long	N	36	22	2
30800.WPP22N13.7	13.7	long	N	36	22	2
30800.WPP22N13.8	13.8	long	N	36	22	2
30800.WPP22N13.9	13.9	long	N	36	22	2
30800.WPP22N14.0	14.0	long	N	36	22	2
30800.WPP22N14.1	14.1	long	N	36	22	2
30800.WPP22N14.2	14.2	long	N	36	22	2
30800.WPP22N14.3	14.3	long	N	36	22	2
30800.WPP22N14.4	14.4	long	N	36	22	2
30800.WPP22N14.5	14.5	long	N	36	22	2
30800.WPP22N14.6	14.6	long	N	36	22	2
30800.WPP22N14.7	14.7	long	N	36	22	2
30800.WPP22N14.8	14.8	long	N	36	22	2
30800.WPP22N14.9	14.9	long	N	36	22	2
30800.WPP22N15.0	15.0	long	N	36	22	2
30800.WPP26N15.5	15.5	long	N	36	26	2
30800.WPP26N16.0	16.0	long	N	36	26	2
30800.WPP26N16.5	16.5	long	N	36	26	2
30800.WPP26N17.0	17.0	long	N	36	26	2
30800.WPP26N17.5	17.5	long	N	36	26	2
30800.WPP26N18.0	18.0	long	N	36	26	2
30800.WPP30R18.5	18.5	long	R	45	30	3
30800.WPP30R19.0	19.0	long	R	45	30	3
30800.WPP30R19.5	19.5	long	R	45	30	3
30800.WPP30R20.0	20.0	long	R	45	30	3
30800.WPP30R20.5	20.5	long	R	45	30	3
30800.WPP30R21.0	21.0	long	R	45	30	3
30800.WPP30R21.5	21.5	long	R	45	30	3
30800.WPP30R22.0	22.0	long	R	45	30	3
30800.WPP35R22.5	22.5	long	R	45	35	3
30800.WPP35R23.0	23.0	long	R	45	35	3
30800.WPP35R23.5	23.5	long	R	45	35	3
30800.WPP35R24.0	24.0	long	R	45	35	3
30800.WPP35R24.5	24.5	long	R	45	35	3
30800.WPP35R25.0	25.0	long	R	45	35	3
30800.WPP35R25.5	25.5	long	R	45	35	3
30800.WPP35R26.0	26.0	long	R	45	35	3
30800.WPP42S26.5	26.5	long	S	56	42	3
30800.WPP42S27.0	27.0	long	S	56	42	3
30800.WPP42S27.5	27.5	long	S	56	42	3
30800.WPP42S28.0	28.0	long	S	56	42	3
30800.WPP42S28.5	28.5	long	S	56	42	3
30800.WPP42S29.0	29.0	long	S	56	42	3
30800.WPP42S29.5	29.5	long	S	56	42	3
30800.WPP42S30.0	30.0	long	S	56	42	3
30800.WPP48S30.5	30.5	long	S	56	48	3
30800.WPP48S31.0	31.0	long	S	56	48	3



Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP48S31.5	31.5	long	S	56	48	3
30800.WPP48S32.0	32.0	long	S	56	48	3
30800.WPP48S32.5	32.5	long	S	56	48	3
30800.WPP48S33.0	33.0	long	S	56	48	3
30800.WPP48S33.5	33.5	long	S	56	48	3
30800.WPP48S34.0	34.0	long	S	56	48	3
30800.WPP48S34.5	34.5	long	S	56	48	3
30800.WPP48S35.0	35.0	long	S	56	48	3
30800.WPP78W63.0	63.0	long	W	78	78	4



30020

TENONS, LOCATING PADS & DRILL BUSHES

Material

Steel, case-hardened (C15), blackened and ground.

elements onto machine tables.

Tips

For especially heavy duty applications we recommend tenons no. 30040.

Technical Notes

Used for locating fixtures and clamping

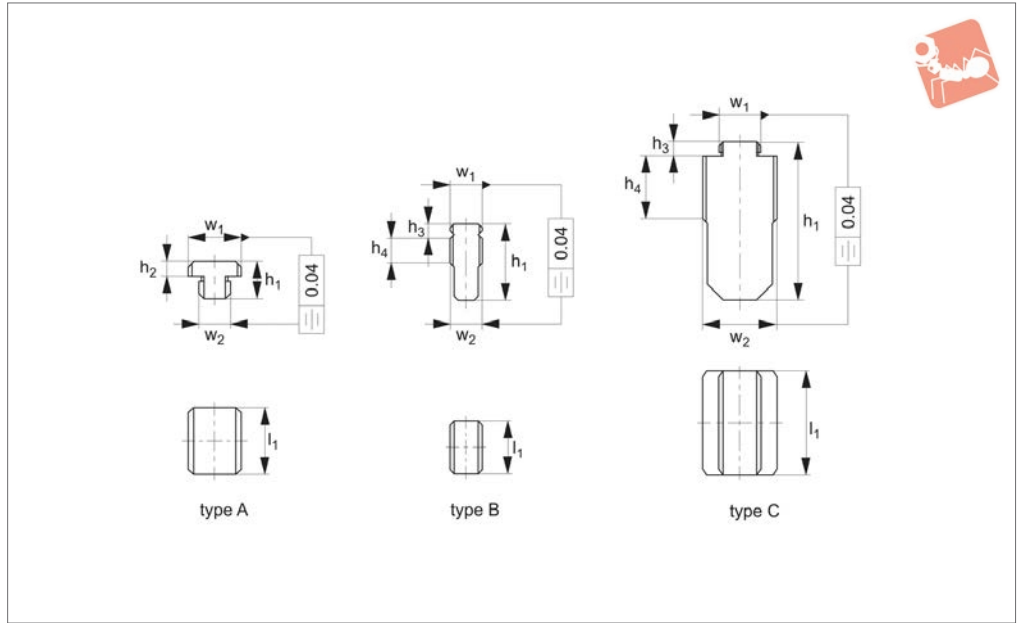
Order No.	l_1	w_1 tol. h6	d_1	d_2	h_1	h_2	For screws DIN 84 & DIN 912	Weight g
30020.W0010	20	10	4.5	8	8	4.3	M 4x10	15
30020.W0012	20	12	5.5	10	8	5.3	M 5x12	19
30020.W0014	22	14	6.6	11	10	6.3	M 6x16	21
30020.W0016	22	16	6.6	11	10	6.3	M 6x16	26
30020.W0018	22	18	6.6	11	10	6.3	M 6x16	30
30020.W0020	22	20	6.6	11	10	6.3	M 6x16	34
30020.W0022	32	22	6.6	11	12	6.3	M 6x16	55
30020.W0024	32	24	6.6	11	12	6.3	M 6x16	62



TENONS, LOCATING PADS & DRILL BUSHES



30040



Material

Steel, case-hardened (C15), blackened and ground.

Used for locating fixtures and clamping elements onto machine tables. Simply push into position after fixture or clamping element has been roughly positioned.

Technical Notes

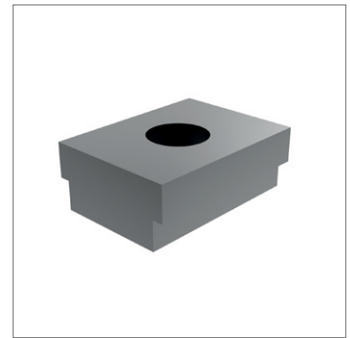
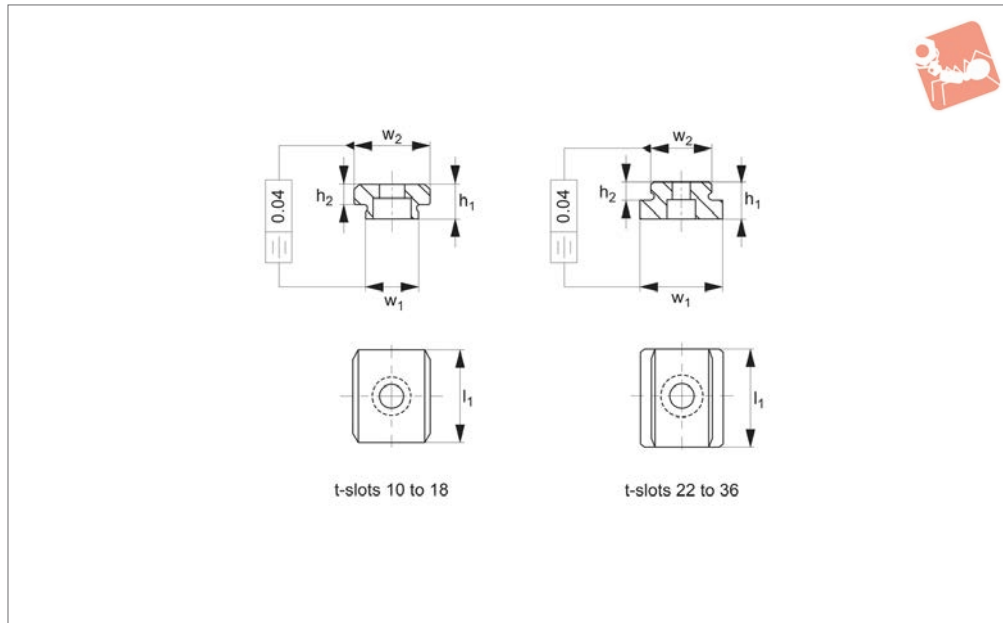
Produced to DIN 6323.

Order No.	Type	Machine slot size w_2 tol. h6	l_1	Fixture slot size w_1 tol. h6	h_1	h_2	h_3	h_4	Weight g
30040.W0010	Type A	10	20	12	12.0	3.6	-	-	20
30040.W0012	Type A	12	32	20	14.0	5.5	-	-	50
30040.W0014	Type A	14	32	20	14.0	5.5	-	-	55
30040.W0016	Type A	16	32	20	14.0	5.5	-	-	60
30040.W0018	Type A	18	32	20	14.0	5.5	-	-	65
30040.W0011	Type B	12	20	12	28.6	-	5.5	9	45
30040.W0020	Type B	20	32	20	45.5	-	7.0	16	200
30040.W0022	Type C	22	40	20	50.5	-	7.0	18	290
30040.W0024	Type C	24	40	20	55.5	-	7.0	20	350
30040.W0028	Type C	28	40	20	61.5	-	7.0	24	460
30040.W0036	Type C	36	50	20	76.5	-	7.0	30	940



Fixed Slot Tenons with cylindrical fastening

Tenons, Locating Pads & Drill



30060

TENONS, LOCATING PADS & DRILL BUSHES

Material

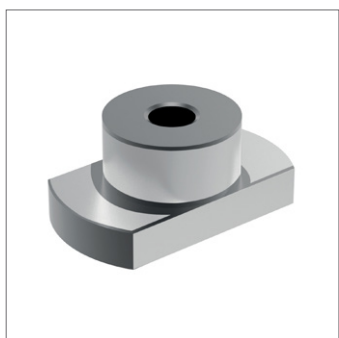
Steel, case-hardened (C15), blackened and ground.

Technical Notes

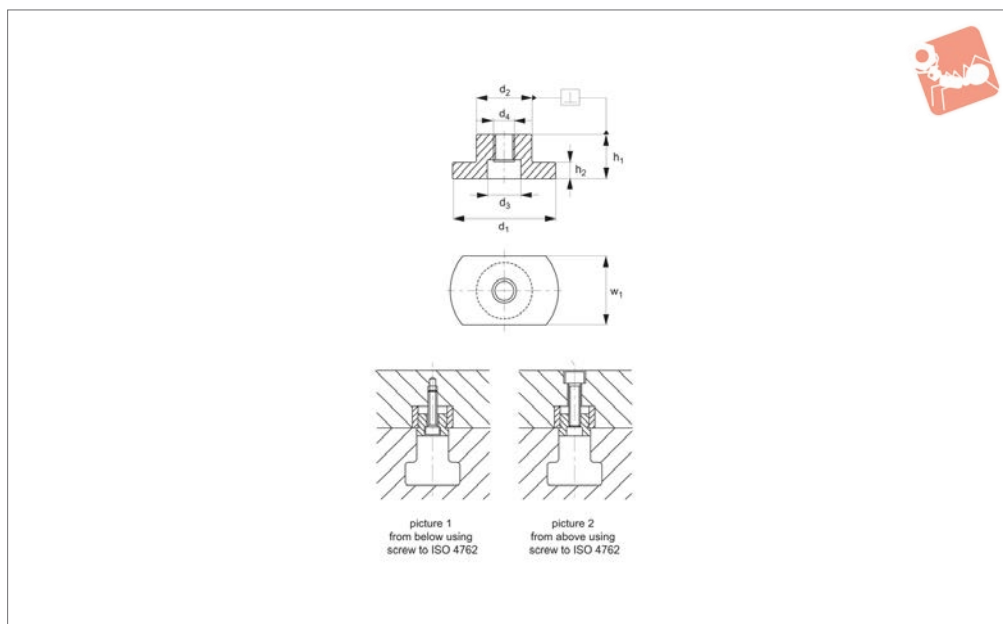
Fixed type tenons, used in pairs, are

screwed onto the bases of vices and fixtures having standard slot sizes of 20mm. The tenon interfaces into machine T-slots of varying widths. For heavy fixtures use loose tenons no. 30040.

Order No.	Machine slot Size w_1 tol. h6	l_1	Fixture slot size w_2 tol. h6	h_1	h_2	For screws DIN 84 & DIN 912	Weight g
30060.W0010	10	22	20	10	5.5	M 6x10	20
30060.W0012	12	22	20	10	5.5	M 6x10	25
30060.W0014	14	25	20	10	5.5	M 6x16	28
30060.W0016	16	25	20	10	5.5	M 6x16	30
30060.W0018	18	25	20	10	5.5	M 6x16	30
30060.W0022	22	32	20	12	5.5	M 6x16	50
30060.W0024	24	32	20	12	5.5	M 6x16	55
30060.W0028	28	32	20	12	5.5	M 6x16	60
30060.W0036	36	32	20	12	5.5	M 6x16	75



30080



Material

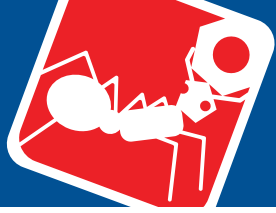
Steel, heat-treated, case-hardened, blackened and ground.

Technical Notes

Used for locating fixtures and clamping elements on mounting pallets with cylindrical location holes. They can also be inserted into bored holes and T-slots.

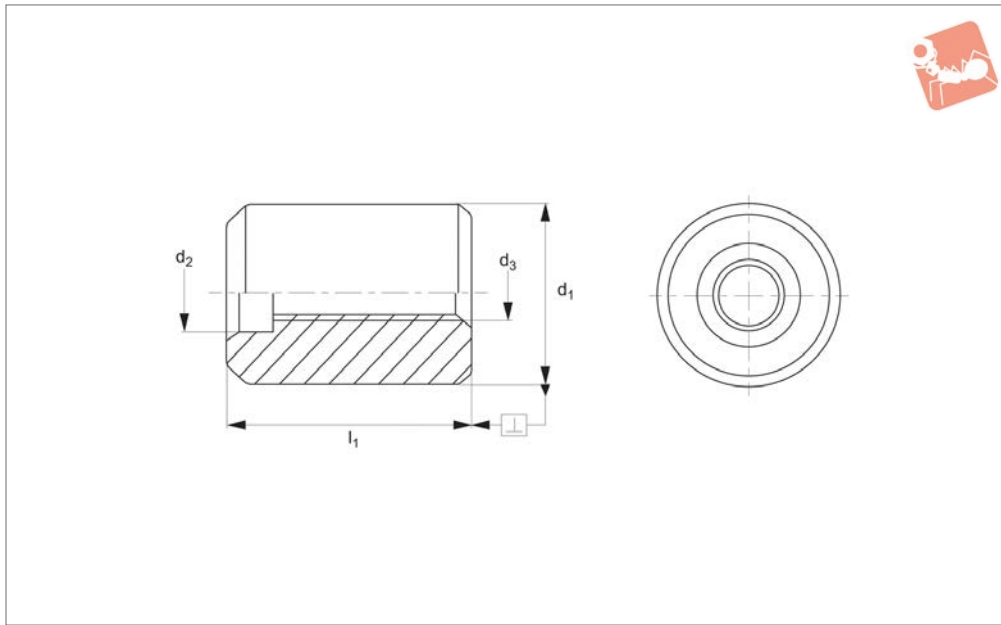
drical location holes. They can also be inserted into bored holes and T-slots.

Order No.	Machine slot Size w_1 tol. h6	d_1	Fixture slot size d_2 tol. h6	d_3	h_1	h_2	For screws ISO 4762 picture 1	For screws ISO 4762 picture 2 d_4	Weight g
30080.W0110	10	30	20	11	15,5	5,8	M 6x10	M 8	28
30080.W0112	12	30	20	11	15,5	5,8	M 6x10	M 8	39
30080.W0114	14	30	20	11	15,5	5,8	M 6x16	M 8	41
30080.W0116	16	30	20	11	15,5	5,8	M 6x16	M 8	36
30080.W0118	18	30	20	11	15,5	5,8	M 6x16	M 8	45
30080.W0120	20	36	20	11	15,5	5,8	M 6x16	M 8	48
30080.W0122	22	40	20	11	15,5	5,8	M 6x16	M 8	54
30080.W0128	28	42	20	11	15,5	5,8	M 6x16	M 8	65
30080.W0136	36	48	20	11	15,5	5,8	M 6x16	M 8	86



Centering Pins for fixtures and pallets

Tenons, Locating Pads & Drill



30090

TENONS, LOCATING PADS & DRILL BUSHES

Material

Steel, alloyed, case-hardened, ground.

Technical Notes

Used for centering fixtures on pallets.

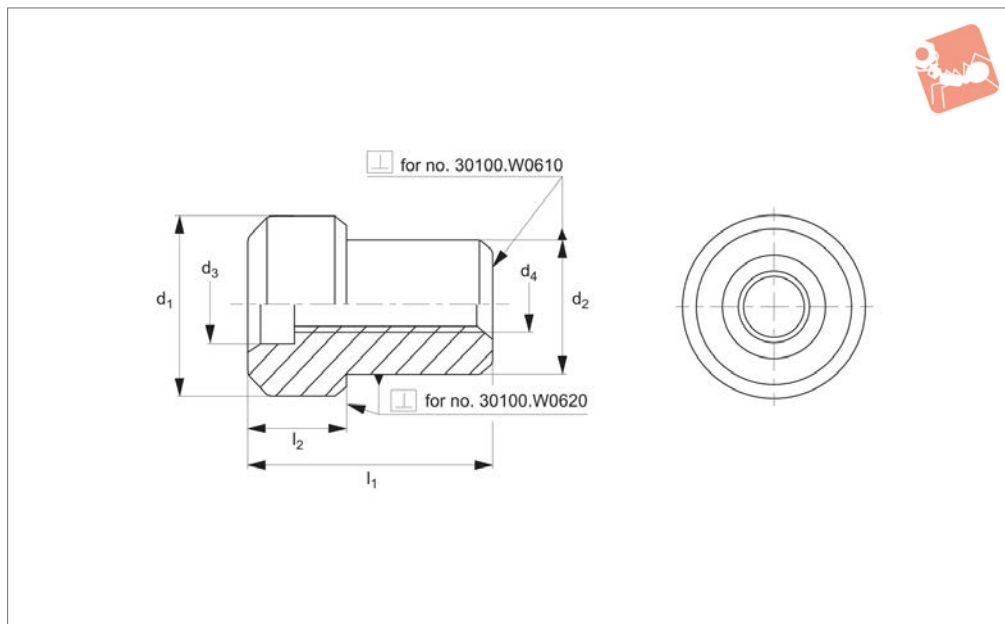
Order No.	l_1	d_1 tol. h6	d_2	d_3	Weight g
30090.W0510	31	20	11	M 8	70
30090.W0520	35	25	11	M 8	118
30090.W0530	31	50	11	M 8	473
30090.W0540	45	50	11	M 8	672



TENONS, LOCATING PADS & DRILL BUSHES



30100



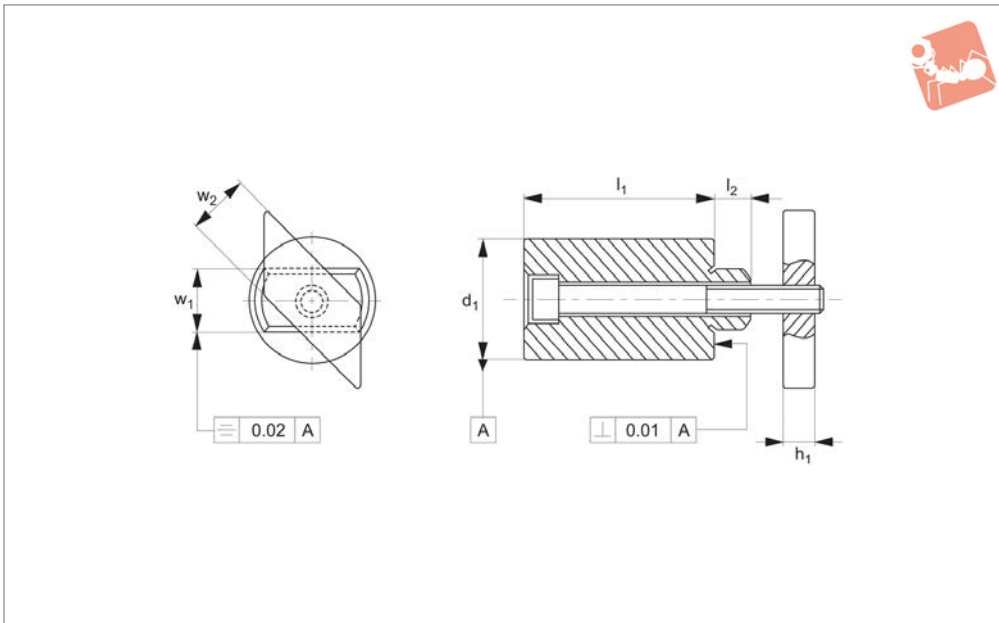
Material

Steel, alloyed, case-hardened, ground.

Technical Notes

Used for centering fixtures on pallets.

Order No.	l_1	l_2	d_1 tol. h6	d_2 tol. h6	d_3	d_4	Weight g
30100.W0610	35	12	25	20	11	M 8	87
30100.W0620	35	20	50	20	11	M 8	330



30200

TENONS, LOCATING PADS & DRILL BUSHES

Material

Cylindrical stop: steel, case-hardened and ground.

Holding plate: steel, blackened.

Screw: DIN 912, quality 8.8.

Technical Notes

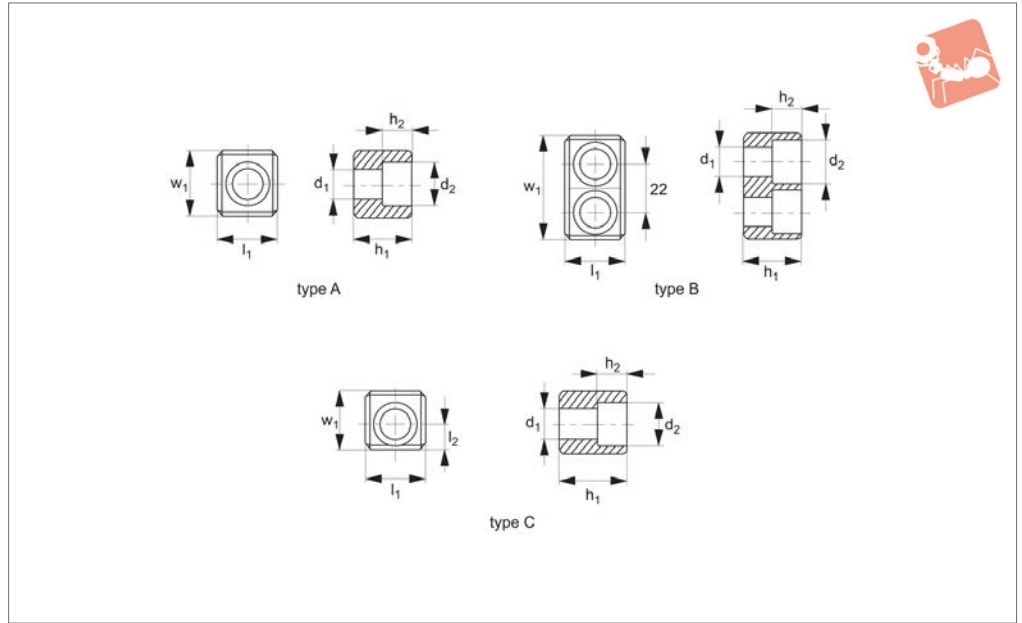
Used as workpiece stops on machine

tables, and as datum points. The short form is ground to a height tolerance of $\pm 0,01\text{mm}$ and can also be used as a seating element.

Order No.	Short l_1 ± 0.01	Long l_1 ± 0.2	l_2	w_2 -0.6	d_1 ± 0.01	h_1	Screw DIN 912	T-slot w_1 tol. h6	Weight g
30200.W0110	15	-	8	10	20	6	M 6x25	10	53
30200.W0112	15	-	8	12	20	6	M 6x25	12	58
30200.W0114	25	-	9	14	32	8	M 8x35	14	202
30200.W0116	25	-	10	16	32	8	M 8x45	16	221
30200.W0118	25	-	15	18	40	10	M10x50	18	371
30200.W0122	25	-	15	20	40	14	M10x55	22	435
30200.W0128	25	-	20	22	46	16	M12x60	28	661
30200.W0210	-	25	8	10	20	6	M 6x35	10	76
30200.W0212	-	25	8	12	20	6	M 6x35	12	83
30200.W0214	-	50	9	14	32	8	M 8x60	14	357
30200.W0216	-	50	10	16	32	8	M 8x70	16	371
30200.W0218	-	50	15	18	40	10	M10x75	18	613
30200.W0222	-	50	15	20	40	14	M10x80	22	679
30200.W0228	-	50	20	22	46	16	M12x90	28	985



30300



Material

Steel, alloyed, case-hardened, blackened and ground.

Technical Notes

Produced to DIN 2079.
Used on machine tool spindle heads for

positioning and locking of spindle head.

Order No.	Type	l_1 tol. h5	l_2 ± 0.1	w_1	d_1	d_2	h_1	h_2	For spindle head no.	Matching screw DIN 912	Weight g
30300.W0030	A	15.9	-	16.5	6.4	10.4	16.0	6.2	30	M 6x16	25
30300.W0040	A	15.9	-	19.5	6.4	10.4	16.0	6.2	40	M 6x16	31
30300.W0045	A	19.0	-	19.5	8.4	13.5	19.0	8.3	45	M 8x20	38
30300.W0050	A	25.4	-	26.5	13.0	19.0	25.0	12.3	50-55	M12x25	85
30300.W0060	A	25.4	-	45.5	13.0	19.0	25.0	12.3	60	M12x25	179
30300.W0160	B	25.4	-	45.5	13.0	19.0	25.0	12.3	60	M12x25	140
30300.W0230	C	15.9	5.5	13.5	6.4	10.4	24.5	6.2	30	M 6x25	30
30300.W0240	C	15.9	7.0	16.5	6.4	10.4	24.5	6.2	40	M 6x25	39
30300.W0245	C	19.0	7.5	17.5	8.4	13.5	26.0	10.0	45	M 8x25	47
30300.W0250	C	25.4	11.0	24.0	13.0	19.0	29.0	12.3	50	M12x30	89

