Cemented Carbide
Rods & Bars

ZHUZHOU CEMENTED CARBIDE GROUP CORP. LTD.

www.zcccanada.com

About ZCC and Rods & Bars Division

Zhuzhou Cemented Carbide Works Imp.&Exp.Co. (ZCC) is the international trade organization under ZCC group. ZCC has five overseas branches in the USA, Canada, Europe, Hongkong and India. In order to shorten delivery and facilitate customers at closer range, large volume of standardized rods are stocked in Ann Arbor, USA; Guelph, Canada; and Dusseldorf, Germany, enabling prompt order response and deliveries of most popular rods within 48 hours to our customers in North America and European countries.

CONTENT

R & D Center

State Key Laboratory of
Cemented Carbide

Testing Center

National Accreditation Board
for Laboratories. (Equivalent to ISO/IEC17025)

Production Plants

◀Spray Drying

◀Extrusion

Pressing▲

▲Sintering

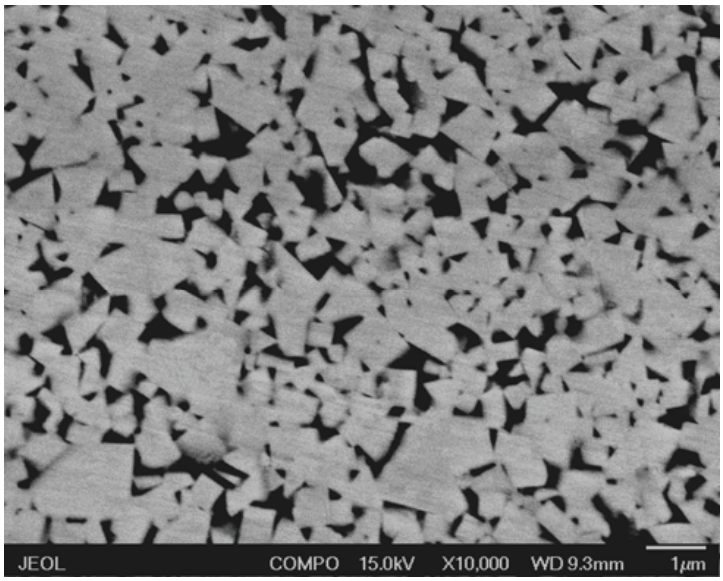
◀Machining

GRADE OVERVIEW

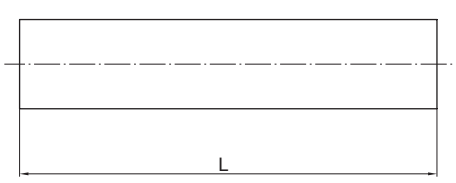
GRADE OVERVIEW(For Cutting Tools)									
CHEMICAL COMPOSITION			PHYSICAL PROPERTIES						
GRADE	WC+ others	Co	GRAIN SIZE (μm)	HARDNESS (HV30)	HARDNESS (HRA)	TRS (N/mm^2) (Sample C)	TRS (KPSI)	DENSITY (g/cm^3)	Fracture Toughness KIC $Mpa.m^{1/2}$
XN108	92.00%	8%	0.2	2100	94.6	4500	652.5	14.46	10.50
XU30	88.00%	12%	0.4	1750	92.5	4000	580	14.1	15.20
YF06	94.00%	6%	0.6	1850	93.1	3600	522	14.9	9.17
XF20T	90.00%	10%	0.6	1650	91.7	3800	551	14.45	15.40
XF30	88.00%	12%	0.6	1700	92.3	4000	580	14.1	13.26
YL10.2	90.00%	10%	0.8	1600	91.5	4000	580	14.42	14.60
YL10A	92.00%	8%	0.8	1780	92.8	3800	551	14.65	10.74

Cemented Carbide Rod Grade YL10.2

GRADE YL10.2			
Co			10%
WC(%)			90%
PHYSICS PERFORMANCE			
Density (g/cm³)		ISO3369	14.45 ± 0.05
Hardness HV30		ISO3878	1600 (typical) / 1550 (min)
HRA			91.5 (typical) / 91.0 (min)
4 π σ (μTm³/kg)			17.0 ± 1.2
HC (KA/m)		ISO3326	20.5 ± 2.0
TRS (N/mm²)		ISO3327	Sample B: 3300 (typical) / 3000 (min)
Kic (Mpa.m¹/²)			14.60
MICRO STRUCTURE			
MICRO POROSITY	A (<10 μm)	ISO4505	≤02
	B (10-25 μm)	ISO4505	≤00
	C	ISO4505	≤00
Grain Size (micron)		ISO4499	0.8μm
η Phase		ISO4499	E00



Carbide Rods as Sintered Length 330(310)mm

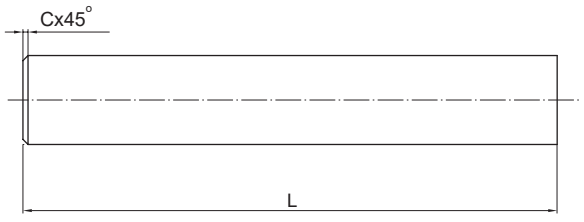


Type	D(mm)	Tol.D	L(mm)	Tol.L
BΦ0.5×330	0.5	+0.10/0.20	330	-0/+10.0
BΦ1.0×330	1.0	+0.10/0.20	330	-0/+10.0
BΦ1.2×330	1.2	+0.10/0.20	330	-0/+10.0
BΦ1.6×330	1.6	+0.10/0.20	330	-0/+10.0
BΦ1.8×330	1.8	+0.10/0.20	330	-0/+10.0
BΦ2.3×330	2.3	+0.10/0.30	330	-0/+10.0
BΦ2.5×330	2.5	+0.10/0.30	330	-0/+10.0
BΦ3.0×330	3.0	+0.10/0.30	330	-0/+10.0
BΦ3.5×330	3.5	+0.10/0.30	330	-0/+10.0
BΦ4.0×330	4.0	+0.20/0.50	330	-0/+10.0
BΦ4.5×330	4.5	+0.20/0.50	330	-0/+10.0
BΦ5.0×330	5.0	+0.20/0.50	330	-0/+10.0
BΦ5.5×330	5.5	+0.20/0.50	330	-0/+10.0
BΦ6.0×330	6.0	+0.20/0.50	330	-0/+10.0
BΦ6.5×330	6.5	+0.20/0.50	330	-0/+10.0
BΦ7.0×330	7.0	+0.20/0.50	330	-0/+10.0
BΦ7.5×330	7.5	+0.20/0.50	330	-0/+10.0
BΦ8.0×330	8.0	+0.20/0.50	330	-0/+10.0
BΦ8.5×330	8.5	+0.20/0.50	330	-0/+10.0
BΦ9.0×330	9.0	+0.20/0.50	330	-0/+10.0
BΦ9.5×330	9.5	+0.20/0.50	330	-0/+10.0
BΦ10.0×330	10.0	+0.20/0.50	330	-0/+10.0
BΦ10.5×330	10.5	+0.20/0.50	330	-0/+10.0
BΦ11.0×330	11.0	+0.20/0.50	330	-0/+10.0
BΦ11.5×330	11.5	+0.20/0.50	330	-0/+10.0
BΦ12.0×330	12.0	+0.20/0.60	330	-0/+10.0
BΦ12.5×330	12.5	+0.20/0.60	330	-0/+10.0
BΦ13.0×330	13.0	+0.20/0.60	330	-0/+10.0
BΦ13.5×330	13.5	+0.20/0.60	330	-0/+10.0

Type	D(mm)	Tol.D	L(mm)	Tol.L
BΦ14.0×330	14.0	+0.20/0.60	330	-0/+10.0
BΦ14.5×330	14.5	+0.20/0.60	330	-0/+10.0
BΦ15.0×330	15.0	+0.20/0.60	330	-0/+10.0
BΦ15.5×330	15.5	+0.20/0.60	330	-0/+10.0
BΦ16.0×330	16.0	+0.20/0.60	330	-0/+10.0
BΦ16.5×330	16.5	+0.20/0.60	330	-0/+10.0
BΦ17.0×330	17.0	+0.20/0.60	330	-0/+10.0
BΦ17.5×330	17.5	+0.20/0.60	330	-0/+10.0
BΦ18.0×330	18.0	+0.20/0.60	330	-0/+10.0
BΦ18.5×330	18.5	+0.20/0.60	330	-0/+10.0
BΦ19.0×330	19.0	+0.20/0.60	330	-0/+10.0
BΦ19.5×330	19.5	+0.20/0.60	330	-0/+10.0
BΦ20.0×330	20.0	+0.20/0.60	330	-0/+10.0
BΦ21.0×330	21.0	+0.20/0.65	330	-0/+10.0
BΦ22.0×330	22.0	+0.20/0.65	330	-0/+10.0
BΦ23.0×330	23.0	+0.20/0.65	330	-0/+10.0
BΦ24.0×330	24.0	+0.20/0.65	330	-0/+10.0
BΦ25.0×330	25.0	+0.20/0.65	330	-0/+10.0
BΦ26.0×330	26.0	+0.20/0.65	330	-0/+10.0
BΦ27.0×330	27.0	+0.20/0.65	330	-0/+10.0
BΦ28.0×330	28.0	+0.20/0.65	330	-0/+10.0
BΦ29.0×330	29.0	+0.20/0.65	330	-0/+10.0
BΦ30.0×330	30.0	+0.20/0.65	330	-0/+10.0
BΦ31.0×330	31.0	+0.20/0.65	330	-0/+10.0
BΦ32.0×330	32.0	+0.20/0.65	330	-0/+10.0
BΦ33.0×330	33.0	+0.20/0.65	330	-0/+10.0
BΦ34.0×330	34.0	+0.20/0.65	330	-0/+10.0
BΦ35.0×330	35.0	+0.20/0.65	330	-0/+10.0

More types are available on request

Carbide Ground Rods(tol.h5/h6)
Length100mm,
Chamfered 45°

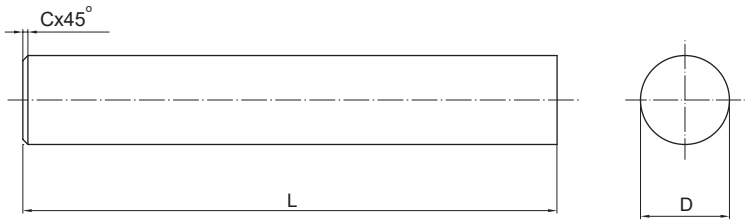


Type	D (mm)	L(mm)	Tol.L(mm)	C(mm)
Φ1.0×100	1.0	100	up on request	0.3
Φ1.5×100	1.5	100	up on request	0.3
Φ2.0×100	2.0	100	up on request	0.3
Φ2.5×100	2.5	100	up on request	0.3
Φ3.0×100	3.0	100	up on request	0.3
Φ3.5×100	3.5	100	up on request	0.3
Φ4.0×100	4.0	100	up on request	0.3
Φ4.5×100	4.5	100	up on request	0.3
Φ5.0×100	5.0	100	up on request	0.3
Φ5.5×100	5.5	100	up on request	0.3
Φ6.0×100	6.0	100	up on request	0.5
Φ6.5×100	6.5	100	up on request	0.5
Φ7.0×100	7.0	100	up on request	0.5
Φ7.5×100	7.5	100	up on request	0.5
Φ8.0×100	8.0	100	up on request	0.5
Φ8.5×100	8.5	100	up on request	0.5
Φ9.0×100	9.0	100	up on request	0.5
Φ9.5×100	9.5	100	up on request	0.5
Φ10.0×100	10.0	100	up on request	0.5
Φ10.5×100	10.5	100	up on request	0.5
Φ11.0×100	11.0	100	up on request	0.5
Φ11.5×100	11.5	100	up on request	0.5
Φ12.0×100	12.0	100	up on request	0.7

Type	D (mm)	L(mm)	Tol.L(mm)	C(mm)
Φ13.0×100	13.0	100	up on request	0.7
Φ14.0×100	14.0	100	up on request	0.7
Φ15.0×100	15.0	100	up on request	0.7
Φ16.0×100	16.0	100	up on request	0.7
Φ18.0×100	18.0	100	up on request	1.0
Φ19.0×100	19.0	100	up on request	1.0
Φ20.0×100	20.0	100	up on request	1.0
Φ21.0×100	21.0	100	up on request	1.0
Φ22.0×100	22.0	100	up on request	1.0
Φ23.0×100	23.0	100	up on request	1.0
Φ24.0×100	24.0	100	up on request	1.0
Φ25.0×100	25.0	100	up on request	1.5
Φ26.0×100	26.0	100	up on request	1.5
Φ28.0×100	28.0	100	up on request	1.5
Φ30.0×100	30.0	100	up on request	1.5
Φ32.0×100	32.0	100	up on request	1.5
Φ33.0×100	33.0	100	up on request	1.5
Φ34.0×100	34.0	100	up on request	1.5
Φ35.0×100	35.0	100	up on request	1.5
Φ36.0×100	36.0	100	up on request	1.5
Φ38.0×100	38.0	100	up on request	1.5
Φ40.0×100	40.0	100	up on request	1.5

More types are available on request

Carbide Rods
Cut to Length-Inch Sizes
Ground/Polished/Chamfered

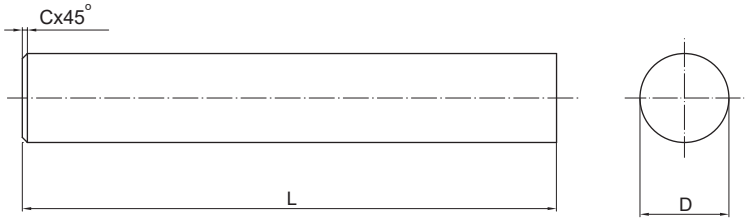


Type	D,inch	Tol. D	L,inch	Chamfer
1/16×1-1/2	1/16	h6	1-1/2	0.2
3/32×1.04	3/32	h6	1.04	0.2
3/32×1-3/4	3/32	h6	1-3/4	0.2
3/32×2	3/32	h6	2	0.2
1/8×1	1/8	h6	1	0.3
1/8×1-1/2	1/8	h6	1-1/2	0.3
1/8×2	1/8	h6	2	0.3
1/8×2-1/4	1/8	h6	2-1/4	0.3
1/8×2-1/2	1/8	h6	2-1/2	0.3
1/8×3	1/8	h6	3	0.3
1/8×4	1/8	h6	4	0.3
1/8×4-1/2	1/8	h6	4-1/2	0.3
1/8×12	1/8	h6	12	0.3
5/32×2	5/32	h6	2	0.3
5/32×2-1/2	5/32	h6	2-1/2	0.3
5/32×3	5/32	h6	3	0.3
5/32×12	5/32	h6	12	0.3
.1610×2-1/2	.1610	h6	2-1/2	0.3
11/64×2-3/4	11/64	h6	2-3/4	0.3
11/64×6-1/2	11/64	h6	6-1/2	0.3
11/64×7	11/64	h6	7	0.3
3/16×1-1/2	3/16	h6	1-1/2	0.4
3/16×2	3/16	h6	2	0.4
3/16×2-3/16	3/16	h6	2-3/16	0.4
3/16×2-1/4	3/16	h6	2-1/4	0.4
3/16×2-1/2	3/16	h6	2-1/2	0.4
3/16×3	3/16	h6	3	0.4
3/16×4	3/16	h6	4	0.4
3/16×6	3/16	h6	6	0.4

Note:10"≤L≤13", L tolerance: 0/+0.4"; L<10", L tolerance: 0/+0.02"

More types are available on request

Carbide Rods
Cut to Length-Inch Sizes
Ground/Polished/Chamfered

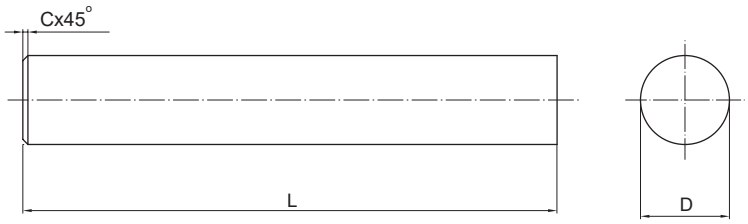


Type	D,inch	Tol. D	L,inch	Chamfer
.1935×2-3/4	.1935	h6	2-3/4	0.4
13/64×3	13/64	h6	3	0.4
7/32×3	7/32	h6	3	0.4
0.2188×2.5	0.2188	h6	2.5	0.4
1/4×1-1/2	1/4	h6	1-1/2	0.4
1/4×2	1/4	h6	2	0.4
1/4×2-1/2	1/4	h6	2-1/2	0.4
1/4×3	1/4	h6	3	0.4
1/4×3-1/2	1/4	h6	3-1/2	0.4
1/4×4	1/4	h6	4	0.4
1/4×4-1/2	1/4	h6	4-1/2	0.4
1/4×5	1/4	h6	5	0.4
1/4×6	1/4	h6	6	0.4
1/4×6-1/2	1/4	h6	6-1/2	0.4
1/4×7	1/4	h6	7	0.4
1/4×8	1/4	h6	8	0.4
1/4×12	1/4	h6	12	no
9/32×1-1/2	9/32	h6	1-1/2	0.6
9/32×2-13/16	9/32	h6	2-13/16	0.6
5/16×1-1/4	5/16	h6	1-1/4	0.6
5/16×2-1/2	5/16	h6	2-1/2	0.6
5/16×3	5/16	h6	3	0.6
5/16×3-1/2	5/16	h6	3-1/2	0.6
5/16×3-3/4	5/16	h6	3-3/4	0.6
5/16×4	5/16	h6	4	0.6
5/16×6	5/16	h6	6	0.6
5/16×12	5/16	h6	12	no
11/32×4	11/32	h6	4	0.6

Note:10"≤L≤13", L tolerance: 0/+0.4"; L<10", L tolerance: 0/+0.02"

More types are available on request

Carbide Rods
Cut to Length-Inch Sizes
Ground/Polished/Chamfered

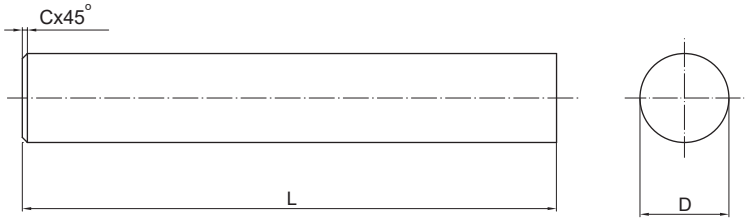


Type	D,inch	Tol. D	L,inch	Chamfer
23/64×8	23/64	h6	8	0.6
3/8×2	3/8	h6	2	0.6
3/8×2-1/2	3/8	h6	2-1/2	0.6
3/8×3	3/8	h6	3	0.6
3/8×3-1/4	3/8	h6	3-1/4	0.6
3/8×4	3/8	h6	4	0.6
3/8×4-1/2	3/8	h6	4-1/2	0.6
3/8×5	3/8	h6	5	0.6
3/8×6	3/8	h6	6	0.6
3/8×8	3/8	h6	8	0.6
3/8×6-1/2	3/8	h6	6-1/2	0.6
3/8×12	3/8	h6	12	0.6
27/64×4	27/64	h6	4	0.6
27/64×4-1/2	27/64	h6	4-1/2	0.6
7/16×2-1/2	7/16	h6	2-1/2	0.6
7/16×3	7/16	h6	3	0.6
7/16×3-1/2	7/16	h6	3-1/2	0.6
7/16×4	7/16	h6	4	0.6
7/16×4-1/2	7/16	h6	4-1/2	0.6
7/16×6	7/16	h6	6	0.6
7/16×12	7/16	h6	12	0.6
1/2×2-1/2	1/2	h6	2-1/2	0.6
1/2×3	1/2	h6	3	0.6
1/2×3-1/4	1/2	h6	3-1/4	0.6
1/2×3-1/2	1/2	h6	3-1/2	0.6
1/2×4	1/2	h6	4	0.6
1/2×4-1/2	1/2	h6	4-1/2	0.6
1/2×5	1/2	h6	5	0.6

Note:10"≤L≤13", L tolerance: 0/+0.4"; L<10", L tolerance: 0/+0.02"

More types are available on request

Carbide Rods
Cut to Length-Inch Sizes
Ground/Polished/Chamfered

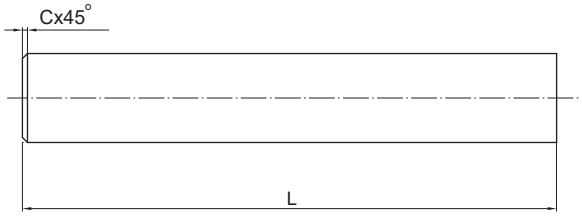


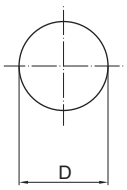
Type	D,inch	Tol. D	L,inch	Chamfer
1/2×6	1/2	h6	6	0.6
1/2×7	1/2	h6	7	0.6
1/2×8	1/2	h6	8	0.6
1/2×8-1/2	1/2	h6	8-1/2	0.6
1/2×12	1/2	h6	12	no
9/16×3	9/16	h6	3	0.8
9/16×3-1/2	9/16	h6	3-1/2	0.8
9/16×4	9/16	h6	4	0.8
9/16×5	9/16	h6	5	0.8
9/16×6	9/16	h6	6	0.8
5/8×3	5/8	h6	3	0.8
5/8×3-1/8	5/8	h6	3-1/8	0.8
5/8×3-1/4	5/8	h6	3-1/4	0.8
5/8×3-1/2	5/8	h6	3-1/2	0.8
5/8×4	5/8	h6	4	0.8
5/8×4-1/2	5/8	h6	4-1/2	0.8
5/8×5	5/8	h6	5	0.8
5/8×6	5/8	h6	6	0.8
5/8×7	5/8	h6	7	0.8
5/8×8	5/8	h6	8	0.8
5/8×10	5/8	h6	10	0.8
5/8×12	5/8	h6	12	0.8
3/4×3	3/4	h6	3	0.8
3/4×4	3/4	h6	4	0.8
3/4×5	3/4	h6	5	0.8
3/4×6	3/4	h6	6	0.8
3/4×7	3/4	h6	7	0.8
3/4×8	3/4	h6	8	0.8

Note:10"≤L≤13", L tolerance: 0/+0.4"; L<10", L tolerance: 0/+0.02"

More types are available on request

Carbide Rods
Cut to Length-Inch Sizes
Ground/Polished/Chamfered



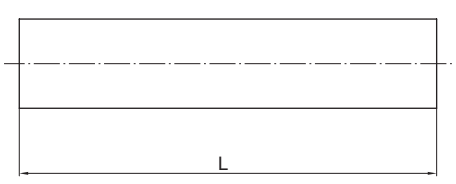


Type	D,inch	Tol. D	L,inch	Chamfer
3/4×10	3/4	h6	10	0.8
3/4×12	3/4	h6	12	no
7/8×4	7/8	h6	4	1.0
7/8×5	7/8	h6	5	1.0
7/8×6	7/8	h6	6	1.0
1×3	1	h6	3	1.0
1×4	1	h6	4	1.0
1×5	1	h6	5	1.0
1×6	1	h6	6	1.0
1×7	1	h6	7	1.0
1×8	1	h6	8	1.0
1×9	1	h6	9	1.0
1×10	1	h6	10	1.0
1×12	1	h6	12	no
1×12-1/2	1	h6	12-1/2	no
1×13	1	h6	13	no
1-1/8×4-1/2	1-1/8	h6	4-1/2	1.0
1-1/4×4	1-1/4	h6	4	1.0
1-1/4×5	1-1/4	h6	5	1.0
1-1/4×5-1/2	1-1/4	h6	5-1/2	1.0
1-1/4×6	1-1/4	h6	6	1.0
1-1/4×6-1/2	1-1/4	h6	6-1/2	1.0
1-1/4×7	1-1/4	h6	7	1.0
1-1/4×7-1/2	1-1/4	h6	7-1/2	1.0
1-1/4×8	1-1/4	h6	8	1.0
1-1/4×9	1-1/4	h6	9	1.0
1-1/4×12-1/2	1-1/4	h6	12-1/2	no
1-1/2×7-1/2	1-1/2	h6	7-1/2	1.0

Note:10"≤L≤13", L tolerance: 0/+0.4"; L<10", L tolerance: 0/+0.02"

More types are available on request

Carbide Rods
Ground to h5/h6
Length 330mm
Chamfered 45°

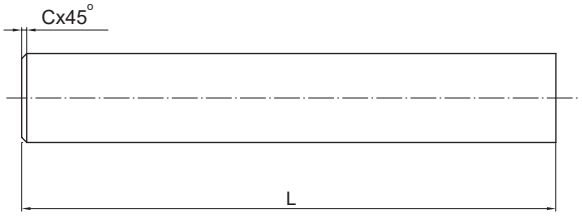


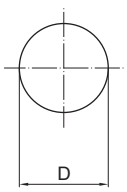
Type	D (mm)	L(mm)	Tol. L(mm)
Φ1.0×330	1.0	330	0/+10.0
Φ1.5×330	1.5	330	0/+10.0
Φ2.0×330	2.0	330	0/+10.0
Φ2.5×330	2.5	330	0/+10.0
Φ3.0×330	3.0	330	0/+10.0
Φ3.5×330	3.5	330	0/+10.0
Φ4.0×330	4.0	330	0/+10.0
Φ4.5×330	4.5	330	0/+10.0
Φ5.0×330	5.0	330	0/+10.0
Φ5.5×330	5.5	330	0/+10.0
Φ6.0×330	6.0	330	0/+10.0
Φ6.5×330	6.5	330	0/+10.0
Φ7.0×330	7.0	330	0/+10.0
Φ7.5×330	7.5	330	0/+10.0
Φ8.0×330	8.0	330	0/+10.0
Φ8.5×330	8.5	330	0/+10.0
Φ9.0×330	9.0	330	0/+10.0
Φ9.5×330	9.5	330	0/+10.0
Φ10×330	10.0	330	0/+10.0
Φ10.5×330	10.5	330	0/+10.0
Φ11×330	11.0	330	0/+10.0
Φ11.5×330	11.5	330	0/+10.0
Φ12×330	12.0	330	0/+10.0
Φ12.5×330	12.5	330	0/+10.0

Type	D (mm)	L(mm)	Tol. L(mm)
Φ13×330	13.0	330	0/+10.0
Φ14×330	14.0	330	0/+10.0
Φ15×330	15.0	330	0/+10.0
Φ16×330	16.0	330	0/+10.0
Φ17×330	17.0	330	0/+10.0
Φ18×330	18.0	330	0/+10.0
Φ19×330	19.0	330	0/+10.0
Φ20×330	20.0	330	0/+10.0
Φ21×330	21.0	330	0/+10.0
Φ22×330	22.0	330	0/+10.0
Φ23×330	23.0	330	0/+10.0
Φ24×330	24.0	330	0/+10.0
Φ25×330	25.0	330	0/+10.0
Φ26×330	26.0	330	0/+10.0
Φ28×330	28.0	330	0/+10.0
Φ30×330	30.0	330	0/+10.0
Φ32×330	32.0	330	0/+10.0
Φ33×330	33.0	330	0/+10.0
Φ34×330	34.0	330	0/+10.0
Φ35×330	35.0	330	0/+10.0
Φ36×330	36.0	330	0/+10.0
Φ38×330	38.0	330	0/+10.0
Φ40×330	40.0	330	0/+10.0

More types are available on request

Carbide Rods, Cut to Length
Ground to h5/h6
Chamfered 45°



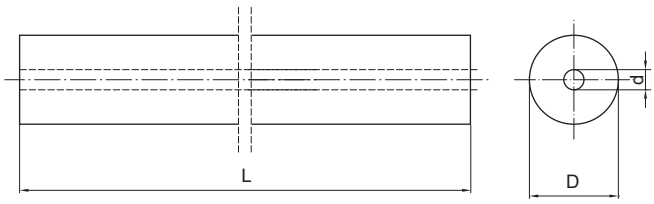


Type	D (mm)	L(mm)	Tol.(mm)L	Chamfer
Φ2.0×32	2.0	32	-0/+0.5	0.3
Φ3.0×32	3.0	32	-0/+0.5	0.3
Φ3.0×39	3.0	39	-0/+0.5	0.3
Φ4.0×38	4.0	38	-0/+0.5	0.4
Φ4.0×40	4.0	40	-0/+0.5	0.4
Φ4.0×51	4.0	51	-0/+0.5	0.4
Φ5.0×38	5.0	38	-0/+0.5	0.4
Φ5.0×51	5.0	51	-0/+0.5	0.4
Φ5.0×57	5.0	57	-0/+0.5	0.4
Φ6.0×39	6.0	39	-0/+0.5	0.4
Φ6.0×45	6.0	45	-0/+0.5	0.4
Φ6.0×51	6.0	51	-0/+0.5	0.4
Φ6.0×55	6.0	55	-0/+0.5	0.4
Φ6.0×57	6.0	57	-0/+0.5	0.4
Φ7.0×60	7.0	60	-0/+0.5	0.6
Φ8.0×58	8.0	58	-0/+0.5	0.6
Φ8.0×60	8.0	60	-0/+0.5	0.6
Φ8.0×64	8.0	64	-0/+0.5	0.6
Φ9.0×60	9.0	60	-0/+0.5	0.6
Φ9.0×63	9.0	63	-0/+0.5	0.6
Φ10.0×66	10.0	66	-0/+0.5	0.6

Type	D (mm)	L(mm)	Tol.(mm)L	Chamfer
Φ10.0×70	10.0	70	-0/+0.5	0.8
Φ10.0×72	10.0	72	-0/+0.5	0.8
Φ11.0×70	11.0	70	-0/+0.5	0.8
Φ11.0×72	11.0	72	-0/+0.5	0.8
Φ12.0×70	12.0	70	-0/+0.5	0.8
Φ12.0×73	12.0	73	-0/+0.5	0.8
Φ12.0×84	12.0	84	-0/+0.5	0.8
Φ12.0×100	12.0	100	-0/+0.5	0.8
Φ13.0×75	13.0	75	-0/+0.5	0.8
Φ14.0×75	14.0	75	-0/+0.5	0.8
Φ14.0×84	14.0	84	-0/+0.5	0.8
Φ15.0×75	15.0	75	-0/+0.5	0.8
Φ16.0×75	16.0	75	-0/+0.5	0.8
Φ16.0×82	16.0	82	-0/+0.5	0.8
Φ16.0×92	16.0	92	-0/+0.5	0.8
Φ18.0×84	18.0	84	-0/+0.5	1.0
Φ18.0×93	18.0	93	-0/+0.5	1.0
Φ18.0×100	18.0	100	-0/+0.5	1.0
Φ20.0×92	20.0	92	-0/+0.5	1.0
Φ20.0×100	20.0	100	-0/+0.5	1.0
Φ20.0×104	20.0	104	-0/+0.5	1.0

More types are available on request

Cemented Carbide Rods Blanks with One Central Coolant Hole

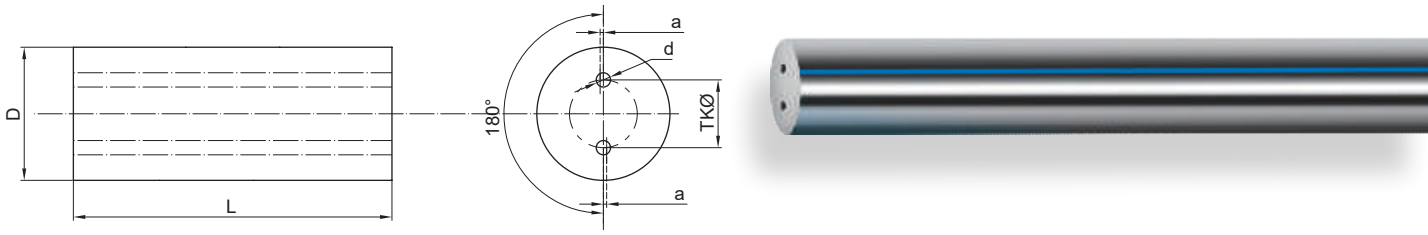


Type	D(mm)		d(mm)		Deviation of holes position≤(mm)	L(mm)	
	D	Tol.	d	Tol.		L	Tol.
BΦ4.0×Φ1.0×330	4.0	+0.2/+0.6	1.0	±0.15	0.2	330	0/+5
BΦ5.0×Φ1.0×330	5.0	+0.2/+0.6	1.0	±0.15	0.2	330	0/+5
BΦ5.0×Φ1.5×330	5.0	+0.2/+0.6	1.5	±0.15	0.2	330	0/+5
BΦ6.0×Φ1.0×330	6.0	+0.2/+0.6	1.0	±0.15	0.2	330	0/+5
BΦ6.0×Φ1.5×330	6.0	+0.2/+0.6	1.5	±0.15	0.2	330	0/+5
BΦ8.0×Φ1.0×330	8.0	+0.2/+0.6	1.0	±0.15	0.25	330	0/+5
BΦ8.0×Φ1.5×330	8.0	+0.2/+0.6	1.5	±0.15	0.25	330	0/+5
BΦ9.0×Φ1.0×330	9.0	+0.3/+0.7	1.0	±0.15	0.25	330	0/+5
BΦ10.0×Φ1.0×330	10.0	+0.3/+0.7	1.0	±0.15	0.25	330	0/+5
BΦ10.0×Φ2.0×330	10.0	+0.3/+0.7	2.0	±0.2	0.25	330	0/+5
BΦ11.0×Φ1.0×330	11.0	+0.3/+0.7	1.0	±0.15	0.25	330	0/+5
BΦ12.0×Φ1.0×330	12.0	+0.3/+0.7	1.0	±0.15	0.25	330	0/+5
BΦ12.0×Φ2.0×330	12.0	+0.3/+0.7	2.0	±0.2	0.25	330	0/+5
BΦ14.0×Φ2.0×330	14.0	+0.3/+0.7	2.0	±0.2	0.25	330	0/+5
BΦ16.0×Φ2.0×330	16.0	+0.4/+0.8	2.0	±0.2	0.25	330	0/+5
BΦ16.0×Φ3.0×330	16.0	+0.4/+0.8	3.0	±0.25	0.25	330	0/+5
BΦ18.0×Φ3.0×330	18.0	+0.4/+0.8	3.0	±0.25	0.3	330	0/+5
BΦ20.0×Φ3.0×330	20.0	+0.4/+0.8	3.0	±0.25	0.3	330	0/+5

20.0≤Dia ≤40.0 are available on request

More types are available on request

Carbide Rod with Two Straight Coolant Holes As Sintered

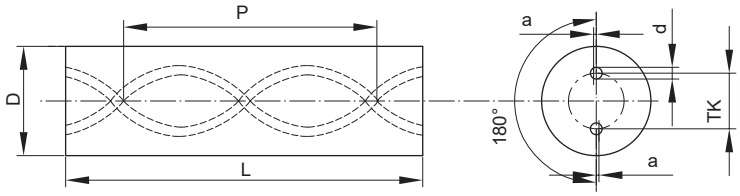


Type	D(mm)		TK(mm)		d(mm)		Deviation of holes position≤(mm)	L(mm)	
	D	Tol.(mm)	TK	Tol.	d	Tol.(mm)		L	Tol.(mm)
BΦ4.3×2Φ0.8×1.8×330Z	4.3	0/+0.6	1.8	-0.4/0	0.8	±0.10	0.15	330	0/+10
BΦ5.3×2Φ0.8×2.0×330Z	5.3	0/+0.6	2.0	-0.4/0	0.8	±0.10	0.20	330	0/+10
BΦ6.3×2Φ1.0×3.0×330Z	6.3	0/+0.6	3.0	-0.5/0	1.0	±0.15	0.20	330	0/+10
BΦ7.3×2Φ1.0×3.5×330Z	7.3	0/+0.6	3.5	-0.5/0	1.0	±0.15	0.20	330	0/+10
BΦ8.3×2Φ1.0×4.0×330Z	8.3	0/+0.6	4.0	-0.6/0	1.0	±0.15	0.20	330	0/+10
BΦ9.3×2Φ1.4×4.0×330Z	9.3	0/+0.6	4.0	-0.6/0	1.4	±0.15	0.20	330	0/+10
BΦ10.3×2Φ1.4×5.0×330Z	10.3	0/+0.6	5.0	-0.6/0	1.4	±0.15	0.20	330	0/+10
BΦ11.3×2Φ1.4×5.0×330Z	11.3	0/+0.6	5.0	-0.6/0	1.4	±0.15	0.28	330	0/+10
BΦ12.3×2Φ1.75×6.0×330Z	12.3	0/+0.6	6.0	-0.6/0	1.75	±0.15	0.30	330	0/+10
BΦ13.3×2Φ1.75×6.0×330Z	13.3	0/+0.6	6.0	-0.6/0	1.75	±0.15	0.34	330	0/+10
BΦ14.3×2Φ1.75×7.0×330Z	14.3	0/+0.6	7.0	-0.6/0	1.75	±0.15	0.37	330	0/+10
BΦ15.3×2Φ2.0×7.0×330Z	15.3	0/+0.6	7.0	-0.6/0	2.0	±0.20	0.37	330	0/+10
BΦ16.3×2Φ2.0×8.0×330Z	16.3	0/+0.6	8.0	-0.6/0	2.0	±0.20	0.40	330	0/+10
BΦ17.3×2Φ2.0×8.0×330Z	17.3	0/+0.8	8.0	-0.6/0	2.0	±0.20	0.47	330	0/+10
BΦ18.3×2Φ2.0×9.0×330Z	18.3	0/+0.8	9.0	-0.6/0	2.0	±0.20	0.50	330	0/+10
BΦ19.3×2Φ2.0×9.0×330Z	19.3	0/+0.8	9.0	-0.6/0	2.0	±0.20	0.50	330	0/+10
BΦ20.3×2Φ2.5×10.0×330Z	20.3	0/+0.8	10.0	-0.8/0	2.5	±0.25	0.50	330	0/+10

20.0≤Dia≤40.0 are available on request

More types are available on request

Carbide Rods with Two Helical Holes
30°Helix, Length 330mm
As Sintered

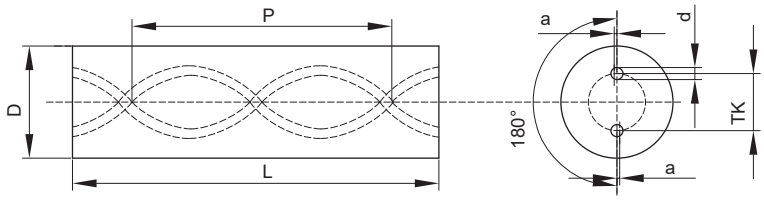


Type	D(mm)		d(mm)		Tk		a	Pitch			
	D	Tolerance	d	Tolerance	TK	Tolerance		P1	P2	P3	Tolerance
BΦ3.3×2Φ0.4×1.7×330B	3.3	2.33	0.4	±0.10	1.7	0/-0.3	≤0.08	15.89	16.32	16.77	±0.23
BΦ4.3×2Φ0.6×2.2×330B	4.3	2.33	0.6	±0.15	2.2	0/-0.3	≤0.10	21.19	21.77	22.36	±0.31
BΦ5.3×2Φ0.7×2.6×330B	5.3	2.67	0.7	±0.15	2.6	0/-0.4	≤0.13	26.49	27.21	27.95	±0.38
BΦ6.3×2Φ0.7×2.6×330B	6.3	2.5	0.7	±0.15	2.6	0/-0.4	≤0.15	31.79	32.65	33.54	±0.46
BΦ6.3×2Φ1.0×2.6×330B	6.3	2.5	1.0	±0.15	2.6	0/-0.4	≤0.15	31.79	32.65	33.54	±0.46
BΦ7.3×2Φ1.0×3.7×330B	7.3	2.5	1.0	±0.15	3.7	0/-0.4	≤0.15	37.09	38.09	39.13	±0.54
BΦ8.3×2Φ1.0×4.0×330B	8.3	2.5	1.0	±0.15	4.0	0/-0.4	≤0.15	42.38	43.53	44.73	±0.62
BΦ8.3×2Φ1.0×3.5×330B	8.3	2.5	1.0	±0.15	3.5	0/-0.4	≤0.15	42.38	43.53	44.73	±0.62
BΦ8.3×2Φ0.6×2.8×330B	8.3	2.5	0.6	±0.15	2.8	0/-0.4	≤0.15	42.38	43.53	44.73	±0.62
BΦ9.3×2Φ1.4×4.8×330B	9.3	2.5	1.4	±0.15	4.8	0/-0.6	≤0.20	47.68	48.97	50.32	±0.69
BΦ10.3×2Φ1.4×4.8×330B	10.3	2.75	1.4	±0.15	4.8	0/-0.6	≤0.20	52.98	54.41	55.91	±0.77
BΦ10.3×2Φ0.7×2.6×330B	10.3	2.75	0.7	±0.15	2.6	0/-0.4	≤0.20	52.98	54.41	55.91	±0.77
BΦ10.3×2Φ1.0×3.0×330B	10.3	2.75	1.0	±0.15	3.0	0/-0.4	≤0.20	52.98	54.41	55.91	±0.77
BΦ10.3×2Φ1.4×5.0×330B	10.3	2.75	1.4	±0.15	5.0	0/-0.6	≤0.20	52.98	54.41	55.91	±0.77
BΦ11.3×2Φ1.4×5.3×330B	11.3	2.75	1.4	±0.15	5.3	0/-0.8	≤0.28	58.28	59.86	61.5	±0.85
BΦ12.3×2Φ1.4×6.25×330B	12.3	2.75	1.4	±0.15	6.25	0/-0.8	≤0.30	63.58	65.3	67.09	±0.92
BΦ12.3×2Φ1.75×6.0×330B	12.3	2.75	1.75	±0.20	6.0	0/-0.8	≤0.30	63.58	65.3	67.09	±0.92
BΦ13.3×2Φ1.75×6.5×330B	13.3	3.0	1.75	±0.20	6.5	0/-0.8	≤0.34	68.87	70.74	72.68	±1.00
BΦ14.3×2Φ1.75×7.1×330B	14.3	3.5	1.75	±0.20	7.1	0/-0.8	≤0.37	74.17	76.18	78.27	±1.08
BΦ14.3×2Φ0.8×3.5×330B	14.3	3.5	0.8	±0.15	3.5	0/-0.4	≤0.37	74.17	76.18	78.27	±1.08
BΦ14.3×2Φ1.4×4.5×330B	14.3	3.5	1.4	±0.15	4.5	0/-0.6	≤0.37	74.17	76.18	78.27	±1.08
BΦ15.3×2Φ1.75×7.7×330B	15.3	3.5	1.75	±0.20	7.7	0/-0.8	≤0.40	79.47	81.62	83.86	±1.15
BΦ16.3×2Φ1.75×8.3×330B	16.3	3.5	1.75	±0.20	8.3	0/-0.8	≤0.40	84.77	87.06	89.45	±1.23
BΦ16.3×2Φ2.0×8.0×330B	16.3	3.5	2.0	±0.20	8.0	0/-0.6	≤0.40	84.77	87.06	89.45	±1.23
BΦ17.3×2Φ1.75×8.9×330B	17.3	3.5	1.75	±0.20	8.9	0/-0.8	≤0.47	90.07	92.5	95.04	±1.31
BΦ18.3×2Φ2.0×9.55×330B	18.3	3.5	2.0	±0.25	9.55	0/-0.8	≤0.50	95.36	97.95	100.63	±1.38
BΦ18.3×2Φ1.75×9.15×330B	18.3	3.5	1.75	±0.20	9.15	0/-0.8	≤0.50	95.36	97.95	100.63	±1.38
BΦ19.3×2Φ2.0×10×330B	19.3	3.5	2.0	±0.25	10.0	0/-0.8	≤0.50	100.66	103.39	106.22	±1.46
BΦ20.3×2Φ2.0×10.4×330B	20.3	3.5	2.0	±0.25	10.4	0/-1	≤0.50	105.96	108.83	111.81	±1.54

Note： D<18.3, L>100, L Tolerance0~+7; L<100, L Tolerance0~+5. D ≥ 18.3, L Tolerance+3~+10.

More types are available on request

Carbide Rods with Two Helical Coolant Holes
40°Helical
As Sintered

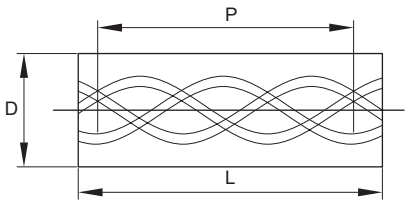


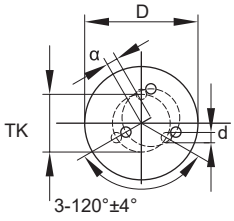
Type	D(mm)		d(mm)		TK(mm)		a	Ptich			
	D	Tol.	d	Tol.	TK	Tol.		P 1	P 2	P 3	Tol.
BΦ6.3×2Φ0.6×1.9×LC	6.3	2.5	0.6	±0.15	1.9	0/-0.4	≤0.15	18.2	18.85	19.52	±0.34
BΦ6.3×2Φ0.5×2.2×LC	6.3	2.5	0.5	±0.15	2.2	0/-0.4	≤0.15	21.68	22.46	23.28	±0.42
BΦ8.3×2Φ0.65×2.7×LC	8.3	2.5	0.65	±0.15	2.7	0/-0.6	≤0.15	28.91	29.95	31.04	±0.56
BΦ10.3×2Φ0.8×3.5×LC	10.3	2.75	0.8	±0.15	3.5	0/-0.8	≤0.20	36.14	37.44	38.8	±0.70
BΦ12.3×2Φ0.9×4.2×LC	12.3	2.75	0.9	±0.15	4.2	0/-0.8	≤0.30	43.37	44.93	46.55	±0.84
BΦ14.3×2Φ1.0×4.7×LC	14.3	3.5	1.0	±0.20	4.7	0/-0.8	≤0.37	50.6	52.42	54.31	±0.98
BΦ16.3×2Φ1.2×5.5×LC	16.3	3.5	1.2	±0.20	5.5	0/-0.8	≤0.40	57.82	59.9	62.07	±1.12
BΦ18.3×2Φ1.4×6.3×LC	18.3	3.5	1.4	±0.20	6.3	0/-0.8	≤0.50	65.05	67.39	69.83	±1.26
BΦ20.3×2Φ1.5×7.1×LC	20.3	3.5	1.5	±0.20	7.1	0/-1.0	≤0.50	72.28	74.88	77.59	±1.40

Note: D<18.3, L>100, L Tolerance0~+7, L<100, L Tolerance0~+5, D≥18.3, Length Tolerance+3~+10

More types are available on request

Carbide Rods as Sintered
Three Helical Coolant Holes
30° Helix



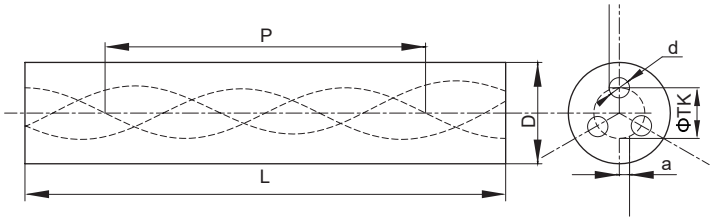


Type	D(mm)		d(mm)		TK		a	Pitch			
	D	Tol.	d	Tol.	TK	Tol.		P 1	P 2	P 3	Tol.
BΦ6.3×3Φ0.5×2.9×LB	6.3	2.5	0.5	±0.15	2.9	0/-0.4	≤0.15	31.79	32.65	33.54	±0.46
BΦ8.3×3Φ0.7×4.0×LB	8.3	2.5	0.7	±0.15	4	0/-0.4	≤0.15	42.38	43.53	44.73	±0.62
BΦ9.3×3Φ0.7×4.0×LB	9.3	2.5	0.85	±0.15	5.1	0/-0.5	≤0.20	47.68	48.97	50.32	±0.69
BΦ10.3×3Φ0.85×5.1×LB	10.3	2.75	0.85	±0.15	5.1	0/-0.4	≤0.20	52.98	54.41	55.91	±0.77
BΦ12.3×3Φ1.1×6.3×LB	12.3	2.75	1.1	±0.15	6.3	0/-0.6	≤0.30	63.58	65.3	67.09	±0.92
BΦ14.3×3Φ1.4×7.3×LB	14.3	3.5	1.4	±0.20	7.3	0/-0.8	≤0.40	74.17	76.18	78.27	±1.08
BΦ15.3×3Φ1.4×7.3×LB	15.3	3.5	1.4	±0.20	7.8	0/-0.8	≤0.40	79.47	81.62	83.86	±1.15
BΦ16.3×3Φ1.6×8.3×LB	16.3	3.5	1.6	±0.20	8.3	0/-0.8	≤0.40	84.77	87.06	89.45	±1.23
BΦ18.3×3Φ1.7×9.5×LB	18.3	3.5	1.7	±0.20	9.5	0/-0.8	≤0.50	95.36	97.95	100.63	±1.38
BΦ20.3×3Φ1.9×10.2×LB	20.3	3.5	1.9	±0.25	10.2	0/-0.8	≤0.50	105.96	108.83	111.81	±1.54

Note: D<18.3, L>100, L Tolerance0~+7; L<100, L Tolerance0~+5. D≥18.3, L Tolerance+3~+10.

More types are available on request

Carbide Rods with Three Helical Coolant Holes
40°Helical
As Sintered



Type	D(mm)		d(mm)		Tk		a	Pitch			
	D	Tol.	d	Tolerance	TK	Tol.		P1	P2	P3	Tol.
BΦ6.3×3Φ0.5×2.9×LB	6.3	2.5	0.5	±0.15	2.2	0/-0.4	≤0.15	21.68	22.46	23.28	±0.42
BΦ8.3×3Φ0.7×4.0×LB	8.3	2.5	0.65	±0.15	2.7	0/-0.4	≤0.15	28.91	29.95	31.04	±0.56
BΦ10.3×3Φ0.85×5.1×LB	10.3	2.75	0.8	±0.15	3.5	0/-0.4	≤0.20	36.14	37.44	38.8	±0.70
BΦ12.3×3Φ1.1×6.3×LB	12.3	2.75	0.9	±0.15	4.2	0/-0.6	≤0.30	43.37	44.93	46.55	±0.84
BΦ14.3×3Φ1.4×7.3×LB	14.3	3.5	1.0	±0.20	4.7	0/-0.6	≤0.37	50.6	52.42	54.31	±0.98
BΦ16.3×3Φ1.6×8.3×LB	16.3	3.5	1.2	±0.20	5.5	0/-0.8	≤0.40	57.82	59.9	62.07	±1.12
BΦ18.3×3Φ1.7×9.5×LB	18.3	3.5	1.4	±0.20	6.3	0/-0.8	≤0.50	65.05	67.39	69.83	±1.26
BΦ20.3×3Φ1.9×10.2×LB	20.3	3.5	1.5	±0.20	7.1	0/-0.8	≤0.50	72.28	74.88	77.59	±1.40

Note: D<18.3, L>100, L Tolerance0~+7, L<100, L Tolerance0~+5, D≥18.3, Length Tolerance+3~+10

Canada

Zhuzhou Cemented Carbide Works Canadian Distribution Centre
784 Imperial Road N., Guelph, ON, N1K 1Z3, Canada
Tel: +1-800-875-6697 Fax: +1-800-875-6814

Email: info@zcccanada.com

Website: www.zcccanada.com

How to find us

ZCC Canadian Distribution Centre

784 Imperial Rd. N., Guelph, ON, N1K 1Z3

Tel: 800-875-6697

Fax: 800-875-6814

Web Site: www.zcccanada.com

E-mail: info@zcccanada.com