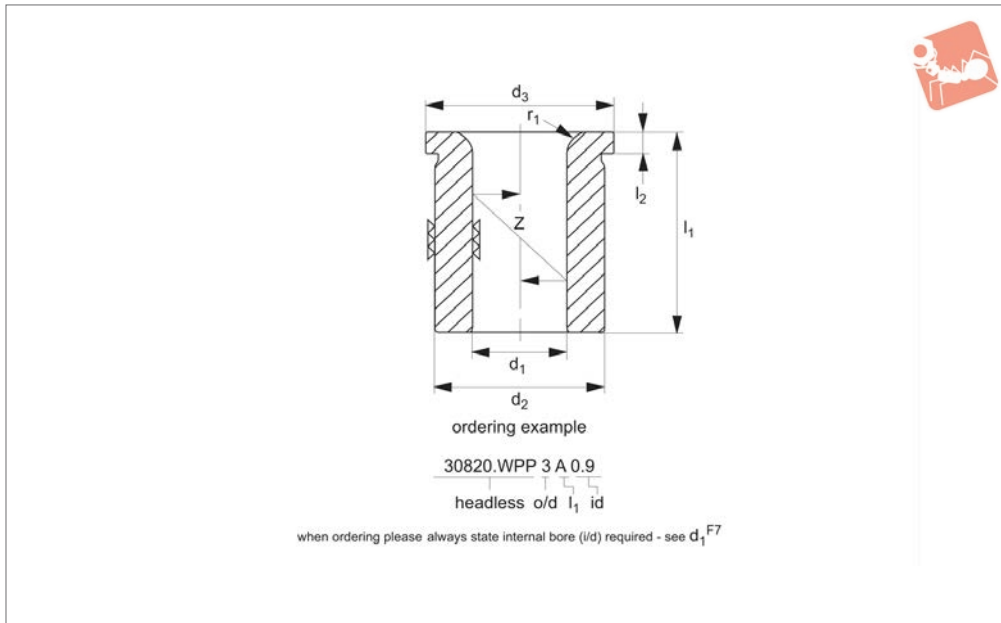




Headed Drill Bushes - DIN 172A

short

Tenons, Locating Pads & Drill



30820.1

TENONS, LOCATING PADS & DRILL BUSHES

Material

High grade steel. Hardened 740 +HV10.
Hole, d_1 ground ISO tolerance F7.
o/d- d_2 ground ISO tolerance n6, to fit standard hole tolerance H7. Length l_1 to $\pm 0,2$ for lengths 6 to 30mm.

Technical Notes

d_1 dimension tolerance to F7.

Key to dimensions l_1 :

- l_1 short
- l_1 medium
- l_1 long

Table of lengths l_1 :

- 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 $d_1 < 0,9$ 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

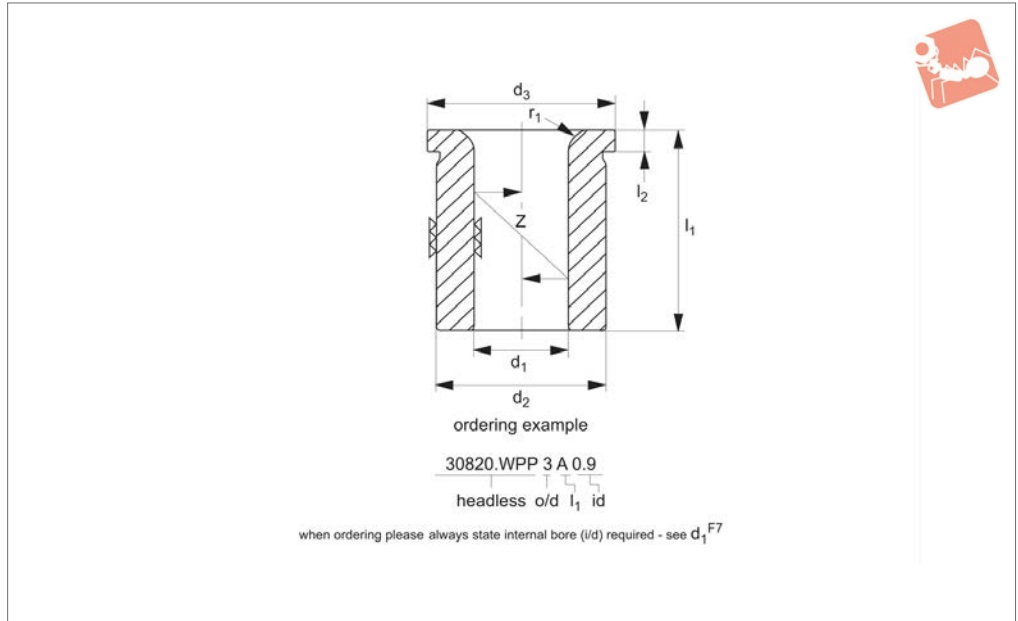


Tenons, Locating Pads & Drill

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

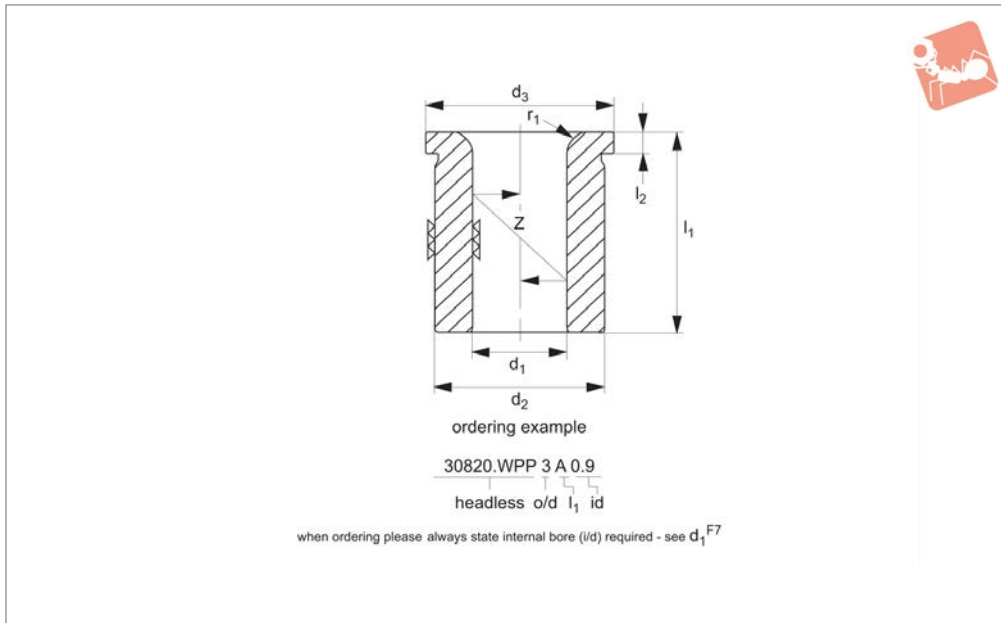


Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH78T57.5	57.5	medium	T	67	78	4	82	6
30820.WPH78T58.0	58.0	medium	T	67	78	4	82	6
30820.WPH78T58.5	58.5	medium	T	67	78	4	82	6
30820.WPH78T59.0	59.0	medium	T	67	78	4	82	6
30820.WPH78T59.5	59.5	medium	T	67	78	4	82	6
30820.WPH78T60.0	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

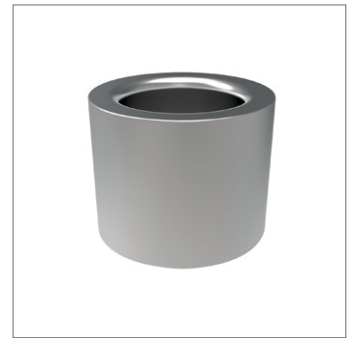
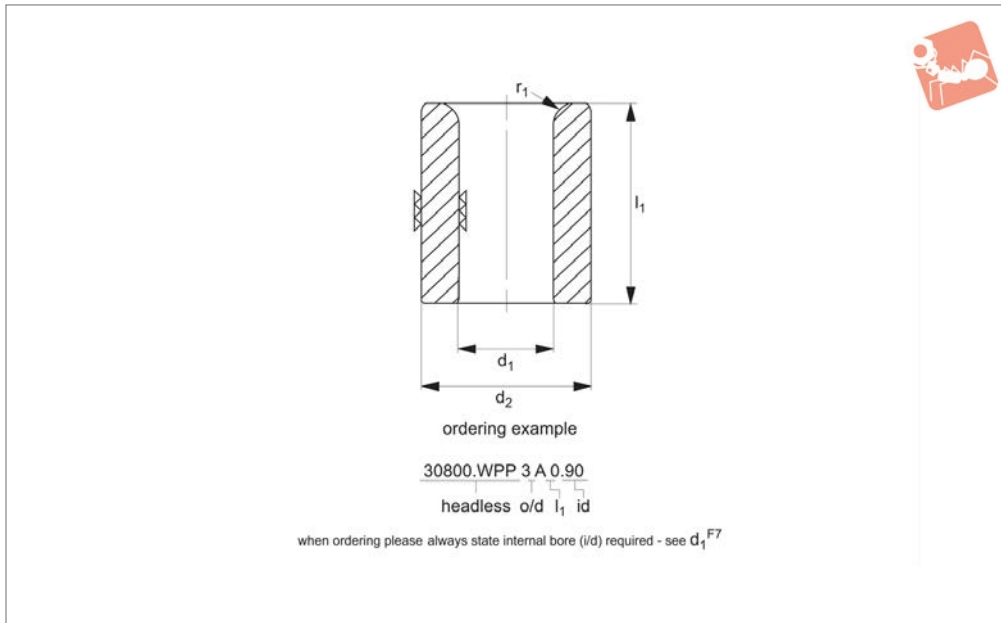


Order No.	i/d - d ₁	Length gen	Length letter	Length mm	d ₂	r ₁	d ₃	l ₂
30820.WPH48S30.5	30.5	long	S	56	48	3	52	5
30820.WPH48S31.0	31.0	long	S	56	48	3	52	5
30820.WPH48S31.5	31.5	long	S	56	48	3	52	5
30820.WPH48S32.0	32.0	long	S	56	48	3	52	5
30820.WPH48S32.5	32.5	long	S	56	48	3	52	5
30820.WPH48S33.0	33.0	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

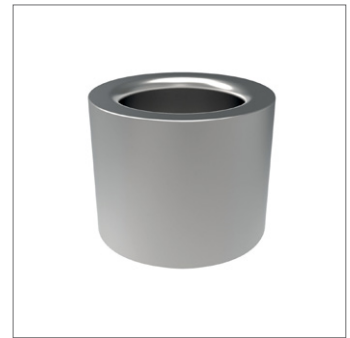
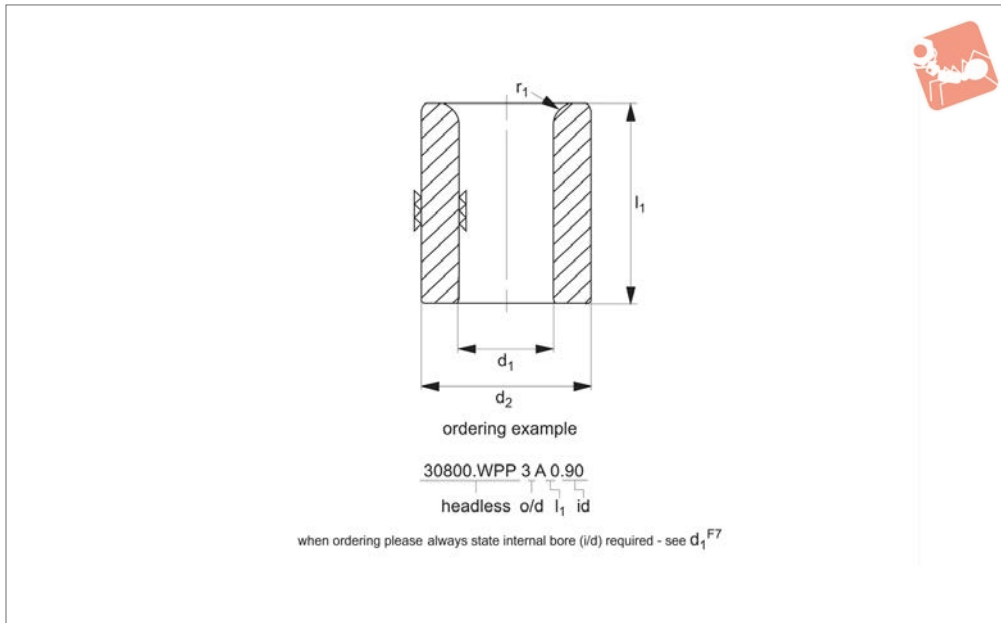


Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP35H22.5	22.5	short	H	20	35	3
30800.WPP35H23.0	23.0	short	H	20	35	3
30800.WPP35H23.5	23.5	short	H	20	35	3
30800.WPP35H24.0	24.0	short	H	20	35	3
30800.WPP35H24.5	24.5	short	H	20	35	3
30800.WPP35H25.0	25.0	short	H	20	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

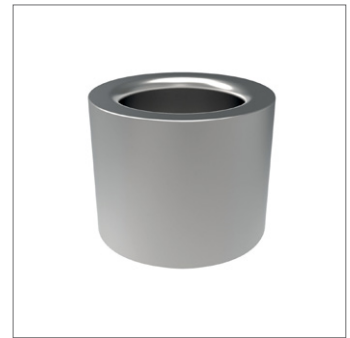
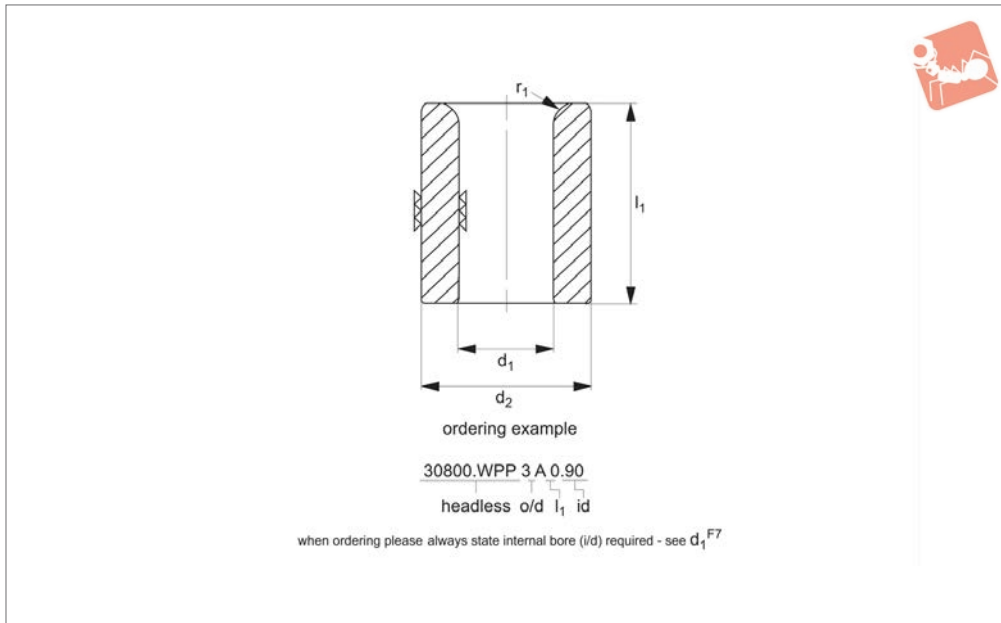


Order No.	i/d - d ₁ tol. F7	Length gen	Length letter	l ₁ ±0.2	d ₂ tol. N6	r ₁
30800.WPP35N22.5	22.5	medium	N	36	35	3
30800.WPP35N23.0	23.0	medium	N	36	35	3
30800.WPP35N23.5	23.5	medium	N	36	35	3
30800.WPP35N24.0	24.0	medium	N	36	35	3
30800.WPP35N24.5	24.5	medium	N	36	35	3
30800.WPP35N25.0	25.0	medium	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

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.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

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.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