

# Standard Boring Bars

with boring units for roughing & finishing

**Product Range:**

- ANSI (B5-50) CAT
- ISO 7388 (DIN 69871)
- BT (MAS 403)
- DIN 2080
- NMTB
- Straight Shank
- Weldon
- Parallel

RIGIBORE® Innovation Technology and Quality in **Design and Manufacture**



# Index

Welcome to Rigibore	
Tool Shank Dimensions for Rigibore Boring Bars	Page 2
<b>Standard Boring Bars with Rigibore R Unit for roughing and semi-finishing</b>	
BT40 (MAS403)	Page 3
BT50 (MAS403)	Page 4
DIN2080-40	Page 5
DIN2080-50	Page 6
NMTB40	Page 7
NMTB50	Page 8
ISO7388-40 (DIN69871A)	Page 9
ISO7388-50 (DIN69871A)	Page 10
ANSI B5-50 (1985)	Page 11
CAT40	Page 12
CAT50	Page 13
Plain Straight Shank 25mm/1.00" diameter	Page 14
Plain Straight Shank 32mm/1.25" diameter	Page 15
Plain Straight Shank 40mm/1.50" diameter	Page 16
Plain Straight Shank 50mm/2.00" diameter	Page 17
Weldon (DIN 1835B/ANSI B94-19) Straight Shank 25mm/1.00" diameter	Page 18
Weldon (DIN 1835B/ANSI B94-19) Straight Shank 32mm/1.25" diameter	Page 19
Weldon (DIN 1835B/ANSI B94-19) Straight Shank 40mm/1.50" diameter	Page 20
Weldon (DIN 1835B/ANSI B94-19) Straight Shank 50mm/2.00" diameter	Page 21
<b>Standard Boring Bars with Rigibore TR Unit for finishing</b>	
BT40 (MAS403)	Page 22
BT50 (MAS403)	Page 23
DIN2080-40	Page 24
DIN2080-50	Page 25
NMTB40	Page 26
NMTB50	Page 27
ISO7388-40 (DIN69871A)	Page 28
ISO7388-50 (DIN69871A)	Page 29
ANSI B5-50 (1985)	Page 30
CAT40	Page 31
CAT50	Page 32
Plain Straight Shank 25mm/1.00" diameter	Page 33
Plain Straight Shank 32mm/1.25" diameter	Page 34
Plain Straight Shank 40mm/1.50" diameter	Page 35
Plain Straight Shank 50mm/2.00" diameter	Page 36

Weldon (DIN 1835B/ANSI B94-19) Straight Shank 25mm/1.00" diameter	Page 37
Weldon (DIN 1835B/ANSI B94-19) Straight Shank 32mm/1.25" diameter	Page 38
Weldon (DIN 1835B/ANSI B94-19) Straight Shank 40mm/1.50" diameter	Page 39
Weldon (DIN 1835B/ANSI B94-19) Straight Shank 50mm/2.00" diameter	Page 40
Parallel Boring Bar (Metric) with Rigibore 'R' Unit for roughing & semi-finishing	Page 41
Parallel Boring Bar (Metric) with Rigibore 'TR' Unit for finishing	Page 42
Rigibore 'F' Style Units with R & TR Units	Page 43
Standard Boring Rings and Flanges	Page 44
Standard Boring Rings and Flanges	Page 45
<b>RIGIBORE UNITS</b>	Page 46
<b>Rigibore Units - Angular Mounted</b>	
Standard 'R' Unit for Roughing & Semi-finishing - Size 2	Page 47
Standard 'R' Unit for Roughing & Semi-finishing - Size 3	Page 48
Standard 'R' Unit for Roughing & Semi-finishing - Size 5	Page 49
Standard 'R' Unit for Roughing & Semi-finishing - Size 7	Page 50
Standard 'R' Unit for Roughing & Semi-finishing - Size 10	Page 51
<b>Rigibore Units - Square Mounted</b>	
Standard 'R' Unit for Roughing & Semi-finishing - Size 2	Page 52
Standard 'R' Unit for Roughing & Semi-finishing - Size 3	Page 53
Standard 'R' Unit for Roughing & Semi-finishing - Size 5	Page 54
Standard 'R' Unit for Roughing & Semi-finishing - Size 7	Page 55
Standard 'R' Unit for Roughing & Semi-finishing - Size 10	Page 56
<b>Rigibore Units - Angular Mounted</b>	
Standard 'TR' Unit for finishing - Size 2	Page 57
Standard 'TR' Unit for finishing - Size 3	Page 58
Standard 'TR' Unit for finishing - Size 5	Page 59
Standard 'TR' Unit for finishing - Size 7	Page 60
Standard 'TR' Unit for finishing - Size 10	Page 61
<b>Rigibore Units - Square Mounted</b>	
Standard 'TR' Unit for finishing - Size 2	Page 62
Standard 'TR' Unit for finishing - Size 3	Page 63
Standard 'TR' Unit for finishing - Size 5	Page 64
Standard 'TR' Unit for finishing - Size 7	Page 65
Standard 'TR' Unit for finishing - Size 10	Page 66

<b>Rigibore Units - Spares &amp; Accessories</b>	
<b>Angular Mounted Units - Size 2</b>	Page 67
<b>Angular Mounted Units - Size 3</b>	Page 68
<b>Angular Mounted Units - Size 5</b>	Page 69
<b>Angular Mounted Units - Size 7</b>	Page 70
<b>Angular Mounted Units - Size 10</b>	Page 71
<b>Square Mounted Units - Size 2</b>	Page 72
<b>Square Mounted Units - Size 3</b>	Page 73
<b>Square Mounted Units - Size 5</b>	Page 74
<b>Square Mounted Units - Size 7</b>	Page 75
<b>Square Mounted Units - Size 10</b>	Page 76
Mounting Dimensions for Angular Mounted Units	Page 77
Mounting Dimensions for Square Mounted Units	Page 78
Rigibore Units - Instructions for Use	Page 79-80
<b>MBTR/SAB Units for fine-finishing</b>	
Angular Mounted MBTR/SAB Bush Units - for fine-finishing	Page 81-82
Spares & Accessories for Angular Mounted MBTR/SAB Units	Page 83
Square Mounted MBTR/SAB Bush Units - for fine-finishing	Page 84-85
Spares & Accessories for Square Mounted MBTR/SAB Units	Page 86
Mounting Dimensions for MBTR/SAB Units	Page 87
<b>MBX Units for fine-finishing</b>	
MBX Units - Overview & technical specification	Page 88-89
Standard Boring Bars for MBX Units	Page 90-91
MBX Units - Instructions for use	Page 92
<b>Rigibore Inserts</b>	
Inserts for Boring	Page 93-94

## Welcome to Rigibore®

Manufacturers of high quality tooling for precision hole boring

Rigibore's use of technology in manufacturing means we deliver our products, even complex multi-edge cutting tools, quicker than the competition.

We pride ourselves on our enquiry response time, our attention to detail, product quality and our commitment to customer satisfaction.

Our bespoke design and manufacturing system delivers high quality boring tools in the shortest delivery times.

Rigibore® is an award winning company recognised for its use of technology and commitment to customer focus.

## Innovation, technology and quality in design and manufacture

### What our customers say about us...

*"Rigibore's quality and on-time delivery performance is outstanding and considered to be Best-in-Class."*

*"The product, coupled with their knowledge of difficult boring applications has proven to be the perfect partner for a world class metalworking solutions provider."*

*"Rigibore® has customised their software and manufacturing services to fit our every need (and more importantly our customer's needs). Their flexibility is unparalleled."*

#### Experience Matters

Our design experience guarantees that we can offer you the best tool solution for your boring application



Hayle, UK



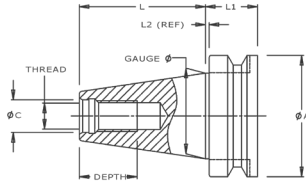
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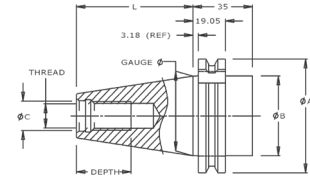
Bangalore, India

# TOOL SHANK DIMENSIONS

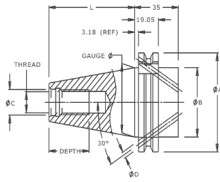
for Rigibore® Boring Bars



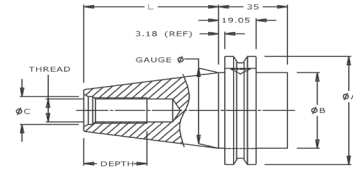
Taper	Ø A	Ø B	Ø C	Ø GAUGE	L	L1	L2	THREAD	DEPTH
BT-MAS403	mm	mm	mm	mm	mm	mm	mm		mm
BT40	63.00	N/A	17.00	44.45	65.40	27.00	2.0	M16-2.0	30.0
BT50	100.00	N/A	25.40	69.85	101.60	38.00	3.0	M24-3.0	47.0



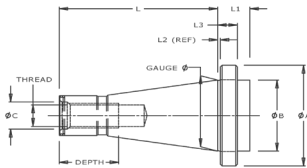
Taper	Ø A	Ø B	Ø C	Ø GAUGE	L	THREAD	DEPTH	THREAD	DEPTH
DIN 69871 / ISO7388	mm	mm	mm	mm	mm		mm		mm
7388-40	63.50	44.45	17.00	44.45	68.25	M16-2.0	32.0	M16-2.0	30.0
7388-50	97.45	70.00	25.00	69.85	101.60	M24-3.0	47.0	M24-3.0	47.0



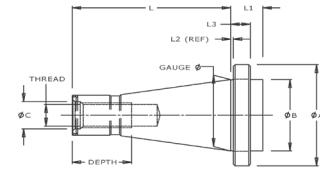
Taper	Ø A	Ø B	Ø C	Ø D	Ø Gauge	L	Thread	Depth	Depth
DIN 69871B / ISO 7388 FORM B	mm	mm	mm	mm	mm	mm	mm	mm	mm
7388-40	63.50	44.45	17.00	4.20	44.45	68.25	M16-2.0	32	30.0
7388-50	97.45	70.00	25.00	5.00	69.85	101.60	M24-3.0	47	47.0



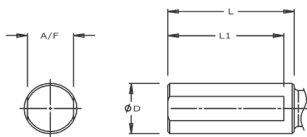
Taper	Ø A	Ø B	Ø C	Ø Gauge	L	Thread	Depth
CATERPILLAR (Imperial Thread)	mm	mm	mm	mm	mm	mm	mm
CAT40	63.50	44.45	16.40	44.45	68.25	5/8-11	32.0
CAT50	98.42	70.00	25.40	69.85	101.60	1.0-8	47.0



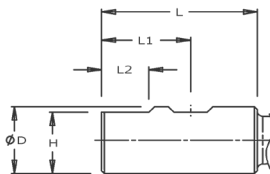
Taper	Ø A	Ø B	Ø C	Ø Gauge	L	L1	L2	L3	Thread	Depth
ISO/DIN 2080 (Metric Thread)										
2080-40	63.50	44.45	17.00	44.45	93.30	19.00	1.6	11.70	M16-2.0	35.00
2080-50	97.40	70.00	26.10	69.85	126.70	30.20	3.2	12.00	M24-3.0	47.00



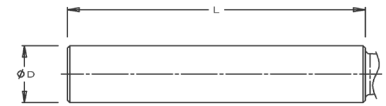
Taper	Ø A	Ø B	Ø C	Ø Gauge	L	L1	L2	L3	Thread	Depth
NMTB (ANSI B5-18 STANDARD)										
NMTB-40	63.50	44.45	17.00	44.45	93.30	19.00	1.60	11.70	5/8-11	35.00
NMTB-50	97.40	70.00	26.10	69.85	126.70	30.20	3.20	12.00	1.0-8	47.00



Taper	Size	Ø D (g6)	L
STRAIGHT SHANK	25SS	25	125
	32SS	32	125
	40SS	40	125
	50SS	50	125



Taper	Size	Ø D (g6)	L ± 1	L1 ± 0.5	L2 + 1	H
WELDON	W25SS	25	56	32	17	23
	W32SS	32	60	36	19	30
	W40SS	40	70	40	19	38
	W50SS	50	80	45	23	47.8

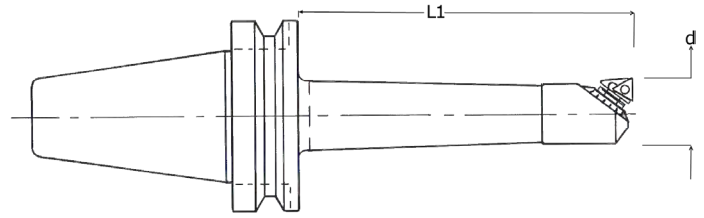


Taper	Size	Ø D (g6)	L	L1 ± 0.5	A/F
MBX	25	25	60	55	22
	32	32	60	55	29.5
	40	40	70	65	37
	50	50	80	75	47

# STANDARD BORING BARS TYPE BT (MAS 403)

with standard R unit for  
roughing & semi-finishing

**BT40**



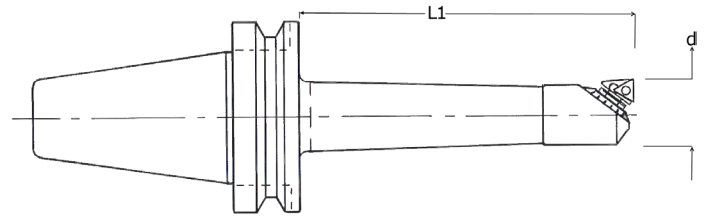
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert	
mm	ins	mm	ins		90°	75°	95°		
15.875-17.40	.625-.685	83	3.268	<b>BT40-1535</b>	R2B2S		TC__06T1__		
16.67-18.25	.656-.718			<b>BT40-1536</b>	R2B2S				
17.40-19.00	.685-.748			<b>BT40-1537</b>	R2B2S				
19.00-23.00	.748-.905	87	3.425	<b>BT40-154</b>	R2B2	R2B2L			
23.00-27.00	.905-1.062								
23.00-31.00	.905-2.200	107	4.212	<b>BT40-155</b>	R3B1		CC__0602__		
24.00-32.00	.945-1.260				R3B2C				
27.00-35.00	1.062-1.378				R3B2			R3B2L	R3B295
28.00-42.00	1.103-1.654	117	4.606	<b>BT40-156</b>	R3A2C		CC__0602__		
31.00-45.00	1.220-1.771				R3A2		R3A2L	R3A295	TC__0902__
28.00-42.00	1.103-1.654	132	5.197	<b>BT40-157</b>	R3A2C		CC__0602__		
31.00-45.00	1.220-1.771				R3A2		R3A2L	R3A295	TC__0902__
37.50-48.70	1.476-1.917				116		4.567	<b>BT40-158</b>	R5B2C
38.00-49.20	1.496-1.937	R5B2	R5B295	TC__1102__					
37.50-48.70	1.476-1.917	173	6.811	<b>BT40-159</b>	R5B2C	R5B2L	CC__0602__		
38.00-49.20	1.496-1.937				R5B2		TC__1102__		
46.50-67.80	1.831-2.673				116		4.567	<b>BT40-160</b>	R5A2C
47.00-68.30	1.850-2.689	R5A2	R5A295	TC__1102__					
46.50-67.80	1.831-2.673	186	7.323	<b>BT40-161</b>	R5A2C	R5A2L	R5A295C	CC__0602__	
47.00-68.30	1.850-2.689				R5A2		R5A295	TC__1102__	
60.50-86.10	2.375-3.383				128		5.039	<b>BT40-163</b>	R7A2C
60.50-86.10	2.375-3.383	185	7.283	<b>BT40-164</b>	R7A2	R7A2L	R7A295	TC__16T3__	
					<b>BT40-164</b>	R7A2C	R7A295C	CC__09T3__	
79.50-105.10	3.130-4.138	119	4.685	<b>BT40-167</b>	R7A2	R7A2L	R7A295	TC__16T3__	
					<b>BT40-167</b>	R7A2C	R7A295C	CC__09T3__	
79.50-105.10	3.130-4.138	199	7.835	<b>BT40-168</b>	R7A2C	R7A295C	CC__09T3__		
					<b>BT40-168</b>	R7A2	R7A2L	R7A295	TC__16T3__
96.00-142.00	3.780-5.590	118	4.645	<b>BT40-170</b>	R10A2C	R10A295C	CC__1204__		
					<b>BT40-170</b>	R10A2	R10A2L	R10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## STANDARD BORING BARS TYPE BT (MAS 403)

with standard R unit for  
roughing & semi-finishing

**BT50**



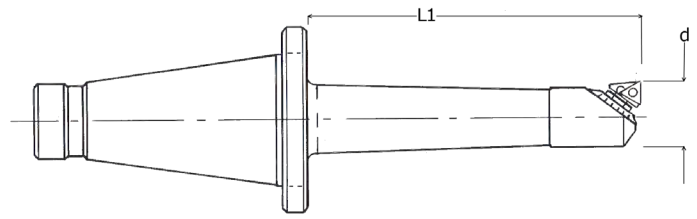
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
15.875-17.40	.625-.685	83	3.268	<b>BT50-1535</b>	R2B2S			TC__06T1__
16.67-18.25	.656-.718			<b>BT50-1536</b>				
17.40-19.00	.685-.748			<b>BT50-1537</b>				
19.00-23.00	.748-.905	87	3.425	<b>BT50-154</b>	R2B2	R2B2L		
23.00-27.00	.905-1.062							
23.00-31.00	.905-1.220	107	4.212	<b>BT50-155</b>	R3B1	R3B2L	R3B295	CC__0602__
24.00-32.00	.945-1.260				R3B2C			TC__0902__
27.00-35.00	1.062-1.378				R3B2			CC__0602__
28.00-42.00	1.103-1.654	117	4.606	<b>BT50-156</b>	R3A2C	R3A2L	R3A295	TC__0902__
31.00-45.00	1.220-1.771				R3A2			CC__0602__
28.00-42.00	1.103-1.654	132	5.197	<b>BT50-157</b>	R3A2C	R3A2L	R3A295	TC__0902__
31.00-45.00	1.220-1.771				R3A2			CC__0602__
37.50-48.70	1.476-1.917	116	4.567	<b>BT50-158</b>	R5B2C	R5B2L	R5B295	CC__0602__
38.00-49.20	1.496-1.937				R5B2			TC__1102__
37.50-48.70	1.476-1.917	173	6.811	<b>BT50-159</b>	R5B2C	R5B2L		CC__0602__
38.00-49.20	1.496-1.937				R5B2			TC__1102__
46.50-67.80	1.831-2.673	116	4.567	<b>BT50-160</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689				R5A2		R5A295	TC__1102__
46.50-67.80	1.831-2.673	186	7.323	<b>BT50-161</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689				R5A2		R5A295	TC__1102__
46.50-67.80	1.831-2.673	208	8.187	<b>BT50-162</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689				R5A2		R5A295	TC__1102__
60.50-86.10	2.375-3.383	128	5.039	<b>BT50-163</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
		185	7.283	<b>BT50-164</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
79.50-105.10	3.130-4.138	280	11.025	<b>BT50-165</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
		119	4.685	<b>BT50-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
199	7.835	<b>BT50-168</b>	R7A2C	R7A2L	R7A295C	CC__09T3__		
			R7A2		R7A295	TC__16T3__		
297	11.693	<b>BT50-169</b>	R7A2C	R7A2L	R7A295C	CC__09T3__		
			R7A2		R7A295	TC__16T3__		
96.00-142.00	3.780-5.590	118	4.645	<b>BT50-170</b>	R10A2C	R10A2L	R10A295C	CC__1204__
					R10A2		R10A295	TC__16T3__
96.00-142.00	3.780-5.590	296	11.653	<b>BT50-171</b>	R10A2C	R10A2L	R10A295C	CC__1204__
					R10A2		R10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE DIN2080

with standard R unit for  
roughing & semi-finishing

**2080-40**



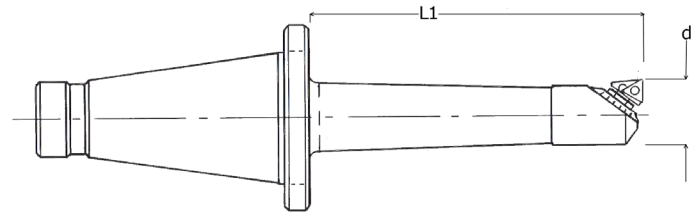
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert					
mm	ins	mm	ins		90°	75°	95°						
15.875-17.40	.625-.685	83	3.268	<b>2080-40-1535</b>	R2B2S			TC__06T1__					
16.67-18.25	.656-.718			<b>2080-40-1536</b>									
17.40-19.00	.685-.748			<b>2080-40-1537</b>									
19.00-23.00	.748-.905	87	3.425	<b>2080-40-154</b>	R2B2	R2B2L							
23.00-27.00	.905-1.062												
23.00-31.00	.905-1.220	107	4.212	<b>2080-40-155</b>	R3B1			CC__0602__					
24.00-32.00	.945-1.260				R3B2C								
27.00-35.00	1.062-1.378				R3B2				R3B2L	R3B295	TC__0902__		
28.00-42.00	1.103-1.654	117	4.606	<b>2080-40-156</b>	R3A2C			CC__0602__					
31.00-45.00	1.220-1.771				R3A2				R3A2L	R3A295	TC__0902__		
28.00-42.00	1.103-1.654				132				5.197	<b>2080-40-157</b>	R3A2C		
31.00-45.00	1.220-1.771	R3A2	R3A2L	R3A295		TC__0902__							
37.50-48.70	1.476-1.917	116	4.567	<b>2080-40-158</b>	R5B2C		R5B295	CC__0602__					
38.00-49.20	1.496-1.937				R5B2								
37.50-48.70	1.476-1.917				173				6.811	<b>2080-40-159</b>	R5B2C	R5B2L	
38.00-49.20	1.496-1.937	R5B2											
46.50-67.80	1.831-2.673	116	4.567	<b>2080-40-160</b>		R5A2C	R5A2L	R5A295C			CC__0602__		
47.00-68.30	1.850-2.689				R5A2	R5A295			TC__1102__				
46.50-67.80	1.831-2.673				186	7.323			<b>2080-40-161</b>	R5A2C		R5A2L	R5A295C
47.00-68.30	1.850-2.689	R5A2	R5A295	TC__1102__									
60.50-86.10	2.375-3.383	128	5.039	<b>2080-40-163</b>			R7A2C	R7A2L		R7A295C	CC__09T3__		
60.50-86.10	2.375-3.383				185	7.283	<b>2080-40-164</b>		R7A2			R7A295	TC__16T3__
									<b>2080-40-165</b>			R7A2C	R7A295C
79.50-105.10	3.130-4.138	119	4.685	<b>2080-40-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__					
					<b>2080-40-168</b>				R7A2	R7A295	TC__16T3__		
					<b>2080-40-169</b>				R7A2C	R7A295C	CC__09T3__		
96.00-142.00	3.780-5.590	118	4.645	<b>2080-40-170</b>	R10A2C	R10A2L	R10A295C	CC__1204__					
					<b>2080-40-171</b>				R10A2	R10A295	TC__16T3__		
									R10A2C	R10A295C	CC__1204__		
		296	11.653		R10A2	R10A2L	R10A295	TC__16T3__					

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## STANDARD BORING BARS TYPE DIN2080

with standard R unit for  
roughing & semi-finishing

**2080-50**



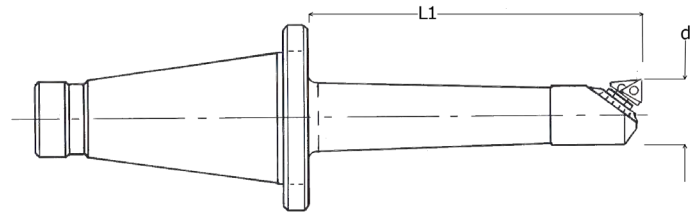
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
15.875-17.40	.625-.685	83	3.268	<b>2080-50-1535</b>	R2B2S			TC__06T1__
16.67-18.25	.656-.718			<b>2080-50-1536</b>				
17.40-19.00	.685-.748			<b>2080-50-1537</b>				
19.00-23.00	.748-.905	87	3.425	<b>2080-50-154</b>	R2B2	R2B2L		
23.00-27.00	.905-1.062			<b>2080-50-155</b>				
23.00-31.00	.905-1.220				R3B1			
24.00-32.00	.945-1.260	107	4.212	<b>2080-50-155</b>	R3B2C	R3B2L	R3B295	CC__0602__
27.00-35.00	1.062-1.378				R3B2			TC__0902__
28.00-42.00	1.103-1.654				R3A2C			CC__0602__
31.00-45.00	1.220-1.771	117	4.606	<b>2080-50-156</b>	R3A2	R3A2L	R3A295	TC__0902__
28.00-42.00	1.103-1.654				R3A2C	CC__0602__		
31.00-45.00	1.220-1.771				R3A2	TC__0902__		
37.50-48.70	1.476-1.917	116	4.567	<b>2080-50-158</b>	R5B2C	R5B2L	R5B295	CC__0602__
					R5B2			TC__1102__
38.00-49.20	1.496-1.937	173	6.811	<b>2080-50-159</b>	R5B2C	R5B2L		CC__0602__
37.50-48.70	1.476-1.917				R5B2			TC__1102__
38.00-49.20	1.496-1.937							
46.50-67.80	1.831-2.673	116	4.567	<b>2080-50-160</b>	R5A2C	R5A2L	R5A295C	CC__0602__
					R5A2		R5A295	TC__1102__
46.50-67.80	1.831-2.673	186	7.323	<b>2080-50-161</b>	R5A2C	R5A2L	R5A295C	CC__0602__
					R5A2		R5A295	TC__1102__
47.00-68.30	1.850-2.689	208	8.187	<b>2080-50-162</b>	R5A2C	R5A2L	R5A295C	CC__0602__
					R5A2		R5A295	TC__1102__
60.50-86.10	2.375-3.383	128	5.039	<b>2080-50-163</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
		185	7.283	<b>2080-50-164</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
		280	11.025	<b>2080-50-165</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
79.50-105.10	3.130-4.138	119	4.685	<b>2080-50-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
		199	7.835	<b>2080-50-168</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
		297	11.693	<b>2080-50-169</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
96.00-142.00	3.780-5.590	118	4.645	<b>2080-50-170</b>	R10A2C	R10A2L	R10A295C	CC__1204__
					R10A2		R10A295	TC__16T3__
		296	11.653	<b>2080-50-171</b>	R10A2C	R10A2L	R10A295C	CC__1204__
					R10A2		R10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE NMTB

with standard R unit for  
roughing & semi-finishing

**NMTB40**



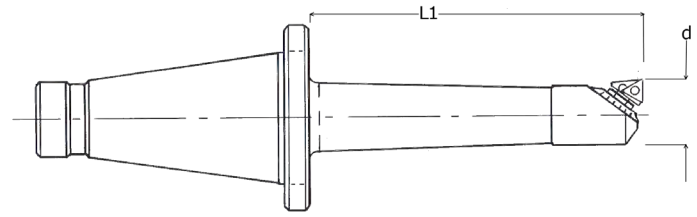
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert	
mm	ins	mm	ins		90°	75°	95°		
15.875-17.40	.625-.685	83	3.268	<b>NMTB40-1535</b>	R2B2S			TC__06T1__	
16.67-18.25	.656-.718			<b>NMTB40-1536</b>					
17.40-19.00	.685-.748			<b>NMTB40-1537</b>					
19.00-23.00	.748-.905	87	3.425	<b>NMTB40-154</b>	R2B2	R2B2L			
23.00-27.00	.905-1.062								
23.00-31.00	.905-1.220	107	4.212	<b>NMTB40-155</b>	R3B1				
24.00-32.00	.945-1.260				R3B2C				
27.00-35.00	1.062-1.378				R3B2				R3B2L
28.00-42.00	1.103-1.654	117	4.606	<b>NMTB40-156</b>	R3A2C				CC__0602__
31.00-45.00	1.220-1.771				R3A2				R3A2L
28.00-42.00	1.103-1.654	132	5.197	<b>NMTB40-157</b>	R3A2C			CC__0602__	
31.00-45.00	1.220-1.771				R3A2			R3A2L	R3A295
37.50-48.70	1.476-1.917	116	4.567	<b>NMTB40-158</b>	R5B2C			CC__0602__	
38.00-49.20	1.496-1.937				R5B2				R5B295
37.50-48.70	1.476-1.917	173	6.811	<b>NMTB40-159</b>	R5B2C			CC__0602__	
38.00-49.20	1.496-1.937				R5B2			R5B2L	
46.50-67.80	1.831-2.673	116	4.567	<b>NMTB40-160</b>	R5A2C		R5A295C	CC__0602__	
47.00-68.30	1.850-2.689				R5A2		R5A2L	R5A295	TC__1102__
46.50-67.80	1.831-2.673	186	7.323	<b>NMTB40-161</b>	R5A2C		R5A295C	CC__0602__	
47.00-68.30	1.850-2.689				R5A2		R5A2L	R5A295	TC__1102__
60.50-86.10	2.375-3.383	128	5.039	<b>NMTB40-163</b>	R7A2C		R7A295C	CC__09T3__	
					R7A2		R7A2L	R7A295	TC__16T3__
		185	7.283	<b>NMTB40-164</b>	R7A2C		R7A295C	CC__09T3__	
					R7A2		R7A2L	R7A295	TC__16T3__
79.50-105.10	3.130-4.138	280	11.025	<b>NMTB40-165</b>	R7A2C		R7A295C	CC__09T3__	
					R7A2		R7A2L	R7A295	TC__16T3__
		119	4.685	<b>NMTB40-167</b>	R7A2C		R7A295C	CC__09T3__	
					R7A2		R7A2L	R7A295	TC__16T3__
199	7.835	<b>NMTB40-168</b>	R7A2C		R7A295C	CC__09T3__			
			R7A2		R7A2L	R7A295	TC__16T3__		
297	11.693	<b>NMTB40-169</b>	R7A2C		R7A295C	CC__09T3__			
			R7A2		R7A2L	R7A295	TC__16T3__		
96.00-142.00	3.780-5.590	118	4.645	<b>NMTB40-170</b>	R10A2C		R10A295C	CC__1204__	
					R10A2		R10A2L	R10A295	TC__16T3__
		296	11.693	<b>NMTB40-171</b>	R10A2C		R10A295C	CC__1204__	
					R10A2	R10A2L	R10A295	TC__16T3__	

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## STANDARD BORING BARS TYPE NMTB

with standard R unit for  
roughing & semi-finishing

### NMTB50



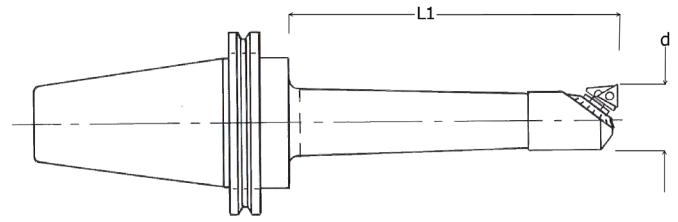
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
15.875-17.40	.625-.685	83	3.268	<b>NMTB50-1535</b>	R2B2S			TC__06T1__
16.67-18.25	.656-.718			<b>NMTB50-1536</b>				
17.40-19.00	.685-.748			<b>NMTB50-1537</b>				
19.00-23.00	.748-.905	87	3.425	<b>NMTB50-154</b>	R2B2	R2B2L		
23.00-27.00	.905-1.062							
23.00-31.00	.905-1.220	107	4.212	<b>NMTB50-155</b>	R3B1	R3B2L	R3B295	CC__0602__
24.00-32.00	.945-1.260				R3B2C			TC__0902__
27.00-35.00	1.062-1.378				R3B2			CC__0602__
28.00-42.00	1.103-1.654	117	4.606	<b>NMTB50-156</b>	R3A2C	R3A2L	R3A295	TC__0902__
31.00-45.00	1.220-1.771				R3A2			CC__0602__
28.00-42.00	1.103-1.654				R3A2C			TC__0902__
31.00-45.00	1.220-1.771	132	5.197	<b>NMTB50-157</b>	R3A2	R3A2L	R3A295	CC__0602__
					R5B2C			TC__0902__
37.50-48.70	1.476-1.917	116	4.567	<b>NMTB50-158</b>	R5B2	R5B2L	R5B295	CC__0602__
38.00-49.20	1.496-1.937							TC__1102__
37.50-48.70	1.476-1.917	173	6.811	<b>NMTB50-159</b>	R5B2C	R5B2L		CC__0602__
38.00-49.20	1.496-1.917				R5B2			TC__1102__
46.50-67.80	1.831-2.673	116	4.567	<b>NMTB50-160</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689				R5A2			TC__1102__
46.50-67.80	1.831-2.673	186	7.323	<b>NMTB50-161</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689				R5A2			TC__1102__
46.50-67.80	1.831-2.673	208	8.187	<b>NMTB50-162</b>	R5A2C	R5A2L	R5A295C	CC__0602__
45.60-67.80	1.831-2.673				R5A2			TC__1102__
47.00-68.30	1.850-2.689							
60.50-86.10	2.375-3.383	128	5.039	<b>NMTB50-163</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
				R7A2	TC__16T3__			
		185	7.283	<b>NMTB50-164</b>	R7A2C			CC__09T3__
				R7A2	R7A2L	R7A295	TC__16T3__	
		280	11.025	<b>NMTB50-165</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
				R7A2	R7A2L	R7A295	TC__16T3__	
79.50-105.10	3.130-4.138	119	4.685	<b>NMTB50-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
				R7A2	R7A2L	R7A295	TC__16T3__	
		199	7.835	<b>NMTB50-168</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
				R7A2	R7A2L	R7A295	TC__16T3__	
		297	11.693	<b>NMTB50-169</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
				R7A2	R7A2L	R7A295	TC__16T3__	
96.00-142.00	3.780-5.590	118	4.645	<b>NMTB50-170</b>	R10A2C	R10A2L	R10A295C	CC__1204__
				R10A2	R10A2L	R10A295	TC__16T3__	
		296	11.653	<b>NMTB50-171</b>	R10A2C	R10A2L	R10A295C	CC__1204__
				R10A2	R10A2L	R10A295	TC__16T3__	

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE ISO7388 (DIN 69871A)

with standard R unit for  
roughing & semi-finishing

**7388-40**



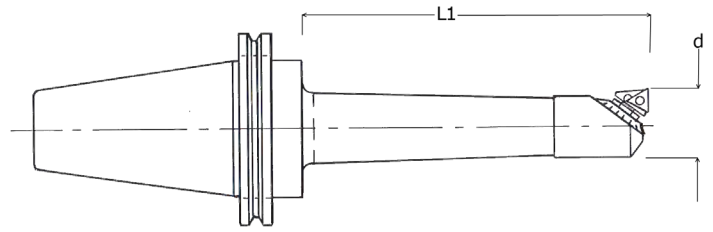
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert					
mm	ins	mm	ins		90°	75°	95°						
15.875-17.40	.625-.685	83	3.268	<b>7388-40-1535</b>	R2B2S			TC__06T1__					
16.67-18.25	.656-.718			<b>7388-40-1536</b>									
17.40-19.00	.685-.748			<b>7388-40-1537</b>									
19.00-23.00	.748-.905	87	3.425	<b>7388-40-154</b>	R2B2	R2B2L							
23.00-27.00	.905-1.062												
23.00-31.00	.905-1.220	107	4.212	<b>7388-40-155</b>	R3B1	R3B2L	R3B295	CC__0602__					
24.00-32.00	.945-1.260				R3B2C			TC__0902__					
27.00-35.00	1.062-1.378				R3B2			CC__0602__					
28.00-42.00	1.103-1.654	117	4.606	<b>7388-40-156</b>	R3A2C	R3A2L	R3A295	TC__0902__					
31.00-45.00	1.220-1.771				R3A2			CC__0602__					
28.00-42.00	1.103-1.654				R3A2C			TC__0902__					
31.00-45.00	1.220-1.771	132	5.197	<b>7388-40-157</b>	R3A2	R3A2L	R3A295	CC__0602__					
37.50-48.70	1.476-1.917				116			4.567	<b>7388-40-158</b>	R5B2C	R5B2L	R5B295	TC__0902__
										R5B2			CC__0602__
38.00-49.20	1.496-1.937	173	6.811	<b>7388-40-159</b>	R5B2C	R5B2L		TC__1102__					
37.50-48.70	1.476-1.917				R5B2			CC__0602__					
38.00-49.20	1.496-1.937							TC__1102__					
46.50-67.80	1.831-2.673	116	4.567	<b>7388-40-160</b>	R5A2C	R5A2L	R5A295C	CC__0602__					
47.00-68.30	1.850-2.689				R5A2		R5A295	TC__1102__					
46.50-67.80	1.831-2.673	186	7.323	<b>7388-40-161</b>	R5A2C	R5A2L	R5A295C	CC__0602__					
47.00-68.30	1.850-2.689				R5A2		R5A295	TC__1102__					
60.50-86.10	2.375-3.383	128	5.039	<b>7388-40-163</b>	R7A2C	R7A2L	R7A295C	CC__09T3__					
					R7A2		R7A295	TC__16T3__					
79.50-105.10	3.130-4.138	185	7.283	<b>7388-40-164</b>	R7A2C	R7A2L	R7A295C	CC__09T3__					
					R7A2		R7A295	TC__16T3__					
		119	4.685	<b>7388-40-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__					
					R7A2		R7A295	TC__16T3__					
199	7.835	<b>7388-40-168</b>	R7A2C	R7A2L	R7A295C	CC__09T3__							
			R7A2		R7A295	TC__16T3__							
96.00-142.00	3.780-5.590	118	4.645	<b>7388-40-170</b>	R10A2C	R10A2L	R10A295C	CC__1204__					
					R10A2		R10A295	TC__16T3__					

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE ISO7388 (DIN 69871A)

with standard R unit for  
roughing & semi-finishing

**7388-50**



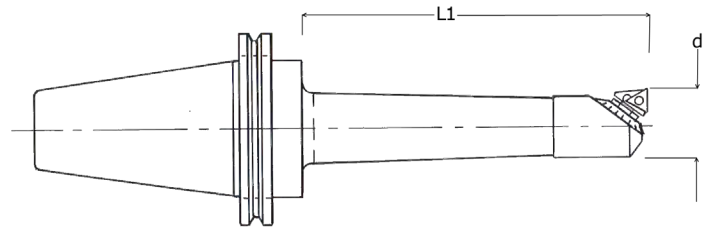
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
15.875-17.40	.625-.685	83	3.268	<b>7388-50-1535</b>	R2B2S			TC__06T1__
16.67-18.25	.656-.718			<b>7388-50-1536</b>				
17.40-19.00	.685-.748			<b>7388-50-1537</b>				
19.00-23.00	.748-.905	87	3.425	<b>7388-50-154</b>	R2B2	R2B2L		
23.00-27.00	.905-1.062							
23.00-31.00	.905-1.220	107	4.212	<b>7388-50-155</b>	R3B1	R3B2L	R3B295	CC__0602__
24.00-32.00	.945-1.260				R3B2C			TC__0902__
27.00-35.00	1.062-1.378				R3B2			CC__0602__
28.00-42.00	1.103-1.654	117	4.606	<b>7388-50-156</b>	R3A2C	R3A2L	R3A295	TC__0902__
31.00-45.00	1.220-1.771				R3A2			CC__0602__
28.00-42.00	1.103-1.654	132	5.197	<b>7388-50-157</b>	R3A2C	R3A2L	R3A295	TC__0902__
31.00-45.00	1.220-1.771				R3A2			CC__0602__
37.50-48.70	1.476-1.917				R5B2C			TC__0902__
38.00-49.20	1.496-1.937	116	4.567	<b>7388-50-158</b>	R5B2	R5B2L	R5B295	TC__1102__
37.50-48.70	1.476-1.917				R5B2C		CC__0602__	
38.00-49.20	1.496-1.937	173	6.811	<b>7388-50-159</b>	R5B2	R5B2L		TC__1102__
46.50-67.80	1.831-2.673				R5A2C			CC__0602__
47.00-68.30	1.850-2.689	116	4.567	<b>7388-50-160</b>	R5A2	R5A2L	R5A295C	CC__0602__
46.50-67.80	1.831-2.673				R5A2C		TC__1102__	
47.00-68.30	1.850-2.689	186	7.323	<b>7388-50-161</b>	R5A2	R5A2L	R5A295	CC__0602__
46.50-67.80	1.831-2.673				R5A2C		TC__1102__	
47.00-68.30	1.850-2.689	208	8.187	<b>7388-50-162</b>	R5A2C	R5A2L	R5A295C	CC__0602__
46.50-67.80	1.831-2.673				R5A2		TC__1102__	
47.00-68.30	1.850-2.689	128	5.039	<b>7388-50-163</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
60.50-86.10	2.375-3.383				R7A2		TC__16T3__	
79.50-105.10	3.130-4.138	185	7.283	<b>7388-50-164</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		TC__16T3__	
79.50-105.10	3.130-4.138	119	4.685	<b>7388-50-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		TC__16T3__	
79.50-105.10	3.130-4.138	199	7.835	<b>7388-50-168</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		TC__16T3__	
96.00-142.00	3.780-5.590	118	4.645	<b>7388-50-170</b>	R10A2C		R10A295C	CC__1204__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE ANSI B5-50 (1985)

with standard R unit for  
roughing & semi-finishing

**ANSI50**



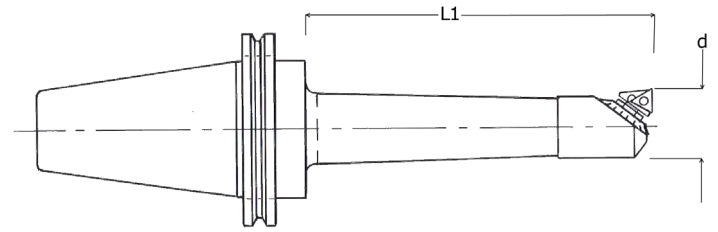
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
15.875-17.40	.625-.685	83	3.268	<b>ANSI50-1535</b>	R2B2S			
16.67-18.25	.656-.718			<b>ANSI50-1536</b>				
17.40-19.00	.685-.748			<b>ANSI50-1537</b>				
19.00-23.00	.748-.905	87	3.425	<b>ANSI50-154</b>	R2B2	R2B2L	TC__06T1__	
23.00-27.00	.905-1.062							
23.00-31.00	.905-1.220							
24.00-32.00	.945-1.260	107	4.212	<b>ANSI50-155</b>	R3B1		CC__0602__	
27.00-35.00	1.062-1.378			R3B2C				
28.00-42.00	1.103-1.654			R3B2				
31.00-45.00	1.220-1.771	117	4.606	<b>ANSI50-156</b>	R3A2C	R3B2L	R3B295	TC__0902__
28.00-42.00	1.103-1.654			R3A2	R3A2L	R3A295	CC__0602__	
31.00-45.00	1.220-1.771			R3A2C	R3A2L	R3A295	TC__0902__	
37.50-48.70	1.476-1.917	116	4.567	<b>ANSI50-157</b>	R3A2	R3A2L	R3A295	CC__0602__
38.00-49.20	1.496-1.937			R5B2C			TC__0902__	
37.50-48.70	1.476-1.917			R5B2		R5B295	CC__0602__	
38.00-49.20	1.496-1.937	173	6.811	<b>ANSI50-158</b>		R5B2L		TC__1102__
37.50-48.70	1.476-1.917			R5B2C			CC__0602__	
38.00-49.20	1.496-1.937			R5B2			TC__1102__	
46.50-67.80	1.831-2.673	116	4.567	<b>ANSI50-159</b>		R5B2L		CC__0602__
47.00-68.30	1.850-2.689						TC__1102__	
46.50-67.80	1.831-2.673			R5A2C		R5A295C	CC__0602__	
47.00-68.30	1.850-2.689	186	7.323	<b>ANSI50-160</b>	R5A2		R5A295	TC__1102__
46.50-67.80	1.831-2.673						CC__0602__	
47.00-68.30	1.850-2.689			R5A2C		R5A295C	TC__1102__	
46.50-67.80	1.831-2.673	208	8.187	<b>ANSI50-161</b>	R5A2		R5A295	CC__0602__
47.00-68.30	1.850-2.689						TC__1102__	
46.50-67.80	1.831-2.673			R5A2C		R5A295C	CC__0602__	
47.00-68.30	1.850-2.689	128	5.039	<b>ANSI50-162</b>	R5A2		R5A295	TC__1102__
60.50-86.10	2.375-3.383						CC__09T3__	
				R7A2C		R7A295C	TC__16T3__	
60.50-86.10	2.375-3.383	185	7.283	<b>ANSI50-163</b>	R7A2	R7A2L	R7A295	CC__09T3__
					R7A2C	R7A2L	R7A295	TC__16T3__
		280	11.025	<b>ANSI50-164</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2	R7A2L	R7A295	TC__16T3__
		119	4.685	<b>ANSI50-165</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2	R7A2L	R7A295	TC__16T3__
79.50-105.10	3.130-4.138	199	7.835	<b>ANSI50-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2	R7A2L	R7A295	TC__16T3__
96.00-142.00	3.780-5.590	118	4.645	<b>ANSI50-168</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2	R7A2L	R7A295	TC__16T3__
		296	11.653	<b>ANSI50-169</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2	R7A2L	R7A295	TC__16T3__
96.00-142.00	3.780-5.590	118	4.645	<b>ANSI50-170</b>	R10A2C		R10A295C	CC__1204__
					R10A2	R10A2L	R10A295	TC__16T3__
					R10A2C		R10A295C	CC__1204__
		296	11.653	<b>ANSI50-171</b>	R10A2	R10A2L	R10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## STANDARD BORING BARS TYPE CAT

with standard R unit for  
roughing & semi-finishing

### CAT40



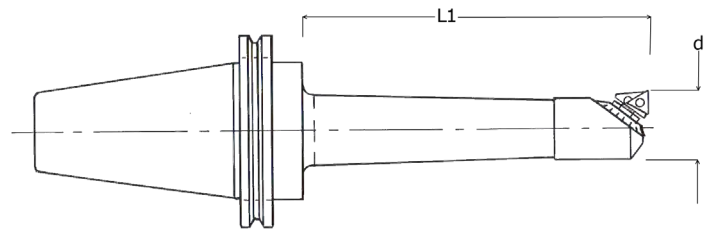
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert		
mm	ins	mm	ins		90°	75°	95°			
15.875-17.40	.625-.685	83	3.268	CAT40-1535	R2B2S			TC__06T1__		
16.67-18.25	.656-.718			CAT40-1536						
17.40-19.00	.685-.748			CAT40-1537						
19.00-23.00	.748-.905	87	3.425	CAT40-154	R2B2	R2B2L				
23.00-27.00	.905-1.062									
23.00-31.00	.905-1.220	107	4.212	CAT40-155	R3B1	R3B2L	R3B295		CC__0602__	
24.00-32.00	.945-1.260			R3B2C						
27.00-35.00	1.062-1.378			R3B2						
28.00-42.00	1.103-1.654	117	4.606	CAT40-156	R3A2C	R3A2L	R3A295	CC__0602__		
31.00-45.00	1.220-1.771			R3A2						
28.00-42.00	1.103-1.654			CAT40-157	R3A2C					
31.00-45.00	1.220-1.771	132	5.197	CAT40-157	R3A2	R3A2L	R3A295	CC__0602__		
37.50-48.70	1.476-1.917			CAT40-158	R5B2C			R5B2L	R5B295	CC__0602__
38.00-49.20	1.496-1.937	116	4.567	CAT40-158	R5B2	R5B2L	R5B295			TC__1102__
37.50-48.70	1.476-1.917			CAT40-159	R5B2C			R5B2L	R5B295	CC__0602__
38.00-49.20	1.496-1.937			CAT40-159	R5B2					R5B2L
46.50-67.80	1.831-2.673	116	4.567	CAT40-160	R5A2C	R5A2L	R5A295C	CC__0602__		
47.00-68.30	1.850-2.689			CAT40-160	R5A2			R5A2L	R5A295	TC__1102__
46.50-67.80	1.831-2.673	186	7.323	CAT40-161	R5A2C	R5A2L	R5A295C			CC__0602__
47.00-68.30	1.850-2.689			CAT40-161	R5A2			R5A2L	R5A295	TC__1102__
60.50-86.10	2.375-3.383	128	5.039	CAT40-163	R7A2C	R7A2L	R7A295C			CC__09T3__
		CAT40-163	R7A2	R7A2L	R7A295			TC__16T3__		
79.50-105.10	3.130-4.138	185	7.283			CAT40-164	R7A2C	R7A2L	R7A295C	CC__09T3__
		CAT40-164	R7A2	R7A2L	R7A295	TC__16T3__				
79.50-105.10	3.130-4.138	119	4.685			CAT40-167	R7A2C	R7A2L	R7A295C	CC__09T3__
		CAT40-167	R7A2	R7A2L	R7A295	TC__16T3__				
96.00-142.00	3.780-5.590	118	4.645			CAT40-168	R7A2C	R7A2L	R7A295C	CC__09T3__
				CAT40-168	R7A2	R7A2L	R7A295			TC__16T3__
96.00-142.00	3.780-5.590	118	4.645	CAT40-170	R10A2C			R10A2L	R10A295C	CC__1204__
				CAT40-170	R10A2	R10A2L	R10A295			TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE CAT

with standard R unit for  
roughing & semi-finishing

**CAT50**



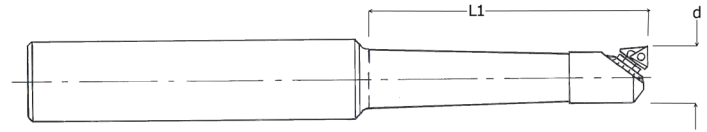
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
15.875-17.40	.625-.685	83	3.268	<b>CAT50-1535</b>	R2B2S		TC__06T1__	
16.67-18.25	.656-.718			<b>CAT50-1536</b>				
17.40-19.00	.685-.748			<b>CAT50-1537</b>				
19.00-23.00	.748-.905	87	3.425	<b>CAT50-154</b>	R2B2	R2B2L	TC__06T1__	
23.00-27.00	.905-1.062							
23.00-31.00	.905-1.220	107	4.212	<b>CAT50-155</b>	R3B1	R3B2L	CC__0602__	
24.00-32.00	.945-1.260				R3B2C		TC__0902__	
27.00-35.00	1.062-1.378				R3B2		R3B295	CC__0602__
28.00-42.00	1.103-1.654	117	4.606	<b>CAT50-156</b>	R3A2C	R3A2L	TC__0902__	
31.00-45.00	1.220-1.771				R3A2		R3A295	CC__0602__
28.00-42.00	1.103-1.654	132	5.197	<b>CAT50-157</b>	R3A2C	R3A2L	TC__0902__	
31.00-45.00	1.220-1.771				R3A2		R3A295	CC__0602__
37.50-48.70	1.476-1.917				116		4.567	<b>CAT50-158</b>
38.00-49.20	1.496-1.937	R5B2	R5B295	CC__0602__				
37.50-48.70	1.476-1.917	173	6.811	<b>CAT50-159</b>	R5B2C	R5B2L	TC__1102__	
38.00-49.20	1.496-1.937				R5B2		CC__0602__	
46.50-67.80	1.831-2.673				116		4.567	<b>CAT50-160</b>
47.00-68.30	1.850-2.689	R5A2	R5A295	CC__0602__				
46.50-67.80	1.831-2.673	186	7.323	<b>CAT50-161</b>	R5A2C	R5A2L	TC__1102__	
47.00-68.30	1.850-2.689				R5A2		R5A295	CC__0602__
46.50-67.80	1.831-2.673				208		8.187	<b>CAT50-162</b>
47.00-68.30	1.850-2.689	R5A2	R5A295	CC__0602__				
60.50-86.10	2.375-3.383	128	5.039	<b>CAT50-163</b>	R7A2C	R7A2L	CC__09T3__	
					R7A2		R7A295	TC__16T3__
		185	7.283	<b>CAT50-164</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
		280	11.025	<b>CAT50-165</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
79.50-105.10	3.130-4.138	119	4.685	<b>CAT50-167</b>	R7A2C	R7A2L	CC__09T3__	
					R7A2		R7A295	TC__16T3__
		199	7.835	<b>CAT50-168</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
		297	11.693	<b>CAT50-169</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
					R7A2		R7A295	TC__16T3__
96.00-142.00	3.780-5.590	118	4.645	<b>CAT50-170</b>	R10A2C	R10A2L	CC__1204__	
					R10A2		R10A295	TC__16T3__
		296	11.653	<b>CAT50-171</b>	R10A2C	R10A2L	R10A295C	CC__1204__
					R10A2		R10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## STANDARD BORING BARS PLAIN STRAIGHT SHANK

with standard R unit for  
roughing & semi-finishing

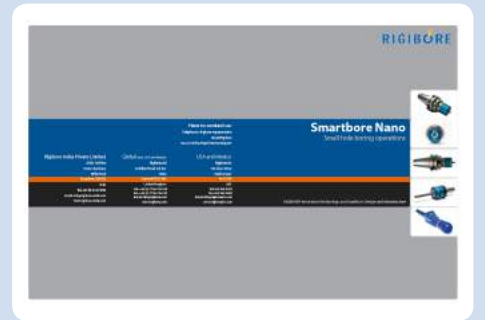
**25SS / 1.00SS**



Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert					
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°						
15.875-17.40	.625-.685	83	3.268	<b>25SS-1535</b>	<b>1.00SS-1535</b>	R2B2S			TC__06T1__					
16.67-18.25	.656-.718			<b>25SS-1536</b>	<b>1.00SS-1536</b>									
17.40-19.00	.685-.748			<b>25SS-1537</b>	<b>1.00SS-1537</b>									
19.00-23.00	.748-.905	87	3.425	<b>25SS-154</b>	<b>1.00SS-154</b>	R2B2	R2B2L							
23.00-27.00	.905-1.062													
23.00-31.00	.905-1.220	107	4.212	<b>25SS-155</b>	<b>1.00SS-155</b>	R3B1	R3B2L	R3B295	CC__0602__					
24.00-32.00	.945-1.260					R3B2C								
27.00-35.00	1.062-1.378					R3B2								
28.00-42.00	1.103-1.654					R3A2C								
31.00-45.00	1.220-1.771	117	4.606	<b>25SS-156</b>	<b>1.00SS-156</b>	R3A2	R3A2L	R3A295	TC__0902__					
37.50-48.70	1.476-1.917					R5B2C								
38.00-49.20	1.496-1.937					R5B2								
46.50-67.80	1.831-2.673	116	4.567	<b>25SS-160</b>	<b>1.00SS-160</b>	R5B2L	R5B2L	R5B295	TC__1102__					
47.00-68.30	1.850-2.689					RSA2C								
60.50-86.10	2.375-3.383	128	5.039	<b>25SS-163</b>	<b>1.00SS-163</b>	RSA2	R5A2L	R5A295C	CC__0602__					
79.50-105.10	3.130-4.138					119		4.685	<b>25SS-167</b>	<b>1.00SS-167</b>	R7A2C	R7A2L	R7A295	TC__1102__
											R7A2		R7A295C	CC__09T3__
						R7A2	R7A2L	R7A295	TC__16T3__					

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

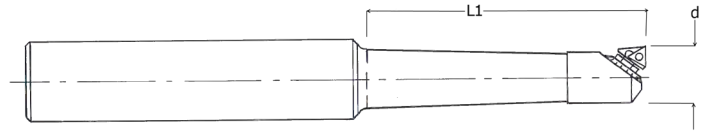
## Smartbore & Smartbore Nano



# STANDARD BORING BARS PLAIN STRAIGHT SHANK

with standard R unit for  
roughing & semi-finishing

**32SS / 1.25SS**



Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
19.00-23.00	.748-.905	87	3.425	<b>32SS-154</b>	<b>1.25SS-154</b>	R2B2	R2B2L		TC__06T1__
23.00-27.00	.905-1.062					R3B1			
23.00-31.00	.905-1.220					R3B2C			
24.00-32.00	.945-1.260	107	4.212	<b>32SS-155</b>	<b>1.25SS-155</b>	R3B2	R3B2L	R3B295	TC__0902__
27.00-35.00	1.062-1.378					R3A2C	R3A2L	R3A295	CC__0602__
28.00-42.00	1.103-1.654					R3A2			TC__0902__
31.00-45.00	1.220-1.771	116	4.567	<b>32SS-156</b>	<b>1.25SS-156</b>	R5B2C	R5B2L	R5B295	CC__0602__
37.50-48.70	1.476-1.917					R5B2			TC__1102__
38.00-49.20	1.496-1.937					R5A2C			R5A295C
46.50-67.80	1.831-2.673					R5A2	R5A295	TC__1102__	
47.00-68.30	1.850-2.689					R5A2L			
60.50-86.10	2.375-3.383	128	5.039	<b>32SS-163</b>	<b>1.25SS-163</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
60.50-86.10	2.375-3.383					R7A2		R7A295	TC__16T3__
79.50-105.10	3.130-4.138					119	4.685	<b>32SS-167</b>	<b>1.25SS-167</b>
79.50-105.10	3.130-4.138	R7A2	R7A295	TC__16T3__					

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

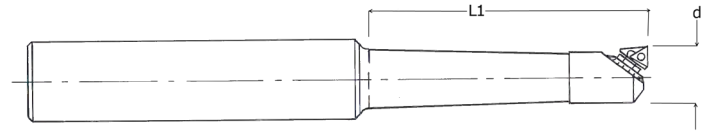
## Specialists In Special Tools



# STANDARD BORING BARS PLAIN STRAIGHT SHANK

with standard R unit for  
roughing & semi-finishing

**40SS / 1.50SS**



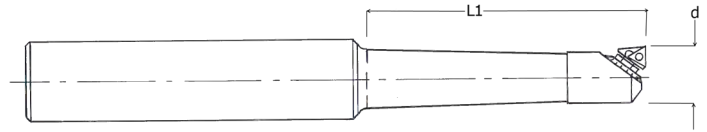
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
19.00-23.00	.748-.905	87	3.425	<b>40SS-154</b>	<b>1.50SS-154</b>	R2B2	R2B2L	R3B295	TC__06T1__
23.00-27.00	.905-1.062								
23.00-31.00	.905-1.220								
24.00-32.00	.945-1.260	107	4.212	<b>40SS-155</b>	<b>1.50SS-155</b>	R3B1	R3B2L	R3B295	CC__0602__
27.00-35.00	1.062-1.378					R3B2C			
28.00-42.00	1.103-1.654	117	4.606	<b>40SS-156</b>	<b>1.50SS-156</b>	R3A2C	R3A2L	R3A295	TC__0902__
31.00-45.00	1.220-1.771					R3A2			
28.00-42.00	1.103-1.654					R3A2C			
31.00-45.00	1.220-1.771	132	5.197	<b>40SS-157</b>	<b>1.50SS-157</b>	R3A2	R3A2L	R3A295	TC__0902__
						R5B2C			
37.50-48.70	1.476-1.917	116	4.567	<b>40SS-158</b>	<b>1.50SS-158</b>	R5B2	R5B2L	R5B295	TC__1102__
38.00-49.20	1.496-1.937								
37.50-48.70	1.476-1.917	173	6.811	<b>40SS-159</b>	<b>1.50SS-159</b>	R5B2C	R5B2L	R5B295	CC__0602__
38.00-49.20	1.496-1.937					R5B2			
46.50-67.80	1.831-2.673	116	4.567	<b>40SS-160</b>	<b>1.50SS-160</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689					R5A2		R5A295	
46.50-67.80	1.831-2.673	186	7.323	<b>40SS-161</b>	<b>1.50SS-161</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689					R5A2		R5A295	
60.50-86.10	2.375-3.383	128	5.039	<b>40SS-163</b>	<b>1.50SS-163</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		R7A295	
		186	7.283	<b>40SS-164</b>	<b>1.50SS-164</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		R7A295	
79.50-105.10	3.130-4.138	119	4.685	<b>40SS-167</b>	<b>1.50SS-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		R7A295	
		199	7.835	<b>40SS-168</b>	<b>1.50SS-168</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		R7A295	
96.00-142.00	3.780-5.590	118	4.645	<b>40SS-170</b>	<b>1.50SS-170</b>	R10A2C	R10A2L	R10A295C	CC__1204__
						R10A2		R10A295	

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS PLAIN STRAIGHT SHANK

with standard R unit for  
roughing & semi-finishing

**50SS / 2.00SS**



Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
19.00-23.00	.748-.905	87	3.425	<b>50SS-154</b>	<b>2.00SS-154</b>	R2B2	R2B2L		TC__06T1__
23.00-27.00	.905-1.062								
23.00-31.00	.905-1.220	107	4.212	<b>50SS-155</b>	<b>2.00SS-155</b>	R3B1	R3B2L	R3B295	CC__0602__
24.00-32.00	.945-1.260					R3B2C			
27.00-35.00	1.062-1.378					R3B2			
28.00-42.00	1.103-1.654					R3A2C			
31.00-45.00	1.220-1.771	117	4.606	<b>50SS-156</b>	<b>2.00SS-156</b>	R3A2	R3A2L	R3A295	TC__0902__
28.00-42.00	1.103-1.654					R3A2C			
31.00-45.00	1.220-1.771					R3A2			
						R3A2C			
37.50-48.70	1.476-1.917	116	4.567	<b>50SS-158</b>	<b>2.00SS-158</b>	R5B2C	R5B2L	R5B295	CC__0602__
38.00-49.20	1.496-1.937					R5B2			
37.50-48.70	1.476-1.917	173	6.811	<b>50SS-159</b>	<b>2.00SS-159</b>	R5B2C	R5B2L		CC__0602__
38.00-49.20	1.496-1.937					R5B2			
46.50-67.80	1.831-2.673	116	4.567	<b>50SS-160</b>	<b>2.00SS-160</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689					R5A2		R5A295	TC__1102__
46.50-67.80	1.831-2.673	186	7.323	<b>50SS-161</b>	<b>2.00SS-161</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689					R5A2		R5A295	TC__1102__
60.50-86.10	2.375-3.383	128	5.039	<b>50SS-163</b>	<b>2.00SS-163</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		R7A295	TC__16T3__
		186	7.283	<b>50SS-164</b>	<b>2.00SS-164</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		R7A295	TC__16T3__
79.50-105.10	3.130-4.138	119	4.685	<b>50SS-167</b>	<b>2.00SS-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		R7A295	TC__16T3__
		199	7.835	<b>50SS-168</b>	<b>2.00SS-168</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		R7A295	TC__16T3__
96.00-142.00	3.780-5.590	118	4.645	<b>50SS-170</b>	<b>2.00SS-170</b>	R10A2C	R10A2L	R10A295C	CC__1204__

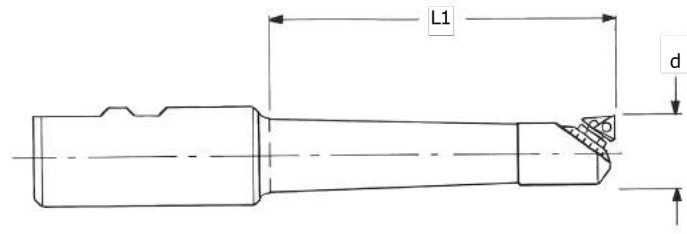
Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS WELDON (DIN 1835B/ANSI B94-19)

with standard R unit for  
roughing & semi-finishing

**W25SS / W1.00SS**

# RIGIBORE



Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
15.875-17.40	.625-.685	83	3.268	<b>W25SS-1535</b>	<b>W1.00SS-1535</b>	R2B2S			TC__06T1__
16.67-18.25	.685-718			<b>W25SS-1536</b>	<b>W1.00SS-1536</b>				
17.40-19.00	.685-748			<b>W25SS-1537</b>	<b>W1.00SS-1537</b>				
19.00-23.00	.748-905	87	3.425	<b>W25SS-154</b>	<b>W1.00SS-154</b>	R2B2	R2B2L		
23.00-27.00	.905-1.062								
23.00-31.00	.905-1.220	107	4.212	<b>W25SS-155</b>	<b>W1.00SS-155</b>	R3B1	R3B2L	R3B295	CC__0602__
24.00-32.00	.945-1.260					R3B2C			TC__0902__
27.00-35.00	1.062-1.378					R3B2			CC__0602__
28.00-42.00	1.103-1.654	117	4.606	<b>W25SS-156</b>	<b>W1.00SS-156</b>	R3A2C	R3A2L	R3A295	TC__0902__
31.00-45.00	1.220-1.771					R3A2			CC__0602__
						R5B2C			
37.50-48.70	1.476-1.917	116	4.567	<b>W25SS-158</b>	<b>W1.00SS-158</b>	R5B2	R5B2L	R5B295	TC__1102__
	1.496-1.937								
46.50-67.80	1.831-2.673					R5A2C		R5A295C	CC__0602__
		R5A2	R5A295	TC__1102__					
47.00-68.30	1.850-2.689					R5A2L			
60.50-86.10	2.375-3.383	128	5.039	<b>W25SS-163</b>	<b>W1.00SS-163</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		TC__16T3__	
79.50-105.10	3.130-4.138	119	4.685	<b>W25SS-167</b>	<b>W1.00SS-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		TC__16T3__	

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

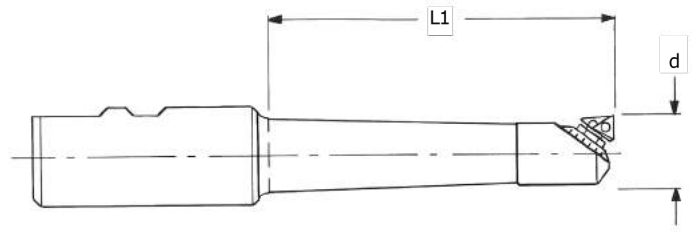
## UFP Cartridges



# STANDARD BORING BARS WELDON (DIN 1835B/ANSI B94-19)

with standard R unit for  
roughing & semi-finishing

**W32SS / W1.25SS**



Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	Ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
19.00-23.00	.748-.905	87	3.425	<b>W32SS-154</b>	<b>W1.25SS-154</b>	R2B2	R2B2L		TC__06T1__
23.00-27.00	.905-1.062					R3B1			
23.00-31.00	.905-1.220					R3B2C			
24.00-32.00	.945-1.260	107	4.212	<b>W32SS-155</b>	<b>W1.25SS-155</b>	R3B2	R3B2L	R3B295	TC__0902__
27.00-35.00	1.062-1.378					R3A2C	R3A2L	R3A295	CC__0602__
28.00-42.00	1.103-1.654					R3A2			TC__0902__
31.00-45.00	1.220-1.771	117	4.606	<b>W32SS-156</b>	<b>W1.25SS-156</b>	R5B2C		R5B295	CC__0602__
37.50-48.70	1.476-1.917					R5B2			TC__1102__
38.00-49.20	1.496-1.937					116	4.567	<b>W32SS-158</b>	<b>W1.25SS-158</b>
46.50-67.80	1.831-2.673	R5A2	R5A295	TC__1102__					
47.00-68.30	1.850-2.689	128	5.039	<b>W32SS-160</b>	<b>W1.25SS-160</b>				
60.50-86.10	2.375-3.383					R7A2C	R7A295C	CC__09T3__	
79.50-105.10	3.130-4.138					R7A2	R7A295	TC__16T3__	
		119	4.685	<b>W32SS-163</b>	<b>W1.25SS-163</b>	R7A2C		R7A295C	CC__09T3__
						R7A2	R7A295	TC__16T3__	

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## Specialists In Special Tools

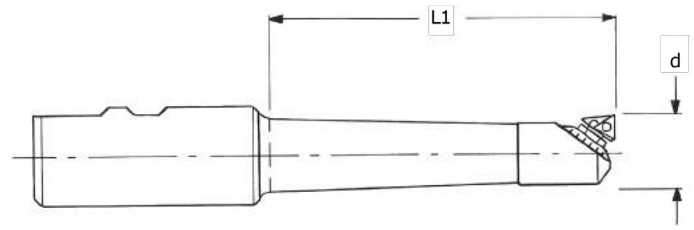


# STANDARD BORING BARS WELDON (DIN 1835B/ANSI B94-19)

with standard R unit for  
roughing & semi-finishing

**W40SS / W1.50SS**

**RIGIBORE**



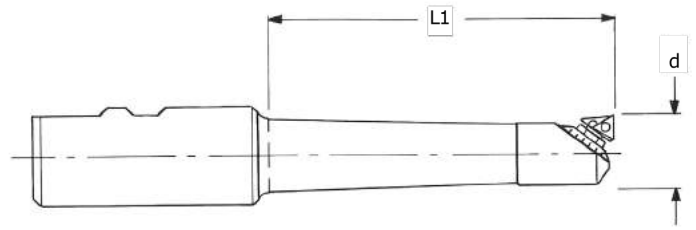
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	Ins	Mm	ins	METRIC	IMPERIAL	90°	75°	95°	
19.00-23.00	.748-.905	87	3.425	<b>W40SS-154</b>	<b>W1.50SS-154</b>	R2B2	R2B2L		TC__06T1__
23.00-27.00	.905-1.062								
23.00-31.00	.905-1.220	107	4.212	<b>W40SS-155</b>	<b>W1.50SS-155</b>	R3B1	R3B2L	R3B295	CC__0602__
24.00-32.00	.945-1.260					R3B2C			
27.00-35.00	1.062-1.378					R3B2			
28.00-42.00	1.103-1.654	117	4.606	<b>W40SS-156</b>	<b>W1.50SS-156</b>	R3A2C	R3A2L	R3A295	CC__0602__
31.00-45.00	1.220-1.771					R3A2			
28.00-42.00	1.103-1.654	132	5.197	<b>W40SS-157</b>	<b>W1.50SS-157</b>	R3A2C	R3A2L	R3A295	CC__0602__
31.00-45.00	1.220-1.771					R3A2			
						R5B2C			
37.50-48.70	1.476-1.917	116	4.567	<b>W40SS-158</b>	<b>W1.50SS-158</b>	R5B2	R5B2L	R5B295	TC__1102__
38.00-49.20	1.496-1.937					R5B2C			
37.50-48.70	1.476-1.917	173	6.811	<b>W40SS-159</b>	<b>W1.50SS-159</b>	R5B2	R5B2L		CC__0602__
38.00-49.20	1.496-1.937					R5B2C			
46.50-67.80	1.831-2.673	116	4.567	<b>W40SS-160</b>	<b>W1.50SS-160</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689					R5A2		R5A295	
46.50-67.80	1.831-2.673	186	7.323	<b>W40SS-161</b>	<b>W1.50SS-161</b>	R5A2C	R5A2L	R5A295C	CC__0602__
47.00-68.30	1.850-2.689					R5A2		R5A295	
60.50-86.10	2.375-3.383	128	5.039	<b>W40SS-163</b>	<b>W1.50SS-163</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		R7A295	TC__16T3__
		185	7.283	<b>W40SS-164</b>	<b>W1.50SS-164</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
79.50-105.10	3.130-4.138	119	4.685	<b>W40SS-167</b>	<b>W1.50SS-167</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
						R7A2		R7A295	TC__16T3__
		199	7.835	<b>W40SS-168</b>	<b>W1.50SS-168</b>	R7A2C	R7A2L	R7A295C	CC__09T3__
96.00-142.00	3.780-5.590	118	4.645	<b>W40SS-170</b>	<b>W1.50SS-170</b>	R10A2C	R10A2L	R10A295C	CC__1204__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS WELDON (DIN 1835B/ANSI B94-19)

with standard R unit for  
roughing & semi-finishing

**W50SS / W2.00SS**



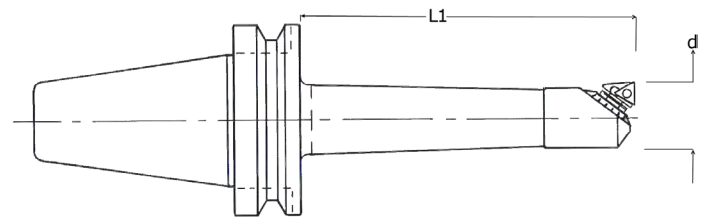
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert				
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°					
19.00-23.00	.748-.905	87	3.425	W50SS-154	W2.00SS-154	R2B2	R2B2L		TC__06T1__				
23.00-27.00	.905-1.062					R3B1							
23.00-31.00	.905-1.220					R3B2C							
24.00-32.00	.945-1.260	107	4.212	W50SS-155	W2.00SS-155	R3B2	R3B2L	R3B295	TC__0902__				
27.00-35.00	1.062-1.378					R3A2C	R3A2L	R3A295	CC__0602__				
28.00-42.00	1.103-1.654					R3A2							
31.00-45.00	1.220-1.771	117	4.606	W50SS-156	W2.00SS-156	R3A2C	R3A2L	R3A295	CC__0602__				
28.00-42.00	1.103-1.654					R3A2							
31.00-45.00	1.220-1.771					R3A2C	R3A2L	R3A295	CC__0602__				
37.50-48.70	1.476-1.917	132	5.197	W50SS-157	W2.00SS-157	R3A2			R3A2L	R3A295	TC__1102__		
38.00-49.20	1.496-1.937					R5B2C	R5B2L	R5B295	CC__0602__				
37.50-48.70	1.476-1.917					R5B2							
38.00-49.20	1.496-1.937	173	6.811	W50SS-159	W2.00SS-159	R5B2C	R5B2L	R5B295	TC__1102__				
37.50-48.70	1.476-1.917					R5B2							
38.00-49.20	1.496-1.937					R5B2C	R5A2L	R5A295C	CC__0602__				
46.50-67.80	1.831-2.673	116	4.567	W50SS-160	W2.00SS-160	R5A2C			R5A2L	R5A295C	CC__0602__		
47.00-68.30	1.850-2.689					R5A2	R5A2L	R5A295C	TC__1102__				
46.50-67.80	1.831-2.673					R5A2C			R5A295C				
47.00-68.30	1.850-2.689	186	7.323	W50SS-161	W2.00SS-161	R5A2	R5A2L	R5A295C	CC__0602__				
60.50-86.10	2.375-3.383					128	5.039	W50SS-163	W2.00SS-163	R7A2C	R7A2L	R7A295C	CC__09T3__
60.50-86.10										R7A2			R7A295C
60.50-86.10		2.375-3.383	185	7.283	W50SS-164	W2.00SS-164	R7A2C	R7A2L	R7A295C	CC__09T3__			
79.50-105.10	3.130-4.138	119	4.685	W50SS-167	W2.00SS-167	R7A2	R7A2L	R7A295C	TC__16T3__				
						R7A2C	R7A295C						
		199	7.835	W50SS-168	W2.00SS-168	R7A2C	R7A2L	R7A295C	CC__09T3__				
96.00-142.00	3.780-5.590	118	4.645	W50SS-170	W2.00SS-170	R10A2C	R10A2L	R10A295C	CC__1204__				
						R10A2			R10A295C				

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## STANDARD BORING BARS TYPE BT40 (MAS 403)

with standard TR (Top-adjusting)  
unit for finish boring

**BT40**



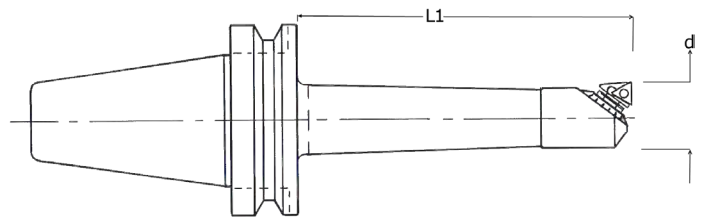
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>BT40-154</b>		TR2B2L		TC__06T1__
23.6-27.6	.930-1.087				TR2B3			
28.0-31.0	1.103-1.220				TR3B1			
28.0-32.0	1.103-1.260	107	4.212	<b>BT40-155</b>	TR3B2C			CC__0602__
28.0-35.0	1.103-1.378				TR3B2	TR3B2L	TR3B295	TC__0902__
31.0-42.0	1.220-1.654	117	4.606	<b>BT40-156</b>	TR3A2C			CC__0602__
31.0-45.0	1.220-1.771				TR3A2	TR3A2L	TR3A295	TC__0902__
31.0-42.0	1.220-1.654	132	5.197	<b>BT40-157</b>	TR3A2C			CC__0602__
31.0-45.0	1.220-1.771				TR3A2	TR3A2L	TR3A295	TC__0902__
					TR5B2C			CC__0602__
37.5-48.7	1.476-1.917	116	4.567	<b>BT40-158</b>	TR5B2		TR5B295	TC__1102__
38.0-49.2	1.496-1.937					TR5B2L		CC__0602__
37.5-48.7	1.476-1.917	173	6.811	<b>BT40-159</b>	TR5B2C		TR5B295	TC__1102__
38.0-49.2	1.496-1.937				TR5B2			CC__0602__
						TR5B2L		TC__1102__
46.5-67.8	1.831-2.673	116	4.567	<b>BT40-160</b>	TR5A2C		TR5A295C	CC__0602__
47.0-68.3	1.850-2.659				TR5A2		TR5A295	TC__1102__
46.5-67.8	1.831-2.673	186	7.323	<b>BT40-161</b>		TR5A2L		CC__0602__
47.0-68.3	1.850-2.689				TR5A2C		TR5A295C	TC__1102__
61.5-85.6	2.422-3.370				TR5A2		TR5A295	
62.2-87.8	2.450-3.455	128	5.039	<b>BT40-163</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
61.5-85.6	2.422-3.370				TR7A2C		TR7A295C	CC__09T3__
62.2-87.8	2.450-3.455	185	7.283	<b>BT40-164</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
79.5-104.6	3.130-4.118				TR7A2C		TR7A295C	CC__09T3__
81.2-106.8	3.197-4.204	119	4.685	<b>BT40-167</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
79.5-104.6	3.130-4.118				TR7A2C		TR7A295C	CC__09T3__
81.2-106.8	3.197-4.204	199	7.835	<b>BT40-168</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
95.3-141.3	3.752-5.562				TR7A2C		TR7A295C	CC__09T3__
96.0-141.5	3.780-5.570	118	4.645	<b>BT40-170</b>	TR10A2C		TR10A295C	CC__1204__
					TR10A2	TR10A2L	TR10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## STANDARD BORING BARS TYPE BT50 (MAS 403)

with standard TR (Top-adjusting) unit for finish boring

**BT50**



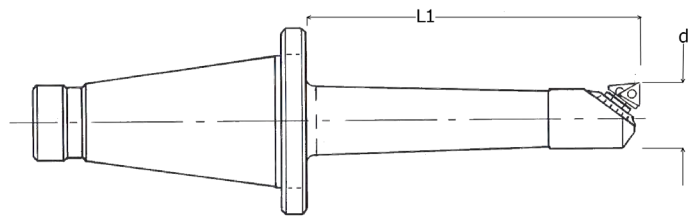
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>BT50-154</b>		TR2B2L	TC__06T1__	
23.6-27.6	.930-1.087				TR2B3			
28.0-31.0	1.103-1.220	107	4.212	<b>BT50-155</b>	TR3B1	TC__0902__		
28.0-32.0	1.103-1.260				TR3B2C			
28.0-35.0	1.103-1.378	117	4.606	<b>BT50-156</b>	TR3B2	TR3B2L	TR3B295	TC__0902__
31.0-42.0	1.220-1.654				TR3A2C	TR3A2L	TR3A295	CC__0602__
31.0-45.0	1.220-1.771	132	5.197	<b>BT50-157</b>	TR3A2	TR3A2L	TR3A295	TC__0902__
31.0-42.0	1.220-1.654				TR3A2C	TR3A2L	TR3A295	CC__0602__
31.0-45.0	1.220-1.771	116	4.567	<b>BT50-158</b>	TR5B2C	TR5B2L	TR5B295	TC__0602__
37.5-48.7	1.476-1.917				TR5B2		TC__1102__	
38.0-49.2	1.496-1.937	173	6.811	<b>BT50-159</b>	TR5B2C	TR5B2L	TR5B295	CC__0602__
37.5-48.7	1.476-1.917				TR5B2	TC__1102__		
38.0-49.2	1.496-1.937	116	4.567	<b>BT50-160</b>	TR5B2C	TR5B2L	TR5B295	TC__1102__
46.5-67.8	1.831-2.673				TR5B2	CC__0602__		
47.0-68.3	1.850-2.659	186	7.323	<b>BT50-161</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
46.5-67.8	1.831-2.673				TR5A2	TR5A295	TC__1102__	
47.0-68.3	1.850-2.689	208	8.187	<b>BT50-162</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
46.5-67.8	1.831-2.673				TR5A2	TR5A295	TC__1102__	
47.0-68.3	1.850-2.689	128	5.039	<b>BT50-163</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
61.5-85.6	2.422-3.370				TR5A2	TR5A295	TC__1102__	
62.2-87.8	2.450-3.455	185	7.283	<b>BT50-164</b>	TR7A2	TR7A2L	TR7A295	CC__09T3__
61.5-85.6	2.422-3.370				TR7A2C	TR7A295C	TC__16T3__	
62.2-87.8	2.450-3.455	280	11.025	<b>BT50-165</b>	TR7A2	TR7A2L	TR7A295	CC__09T3__
61.5-85.6	2.422-3.370				TR7A2C	TR7A295C	TC__16T3__	
62.2-87.8	2.450-3.455	119	4.685	<b>BT50-167</b>	TR7A2	TR7A2L	TR7A295	CC__09T3__
79.5-104.6	3.130-4.118				TR7A2C	TR7A295C	TC__16T3__	
81.2-106.8	3.197-4.204	199	7.835	<b>BT50-168</b>	TR7A2	TR7A2L	TR7A295	CC__09T3__
79.5-104.6	3.130-4.118				TR7A2C	TR7A295C	TC__16T3__	
81.2-106.8	3.197-4.204	297	11.693	<b>BT50-169</b>	TR7A2	TR7A2L	TR7A295	CC__09T3__
79.5-104.6	3.130-4.118				TR7A2C	TR7A295C	TC__16T3__	
81.2-106.8	3.197-4.204	118	4.645	<b>BT50-170</b>	TR10A2C	TR10A2L	TR10A295C	CC__1204__
95.3-141.3	3.752-5.562				TR10A2	TR10A295	TC__16T3__	
96.0-141.5	3.780-5.570	296	11.653	<b>BT50-171</b>	TR10A2C	TR10A2L	TR10A295C	CC__1204__
95.3-141.3	3.752-5.562				TR10A2	TR10A295	TC__16T3__	
96.0-141.5	3.780-5.570							

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## STANDARD BORING BARS TYPE DIN 2080-40

with standard TR (Top-adjusting)  
unit for finish boring

### 2080-40



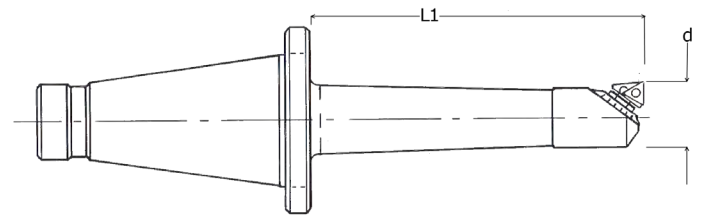
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>2080-40-154</b>		TR2B2L		TC__06T1__
23.6-27.6	.930-1.087				TR2B3			
28.0-31.0	1.103-1.220				TR3B1			
28.0-32.0	1.103-1.260	107	4.212	<b>2080-40-155</b>	TR3B2C			CC__0602__
28.0-35.0	1.103-1.378				TR3B2	TR3B2L	TR3B295	TC__0902__
31.0-42.0	1.220-1.654	117	4.606	<b>2080-40-156</b>	TR3A2C			CC__0602__
31.0-45.0	1.220-1.771				TR3A2	TR3A2L	TR3A295	TC__0902__
31.0-42.0	1.220-1.654	132	5.197	<b>2080-40-157</b>	TR3A2C			CC__0602__
31.0-45.0	1.220-1.771				TR3A2	TR3A2L	TR3A295	TC__0902__
37.5-48.7	1.476-1.917	116	4.567	<b>2080-40-158</b>	TR5B2C			CC__0602__
38.0-49.2	1.496-1.937				TR5B2		TR5B295	TC__1102__
37.5-48.7	1.476-1.917	173	6.811	<b>2080-40-159</b>	TR5B2C	TR5B2L		CC__0602__
38.0-49.2	1.496-1.937				TR5B2		TR5B295	TC__1102__
46.5-67.8	1.831-2.673	116	4.567	<b>2080-40-160</b>	TR5A2C		TR5A295C	CC__0602__
47.0-68.3	1.850-2.659				TR5A2	TR5A2L	TR5A295	TC__1102__
46.5-67.8	1.831-2.673	186	7.323	<b>2080-40-161</b>	TR5A2C		TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2	TR5A2L	TR5A295	TC__1102__
46.5-67.8	1.831-2.673	208	8.187	<b>2080-40-162</b>	TR5A2C		TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2	TR5A2L	TR5A295	TC__1102__
61.5-85.6	2.422-3.370	128	5.039	<b>2080-40-163</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C		TR7A295C	CC__09T3__
61.5-85.6	2.422-3.370	185	7.283	<b>2080-40-164</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C		TR7A295C	CC__09T3__
61.5-85.6	2.422-3.370	280	11.025	<b>2080-40-165</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C		TR7A295C	CC__09T3__
79.5-104.6	3.130-4.118	119	4.685	<b>2080-40-167</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C		TR7A295C	CC__09T3__
79.5-104.6	3.130-4.118	199	7.835	<b>2080-40-168</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C		TR7A295C	CC__09T3__
79.5-104.6	3.130-4.118	297	11.693	<b>2080-40-169</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C		TR7A295C	CC__09T3__
95.3-141.3	3.752-5.562	118	4.645	<b>2080-40-170</b>	TR10A2C		TR10A295C	CC__1204__
96.0-141.5	3.780-5.570				TR10A2	TR10A2L	TR10A295	TC__16T3__
95.3-141.3	3.752-5.562	296	11.653	<b>2080-40-171</b>	TR10A2C		TR10A295C	CC__1204__
96.0-141.5	3.780-5.570				TR10A2	TR10A2L	TR10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE DIN 2080-50

with standard TR (Top-adjusting)  
unit for finish boring

**2080-50**



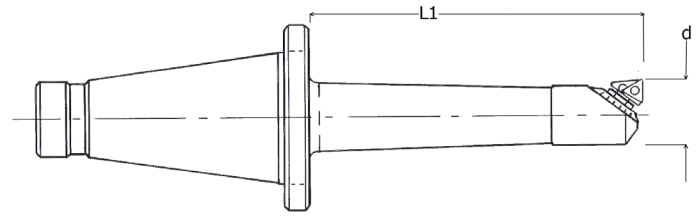
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>2080-50-154</b>		TR2B2L	TR3B295	TC__06T1__
23.6-27.6	.930-1.087				TR2B3			
28.0-31.0	1.103-1.220				TR3B1			
28.0-32.0	1.103-1.260	107	4.212	<b>2080-50-155</b>	TR3B2C	TR3B2L	TR3B295	CC__0602__
28.0-35.0	1.103-1.378				TR3B2			TC__0902__
31.0-42.0	1.220-1.654	117	4.606	<b>2080-50-156</b>	TR3A2C	TR3A2L	TR3A295	CC__0602__
31.0-45.0	1.220-1.771				TR3A2			TC__0902__
31.0-42.0	1.220-1.654				132			5.197
31.0-45.0	1.220-1.771	TR3A2	TC__0902__					
37.5-48.7	1.476-1.917	116	4.567	<b>2080-50-158</b>	TR5B2C	TR5B2L	TR5B295	CC__0602__
38.0-49.2	1.496-1.937				TR5B2			TC__1102__
37.5-48.7	1.476-1.917	173	6.811	<b>2080-50-159</b>	TR5B2C	TR5B2L	TR5B295	CC__0602__
38.0-49.2	1.496-1.937				TR5B2			TC__1102__
46.5-67.8	1.831-2.673				116			4.567
47.0-68.3	1.850-2.659	TR5A2	TC__1102__					
46.5-67.8	1.831-2.673	186	7.323	<b>2080-50-161</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2			TC__1102__
46.5-67.8	1.831-2.673	208	8.187	<b>2080-50-162</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2			TC__1102__
61.5-85.6	2.422-3.370				128			5.039
62.2-87.8	2.450-3.455	TR7A2C	CC__09T3__					
61.5-85.6	2.422-3.370	185	7.283	<b>2080-50-164</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C			CC__09T3__
61.5-85.6	2.422-3.370	280	11.025	<b>2080-50-165</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C			CC__09T3__
79.5-104.6	3.130-4.118	119	4.685	<b>2080-50-167</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C			CC__09T3__
79.5-104.6	3.130-4.118	199	7.835	<b>2080-50-168</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C			CC__09T3__
79.5-104.6	3.130-4.118	297	11.693	<b>2080-50-169</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C			CC__09T3__
95.3-141.3	3.752-5.562	118	4.645	<b>2080-50-170</b>	TR10A2C	TR10A2L	TR10A295C	CC__1204__
96.0-141.5	3.780-5.570				TR10A2			TC__16T3__
95.3-141.3	3.752-5.562				296			11.653
96.0-141.5	3.780-5.570	TR10A2	TC__16T3__					

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE NMTB40

with standard TR (Top-adjusting) unit for  
finish boring

**NMTB40**



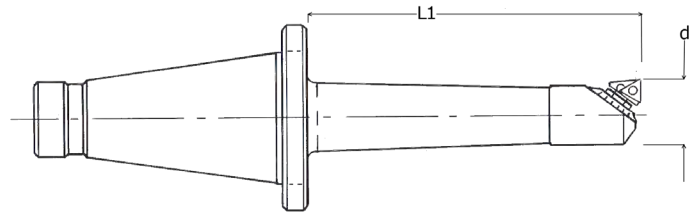
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>NMTB40-154</b>		TR2B2L	TC__06T1__	
23.6-27.6	.930-1.087				TR2B3			
28.0-31.0	1.103-1.220				TR3B1			
28.0-32.0	1.103-1.260	107	4.212	<b>NMTB40-155</b>	TR3B2C	TR3B2L	TR3B295	CC__0602__
28.0-35.0	1.103-1.378				TR3B2			
31.0-42.0	1.220-1.654	117	4.606	<b>NMTB40-156</b>	TR3A2C	TR3A2L	TR3A295	CC__0602__
31.0-45.0	1.220-1.771				TR3A2			
31.0-42.0	1.220-1.654	132	5.197	<b>NMTB40-157</b>	TR3A2C	TR3A2L	TR3A295	CC__0602__
31.0-45.0	1.220-1.771				TR3A2			
					TR5B2C			
37.5-48.7	1.476-1.917	116	4.567	<b>NMTB40-158</b>	TR5B2	TR5B2L	TR5B295	CC__0602__
38.0-49.2	1.496-1.937				TR5B2			
37.5-48.7	1.476-1.917	173	6.811	<b>NMTB40-159</b>	TR5B2C	TR5B2L	TR5B295	CC__0602__
38.0-49.2	1.496-1.937				TR5B2			
					TR5B2			
46.5-67.8	1.831-2.673	116	4.567	<b>NMTB40-160</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.659				TR5A2		TR5A295	
46.5-67.8	1.831-2.673	186	7.323	<b>NMTB40-161</b>		TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2			TR5A295
					TR5A2			TR5A295
46.5-67.8	1.831-2.673	208	8.187	<b>NMTB40-162</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2		TR5A295	
61.5-85.6	2.422-3.370	128	5.039	<b>NMTB40-163</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C	TR7A295C	CC__09T3__	
61.5-85.6	2.422-3.370	185	7.283	<b>NMTB40-164</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C	TR7A295C	CC__09T3__	
61.5-85.6	2.422-3.370	280	11.025	<b>NMTB40-165</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C	TR7A295C	CC__09T3__	
79.5-104.6	3.130-4.118	119	4.685	<b>NMTB40-167</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C	TR7A295C	CC__09T3__	
79.5-104.6	3.130-4.118	199	7.835	<b>NMTB40-168</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C	TR7A295C	CC__09T3__	
79.5-104.6	3.130-4.118	297	11.693	<b>NMTB40-169</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C	TR7A295C	CC__09T3__	
95.3-141.3	3.752-5.562	118	4.645	<b>NMTB40-170</b>	TR10A2C	TR10A2L	TR10A295C	CC__1204__
96.0-141.5	3.780-5.570				TR10A2		TR10A295	TC__16T3__
95.3-141.3	3.752-5.562				TR10A2C		TR10A295C	CC__1204__
96.0-141.5	3.780-5.570	296	11.653	<b>NMTB40-171</b>	TR10A2	TR10A2L	TR10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE NMTB50

with standard TR (Top-adjusting) unit for finish boring

**NMTB50**



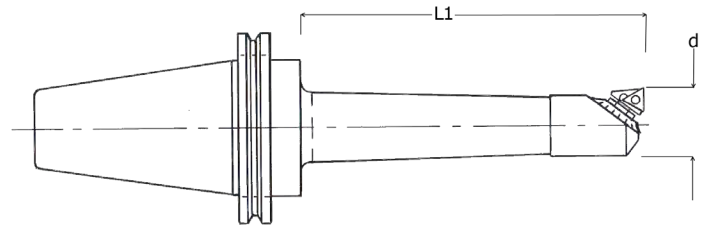
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>NMTB50-154</b>		TR2B2L		TC__06T1__
23.6-27.6	.930-1.087				TR2B3			
28.0-31.0	1.103-1.220				TR3B1			
28.0-32.0	1.103-1.260	107	4.212	<b>NMTB50-155</b>	TR3B2C	TR3B2L	TR3B295	CC__0602__
28.0-35.0	1.103-1.378				TR3B2			TC__0902__
31.0-42.0	1.220-1.654	117	4.606	<b>NMTB50-156</b>	TR3A2C	TR3A2L	TR3A295	CC__0602__
31.0-45.0	1.220-1.771				TR3A2			TC__0902__
31.0-42.0	1.220-1.654				132			5.197
31.0-45.0	1.220-1.771	TR3A2	TC__0902__					
37.5-48.7	1.476-1.917	116	4.567	<b>NMTB50-158</b>		TR5B2C	TR5B2L	
38.0-49.2	1.496-1.937				TR5B2	TC__1102__		
37.5-48.7	1.476-1.917				173	6.811		<b>NMTB50-159</b>
38.0-49.2	1.496-1.937	TR5B2	TC__1102__					
46.5-67.8	1.831-2.673	116	4.567	<b>NMTB50-160</b>			TR5A2C	
47.0-68.3	1.850-2.659				TR5A2	TC__1102__		
46.5-67.8	1.831-2.673				186	7.323	<b>NMTB50-161</b>	TR5A2C
47.0-68.3	1.850-2.689	TR5A2	TC__1102__					
46.5-67.8	1.831-2.673	208	8.187	<b>NMTB50-162</b>				TR5A2C
47.0-68.3	1.850-2.689				TR5A2	TC__1102__		
61.5-85.6	2.422-3.370				128	5.039	<b>NMTB50-163</b>	TR7A2
62.2-87.8	2.450-3.455	TR7A2C	CC__09T3__					
61.5-85.6	2.422-3.370	185	7.283	<b>NMTB50-164</b>				TR7A2
62.2-87.8	2.450-3.455				TR7A2C	CC__09T3__		
61.5-85.6	2.422-3.370				280	11.025	<b>NMTB50-165</b>	TR7A2
62.2-87.8	2.450-3.455	TR7A2C	CC__09T3__					
79.5-104.6	3.130-4.118	119	4.685	<b>NMTB50-167</b>				TR7A2
81.2-106.8	3.197-4.204				TR7A2C	CC__09T3__		
79.5-104.6	3.130-4.118				199	7.835	<b>NMTB50-168</b>	TR7A2
81.2-106.8	3.197-4.204	TR7A2C	CC__09T3__					
79.5-104.6	3.130-4.118	297	11.693	<b>NMTB50-169</b>				TR7A2
81.2-106.8	3.197-4.204				TR7A2C	CC__09T3__		
95.3-141.3	3.752-5.562				118	4.645	<b>NMTB50-170</b>	TR10A2C
96.0-141.5	3.780-5.570	TR10A2	TC__16T3__					
95.3-141.3	3.752-5.562	296	11.653	<b>NMTB50-171</b>				TR10A2C
96.0-141.5	3.780-5.570				TR10A2	TC__16T3__		

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE ISO7388 (DIN 69871A)

with standard TR (Top-adjusting) unit for  
finish boring

**7388-40**



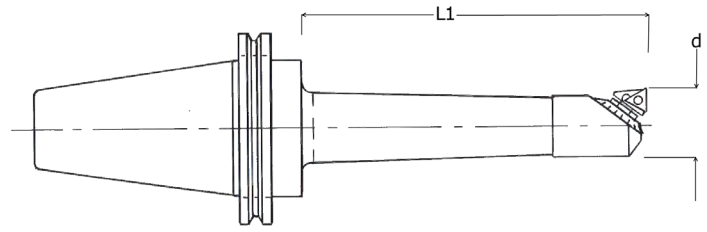
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>7388-40-154</b>		TR2B2L	TC__06T1__	
23.6-27.6	.930-1.087				TR2B3			
28.0-31.0	1.103-1.220				TR3B1			
28.0-32.0	1.103-1.260	107	4.212	<b>7388-40-155</b>	TR3B2C	TR3B295	CC__0602__	
28.0-35.0	1.103-1.378				TR3B2		TC__0902__	
31.0-42.0	1.220-1.654	117	4.606	<b>7388-40-156</b>	TR3A2C	TR3A295	CC__0602__	
31.0-45.0	1.220-1.771				TR3A2		TC__0902__	
31.0-42.0	1.220-1.654	132	5.197	<b>7388-40-157</b>	TR3A2C	TR3A295	CC__0602__	
31.0-45.0	1.220-1.771				TR3A2		TC__0902__	
37.5-48.7	1.476-1.917	116	4.567	<b>7388-40-158</b>	TR5B2C	TR5B295	CC__0602__	
38.0-49.2	1.496-1.937				TR5B2		TC__1102__	
37.5-48.7	1.476-1.917	173	6.811	<b>7388-40-159</b>	TR5B2C	TR5B295	CC__0602__	
38.0-49.2	1.496-1.937				TR5B2		TC__1102__	
46.5-67.8	1.831-2.673	116	4.567	<b>7388-40-160</b>	TR5A2C	TR5A295C	CC__0602__	
47.0-68.3	1.850-2.689				TR5A2		TC__1102__	
46.5-67.8	1.831-2.673	186	7.323	<b>7388-40-161</b>	TR5A2C	TR5A295C	CC__0602__	
47.0-68.3	1.850-2.689				TR5A2		TC__1102__	
61.5-85.6	2.422-3.370	128	5.039	<b>7388-40-163</b>	TR5A2C	TR5A295C	CC__0602__	
62.2-87.8	2.450-3.455				TR7A2C		CC__09T3__	
61.5-85.6	2.422-3.370	185	7.283	<b>7388-40-164</b>	TR7A2	TR7A295	TC__16T3__	
62.2-87.8	2.450-3.455				TR7A2C		CC__09T3__	
79.5-104.6	3.130-4.118	119	4.685	<b>7388-40-167</b>	TR7A2	TR7A295	TC__16T3__	
81.2-106.8	3.197-4.204				TR7A2C		CC__09T3__	
79.5-104.6	3.130-4.118	199	7.835	<b>7388-40-168</b>	TR7A2	TR7A295	TC__16T3__	
81.2-106.8	3.197-4.204				TR7A2C		CC__09T3__	
95.3-141.3	3.752-5.562	118	4.645	<b>7388-40-170</b>	TR10A2C	TR10A295C	CC__1204__	
96.0-141.5	3.780-5.570				TR10A2		TC__16T3__	
95.3-141.3	3.752-5.562	296	11.653	<b>7388-40-171</b>	TR10A2C	TR10A295C	CC__1204__	
96.0-141.5	3.780-5.570				TR10A2		TC__16T3__	

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE ISO7388 (DIN 69871A)

with standard TR (Top-adjusting) unit for finish boring

**7388-50**



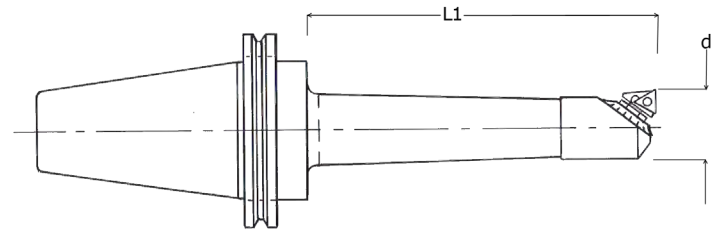
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>7388-50-154</b>		TR2B2L	TC__06T1__	
23.6-27.6	.930-1.087				TR2B3			
28.0-31.0	1.103-1.220				TR3B1			
28.0-32.0	1.103-1.260	107	4.212	<b>7388-50-155</b>	TR3B2C	TR3B2L	TR3B295	CC__0602__
28.0-35.0	1.103-1.378				TR3B2		TC__0902__	
31.0-42.0	1.220-1.654				TR3A2C		CC__0602__	
31.0-45.0	1.220-1.771	117	4.606	<b>7388-50-156</b>	TR3A2	TR3A2L	TR3A295	TC__0902__
31.0-42.0	1.220-1.654				TR3A2C	CC__0602__		
31.0-45.0	1.220-1.771				TR3A2	TC__0902__		
37.5-48.7	1.476-1.917	116	4.567	<b>7388-50-158</b>	TR5B2C	TR5B2L	TR5B295	CC__0602__
38.0-49.2	1.496-1.937				TR5B2		TC__1102__	
37.5-48.7	1.476-1.917				TR5B2C		CC__0602__	
38.0-49.2	1.496-1.937	173	6.811	<b>7388-50-159</b>	TR5B2	TR5B2L	TR5B295	TC__1102__
46.5-67.8	1.831-2.673				TR5A2C	CC__0602__		
47.0-68.3	1.850-2.689				TR5A2	TC__1102__		
46.5-67.8	1.831-2.673	116	4.567	<b>7388-50-160</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2	TC__1102__		
46.5-67.8	1.831-2.673				TR5A2C	CC__0602__		
47.0-68.3	1.850-2.689	186	7.323	<b>7388-50-161</b>	TR5A2	TR5A2L	TR5A295	TC__1102__
46.5-67.8	1.831-2.673				TR5A2C	CC__0602__		
47.0-68.3	1.850-2.689				TR5A2	TC__1102__		
46.5-67.8	1.831-2.673	208	8.187	<b>7388-50-162</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2	TC__1102__		
61.5-85.6	2.422-3.370				TR7A2	CC__09T3__		
62.2-87.8	2.450-3.455	128	5.039	<b>7388-50-163</b>	TR7A2C	TR7A2L	TR7A295	TC__16T3__
61.5-85.6	2.422-3.370				TR7A2	CC__09T3__		
62.2-87.8	2.450-3.455				TR7A2C	TC__16T3__		
79.5-104.6	3.130-4.118	185	7.283	<b>7388-50-164</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C	CC__09T3__		
79.5-104.6	3.130-4.118				TR7A2	TC__16T3__		
81.2-106.8	3.197-4.204	119	4.685	<b>7388-50-167</b>	TR7A2C	TR7A2L	TR7A295	TC__16T3__
79.5-104.6	3.130-4.118				TR7A2	CC__09T3__		
81.2-106.8	3.197-4.204				TR7A2C	TC__16T3__		
79.5-104.6	3.130-4.118	199	7.835	<b>7388-50-168</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C	CC__09T3__		
79.5-104.6	3.130-4.118				TR7A2	TC__16T3__		
81.2-106.8	3.197-4.204	297	11.693	<b>7388-50-169</b>	TR7A2C	TR7A2L	TR7A295	TC__16T3__
95.3-141.3	3.752-5.562				TR7A2	CC__09T3__		
96.0-141.5	3.780-5.570				TR7A2C	TC__16T3__		
95.3-141.3	3.752-5.562	118	4.645	<b>7388-50-170</b>	TR10A2C	TR10A2L	TR10A295C	CC__1204__
96.0-141.5	3.780-5.570				TR10A2	TC__16T3__		
95.3-141.3	3.752-5.562				TR10A2C	CC__1204__		
96.0-141.5	3.780-5.570	296	11.653	<b>7388-50-171</b>	TR10A2	TR10A2L	TR10A295	TC__16T3__
					TR10A2	TC__16T3__		

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## STANDARD BORING BARS TYPE ANSI B5-50 (1985)

with standard TR (Top-adjusting) unit for finish boring

**ANSI50**



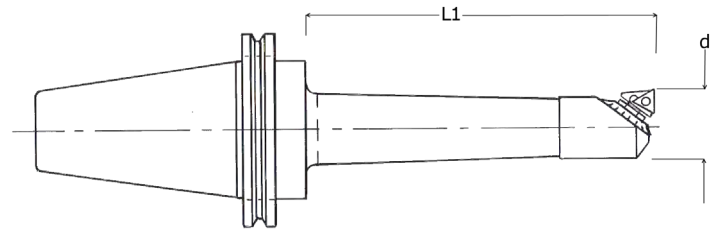
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>ANSI-50-154</b>	TR2B3	TR2B2L		TC__06T1__
23.6-27.6	.930-1.087				TR3B1			
28.0-31.0	1.103-1.220				TR3B2C			
28.0-32.0	1.103-1.260	107	4.212	<b>ANSI-50-155</b>	TR3B2	TR3B2L	TR3B295	TC__0902__
28.0-35.0	1.103-1.378				TR3A2C			CC__0602__
31.0-42.0	1.220-1.654	117	4.606	<b>ANSI-50-156</b>	TR3A2	TR3A2L	TR3A295	TC__0902__
31.0-45.0	1.220-1.771				TR3A2C			CC__0602__
31.0-42.0	1.220-1.654	132	5.197	<b>ANSI-50-157</b>	TR3A2	TR3A2L	TR3A295	TC__0902__
31.0-45.0	1.220-1.771				TR5B2C			CC__0602__
37.5-48.7	1.476-1.917	116	4.567	<b>ANSI-50-158</b>	TR5B2	TR5B2L	TR5B295	TC__1102__
38.0-49.2	1.496-1.937				TR5B2C			
37.5-48.7	1.476-1.917	173	6.811	<b>ANSI-50-159</b>	TR5B2	TR5B2L	TR5B295	TC__1102__
38.0-49.2	1.496-1.937				TR5A2C			
46.5-67.8	1.831-2.673	116	4.567	<b>ANSI-50-160</b>	TR5A2	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2C			
46.5-67.8	1.831-2.673	186	7.323	<b>ANSI-50-161</b>	TR5A2	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2C			
46.5-67.8	1.831-2.673	208	8.187	<b>ANSI-50-162</b>	TR5A2	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2C			
61.5-85.6	2.422-3.370	128	5.039	<b>ANSI-50-163</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C			CC__09T3__
61.5-85.6	2.422-3.370	185	7.283	<b>ANSI-50-164</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C			CC__09T3__
61.5-85.6	2.422-3.370	280	11.025	<b>ANSI-50-165</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C			CC__09T3__
79.5-104.6	3.130-4.118	119	4.685	<b>ANSI-50-167</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C			CC__09T3__
79.5-104.6	3.130-4.118	199	7.835	<b>ANSI-50-168</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C			CC__09T3__
79.5-104.6	3.130-4.118	297	11.693	<b>ANSI-50-169</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C			CC__09T3__
95.3-141.3	3.752-5.562	118	4.645	<b>ANSI-50-170</b>	TR10A2C	TR10A2L	TR10A295C	CC__1204__
96.0-141.5	3.780-5.570				TR10A2			
95.3-141.3	3.752-5.562	296	11.653	<b>ANSI-50-171</b>	TR10A2C		TR10A295C	CC__1204__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE CAT40

with standard TR  
(Top-adjusting) unit for finish boring

**CAT40**



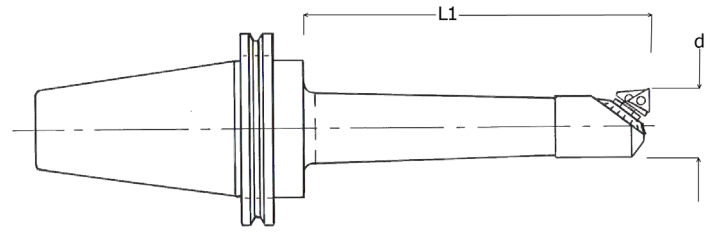
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>CAT40-154</b>		TR2B2L	TC__06T1__	
23.6-27.6	.930-1.087				TR2B3			
28.0-31.0	1.103-1.220				TR3B1			
28.0-32.0	1.103-1.260	107	4.212	<b>CAT40-155</b>	TR3B2C	TR3B2L	TR3B295	CC__0602__
28.0-35.0	1.103-1.378				TR3B2		TC__0902__	
31.0-42.0	1.220-1.654	117	4.606	<b>CAT40-156</b>	TR3A2C	TR3A2L	TR3A295	CC__0602__
31.0-45.0	1.220-1.771				TR3A2			TC__0902__
31.0-42.0	1.220-1.654				132			5.197
31.0-45.0	1.220-1.771	TR3A2	TC__0902__					
37.5-48.7	1.476-1.917	116	4.567	<b>CAT40-158</b>		TR5B2C	TR5B2L	
38.0-49.2	1.496-1.937				TR5B2	TC__1102__		
37.5-48.7	1.476-1.917	173	6.811	<b>CAT40-159</b>	TR5B2C	TR5B2L	TR5B295	CC__0602__
38.0-49.2	1.496-1.937				TR5B2			TC__1102__
46.5-67.8	1.831-2.673				116			4.567
47.0-68.3	1.850-2.689	TR5A2	TC__1102__					
46.5-67.8	1.831-2.673	186	7.323	<b>CAT40-161</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2		TC__1102__	
61.5-85.6	2.422-3.370	128	5.039	<b>CAT40-163</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C	TR7A295C	CC__09T3__	
61.5-85.6	2.422-3.370	185	7.283	<b>CAT40-164</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C	TR7A295C	CC__09T3__	
79.5-104.6	3.130-4.118	119	4.685	<b>CAT40-167</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C	TR7A295C	CC__09T3__	
79.5-104.6	3.130-4.118	199	7.835	<b>CAT40-168</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C	TR7A295C	CC__09T3__	
95.3-141.3	3.752-5.562	118	4.645	<b>CAT40-170</b>	TR10A2C	TR10A2L	TR10A295C	CC__1204__
96.0-141.5	3.780-5.570				TR10A2		TR10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS TYPE CAT

with standard TR (Top-adjusting) unit for  
finish boring

**CAT50**



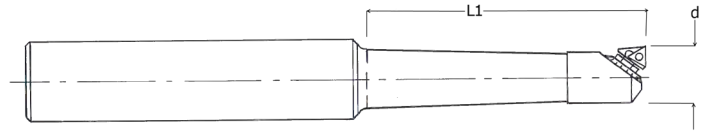
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins		90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>CAT50-154</b>		TR2B2L	TC__06T1__	
23.6-27.6	.930-1.087				TR2B3			
28.0-31.0	1.103-1.220				TR3B1			
28.0-32.0	1.103-1.260	107	4.212	<b>CAT50-155</b>	TR3B2C	TR3B2L	TR3B295	CC__0602__
28.0-35.0	1.103-1.378				TR3B2		TC__0902__	
31.0-42.0	1.220-1.654	117	4.606	<b>CAT50-156</b>	TR3A2C	TR3A2L	TR3A295	CC__0602__
31.0-45.0	1.220-1.771				TR3A2			TC__0902__
31.0-42.0	1.220-1.654	132	5.197	<b>CAT50-157</b>	TR3A2C	TR3A2L	TR3A295	CC__0602__
31.0-45.0	1.220-1.771				TR3A2			TC__0902__
					TR5B2C			CC__0602__
37.5-48.7	1.476-1.917	116	4.567	<b>CAT50-158</b>	TR5B2	TR5B2L	TR5B295	TC__1102__
38.0-49.2	1.496-1.937				TR5B2C		CC__0602__	
37.5-48.7	1.476-1.917	173	6.811	<b>CAT50-159</b>	TR5B2	TR5B2L	TR5B295	TC__1102__
38.0-49.2	1.496-1.937				TR5B2C		CC__0602__	
46.5-67.8	1.831-2.673	116	4.567	<b>CAT50-160</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2		TC__1102__	
46.5-67.8	1.831-2.673	186	7.323	<b>CAT50-161</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2		TC__1102__	
46.5-67.8	1.831-2.673	208	8.187	<b>CAT50-162</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
47.0-68.3	1.850-2.689				TR5A2		TC__1102__	
61.5-85.6	2.422-3.370	128	5.039	<b>CAT50-163</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C	TR7A295C	CC__09T3__	
61.5-85.6	2.422-3.370	185	7.283	<b>CAT50-164</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C	TR7A295C	CC__09T3__	
61.5-85.6	2.422-3.370	280	11.025	<b>CAT50-165</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455				TR7A2C	TR7A295C	CC__09T3__	
79.5-104.6	3.130-4.118	119	4.685	<b>CAT50-167</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C	TR7A295C	CC__09T3__	
79.5-104.6	3.130-4.118	199	7.835	<b>CAT50-168</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C	TR7A295C	CC__09T3__	
79.5-104.6	3.130-4.118	297	11.693	<b>CAT50-169</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204				TR7A2C	TR7A295C	CC__09T3__	
95.3-141.3	3.752-5.562	118	4.645	<b>CAT50-170</b>	TR10A2C	TR10A2L	TR10A295C	CC__1204__
96.0-141.5	3.780-5.570				TR10A2		TC__16T3__	
95.3-141.3	3.752-5.562				TR10A2C		CC__1204__	
96.0-141.5	3.780-5.570	296	11.653	<b>CAT50-171</b>	TR10A2	TR10A2L	TR10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS PLAIN STRAIGHT SHANK

with standard TR (Top-adjusting) unit for finish boring

**25SS / 1.00SS**



Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert		
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°			
23.0-27.0	.905-1.062	87	3.425	25SS-154	1.00SS-154		TR2B2L		TC__06T1__		
23.6-27.6	.930-1.087					TR2B3					
28.0-31.0	1.103-1.220	107	4.212	25SS-155	1.00SS-155	TR3B1			CC__0602__		
28.0-32.0	1.103-1.260					TR3B2C					
28.0-35.0	1.103-1.378					TR3B2	TR3B2L	TR3B295			TC__0902__
31.0-42.0	1.220-1.654					TR3A2C					CC__0602__
31.0-45.0	1.220-1.771	117	4.606	25SS-156	1.00SS-156	TR3A2	TR3A2L	TR3A295	TC__0902__		
						TR5B2C				CC__0602__	
37.5-48.7	1.476-1.917	116	4.567	25SS-158	1.00SS-158	TR5B2		TR5B295	TC__1102__		
38.0-49.2	1.496-1.937						TR5B2L				
46.5-67.8	1.831-2.673					TR5A2C		TR5A295C	CC__0602__		
						TR5A2		TR5A295			
47.0-68.3	1.850-2.689						TR5A2L		TC__1102__		
61.5-85.6	2.422-3.370	128	5.039	25SS-163	1.00SS-163	TR7A2	TR7A2L	TR7A295	TC__16T3__		
62.2-87.8	2.450-3.455					TR7A2C		TR7A295C	CC__09T3__		
79.5-104.6	3.130-4.118	119	4.685	25SS-167	1.00SS-167	TR7A2	TR7A2L	TR7A295	TC__16T3__		
81.2-106.8	3.197-4.204					TR7A2C		TR7A295C	CC__09T3__		

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

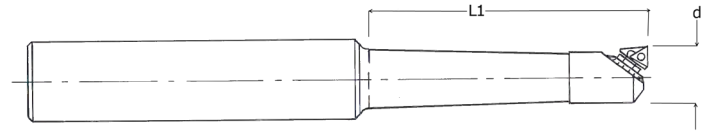
## Specialists In Special Tools



## STANDARD BORING BARS PLAIN STRAIGHT SHANK

with standard TR (Top-adjusting) unit for finish boring

**32SS / 1.25SS**



Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>32SS-154</b>	<b>1.25SS-154</b>		TR2B2L		TC__06T1__
23.6-27.6	.930-1.087					TR2B3			
28.0-31.0	1.103-1.220	107	4.212	<b>32SS-155</b>	<b>1.25SS-155</b>	TR3B1			CC__0602__
28.0-32.0	1.103-1.260					TR3B2C			
28.0-35.0	1.103-1.378	117	4.606	<b>32SS-156</b>	<b>1.25SS-156</b>	TR3B2	TR3B2L	TR3B295	TC__0902__
31.0-42.0	1.220-1.654					TR3A2C			
31.0-45.0	1.220-1.771	116	4.567	<b>32SS-158</b>	<b>1.25SS-158</b>	TR3A2	TR3A2L	TR3A295	TC__0902__
37.5-48.7	1.476-1.917					TR5B2C			
38.0-49.2	1.496-1.937	128	5.039	<b>32SS-163</b>	<b>1.25SS-163</b>	TR5B2	TR5B2L	TR5B295	TC__1102__
46.5-67.8	1.831-2.673					TR5A2C			
47.0-68.3	1.850-2.689	119	4.685	<b>32SS-167</b>	<b>1.25SS-167</b>	TR5A2	TR5A2L	TR5A295C	CC__0602__
61.5-85.6	2.422-3.370					TR7A2			
62.2-87.8	2.450-3.455	119	4.685	<b>32SS-167</b>	<b>1.25SS-167</b>	TR7A2C	TR7A2L	TR7A295C	TC__16T3__
79.5-104.6	3.130-4.118					TR7A2			
81.2-106.8	3.197-4.204					TR7A2C		TR7A295C	CC__09T3__

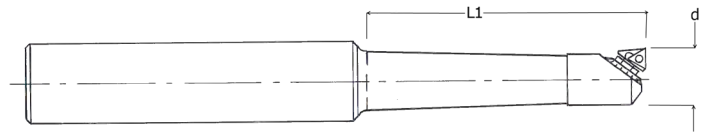
Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.



# STANDARD BORING BARS PLAIN STRAIGHT SHANK

with standard TR (Top-adjusting) unit for finish boring

**40SS / 1.50SS**



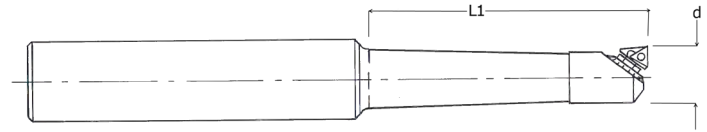
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>40SS-154</b>	<b>1.50SS-154</b>		TR2B2L		TC__06T1__
23.6-27.6	.930-1.087					TR2B3			
28.0-31.0	1.103-1.220					TR3B1			
28.0-32.0	1.103-1.260	107	4.212	<b>40SS-155</b>	<b>1.50SS-155</b>	TR3B2C			CC__0602__
28.0-35.0	1.103-1.378					TR3B2	TR3B2L	TR3B295	TC__0902__
31.0-42.0	1.220-1.654					TR3A2C			CC__0602__
31.0-45.0	1.220-1.771	117	4.606	<b>40SS-156</b>	<b>1.50SS-156</b>	TR3A2	TR3A2L	TR3A295	TC__0902__
31.0-42.0	1.220-1.654					TR3A2C			CC__0602__
31.0-45.0	1.220-1.771					TR3A2	TR3A2L	TR3A295	TC__0902__
37.5-48.7	1.476-1.917	116	4.567	<b>40SS-158</b>	<b>1.50SS-158</b>	TR5B2C			CC__0602__
38.0-49.2	1.496-1.937					TR5B2		TR5B295	TC__1102__
37.5-48.7	1.476-1.917					TR5B2C			CC__0602__
38.0-49.2	1.496-1.937	173	6.811	<b>40SS-159</b>	<b>1.50SS-159</b>	TR5B2	TR5B2L	TR5B295	TC__1102__
37.5-48.7	1.476-1.917					TR5B2C			CC__0602__
38.0-49.2	1.496-1.937					TR5B2			TC__1102__
46.5-67.8	1.831-2.673	116	4.567	<b>40SS-160</b>	<b>1.50SS-160</b>	TR5A2C		TR5A295C	CC__0602__
47.0-68.3	1.850-2.689					TR5A2		TR5A295	TC__1102__
46.5-67.8	1.831-2.673					TR5A2C			CC__0602__
47.0-68.3	1.850-2.689	186	7.323	<b>40SS-161</b>	<b>1.50SS-161</b>	TR5A2		TR5A295	TC__1102__
61.5-85.6	2.422-3.370					TR5A2C			CC__0602__
62.2-87.8	2.450-3.455					TR5A2	TR5A2L		TC__1102__
61.5-85.6	2.422-3.370	128	5.039	<b>40SS-163</b>	<b>1.50SS-163</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455					TR7A2C		TR7A295C	CC__09T3__
61.5-85.6	2.422-3.370					TR7A2	TR7A2L	TR7A295	TC__16T3__
62.2-87.8	2.450-3.455	185	7.283	<b>40SS-164</b>	<b>1.50SS-164</b>	TR7A2C		TR7A295C	CC__09T3__
79.5-104.6	3.130-4.118					TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204					TR7A2C		TR7A295C	CC__09T3__
79.5-104.6	3.130-4.118	119	4.685	<b>40SS-167</b>	<b>1.50SS-167</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204					TR7A2C		TR7A295C	CC__09T3__
79.5-104.6	3.130-4.118					TR7A2	TR7A2L	TR7A295	TC__16T3__
81.2-106.8	3.197-4.204	199	7.835	<b>40SS-168</b>	<b>1.50SS-168</b>	TR7A2C		TR7A295C	CC__09T3__
95.3-141.3	3.752-5.562					TR10A2C		TR10A295C	CC__1204__
96.0-141.5	3.780-5.570					TR10A2	TR10A2L	TR10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS PLAIN STRAIGHT SHANK

with standard TR (Top-adjusting) unit for  
finish boring

**50SS / 2.00SS**



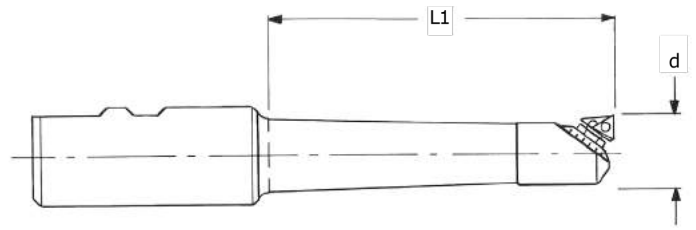
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>50SS-154</b>	<b>2.00SS-154</b>		TR2B2L		TC__06T1__
23.6-27.6	.930-1.087					TR2B3			
28.0-31.0	1.103-1.220	107	4.212	<b>50SS-155</b>	<b>2.00SS-155</b>	TR3B1	TR3B2L	TR3B295	CC__0602__
28.0-32.0	1.103-1.260					TR3B2C			
28.0-35.0	1.103-1.378	117	4.606	<b>50SS-156</b>	<b>2.00SS-156</b>	TR3B2	TR3A2L	TR3A295	TC__0902__
31.0-42.0	1.220-1.654					TR3A2C			
31.0-45.0	1.220-1.771	132	5.197	<b>50SS-157</b>	<b>2.00SS-157</b>	TR3A2	TR3A2L	TR3A295	TC__0902__
31.0-42.0	1.220-1.654					TR3A2C			
31.0-45.0	1.220-1.771	116	4.567	<b>50SS-158</b>	<b>2.00SS-158</b>	TR3A2	TR3A2L	TR3A295	TC__0902__
37.5-48.7	1.476-1.917					TR5B2C			
38.0-49.2	1.496-1.937	173	6.811	<b>50SS-159</b>	<b>2.00SS-159</b>	TR5B2	TR5B2L	TR5B295	TC__1102__
37.5-48.7	1.476-1.917					TR5B2C			
38.0-49.2	1.496-1.937	116	4.567	<b>50SS-160</b>	<b>2.00SS-160</b>	TR5B2	TR5B2L	TR5B295	TC__1102__
46.5-67.8	1.831-2.673					TR5A2C			
47.0-68.3	1.850-2.689	186	7.323	<b>50SS-161</b>	<b>2.00SS-161</b>	TR5A2	TR5A2L	TR5A295C	CC__0602__
46.5-67.8	1.831-2.673					TR5A2C			
47.0-68.3	1.850-2.689	128	5.039	<b>50SS-163</b>	<b>2.00SS-163</b>	TR5A2	TR5A2L	TR5A295	TC__1102__
61.5-85.6	2.422-3.370					TR7A2			
62.2-87.8	2.450-3.455	185	7.283	<b>50SS-164</b>	<b>2.00SS-164</b>	TR7A2C	TR7A2L	TR7A295C	CC__09T3__
61.5-85.6	2.422-3.370					TR7A2			
62.2-87.8	2.450-3.455	119	4.685	<b>50SS-167</b>	<b>2.00SS-167</b>	TR7A2C	TR7A2L	TR7A295C	TC__16T3__
79.5-104.6	3.130-4.118					TR7A2			
81.2-106.8	3.197-4.204	199	7.835	<b>50SS-168</b>	<b>2.00SS-168</b>	TR7A2C	TR7A2L	TR7A295C	CC__09T3__
79.5-104.6	3.130-4.118					TR7A2			
81.2-106.8	3.197-4.204	118	4.645	<b>50SS-170</b>	<b>2.00SS-170</b>	TR10A2C	TR10A2L	TR10A295C	CC__1204__
95.3-141.3	3.752-5.562					TR10A2			
96.0-141.5	3.780-5.570								

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS WELDON (DIN 1835B/ANSI B94-19)

with standard TR (Top-adjusting) unit for finish boring

**W25SS / W1.00SS**



Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert	
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°		
23.0-27.0	.905-1.062	87	3.425	<b>W25SS-154</b>	<b>W1.00SS-154</b>		TR2B2L		TC__06T1__	
23.6-27.6	.930-1.087					TR2B3				
28.0-31.0	1.103-1.220	107	4.212	<b>W25SS-155</b>	<b>W1.00SS-155</b>	TR3B1				
28.0-32.0	1.103-1.260					TR3B2C		CC__0602__		
28.0-35.0	1.103-1.378					TR3B2	TR3B2L	TR3B295	TC__0902__	
31.0-42.0	1.220-1.654					TR3A2C			CC__0602__	
31.0-45.0	1.220-1.771	117	4.606	<b>W25SS-156</b>	<b>W1.00SS-156</b>	TR3A2	TR3A2L	TR3A295	TC__0902__	
						TR5B2C			CC__0602__	
37.5-48.7	1.476-1.917	116	4.567	<b>W25SS-158</b>	<b>W1.00SS-158</b>	TR5B2		TR5B295	TC__1102__	
38.0-49.2	1.496-1.937						TR5B2L			
46.5-67.8	1.831-2.673			<b>W25SS-160</b>	<b>W1.00SS-160</b>	TR5A2C		TR5A295C	CC__0602__	
47.0-68.3	1.850-2.689					TR5A2		TR5A295	TC__1102__	
61.5-85.6	2.422-3.370			128	5.039	<b>W25SS-163</b>	<b>W1.00SS-163</b>		TR5A2L	
62.2-87.8	2.450-3.455							TR7A2	TR7A2L	TR7A295
79.5-104.6	3.130-4.118	119	4.685	<b>W25SS-167</b>	<b>W1.00SS-167</b>	TR7A2C		TR7A295C	CC__09T3__	
81.2-106.8	3.197-4.204					TR7A2	TR7A2L	TR7A295	TC__16T3__	
						TR7A2C		TR7A295C	CC__09T3__	

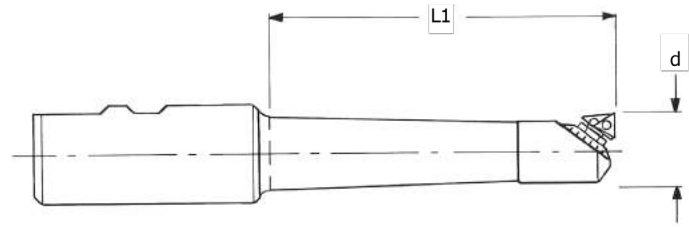
Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.



## STANDARD BORING BARS WELDON (DIN 1835B/ANSI B94-19)

with standard TR (Top-adjusting) unit for finish boring

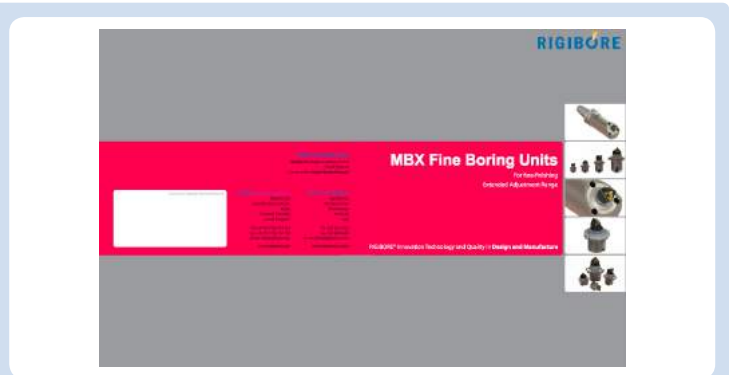
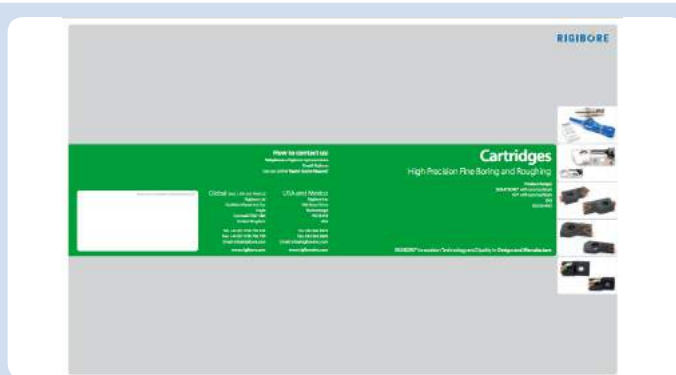
**W32SS / W1.25SS**



Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>W32SS-154</b>	<b>W1.25SS-154</b>		TR2B2L		TC__06T1__
23.6-27.6	.930-1.087					TR2B3			
28.0-31.0	1.103-1.220	107	4.212	<b>W32SS-155</b>	<b>W1.25SS-155</b>	TR3B1	TR3B2L	TR3B295	CC__0602__
28.0-32.0	1.103-1.260					TR3B2C			
28.0-35.0	1.103-1.378	117	4.606	<b>W32SS-156</b>	<b>W1.25SS-156</b>	TR3B2	TR3A2L	TR3A295	TC__0902__
31.0-42.0	1.220-1.654					TR3A2C			
31.0-45.0	1.220-1.771	116	4.567	<b>W32SS-158</b>	<b>W1.25SS-158</b>	TR5B2C	TR5B2L	TR5B295	CC__0602__
37.5-48.7	1.476-1.917					TR5B2			
38.0-49.2	1.496-1.937	128	5.039	<b>W32SS-160</b>	<b>W1.25SS-160</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
46.5-67.8	1.831-2.673					TR5A2			
47.0-68.3	1.850-2.689	119	4.685	<b>W32SS-163</b>	<b>W1.25SS-163</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
61.5-85.6	2.422-3.370					TR7A2C			
62.2-87.8	2.450-3.455	119	4.685	<b>W32SS-167</b>	<b>W1.25SS-167</b>	TR7A2	TR7A2L	TR7A295	CC__09T3__
79.5-104.6	3.130-4.118					TR7A2C			
81.2-106.8	3.197-4.204								

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

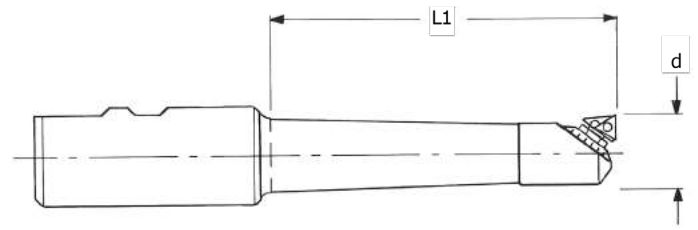
## Please Contact Us For Other Product Information



# STANDARD BORING BARS WELDON (DIN 1835B/ANSI B94-19)

with standard TR (Top-adjusting) unit for finish boring

**W40SS / W1.50SS**



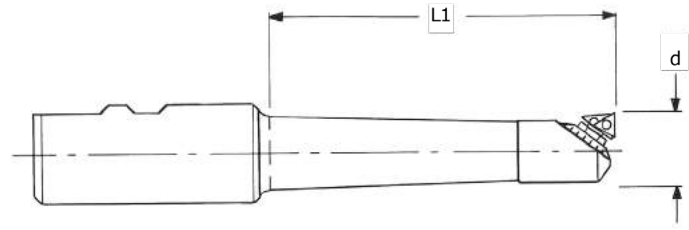
Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>W40SS-154</b>	<b>W1.50SS-154</b>		TR2B2L		TC__06T1__
23.6-27.6	.930-1.087					TR2B3			
28.0-31.0	1.103-1.220	107	4.212	<b>W40SS-155</b>	<b>W1.50SS-155</b>	TR3B1			CC__0602__
28.0-32.0	1.103-1.260					TR3B2C			
28.0-35.0	1.103-1.375	117	4.606	<b>W40SS-156</b>	<b>W1.50SS-156</b>	TR3B2	TR3B2L	TR3B295	TC__0902__
31.0-42.0	1.220-1.654					TR3A2C			CC__0602__
31.0-45.0	1.220-1.771	132	5.197	<b>W40SS-157</b>	<b>W1.50SS-157</b>	TR3A2	TR3A2L	TR3A29	TC__0902__
31.0-42.0	1.220-1.654					TR3A2C			CC__0602__
31.0-45.0	1.220-1.771	116	4.567	<b>W40SS-158</b>	<b>W1.50SS-158</b>	TR3A2	TR3A2L	TR3A29	TC__0902__
37.5-48.7	1.476-1.917					TR5B2C			CC__0602__
38.0-49.2	1.496-1.937	173	6.811	<b>W40SS-159</b>	<b>W1.50SS-159</b>	TR5B2		TR5B295	TC__1102__
37.5-48.7	1.476-1.917					TR5B2C			CC__0602__
38.0-49.2	1.496-1.937	116	4.567	<b>W40SS-160</b>	<b>W1.50SS-160</b>		TR5B2L		TC__1102__
46.5-67.8	1.831-2.673					TR5B2			CC__0602__
47.0-68.3	1.850-2.689	186	7.323	<b>W40SS-161</b>	<b>W1.50SS-161</b>		TR5A2L		TC__1102__
46.5-67.8	1.831-2.673					TR5A2C			CC__0602__
47.0-68.3	1.850-2.689	128	5.039	<b>W40SS-163</b>	<b>W1.50SS-163</b>	TR5A2		TR5A295C	CC__0602__
61.5-85.6	2.422-3.370					TR5A2C			TC__1102__
62.2-87.8	2.450-3.455	185	7.283	<b>W40SS-164</b>	<b>W1.50SS-164</b>		TR5A2L	TR5A295	TC__1102__
61.5-85.6	2.422-3.370					TR5A2			CC__0602__
62.2-87.8	2.450-3.455	119	4.685	<b>W40SS-167</b>	<b>W1.50SS-167</b>		TR7A2L		TC__16T3__
79.5-104.6	3.130-4.118					TR7A2C			CC__09T3__
81.2-106.8	3.197-4.204	199	7.835	<b>W40SS-168</b>	<b>W1.50SS-168</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
79.5-104.6	3.130-4.118					TR7A2C			CC__09T3__
81.2-106.8	3.197-4.204	118	4.645	<b>W40SS-170</b>	<b>W1.50SS-170</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
95.3-141.03	3.520-5.562					TR7A2C			CC__09T3__
96.0-141.05	3.780-5.570	118	4.645	<b>W40SS-170</b>	<b>W1.50SS-170</b>	TR10A2C		TR10A295C	CC__1204__
						TR10A2	TR10A2L	TR10A295	TC__16T3__

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

# STANDARD BORING BARS WELDON (DIN 1835B/ANSI B94-19)

with standard TR (Top-adjusting) unit for finish boring

**W50SS / W2.00SS**

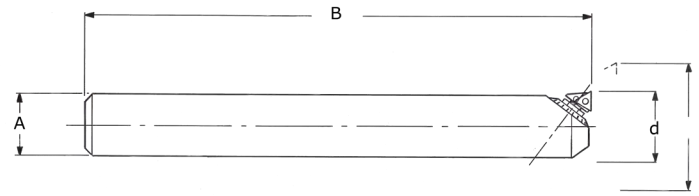


Boring Range d		Bore Depth L1		Boring Bar Ordering Code	Boring Bar Ordering Code	Boring Unit & Approach Angle			Insert
mm	ins	mm	ins	METRIC	IMPERIAL	90°	75°	95°	
23.0-27.0	.905-1.062	87	3.425	<b>W50SS-154</b>	<b>W2.00SS-154</b>		TR2B2L		TC__06T1__
23.6-27.6	.930-1.087					TR2B3			
28.0-31.0	1.103-1.220	107	4.212	<b>W50SS-155</b>	<b>W2.00SS-155</b>	TR3B1	TR3B2L	TR3B295	CC__0602__
28.0-32.0	1.103-1.260					TR3B2C			
28.0-35.0	1.103-1.378	117	4.606	<b>W50SS-156</b>	<b>W2.00SS-156</b>	TR3B2	TR3A2L	TR3A29	TC__0902__
31.0-42.0	1.220-1.654					TR3A2C			
31.0-45.0	1.220-1.771	132	5.197	<b>W50SS-157</b>	<b>W2.00SS-157</b>	TR3A2	TR3A2L	TR3A29	TC__0902__
31.0-42.0	1.220-1.654					TR3A2C			
31.0-45.0	1.220-1.771	116	4.567	<b>W50SS-158</b>	<b>W2.00SS-158</b>	TR5B2C	TR5B2L	TR5B295	CC__0602__
37.5-48.7	1.476-1.917					TR5B2			
38.0-49.2	1.496-1.937	173	6.811	<b>W50SS-159</b>	<b>W2.00SS-159</b>	TR5B2C	TR5B2L	TR5B295	TC__1102__
37.5-48.7	1.476-1.917					TR5B2			
38.0-49.2	1.496-1.937	116	4.567	<b>W50SS-160</b>	<b>W2.00SS-160</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
46.5-67.8	1.831-2.673					TR5A2			
47.0-68.3	1.850-2.689	186	7.323	<b>W50SS-161</b>	<b>W2.00SS-161</b>	TR5A2C	TR5A2L	TR5A295C	CC__0602__
46.5-67.8	1.831-2.673					TR5A2			
47.0-68.3	1.850-2.689	128	5.039	<b>W50SS-163</b>	<b>W2.00SS-163</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
61.5-85.6	2.422-3.870					TR7A2C			
62.2-87.8	2.450-3.455	185	7.283	<b>W50SS-164</b>	<b>W2.00SS-164</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
61.5-85.6	2.422-3.870					TR7A2C			
62.2-87.8	2.450-3.455	119	4.685	<b>W50SS-167</b>	<b>W2.00SS-167</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
79.5-104.6	3.130-4.118					TR7A2C			
81.2-106.8	3.197-4.204	199	7.835	<b>W50SS-168</b>	<b>W2.00SS-168</b>	TR7A2	TR7A2L	TR7A295	TC__16T3__
79.5-104.6	3.130-4.118					TR7A2C			
81.2-106.8	3.197-4.204	118	4.645	<b>W50SS-170</b>	<b>W2.00SS-170</b>	TR10A2C	TR10A2L	TR10A295C	CC__1204__
95.3-141.3	3.752-5.562					TR10A2			
96.0-141.5	3.780-5.570								

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## STANDARD BORING BARS PARALLEL BORING BARS (METRIC)

with standard R unit for  
roughing & semi-finishing



Boring Range D (mm)	Boring Unit & Approach Angle			Boring Bar Ordering Code	A dia	B	Insert
	90°	75°	95°				
16.70-18.25	R2B2S			<b>16PAR-536</b>	16	145	TC__06T102
17.40-19.00				<b>16PAR-537</b>			
19.00-23.00	R2B2			<b>16PAR-540</b>		160	
23.00-27.00		R2B2L					
23.00-31.00	R3B1						
24.00-32.00	R3B2C			<b>20PAR-550</b>	20	170	CC__060204
27.00-35.00	R3B2	R3B2L	R3B295				TC__090204
28.00-42.00	R3A2C						CC__060204
31.00-45.00	R3A2	R3A2L	R3A295	<b>25PAR-560</b>	25	185	TC__090204
37.50-48.70	R5B2C						CC__060204
	R5B2		R5B295	<b>32PAR-580</b>	32		
38.00-49.20		R5B2L				245	TC__110204
46.50-67.80	R5A2C		R5A295C				CC__060204
	R5A2		R5A295	<b>40PAR-600</b>	40		
47.00-68.30		R5A2L					TC__110204

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

## ActiveEdge

### Fully Automatic Boring Bar Compensation

- Automatic bore sizing
- Increase in cell productivity and throughput efficiency
- Consistent bore size control
- Increase in spindle utilisation
- Multiple edges with individual adjustment
- Reduces scrap
- Simple to set up



## ActiveEdge

### Remotely Adjustable Boring Bars

Adjust boring tools from hand held device  
without entering the machine.

Reduces health and safety risks

Accurate adjustments without presetter



### Bore

Pre-set tool bores hole on  
CNC Machine Tool.



### Measure

Bored hole is measured with  
dedicated gauge or probe.

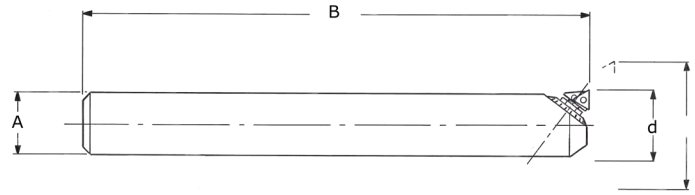


### Automatic Adjust

Measurement is used to  
calculate adjustment for tool.  
Boring tool is wirelessly  
adjusted.

# STANDARD BORING BARS – PARALLEL BORING BARS (METRIC)

with standard TR (Top-adjusting) unit for finish boring



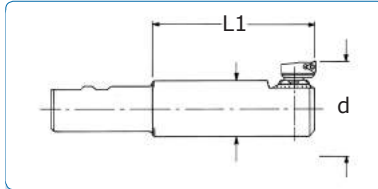
Boring Range D (mm)	Boring Unit & Approach Angle			Boring Bar Ordering Code	A dia	B	Insert
	90°	75°	95°				
23.00-27.00		TR2B2L		<b>16PAR-540</b>	16	160	TC__06T102
23.60-27.60	TR2B3						
28.00-31.00	TR3B1						
28.00-32.00	TR3B2C			<b>20PAR-550</b>	20	170	CC__060204
28.00-35.00	TR3B2	TR3B2L	TR3B295				TC__090204
31.00-42.00	TR3A2C			<b>25PAR-560</b>	25	185	CC__060204
31.00-45.00	TR3A2	TR3A2L	TR3A295				TC__090204
37.50-48.70	TR5B2C			<b>32PAR-580</b>	32	245	CC__060204
	TR5B2		TR5B295				TC__110204
38.00-49.20		TR5B2L					TC__110204
46.50-67.80	TR5A2C		TR5A295C	<b>40PAR-600</b>	40	245	CC__060204
	TR5A2		TR5A295				TC__110204
47.00-68.30		TR5A2L					TC__110204

Boring bar, unit and inserts are ordered separately. Adjusting wrench is included with the boring unit.

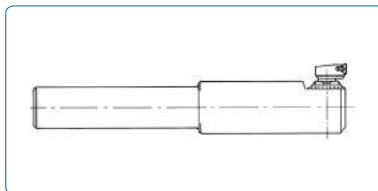
## STANDARD BORING BARS

### With 'F' Style Units

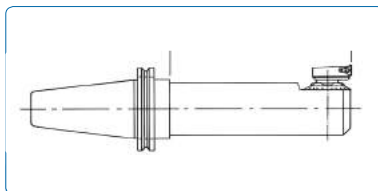
- Standard 'R' Units For Roughing & Semi-Finishing
- Top-adjusting 'TR' units for fine-finishing



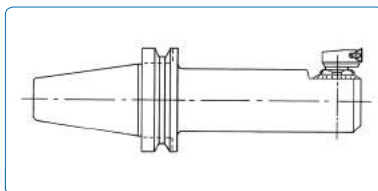
DIN 1835 Weldon mm/inch



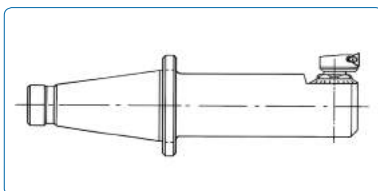
Straight Shank mm/inch



ANSIB550 / CAT / ISO7388



BT (MAS 403)



DIN 2080 / NMTB

To order, specify the shank type with the boring bar reference

For example: BT40-260-098, W25SS-495-191

\*LH (Left Hand Units) are available for back boring

### Standard boring bars with 'F' style units - Top-adjusting 'TR' units for finishing

Boring Range 'd'		Boring Depth L1		Boring Unit & Approach Angle			Insert	Boring Bar Order Reference
mm	inch	mm	inch	90°	75°	95°		
26.0-37.0	1.024-1.457	98	3.858	R2F5			TC__06T1__	<b>SHANK TYPE-260-098</b>
36.3-54.5	1.429-2.145	114	4.488	R3F5			TC__0902__	<b>SHANK TYPE-363-114</b>
49.5-76.3	1.949-3.004	151	5.945	R5F5*		R5F595	TC__1102__	<b>SHANK TYPE-495-151</b>
				R5F5C*			CC__0602__	
66.5-98.5	2.618-3.878	215	8.465	R7F5*	R7F5L	R7F595	TC__16T3__	<b>SHANK TYPE-665-215</b>
			8.645	R7F5C*		R7F595C	CC__09T3__	<b>SHANK TYPE-662-215</b>
97.0-154.4	3.819-6.079	217	8.543	R10F5	R10F5L	R10F595	TC__16T3__	<b>SHANK TYPE-970-217</b>
				R10F5C		R10F595C	CC__1204__	

Boring Range 'd'		Boring Depth L1		Boring Unit & Approach Angle			Insert	Boring Bar Order Reference
mm	inch	mm	inch	90°	75°	95°		
30.0-37.0	1.181-1.457	98	3.858	TR2F5			TC__06T1__	<b>SHANK TYPE-260-098</b>
36.3-54.5	1.429-2.145	114	4.488	TR3F5			TC__0902__	<b>SHANK TYPE-363-114</b>
49.5-76.3	1.949-3.004	151	5.945	TR5F5*		TR5F595	TC__1102__	<b>SHANK TYPE-495-151</b>
				TR5F5C*			CC__0602__	
74.0-98.5	2.913-3.878	215	8.465	TR7F5*	TR7F5L	TR7F595	TC__16T3__	<b>SHANK TYPE-665-215</b>
				TR7F5C*		TR7F595C	CC__09T3__	
97.0-154.4	3.819-6.079	217	8.543	TR10F5*	TR10F5L	TR10F595	TC__16T3__	<b>SHANK TYPE-970-217</b>
				TR10F5C*		TR10F595C	CC__1204__	



### Top adjustment for units

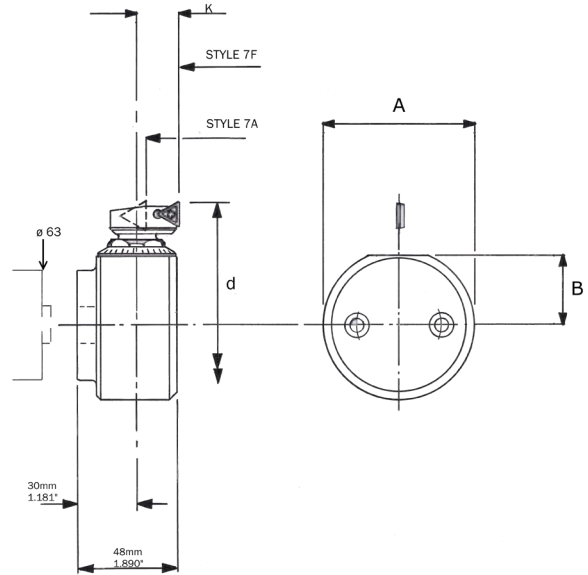
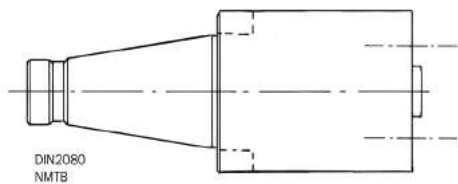
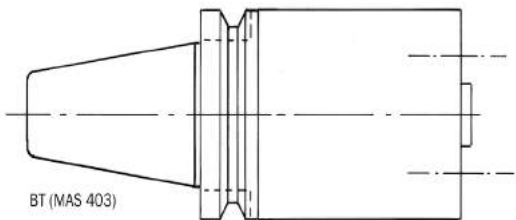
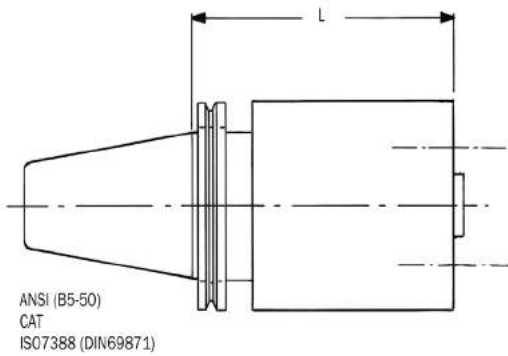
TR2	0.25mm / .010 inch
TR3	0.35mm / .014 inch
TR5	0.5mm / .020 inch
TR7	0.75mm / .030 inch
TR10	0.87mm / .034 inch

## STANDARD BORING BARS AND FLANGES

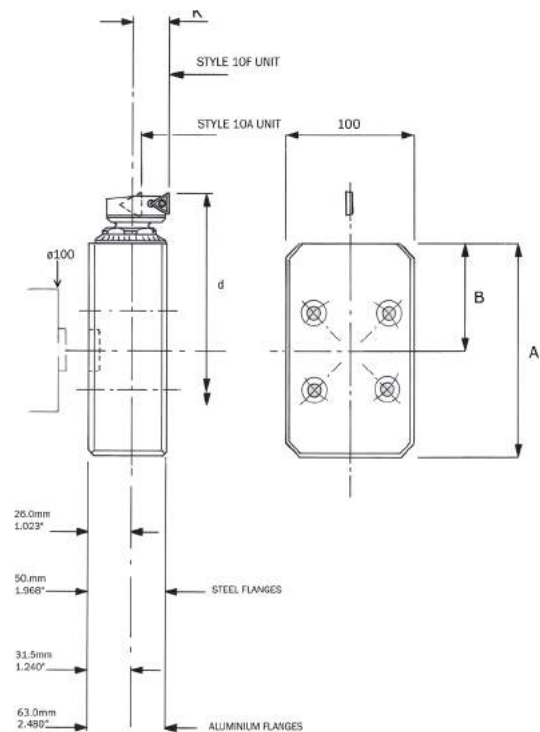
Boring flange adaptors are available on most shanks



### Type 500 Boring Rings



### Type 300 Boring Flanges



### To order, specify:

1. Flange Adaptor by Shank e.g BT50 x type e.g. F300 x Length (L) e.g. 150.

Order Reference - BT50-F300x150

2. Ring/Flange e.g F308S (Steel)

3. Boring Unit e.g. R10F5

Please note that adaptors, rings and flanges are sold separately

### Type 500 Boring Rings

Boring Bar Order Reference	Boring Range 'd'		A		B		Boring Unit & Approach Angle	K		Insert			
	mm	inch	mm	inch	mm	inch		90°	75°		95°	mm	inch
<b>F502</b>	80-111	3.150-4.370	48.0	1.89	14.3	0.56	'R' Units	R7A5	R7A5L	R7A595	8.35	0.328	TC__ 16T3 __
<b>F504</b>	97-129	3.819-5.079	63.5	2.50	23.0	0.91		R7F5	R7F5L	R7F595	20.00	0.787	
<b>F506</b>	115-146	4.528-5.748	76.0	2.99	31.8	1.25		R7A5C			6.35	0.250	CC__ 09T3 __
<b>F508</b>	132-164	5.197-6.457	89.0	3.50	40.5	1.59		R7F5C		R7F595C	20.00	0.787	
							'TR' Units	TR7A5	TR7A5L	TR7A595	8.35	0.328	TC__ 16T3 __
								TR7F5	TR7F5L	TR7F595	20.00	0.787	
								TR7A5C		TR7F595C	6.35	0.250	CC__ 09T3 __
								TR7F5C		TR7F595C	20.00	0.787	

### Type 300 Boring Flanges

Boring Bar Order Reference	Boring Range 'd'		A		B		Boring Unit & Approach Angle	K		Insert			
	mm	inch	mm	inch	mm	inch		90°	75°		95°	mm	inch
<b>F302S</b>	142-198	5.590-7.795	85	3.35	39.0	1.54							
<b>F303S</b>	163-220	6.417-8.661	100	3.94	50.0	1.97							
<b>F304S</b>	191-248	7.520-9.764	127	5.00	63.5	2.50							
<b>F304AL</b>			116	-									
<b>F305S</b>	221-278	8.700-10.945	158	6.22	79.0	3.11							
<b>F305AL</b>			147	-									
<b>F306S</b>	241-298	9.488-11.732	178	7.01	89.0	3.50							
<b>F306AL</b>			167	-									
<b>F307S</b>	263-320	10.354-12.598	200	7.87	100.0	3.94							
<b>F307AL</b>			189	-									
<b>F308S</b>	292-349	11.496-13.740	228	8.98	114.0	4.49							
<b>F308AL</b>			217	-									
<b>F309AL</b>	323-380	12.716-14.960	250	-	130.0	5.12							
<b>F310AL</b>	343-400	13.504-15.748	270	-	140.0	5.51							
<b>F311AL</b>	373-430	14.685-16.929	300	-	155.0	6.10							
<b>F312AL</b>	394-450	15.512-17.717	320	-	165.0	6.50							
							'R' Units	R10A5	R10A5L		9.5	.375	TC__ 16T3 __
								R10F5	R10F5L	R10F595	25.4	1.000	
								R10A5C		R10A595C	9.5	.375	CC__ 1204 __
								R10F5C		R10F595C	25.4	1.000	
							'TR' Units	TR10A5	TR10A5L		9.5	.375	TC__ 16T3 __
								TR10F5	TR10F5L	TR10F595	25.4	1.000	
								TR10A5C		TR10A595C	9.5	.375	CC__ 1204 __
								TR10F5C		TR10F595C	25.4	1.000	

## Rigibore Units

Accuracy through Rigidity

A wide range of boring units

Type 'R' for roughing/semi-finishing

Type 'TR' for fine-finishing

Minimum bore 15.87mm

5 different sizes available in right and left hand

### Key Features

- Unique Design incorporating a precision ground collet
- Split collet clamps to ACME type thread for accuracy and strength
- Separate graduated dial seated on top face of hole
- Rigidity maintained throughout full adjustment of unit

### Key Benefits

- No deflection under load on uneven or intermittent cutting
- Greater repeatability
- Longer Insert Life
- Most positive direct adjustment, high degree of rigidity, no dial slip when adjusting



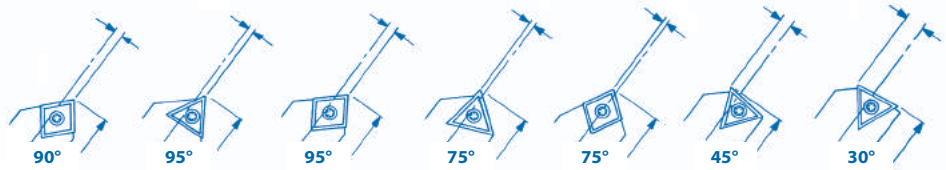
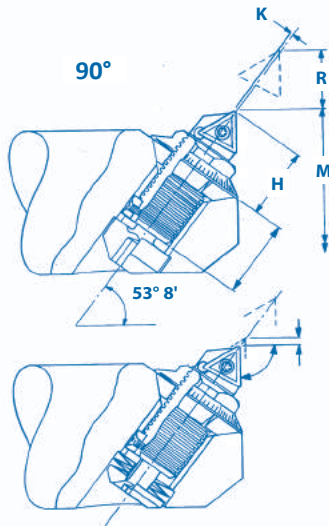
Rigibore Units built into special tools



Rigibore Units in Standard Boring Bars

## 'R' Units - Angular Mounted - Size 2 Units (R for roughing/semi-finishing)

### Technical Specification



Right-hand Units shown.

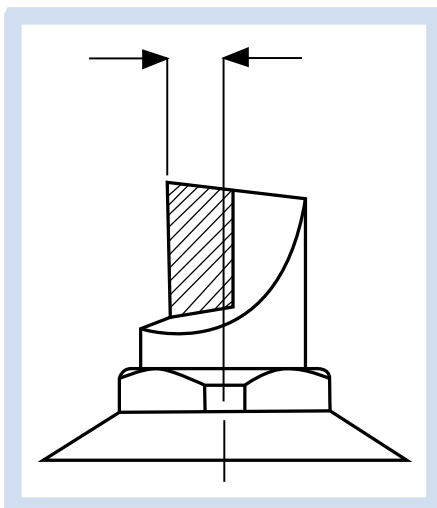
Left-hand Units (LH) are mirror image.

Adjustment = 0.01 mm/0.0004 ins on radius per division.

Notes:

1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	20.9	0.823	0.2	0.008	4.5	0.177	9.4	0.37	1.35	0.053	TC__06T1 (02)	R2A2
	18.2	0.716			2.0	0.079						R2A2-LH
	15.87	0.625			0.75	0.029						R2B2
	20.9	0.823			2.0	0.079						12.6
75°	23.0	0.905	0.2	0.008	4.5	0.177	10.0	0.393	-1.5	-0.059		R2B2S
	20.4	0.803			2.0	0.079						R2B2S-LH
45°	22.8	0.897	0.2	0.008	4.5	0.177	10.0	0.393	-1.6	-0.063		R2B3
	20.2	0.795			2.0	0.079						R2A2L
												R2A2L-LH
												R2B2L
												R2B2L-LH
												R2A245
											R2B245	

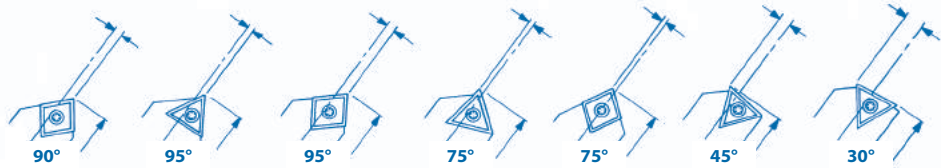
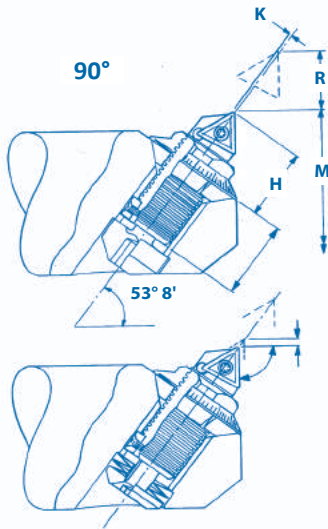


### Cutting edge height (above centre-line)

Unit Size	Insert Size	Height	
		mm	inch
2	06	0.5	0.0196
3	09	0.75	0.0295
5	11	2.38	0.0937
7 & 10	16	3.97	0.1562

## 'R' Units - Angular Mounted - Size 3 Units (R for roughing/semi-finishing)

### Technical Specification



Right-hand Units shown.  
 Left-hand Units (LH) are mirror image.  
 Adjustment = 0.01mm/0.0004ins on radius per division.

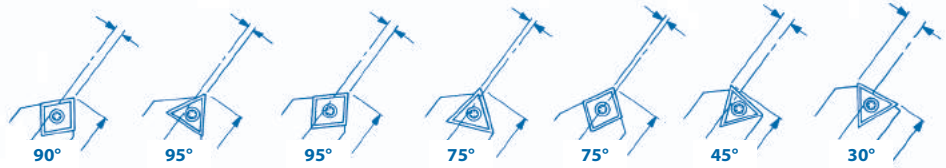
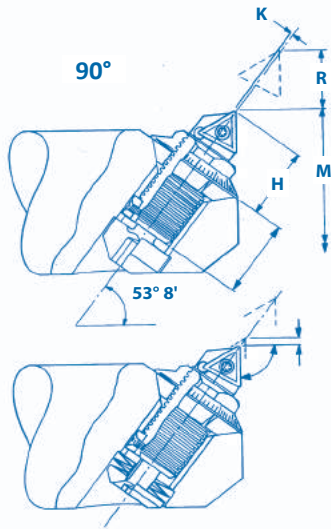
Notes:

1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	28.0	1.102	0.28	0.011	7.3	0.290	13.45	0.529	0.8	0.031	TC__0902 (04)	R3A2
	25.0	0.984			4.0	0.157						R3A2-LH
	23.0	0.905					11.25	0.443	1.32	0.051		TC__06T1 (02)
	26.8	1.055			11.1	0.437						0.2
	23.7	0.933					R3B2C					
	21.0	0.827			1.5	0.059	R3B2C-LH					
	21.0	0.827			1.5	0.059	R3B2CS					
95°	25.0	0.984	4.0	0.157	13.45	0.530	0.036	0.92	TC__0902 (04)	R3B295		
75°	28	1.102	7.3	0.290	13.55	0.533	1.1	0.036	TC__0902 (04)	R3A2L		
	25	0.984	4.0	0.157						R3A2L-LH		
	21	0.827	1.5	0.059	10.47	0.412	-0.33	-0.84		CC__0602 (04)	R3B2L	
45°	30.4	1.197	7.3	0.287	14.5	0.571	-1.6	-0.063	TC__0902 (04)	R3B2L-LH		
	27.1	1.067	4.0	0.157						R3A245		
30°	29.6	1.165	7.3	0.287	14.5	0.571				R3A245-LH		
										R3B245		
											R3A230	

## 'R' Units - Angular Mounted - Size 5 Units (R for roughing/semi-finishing)

### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01 mm/0.0004ins on radius per division.

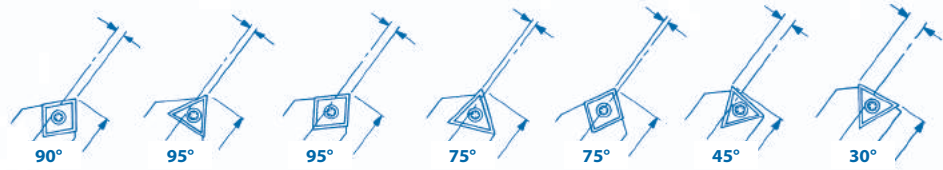
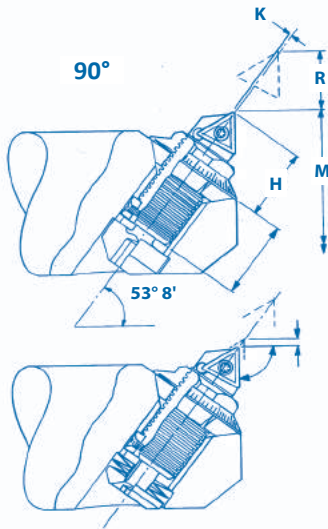
Notes:

1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number		
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch				
90°	41.0	1.614	0.4	0.016	10.7	0.421	16.95	0.667	2.3	0.09	TC__1102 (04)	RSA2		
	36.0	1.417			5.6	0.220						RSA2-LH		
							R5B2							
	R5B2-LH													
40.5	1.575	10.7			0.421	15.9	0.626	1.2	0.047	CC__0602 (04)	RSA2C			
35.4	1.394	5.6			0.220						RSA2C-LH			
						R5B2C								
R5B2C-LH														
95°	41.0	1.614			0.4	0.016	10.7	0.421	16.95	0.667	2.3	0.09	TC__1102 (04)	RSA295
	36.0	1.417							15.6	0.614	1.2	0.047		R5B295
														RSA295C
40.5	1.595	5.6					0.220	16.55	0.625	1.3	0.051	TC__1102 (04)	R5A2L	
36.0	1.417		R5B2L											
			R5B2L-LH											
75°	41.0	1.614	0.4	0.016	10.7	0.421	17.0	0.669	-1.6	-0.063	R5A245			
	36.0	1.417									R5A245-LH			
											R5B245			
R5B245-LH														
45°	43.0	1.693			0.4	0.016	10.7	0.421	16.30	0.641	-1.6	-0.063	TC__1102 (04)	R5A230
	38.0	1.496												5.6
R5B230														
30°	41.4	1.630	5.6	0.220			16.30	0.641	-1.6	-0.063	TC__1102 (04)	R5A230		
	36.2	1.425										R5B230		

## 'R' Units - Angular Mounted - Size 7 Units (R for roughing/semi-finishing)

### Technical Specification



Right-hand Units shown.  
 Left-hand Units (LH) are mirror image.  
 Adjustment = 0.01mm/0.0004ins on radius per division.

Notes:

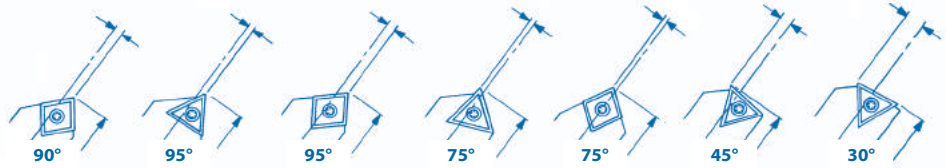
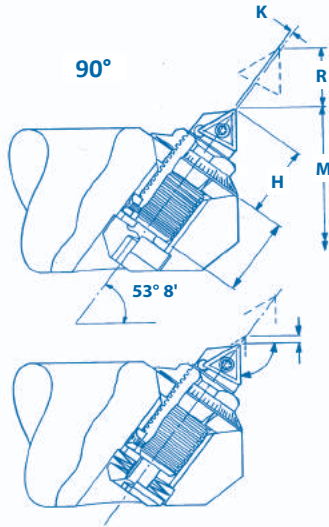
- 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
- 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch			
90°	58.0	2.283	0.6	0.024	12.8	0.504	25.55	1.006	-0.40	-0.016	TC__16T3 (08)	R7A2	
	53.0	2.087			8.0	0.315						R7A2-LH	
	59.5	2.343			12.8	0.504	26.57	1.046	-1.58	-0.062		CC__09T3 (04)	R7B2
	51.5	2.027			8.0	0.315							R7B2-LH
95°	58.0	2.283	0.6	0.024	12.8	0.504	25.55	1.006	-0.26	-0.010	TC__16T3 (08)		R7A2L
	59.5	2.343			8.0	0.315	23.40	0.921	-3.20	-0.126	TC__16T3 (08)		R7A2L-LH
75°	63.5	2.460	0.6	0.024	12.8	0.504	25.50	1.004	-6.50	-0.256	TC__16T3 (08)	R7B2L	
	57.4	2.260			8.0	0.315						R7B2L-LH	
45°	63.5	2.460	0.6	0.024	12.8	0.504	25.50	1.004	-6.50	-0.256	TC__16T3 (08)	R7A245	
	57.4	2.260			8.0	0.315						R7B245	

## 'R' Units - Angular Mounted - Size 10 Units

(R for roughing/semi-finishing)

### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01mm/0.0004ins on radius per division.

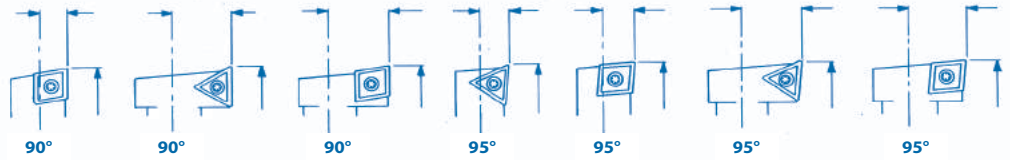
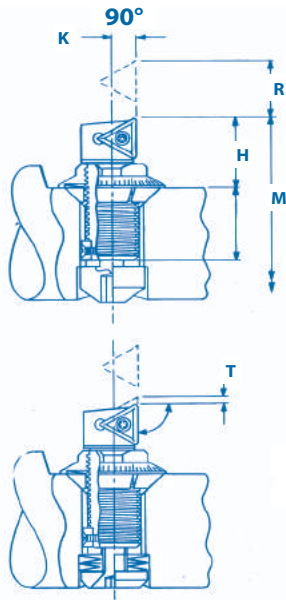
Notes:

1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch			
90°	79.0	3.110	0.7	0.027	23.0	0.906	31.7	1.248	-0.4	-0.016	TC__ 16T3 (08)	R10A2	
	69.0	2.717			12.8	0.504						R10A2-LH	
	79.0	3.110			23.0	0.906	31.24	1.23	0.79	0.031		CC__ 1204 (04)	R10B2
95°	79.0	3.110			12.8	0.504	31.7	1.248	-0.26	-0.01		TC__ 16T3 (08)	R10B2-LH
	69.0	2.717			23.0	0.906							R10A295
75°	79.0	3.110			23.0	0.906	31.1	1.224	-0.9	-0.035			R10B295
	69.0	2.717			12.8	0.504					R10A2L		
					R10A2L-LH								
45°	81.0	3.189			23.0	0.906	31.8	1.252	-3.2	-0.126	R10B2L		
												R10B2L-LH	
													R10A245

## 'R' Units - Square Mounted - Size 2 Units (R for roughing/semi-finishing)

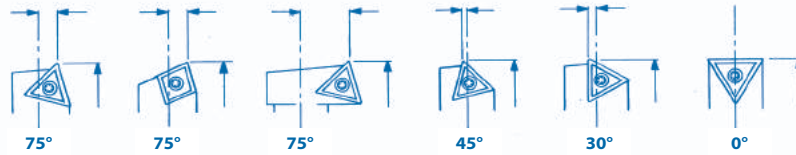
### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01 mm/0.0004 ins on radius per division.



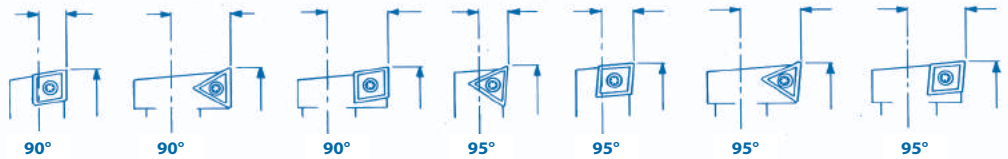
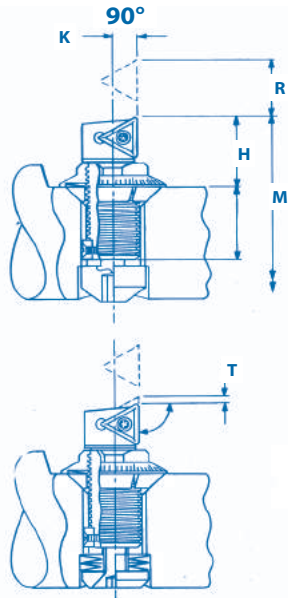
Notes:

1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	24.3	0.957	0.25	0.010	5.5	0.216	9.40	0.370	2.00	0.078	TC__06T1 (02)	R2A5
	24.3	0.957										R2A5-LH
	21.1	0.831			2.5	0.098			R2B5			
	21.1	0.831							R2B5-LH			
	24.3	0.957			5.5	0.216			7.50	0.295		R2F5
	21.1	0.831										R2F5S
75°	24.3	0.957			5.5	0.216	2.00	0.078	R2A5L			
	24.3	0.957							R2A5L-LH			
	21.1	0.831			2.5	0.098			R2B5L			
	21.1	0.831							R2B5L-LH			
45°	25.2	0.992			5.5	0.216	10.00	0.393	-0.80	-0.031		R2A245
	22.0	0.886										R2B245
0°	25.0	0.984	5.5	0.216	9.50	0.374			R2A90			
	21.5	0.846							R2B90			

## 'R' Units - Square Mounted - Size 3 Units (R for roughing/semi-finishing)

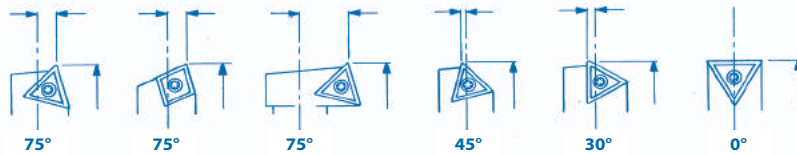
### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01mm/0.0004ins on radius per division.



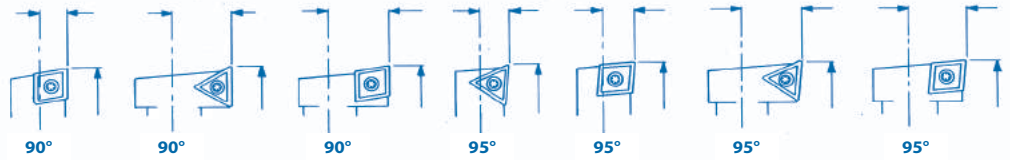
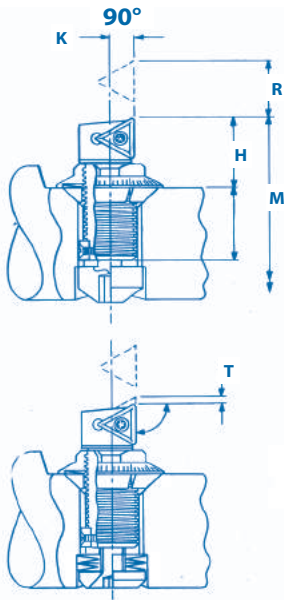
Notes:

- 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
- 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch			
90°	32.5	1.280	0.35	0.014	9.1	0.359	12.30	0.484	3.00	0.118	TC__0902 (04)	R3A5	
	28.5	1.122			5.0	0.197						R3A5-LH	
					31.4	1.236	9.1	0.359	11.10	0.437		4.00	0.158
	27.7	1.090					5.0	0.197					
					34.0	1.279	9.1	0.359	12.90	0.508		9.40	0.370
	30.0	1.181			5.0	0.197	R3A5C-LH						
75°	32.5	1.279	9.1	0.359	12.30	0.484	2.00	0.079	TC__0902 (04)	R3B5C			
	28.5	1.122	5.0	0.197						R3B5C-LH			
45°	34.7	1.367	9.1	0.358	14.50	0.571	-0.80	-0.310		R3F5			
	30.7	0.827	5.0	0.197						R3F5S			
0°	34.0	1.338	9.1	0.358	14.00	0.551				R3F5S-LH			
	30.0	1.181	5.0	0.197			R3A5L						
										R3A5L-LH			
											R3B5L		
											R3B5L-LH		
												R3A545	
												R3B545	
												R3A90	
												R3B90	

## 'R' Units - Square Mounted - Size 5 Units (R for roughing/semi-finishing)

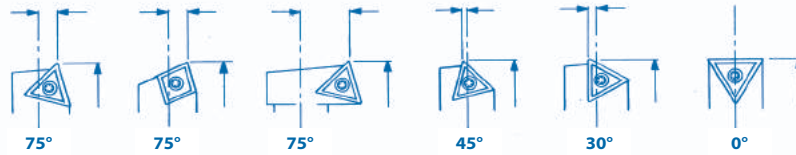
### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01 mm/0.0004 ins on radius per division.



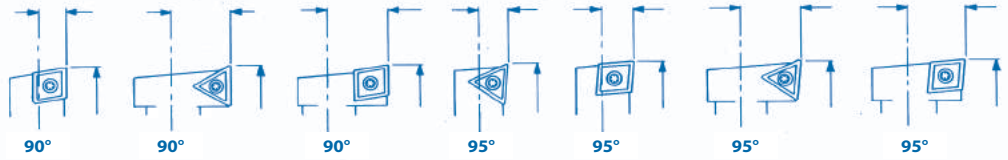
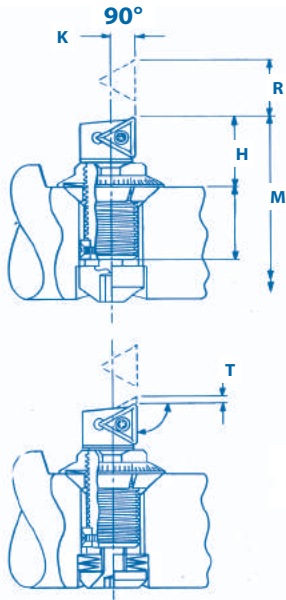
Notes:

- 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
- 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	48.5	1.909	0.5	0.020	13.4	0.528	16.10	0.634	5.40	0.213	TC__1102 (04)	RSAS
	42.5	1.673			7.0	0.276						RSAS-LH
	49.4	1.965			13.4	0.528	15.90	0.628			CC__0602 (04)	RSB5
	43.0	1.693			7.0	0.276					RSB5-LH	
	48.5	1.906			13.4	0.528	16.10	0.634	TC__1102 (04)	RSASC		
	42.5	1.673			7.0	0.276	15.90	0.628	CC__0602 (04)	RSAS-LH		
	49.4	1.965			13.4	0.528	16.10	0.634	TC__1102 (04)	RSBSC		
	95°	48.5			1.910	13.4	0.528	16.10	0.634	15.00	0.591	CC__0602 (04)
75°	42.5	1.673	7.0	0.276	16.10	0.634	3.20	0.126	TC__1102 (04)	RSF5-LH		
	49.6	1.963	13.4	0.528						RSF5S		
	49.6	1.953	7.0	0.275						RSF5C		
45°	43.2	1.819	13.4	0.528	16.10	0.634	-1.60	-0.063	TC__1102 (04)	RSF5C-LH		
	49.5	1.949	7.0	0.276						RSF595		
0°	43.1	1.697	13.4	0.528	16.10	0.634			TC__1102 (04)	RSASL		
			7.0	0.276						RSASL-LH		
											RSB5L	
											RSB5L-LH	
											RSAS45	
											RSAS45-LH	
											RSB545	
											RSA90	
											RSB90	

## 'R' Units - Square Mounted - Size 7 Units (R for roughing/semi-finishing)

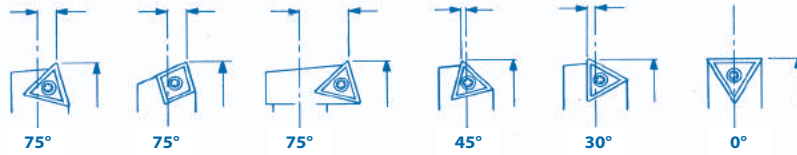
### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01mm/0.0004ins on radius per division.



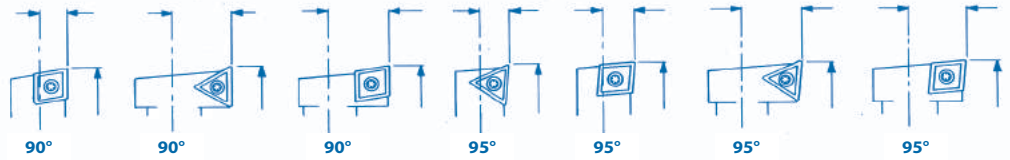
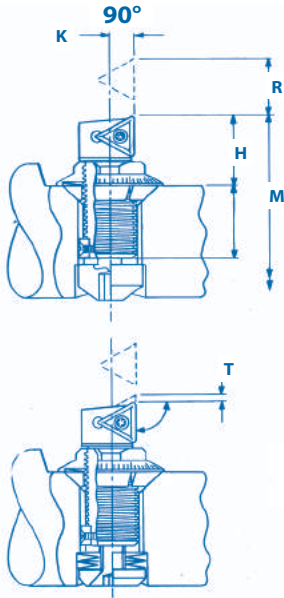
Notes:

- 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
- 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number		
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch				
90°	70.5	2.775	0.75	0.030	16.0	0.630	25.50	1.004	8.35	0.329	TC__16T3 (08)	R7A5		
	64.0	2.520			10.0	0.394						R7A5-LH		
	70.5	2.775			16.0	0.630	25.40	1.000	6.35	0.250		CC__09T3 (04)	R7B5	
	64.0	2.520			10.0	0.394							R7B5-LH	
	70.5	2.775			16.0	0.630	25.50	1.004	20.00	0.787			TC__16T3 (08)	R7F5
							25.40	1.000						R7F5-LH
70.5	2.775	16.0	0.630	25.40	1.000	15.80	0.622	CC__09T3 (08)	R7F5C					
									23.00	0.920	R7F5C-LH			
95°	70.5	2.775	16.0	0.630	25.50	1.004	8.47				0.333	TC__16T3 (08)		R7A595
75°	70.5	2.775	16.0	0.630	25.50	1.004	6.20		0.244	R7A5L				
	64.0	2.520	10.0	0.394						R7A5L-LH				
75°	70.5	2.775	16.0	0.630	25.50	1.004	-1.60		-0.063	R7B5L				
	64.0	2.520	10.0	0.394				R7B5L-LH						
45°	70.5	2.775	16.0	0.630	25.50	1.004	-1.60	-0.063	R7F5L					
	64.4	2.535	10.0	0.394					R7A545					
30°	70.5	2.775	16.0	0.630	25.50	1.004	-1.60	-0.063	R7B545					
	66.0	2.600	16.0	0.630					R7A530					
0°	59.5	2.342	10.0	0.394	23.00	0.920			R7A90					
											R7B90			

## 'R' Units - Square Mounted - Size 10 Units (R for roughing/semi-finishing)

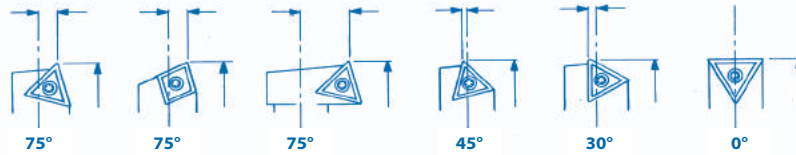
### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01 mm/0.0004 ins on radius per division.



Notes:

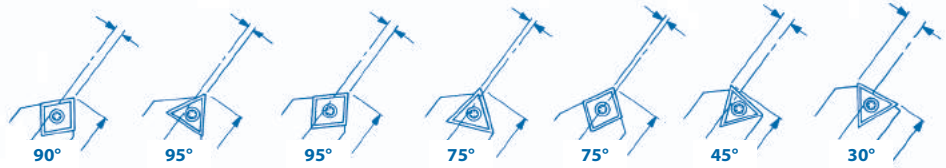
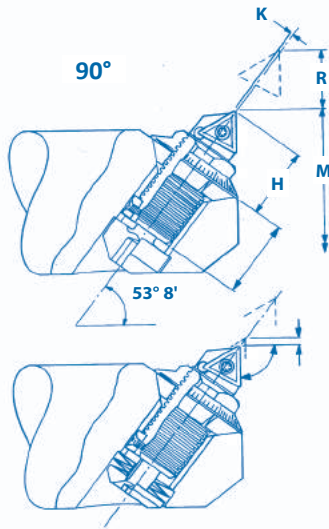
- 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
- 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number			
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch					
90°	96.0	3.780	0.87	0.034	28.7	1.130	31.80	1.252	9.50	0.374	TC__ 16T3 (08)	R10A5			
	83.5	3.287			16.0	0.630						R10A5-LH			
	96.0	3.780			28.7	1.130	31.75	1.250				25.40	1.000	CC__ 1204 (04)	R10B5
	83.5	3.287			16.0	0.630									R10B5-LH
95°	96.0	3.780			28.7	1.130	31.75	1.250	9.54	0.376	TC__ 16T3 (08)				R10F5
															25.52
												25.44	1.002	CC__ 1204 (04)	
														R10A595C	
75°	83.5	3.287			16.0	0.630	31.80	1.252	4.80	0.189	TC__ 16T3 (08)	R10A5L			
												20.35	0.801	R10A5L-LH	
														R10B5L	
												R10B5L-LH			
45°	97.0	3.819	28.7	1.130	31.80	1.252	-1.60	-0.063	TC__ 16T3 (08)	R10F5L					
										R10A545					
										R10A545-LH					
										R10B545					
0°	93.0	3.660	28.7	1.130	28.60	1.126				R10A90					
	80.5	3.170	16.0	0.630			R10B90								

## 'TR' Units - Angular Mounted - Size 2 Units

(TR for fine-finishing)

### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01mm/0.0004ins on radius per division.

Notes:

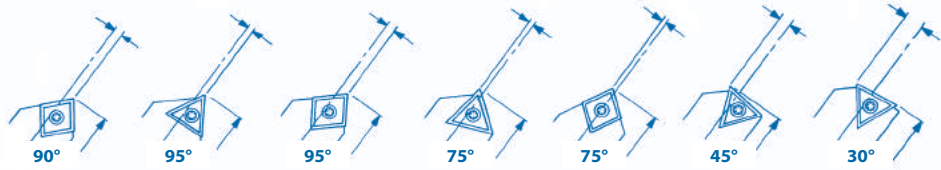
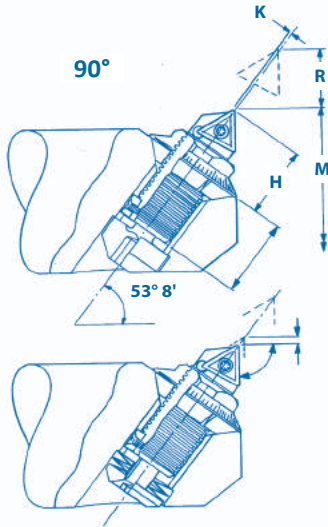
1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch			
90°	23.60	0.930	0.2	0.008	4.5	0.177	9.4	0.370	1.35	0.053	TC_ _ 06T1 (02)	TR2A2	
	20.90	0.823			2.0	0.079						TR2A2-LH	
	18.57	0.731			0.75	0.029						TR2B2	
	23.60	0.929			2.0	0.079	12.6	0.496				TR2B2-LH	
75°	25.70	1.011	0.2	0.008	4.5	0.177	10.0	0.394	-1.50	-0.059		TR2B2S	
	23.10	0.909			2.0	0.079						TR2B2S-LH	
45°	25.30	0.995	0.2	0.008	4.5	0.177	10.0	0.394	-1.60	-0.063		TR2B3	
	22.80	0.897			2.0	0.079						TR2A2L	
													TR2A2L-LH
													TR2B2L
													TR2B2L-LH
													TR2A245
												TR2B245	

## 'TR' Units - Angular Mounted - Size 3 Units

(TR for fine-finishing)

### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01mm/0.0004ins on radius per division.

Notes:

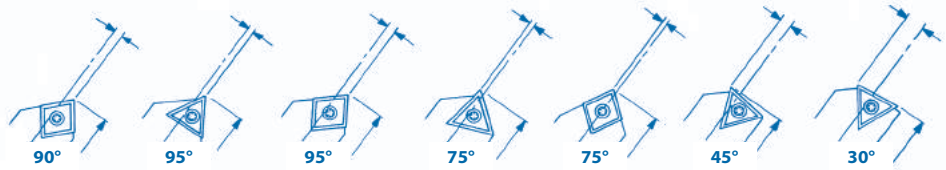
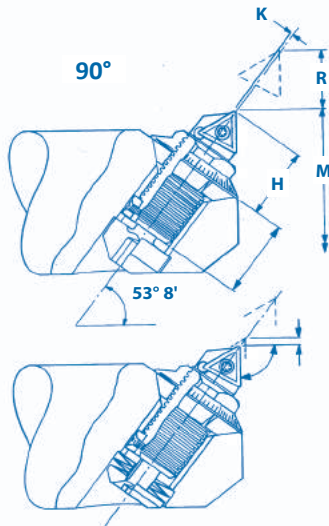
1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch			
90°	30.8	1.212	0.28	0.011	7.3	0.290	13.45	0.529	0.8	0.031	TC__0902 (04)	TR3A2	
	27.6	1.087			4.0	0.157						TR3A2-LH	
	25.6	1.008					11.25	0.443	1.32	0.051		TR3B2	
	29.2	1.149			TR3B2-LH								
	26.1	1.027			11.10	0.437	0.2	0.008	TR3B1				
	26.25	1.033							TR3B1-LH				
	75°	30.7			1.209	0.28	0.011	7.3	0.290	13.55		0.533	1.1
27.5		1.083	4.0	0.157	TR3A2C-LH								
26.25		1.033			1.5			0.059	10.47	0.412	-0.33	-0.840	CC__0602 (04)
			TR3B2C-LH										
45°	32.9	1.295	0.28	0.011	7.3	0.287	14.50	0.571	-1.6	-0.063	TC__0902 (04)	TR3B2CS	
	29.6	1.165			4.0	0.157						TR3A245	
												TR3A245-LH	
30°	32.2	1.268	0.28	0.011	7.3	0.287	14.50	0.571	-1.6	-0.063	TC__0902 (04)	TR3B245	

## 'TR' Units - Angular Mounted - Size 5 Units

(TR for fine-finishing)

### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01mm/0.0004ins on radius per division.

Notes:

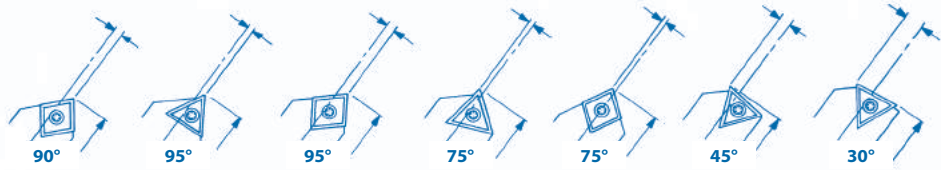
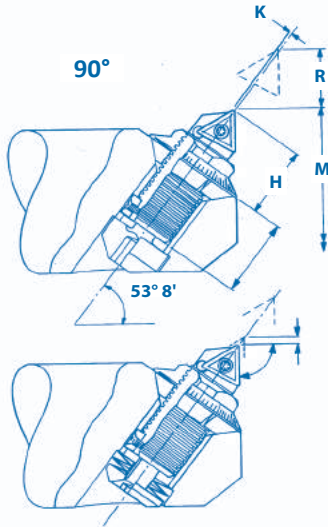
1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch			
90°	41.5	1.634	0.4	0.016	10.7	0.421	16.95	0.667	2.3	0.090	TC__1102 (04)	TR5A2	
	36.5	1.437			5.6	0.220						TR5A2-LH	
	41.0	1.614			10.7	0.421	15.90	0.626	1.2	0.047		CC__0602 (04)	TR5B2
	35.9	1.413			5.6	0.220							TR5B2-LH
95°	41.5	1.634			10.7	0.421	16.95	0.667	2.3	0.090	TC__1102 (04)		TR5A295
	36.5	1.437			5.6	0.220	15.60	0.614	1.2	0.047	CC__0602 (04)		TR5B295
	41.0	1.614			10.7	0.421	15.60	0.614	1.2	0.047	CC__0602 (04)	TR5A295C	
75°	41.5	1.634			10.7	0.421	16.55	0.625	1.3	0.051	TC__1102 (04)	TR5A2L	
	36.5	1.437			5.6	0.220						TR5B2L	
45°	43.5	1.712			10.7	0.421	17.00	0.669	-1.6	-0.063		TR5A245	
	38.5	1.516			5.6	0.220						TR5A245-LH	
	30°	42.0			1.654	10.7						0.421	16.30
36.8		1.449	5.6	0.220	TR5B245-LH								
30°	42.0	1.654	10.7	0.421	16.30	0.641	-1.6	-0.063	TR5A230				
	36.8	1.449	5.6	0.220					TR5B230				

## 'TR' Units - Angular Mounted - Size 7 Units

(TR for fine-finishing)

### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01mm/0.0004ins on radius per division.

Notes:

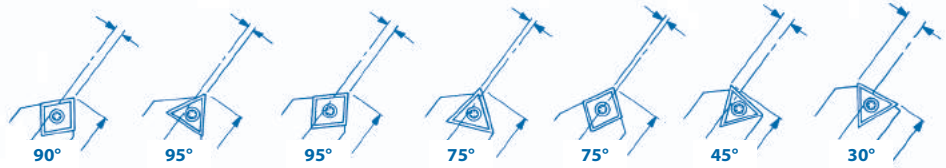
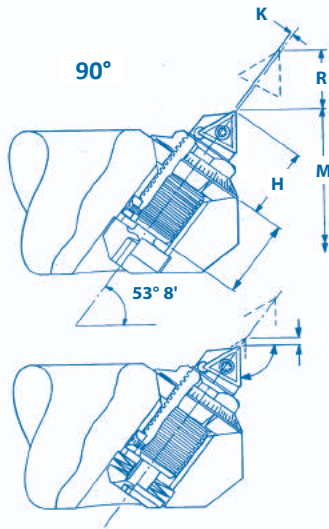
1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number		
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch				
90°	61.5	2.421	0.6	0.024	12.8	0.504	25.55	1.006	-0.40	-0.016	TC__16T3 (08)	TR7A2		
	57.0	2.244			8.0	0.315						TR7A2-LH		
	61.0	2.401			12.8	0.504	26.57	1.046	-1.58	-0.062		CC__09T3(04)	TR7B2	
	55.9	2.201			8.0	0.315							TR7B2-LH	
95°	59.5	2.343			12.8	0.504	25.55	1.006	-0.26	-0.010	TC__16T3 (08)		TR7A2L	
	61.0	2.401			26.57	1.046	-1.60	-0.063	CC__09T3 (04)	TR7A295				
75°	61.5	2.421			0.6	0.024	12.8	0.504	23.40	0.921	-3.20	-0.126	TC__16T3 (08)	TR7A295C
	57.0	2.244					8.0	0.315						TR7A2L-LH
45°	63.9	2.516	12.8	0.504			25.50	1.004	-6.50	-0.256	TC__16T3 (08)	TR7B2L		
	58.8	2.315	8.0	0.315								TR7B2L-LH		
														TR7A245

## 'TR' Units - Angular Mounted - Size 10 Units

(TR for fine-finishing)

### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01mm/0.0004ins on radius per division.

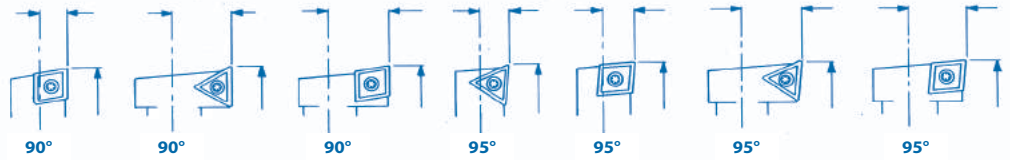
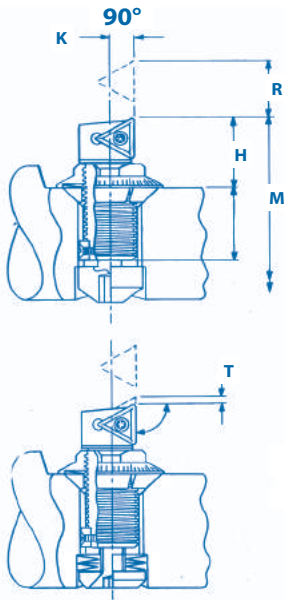
Notes:

1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch			
90°	81.5	3.209	0.7	0.027	23.0	0.906	31.70	1.248	-0.40	-0.016	TC_ 16T3 (08)	TR10A2	
	71.5	2.815			12.8	0.504						TR10A2-LH	
	81.5	3.209			23.0	0.906	31.24	1.230	0.79	0.031		CC_ 1204 (04)	TR10B2
95°	81.5	3.209			23.0	0.906	31.70	1.248	-0.26	-0.010		TC_ 16T3 (08)	TR10A2C
	71.5	2.815			12.8	0.504							TR10B2-LH
75°	81.5	3.209			23.0	0.906	31.10	1.224	-0.90	-0.035			TR10A295
	71.5	2.815	12.8	0.504	TR10B295								
45°	84.0	3.307	23.0	0.906	31.80	1.252	-3.20	-0.126	TR10A2L				
									TR10A2L-LH				
										TR10B2L			
										TR10B2L-LH			
										TR10A245			

## 'TR' Units - Square Mounted - Size 2 Units (TR for fine-finishing)

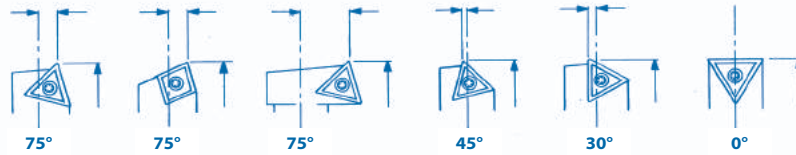
### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01 mm/0.0004 ins on radius per division.



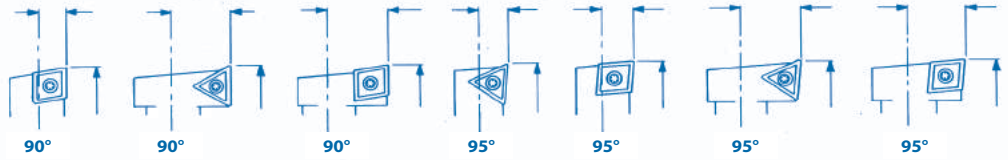
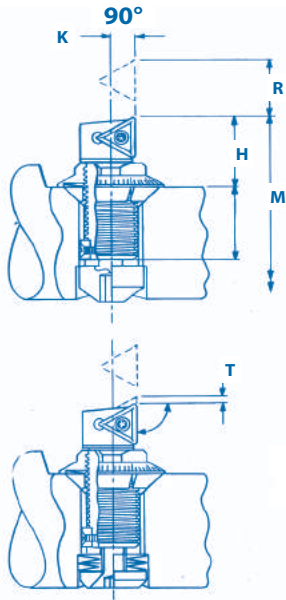
Notes:

1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

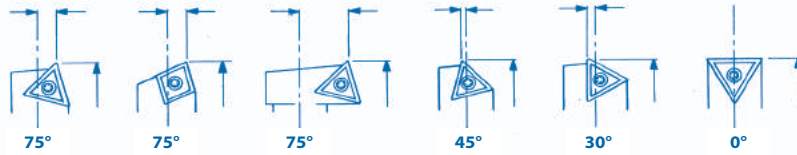
Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	27.60	1.087	0.25	0.010	5.5	0.216	9.40	0.370	2.0	0.078	TC__06T1 (02)	TR2A5
	24.40	0.961			2.5	0.098						TR2A5-LH
	27.60	1.087			5.5	0.216			7.5	0.295		TR2B5
	24.40	0.961			2.5	0.098						TR2B5-LH
75°	27.60	1.087			5.5	0.216	9.40	0.370	2.0	0.078		TR2A5L
	24.40	0.961			2.5	0.098						TR2A5L-LH
45°	28.40	1.118			5.5	0.216	10.00	0.393	-0.8	-0.031		TR2B5L
	25.20	0.992			2.5	0.098						TR2B5L-LH
0°	28.00	1.102	5.5	0.216	9.50	0.374			TR2A245			
	25.00	0.984	2.5	0.098			TR2B245					
												TR2A90
												TR2B90

## 'TR' Units - Square Mounted - Size 3 Units (TR for fine-finishing)

### Technical Specification



Right-hand Units shown.  
 Left-hand Units (LH) are mirror image.  
 Adjustment = 0.01mm/0.0004ins on radius per division.



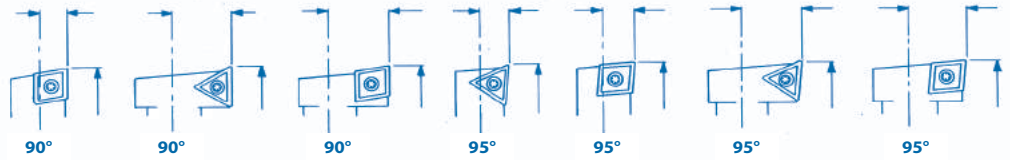
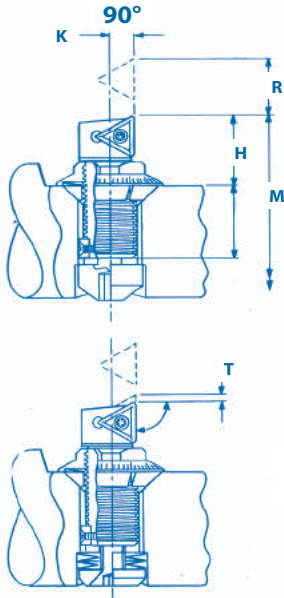
#### Notes:

- 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
- 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number			
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch					
90°	35.1	1.382	0.35	0.014	9.1	0.359	12.3	0.484	3.0	0.118	TC__0902 (04)	TR3A5			
	31.1	1.224			5.0	0.197						TR3A5-LH			
	34.0	1.338			9.1	0.359	TR3B5								
	75°	30.0			1.181	0.35	0.014	5.0	0.197	11.1	0.437	4.0	0.158	CC__0602 (04)	TR3B5-LH
		36.5			1.437			9.1	0.359						TR3A5C
		32.5			1.279			5.0	0.197	12.9	0.508	9.4	0.370		TR3A5C-LH
	45°	35.1			1.381	0.35	0.014	9.1	0.359	12.3	0.484	2.0	0.079	TC__0902 (04)	TR3B5C
31.1		1.224	5.0	0.197	TR3B5C-LH										
37.2		1.465	9.1	0.358	14.5			0.571	-0.8	-0.310	TR3F5				
0°	33.2	1.307	0.35	0.014	5.0	0.197	14.0	0.551				TR3F5S			
	36.5	1.437			9.1	0.358						TR3F5S-LH			
	32.5	1.279			5.0	0.197						TR3A5L			
												TR3A5L-LH			
												TR3B5L			
												TR3B5L-LH			
												TR3A545			
												TR3B545			
												TR3A90			
												TR3B90			

## 'TR' Units - Square Mounted - Size 5 Units (TR for fine-finishing)

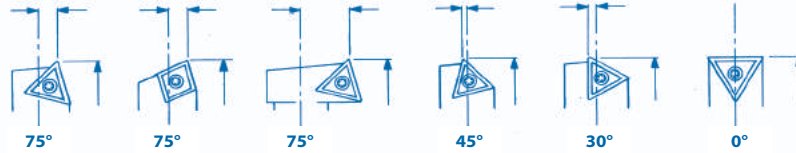
### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01mm/0.0004ins on radius per division.



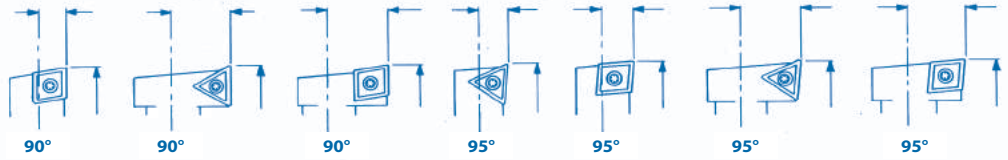
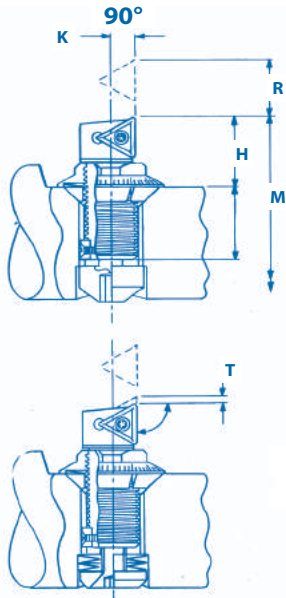
Notes:

- 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
- 'K' is measured to the theoretical sharp point of the insert.

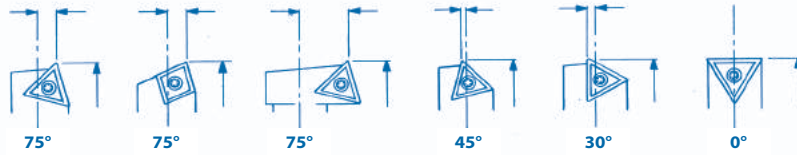
Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number		
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch				
90°	48.0	1.890	0.50	0.020	13.4	0.528	16.1	0.634	5.4	0.213	TC__1102 (04)	TR5A5		
	41.5	1.634			7.0	0.276						TR5A5-LH		
	49.4	1.965			13.4	0.528	15.9	0.628				TR5B5		
	43.0	1.693			7.0	0.276						TR5B5-LH		
	48.0	1.890			13.4	0.528	16.1	0.634	15.0	0.591		TC__1102 (04)	TR5A5C	
	41.5	1.634			7.0	0.276							TR5A5C-LH	
	49.4	1.965			13.4	0.528	15.9	0.626					CC__0602 (04)	TR5B5C
	48.0	1.890			7.0	0.276								TR5B5C-LH
95°	48.0	1.890	13.4	0.528	16.1	0.634	3.2	0.126	TC__1102 (04)	TR5F5				
75°	48.0	1.890	13.4	0.528						TR5F5-LH				
	41.5	1.634	7.0	0.275						TR5F5S				
45°	48.8	1.921	13.4	0.528						-1.6	-0.063		TC__1102 (04)	TR5F5C
	42.4	1.661	7.0	0.275			TR5F5C-LH							
0°	48.7	1.917	13.4	0.528			TR5F90							
	42.3	1.665	7.0	0.275			TR5B90							

## 'TR' Units - Square Mounted - Size 7 Units (TR for fine-finishing)

### Technical Specification



Right-hand Units shown.  
 Left-hand Units (LH) are mirror image.  
 Adjustment = 0.01mm/0.0004ins on radius per division.



#### Notes:

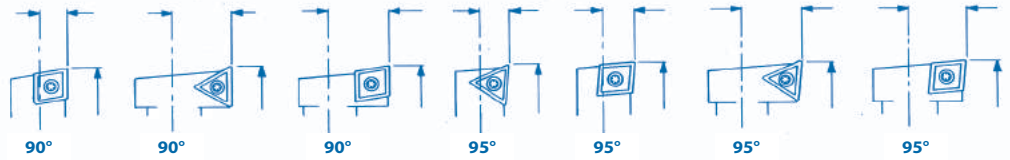
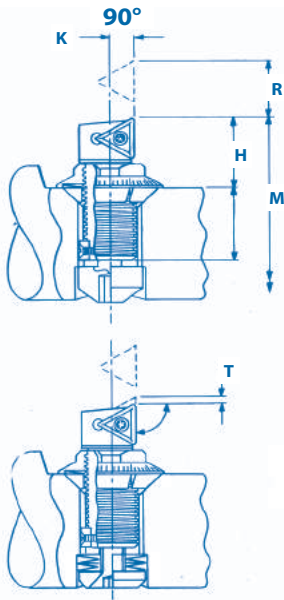
- 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
- 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	70.5	2.775	0.75	0.030	16.0	0.630	25.5	1.004	8.35	0.329	TC_ 16T3 (08)	TR7A5
	64.0	2.250			10.0	0.394						TR7A5-LH
							70.5	2.775	16.0	0.630		25.4
	TR7B5-LH											
	70.5	2.775			16.0	0.630	25.5	1.004	20.00	0.787	TR7F5	
											TR7F5-LH	
	70.5	2.775			16.0	0.630	25.4	1.000	-1.60	-0.063	TR7F5C	
											TR7F5C-LH	
95°	70.5	2.775	0.75	0.030	16.0	0.630	25.5	1.004	8.47	0.333	TC_ 16T3 (08)	TR7A595
75°	64.0	2.520			10.0	0.394			6.20	0.244		TR7A5L
												TR7A5L-LH
75°	70.5	2.775			16.0	0.630			15.80	0.622		TR7B5L
												TR7B5L-LH
45°	69.2	2.724			16.0	0.630			-1.60	-0.063		TR7F5L
												TR7A545
45°	62.8	2.472			10.0	0.393			-1.60	-0.063		TR7B545
			TR7A530									
30°	70.5	2.775	16.0	0.630	23.0	0.920	TR7A590					
0°	66.0	2.600					16.0	0.630	TR7A590			
0°	59.5	2.342	10.0	0.394	23.0	0.920	TR7A590					

## 'TR' Units - Square Mounted - Size 10 Units

(TR for fine-finishing)

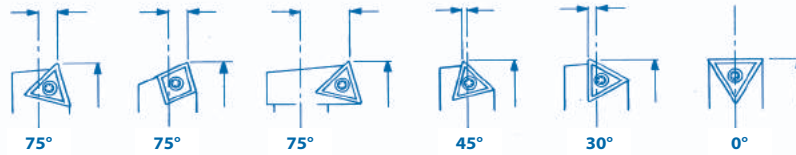
### Technical Specification



Right-hand Units shown.

Left-hand Units (LH) are mirror image.

Adjustment = 0.01 mm/0.0004 ins on radius per division.



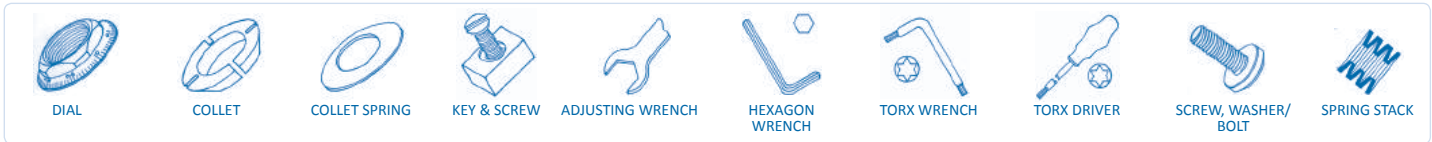
Notes:

- 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
- 'K' is measured to the theoretical sharp point of the insert.

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adjustment		H Min Height		K Tool Point Offset		Insert & Datum Rad	Part Number								
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch										
90°	96.0	3.780	0.87	0.034	28.7	1.130	31.80	1.252	9.5	0.374	TC__ 16T3 (08)	TR10A5								
	83.5	3.287			16.0	0.630						TR10A5-LH								
	96.0	3.780			28.7	1.130	31.75	1.250				CC__ 1204 (04)	TR10B5							
	83.5	2.87			16.0	0.630					TR10B5-LH									
	96.0	3.780			31.80	1.252					25.4		1.000	TC__ 16T3 (08)	TR10F5					
	95°	96.0					3.780	28.7				1.130		31.75	1.250	9.54	0.376	CC__ 1204 (04)	TR10A595C	
25.52									1.005	TC__ 16T3 (08)									TR10F595	
25.44					1.002	CC__ 1204 (04)			TR10F595C											
75°	96.0	3.780			16.0	0.630	31.80	1.252	4.8	0.189	20.35	0.801	TC__ 16T3 (08)	TR10B595C-LH						
														96.0	3.780	31.80	1.252	-1.6	-0.063	TR10A5L
														83.5	3.287					TR10A5L-LH
45°	95.0	3.740			28.7	1.130	31.80	1.252	-1.6	-0.063				TR10B5L						
	84.0	3.307	16.0	0.630	TR10B5L-LH															
0°	80.5	3.170	28.7	1.130	28.60	1.126						TR10F5L								
			16.0	0.630								TR10A545								
												TR10A545-LH								
												TR10B545								
												TR10A90								
												TR10B90								

# Rigibore Units

Spares and Accessories



## Spares and Accessories - Size 2 Units - Angular Mounted

Tool	Tool Body	Dial	Collet	Collet Spring	Key	Adjusting Wrench	Hexagon Wrench	Torx Wrench	Torx Driver	Insert Screw	Screw & Washer (TR Unit)	Bolt (R Unit)	Adjusting Spring Stack (TR Unit)
R2A2	R20A2	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A2	R20A2	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2A2-LH	R20A2-LH	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A2-LH	R20A2-LH	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2B2	R20B2	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B2	R20B2	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2B2-LH	R20B2-LH	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B2-LH	R20B2-LH	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2B2S	R20B2S	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23BS	
TR2B2S	R20B2S	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BS		R29
R2B2S-LH	R20B2S-LH	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23BS	
TR2B2S-LH	R20B2S-LH	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BS		R29
R2B3	R20B3	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B3	R20B3	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2A2L	R20A2L	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A2L	R20A2L	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2A2L-LH	R20A2L-LH	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A2L-LH	R20A2L-LH	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2B2L	R20B2L	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B2L	R20B2L	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2B2L-LH	R20B2L-LH	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B2L-LH	R20B2L-LH	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2A245	R20A245	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A245	R20A245	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2B245	R20B245	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B245	R20B245	R212	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29



DIAL



COLLET



COLLET SPRING



KEY & SCREW



ADJUSTING WRENCH



HEXAGON WRENCH



TORX WRENCH



TORX DRIVER



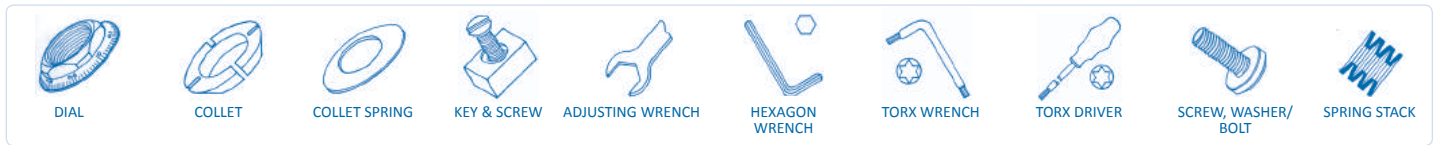
SCREW, WASHER/  
BOLT



SPRING STACK

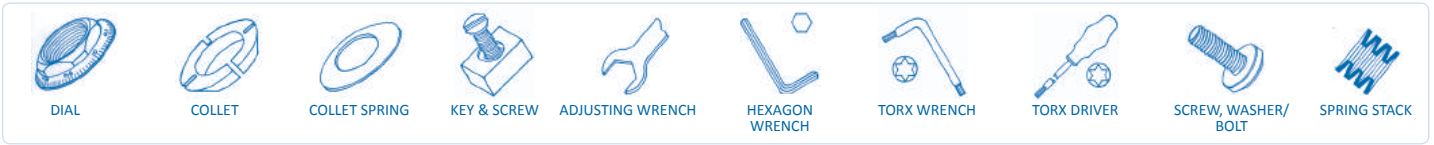
## Spares and Accessories - Size 3 Units - Angular Mounted

Tool	Tool Body	Dial	Collet	Collet Spring	Key	Adjusting Wrench	Hexagon Wrench	Torx Wrench	Torx Driver	Insert Screw	Screw & Washer (TR Unit)	Bolt (R Unit)	Adjusting Spring Stack (TR Unit)
R3A2	R30A2	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A2	R30A2	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3A2-LH	R30A2-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A2-LH	R30A2-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3B2	R30B2	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B2	R30B2	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3B2-LH	R30B2-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B2-LH	R30B2-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3B1	R30B1	R312	R32	R35	R34	R36	R38	R37	R37D	RS2045		R33B	
TR3B1	R30B1	R312	R32	R35	R34	R36	R38	R37	R37D	RS2045	R33BT		R39
R3B1-LH	R30B1-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2045		R33B	
TR3B1-LH	R30B1-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2045	R33BT		R39
R3A2C	R30A2C	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33A	
TR3A2C	R30A2C	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560	R33AT		R39
R3A2C-LH	R30A2C-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33A	
TR3A2C-LH	R30A2C-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560	R33AT		R39
R3B2C	R30B2C	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33B	
TR3B2C	R30B2C	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560	R33BT		R39
R3B2C-LH	R30B2C-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33B	
TR3B2C-LH	R30B2C-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560	R33BT		R39
R3B2CS	R30B2CS	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33B	
TR3B2CS	R30B2CS	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560	R33BT		R39
R3B295	R30B295	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33B	
TR3B295	R30B295	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3A2L	R30A2L	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A2L	R30A2L	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3A2L-LH	R30A2L-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A2L-LH	R30A2L-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3B2L	R30B2L	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B2L	R30B2L	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3B2L-LH	R30B2L-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B2L-LH	R30B3L-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3B2LSC	R30B2LSC	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33B	
TR3B2LSC	R30B2LSC	R312	R32	R35	R34	R36	R38	R37	R37D	RS2560	R33BT		R39
R3A245	R30A245	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A245	R30A245	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3A245-LH	R30A245-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A245-LH	R30A245-LH	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3B245	R30B245	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B245	R30B245	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3A230	R30A230	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A230	R30A230	R312	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39



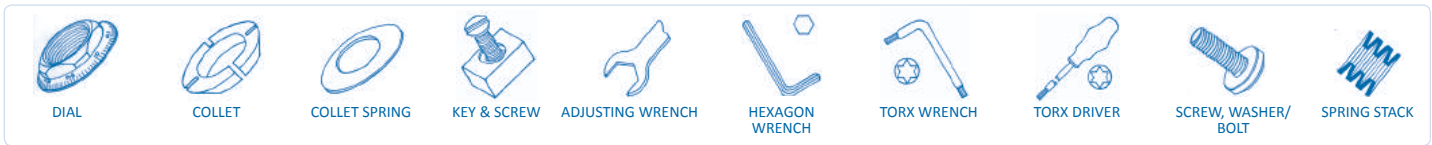
## Spares and Accessories - Size 5 Units - Angular Mounted

Tool	Tool Body	Dial	Collet	Collet Spring	Key	Adjusting Wrench	Hexagon Wrench	Torx Wrench	Torx Driver	Insert Screw	Screw & Washer (TR Unit)	Bolt (R Unit)	Adjusting Spring Stack (TR Unit)
R5A2	R50A2	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55A	
TR5A2	R50A2	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5A2-LH	R50A2-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55A	
TR5A2-LH	R50A2-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B2	R50B2	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55B	
TR5B2	R50B2	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5B2-LH	R50B2-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55B	
TR5B2-LH	R50B2-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5A2C	R50A2C	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55A	
TR5A2C	R50A2C	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5A2C-LH	R50A2C-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55A	
TR5A2C-LH	R50A2C-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B2C	R50B2C	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55B	
TR5B2C	R50B2C	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5B2C-LH	R50B2C-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55B	
TR5B2C-LH	R50B2C-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5A295	R50A295	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55A	
TR5A295	R50A295	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B295	R50B295	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55B	
TR5B295	R50B295	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5A295C	R50A295C	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55A	
TR5A295C	R50A295C	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5A2L	R50A2L	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55A	
TR5A2L	R50A2L	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B2L	R50B2L	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55B	
TR5B2L	R50B2L	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5B2L-LH	R50B2L-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55B	
TR5B2L-LH	R50B2L-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5A245	R50A245	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55A	
TR5A245	R50A245	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5A245-LH	R50A245-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55A	
TR5A245-LH	R50A245-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B245	R50B245	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55B	
TR5B245	R50B245	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5B245-LH	R50B245-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55B	
TR5B245-LH	R50B245-LH	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5A230	R50A230	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55A	
TR5A230	R50A230	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B230	R50B230	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560		R55B	
TR5B230	R50B230	R512	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59



## Spares and Accessories - Size 7 Units - Angular Mounted

Tool	Tool Body	Dial	Collet	Collet Spring	Key	Adjusting Wrench	Hexagon Wrench	Torx Wrench	Torx Driver	Insert Screw	Screw & Washer (TR Unit)	Bolt (R Unit)	Adjusting Spring Stack (TR Unit)
R7A2	R70A2	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A2	R70A2	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A2-LH	R70A2-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A2-LH	R70A2-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7B2	R70B2	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B2	R70B2	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7B2-LH	R70B2-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B2-LH	R70B2-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7A2C	R70A2C	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A2C	R70A2C	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A2C-LH	R70A2C-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A2C-LH	R70A2C-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7B2C	R70B2C	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B2C	R70B2C	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7B2C-LH	R70B2C-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B2C-LH	R70B2C-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7A295	R70A295	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A295	R70A295	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A295C	R70A295C	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A295C	R70A295C	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A2L	R70A2L	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A2L	R70A2L	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A2L-LH	R70A2L-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A2L-LH	R70A2L-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7B2L	R70B2L	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B2L	R70B2L	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7B2L-LH	R70B2L-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B2L-LH	R70B2L-LH	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7A245	R70A245	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A245	R70A245	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7B245	R70B245	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B245	R70B245	R712	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79

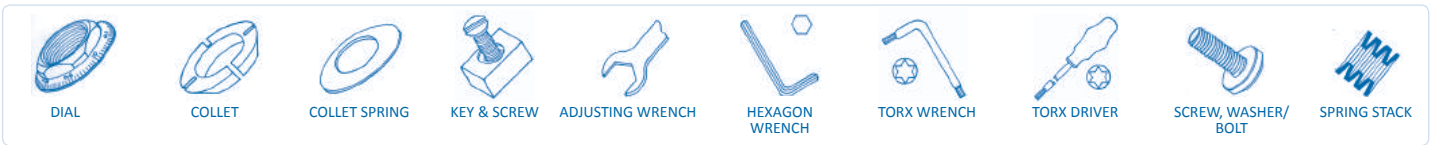


## Spares and Accessories - Size 10 Units - Angular Mounted

Tool	Tool Body	Dial	Collet	Collet Spring	Key	Adjusting Wrench	Hexagon Wrench	Torx Wrench	Torx Driver	Insert Screw	Screw & Washer (TR Unit)	Bolt (R Unit)	Adjusting Spring Stack (TR Unit)	Shim Screw Wrench (Size 10)	Shim	Shim Screw
R10A2	R100A2	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A2	R100A2	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10A2-LH	R100A2-LH	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A2-LH	R100A2-LH	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10B2	R100B2	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B		R118	RSH4129	RSS2471
TR10B2	R100B2	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471
R10B2-LH	R100B2-LH	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B		R118	RSH4129	RSS2471
TR10B2-LH	R100B2-LH	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471
R10A2C	R100A2C	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A				
TR10A2C	R100A2C	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109			
R10A295	R100A295	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A295	R100A295	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10B295	R100B295	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B		R118	RSH4129	RSS2471
TR10B295	R100B295	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471
R10A2L	R100A2L	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A2L	R100A2L	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10B2L	R100B2L	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B		R118	RSH4129	RSS2471
TR10B2L	R100B2L	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471
R10B2L-LH	R100B2L-LH	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B		R118	RSH4129	RSS2471
TR10B2L-LH	R100B2L-LH	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471
R10A295	R100A295	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A295	R100A295	R112	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471

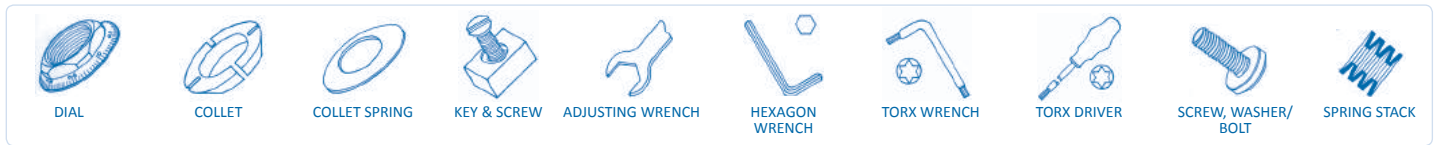
**Specialists in Specials** –Rigibore has the knowledge, experience and professionalism to provide the right custom tooling solutions for your hole-making application.





## Spares and Accessories - Size 2 Units - Square Mounted

Tool	Tool Body	Dial	Collet	Collet Spring	Key	Adjusting Wrench	Hexagon Wrench	Torx Wrench	Torx Driver	Insert Screw	Screw & Washer (TR Unit)	Bolt (R Unit)	Adjusting Spring Stack (TR Unit)
R2A5	R20A5	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A5	R20A5	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2A5-LH	R20A5-LH	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A5-LH	R20A5-LH	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2B5	R20B5	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B5	R20B5	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2B5-LH	R20B5-LH	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B5-LH	R20B5-LH	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2F5	R20F5	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2F5	R20F5	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2F5S	R20F5S	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2F5S	R20F5S	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2A5L	R20A5L	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A5L	R20A5L	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2A5-LH	R20A5-LH	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A5-LH	R20A5-LH	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2B5L	R20B5L	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B5L	R20B5L	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2B5-LH	R20B5-LH	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B5-LH	R20B5-LH	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2A545	R20A545	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A545	R20A545	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2B545	R20B545	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B545	R20B545	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29
R2A90	R20A90	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23A	
TR2A90	R20A90	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23AT		R29
R2B90	R20B90	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045		R23B	
TR2B90	R20B90	R215	R22	R25	R24	R26	R28	R27	R27D	RS2045	R23BT		R29



## Spares and Accessories - Size 3 Units - Square Mounted

Tool	Tool Body	Dial	Collet	Collet Spring	Key	Adjusting Wrench	Hexagon Wrench	Torx Wrench	Torx Driver	Insert Screw	Screw & Washer (TR Unit)	Bolt (R Unit)	Adjusting Spring Stack (TR Unit)
R3A5	R30A5	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A5	R30A5	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3A5-LH	R30A5-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A5-LH	R30A5-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3B5	R30B5	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B5	R30B5	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3B5-LH	R30B5-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B5-LH	R30B5-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3A5C	R30A5C	R315	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33A	
TR3A5C	R30A5C	R315	R32	R35	R34	R36	R38	R37	R37D	RS2560	R33AT		R39
R3A5C-LH	R30A5C-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33A	
TR3A5C-LH	R30A5C-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2560	R33AT		R39
R3B5C	R30B5C	R315	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33B	
TR3B5C	R30B5C	R315	R32	R35	R34	R36	R38	R37	R37D	RS2560	R33BT		R39
R3B5C-LH	R30B5C-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2560		R33B	
TR3B5C-LH	R30B5C-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2560	R33BT		R39
R3F5	R30F5	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3F5	R30F5	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3F5S	R30F5S	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3F5S	R30F5S	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3F5S-LH	R30F5S-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3F5S-LH	R30F5S-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3A5L	R30A5L	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A5L	R30A5L	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3A5L-LH	R30A5L-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A5L-LH	R30A5L-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3B5L	R30B5L	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B5L	R30B5L	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3B5L-LH	R30B5L-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B5L-LH	R30B5L-LH	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3A545	R30A545	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A545	R30A545	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3B545	R30B545	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B545	R30B545	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39
R3A90	R30A90	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33A	
TR3A90	R30A90	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33AT		R39
R3B90	R30B90	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263		R33B	
TR3B90	R30B90	R315	R32	R35	R34	R36	R38	R37	R37D	RS2263	R33BT		R39



DIAL



COLLET



COLLET SPRING



KEY & SCREW



ADJUSTING WRENCH



HEXAGON WRENCH



TORX WRENCH



TORX DRIVER



SCREW, WASHER/  
BOLT



SPRING STACK

## Spares and Accessories - Size 5 Units - Square Mounted

Tool	Tool Body	Dial	Collet	Collet Spring	Key	Adjusting Wrench	Hexagon Wrench	Torx Wrench	Torx Driver	Insert Screw	Screw & Washer (TR Unit)	Bolt (R Unit)	Adjusting Spring Stack (TR Unit)
R5A5	R50A5	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5A5	R50A5	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5A5-LH	R50A5-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5A5-LH	R50A5-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B5	R50B5	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53B	
TR5B5	R50B5	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5B5-LH	R50B5-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53B	
TR5B5-LH	R50B5-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5A5C	R50A5C	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5A5C	R50A5C	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5A5C-LH	R50A5C-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5A5C-LH	R50A5C-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B5C	R50B5C	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53B	
TR5B5C	R50B5C	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5F5	R50F5	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5F5	R50F5	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5F5-LH	R50F5-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53B	
TR5F5-LH	R50F5-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5F5S	R50F5S	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5F5S	R50F5S	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5F5C	R50F5C	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5F5C	R50F5C	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5F5C-LH	R50F5C-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5F5C-LH	R50F5C-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5F595	R50F595	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5F595	R50F595	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5A5L	R50A5L	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5A5L	R50A5L	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5A5L-LH	R50A5L-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5A5L-LH	R50A5L-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B5L	R50B5L	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53B	
TR5B5L	R50B5L	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5B5L-LH	R50B5L-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53B	
TR5B5L-LH	R50B5L-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5A545	R50A545	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5A545	R50A545	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5A545-LH	R50A545-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5A545-LH	R50A545-LH	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B545	R50B545	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53B	
TR5B545	R50B545	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59
R5A90	R50A90	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53A	
TR5A90	R50A90	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53AT		R59
R5B90	R50B90	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560		R53B	
TR5B90	R50B90	R515	R52	R55	R54	R36	R58	R37	R37D	RS2560	R53BT		R59



DIAL



COLLET



COLLET SPRING



KEY & SCREW



ADJUSTING WRENCH



HEXAGON WRENCH



TORX WRENCH



TORX DRIVER



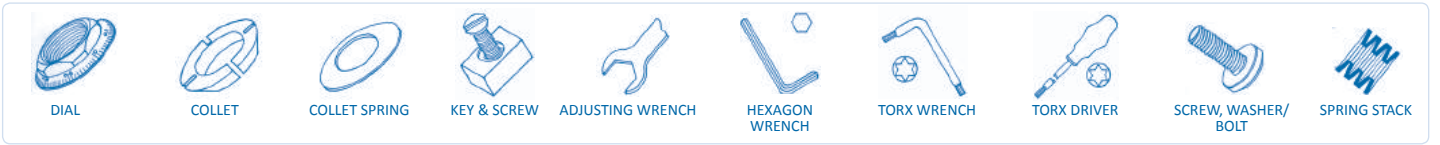
SCREW, WASHER/  
BOLT



SPRING STACK

## Spares and Accessories - Size 7 Units - Square Mounted

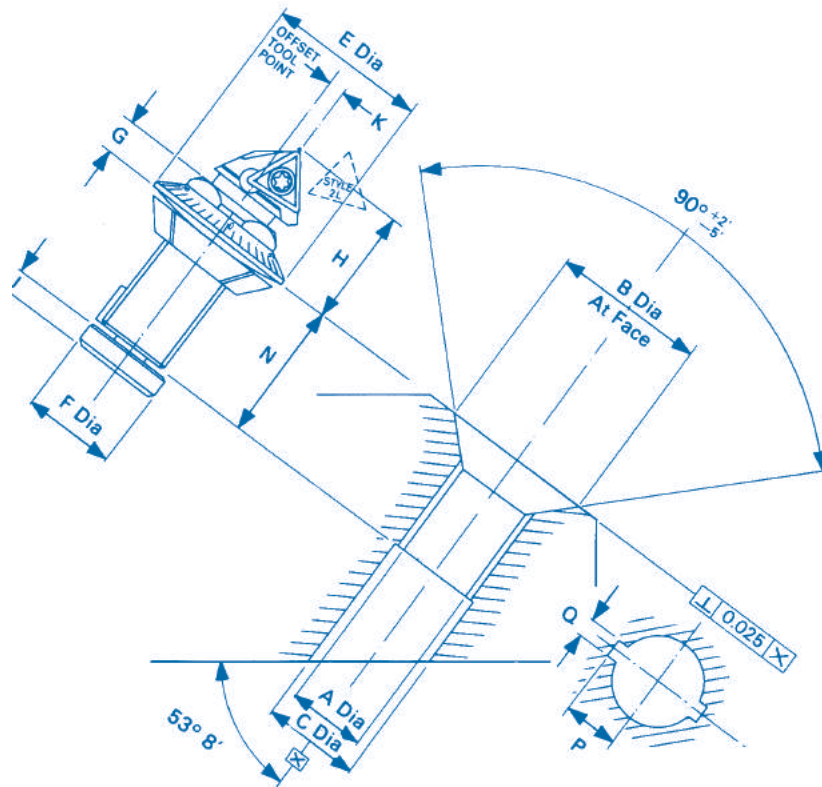
Tool	Tool Body	Dial	Collet	Collet Spring	Key	Adjusting Wrench	Hexagon Wrench	Torx Wrench	Torx Driver	Insert Screw	Screw & Washer (TR Unit)	Bolt (R Unit)	Adjusting Spring Stack (TR Unit)
R7A5	R70A5	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A5	R70A5	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A5-LH	R70A5-LH	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A5-LH	R70A5-LH	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7B5	R70B5	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B5	R70B5	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7B5-LH	R70B5-LH	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B5-LH	R70B5-LH	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7A5C	R70A5C	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A5C	R70A5C	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7B5C	R70B5C	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B5C	R70B5C	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7F5	R70F5	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7F5	R70F5	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7F5-LH	R70F5-LH	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7F5-LH	R70F5-LH	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A595	R70A595	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A595	R70A595	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7F595	R70F595	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7F595	R70F595	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7F595C	R70F595C	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7F595C	R70F595C	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A5L	R70A5L	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A5L	R70A5L	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A5L-LH	R70A5L-LH	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A5L-LH	R70A5L-LH	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7B5L	R70B5L	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B5L	R70B5L	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7B5L-LH	R70B5L-LH	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B5L-LH	R70B5L-LH	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7F5L	R70F5L	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7F5L	R70F5L	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A545	R70A545	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A545	R70A545	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7B545	R70B545	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73B	
TR7B545	R70B545	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		R79
R7A530	R70A530	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A530	R70A530	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7A90	R70A90	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084		R73A	
TR7A90	R70A90	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73AT		R79
R7B90	R70B90	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084			
TR7B90	R70B90	R715	R72	R75	R74	R76	R78	R77	R77D	RS4084	R73BT		



## Spares and Accessories - Size 10 Units - Square Mounted

Tool	Tool Body	Dial	Col-let	Collet Spring	Key	Adjust-ing Wrench	Hexa-gon Wrench	Torx Wrench	Torx Driver	Insert Screw	Screw & Washer (TR Unit)	Bolt (R Unit)	Adjusting Spring Stack (TR Unit)	Shim Screw Wrench (Size 10)	Shim	Shim Screw
R10A5	R100A5	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A5	R100A5	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10A5-LH	R100A5-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A5-LH	R100A5-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10B5	R100B5	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B		R118	RSH4129	RSS2471
TR10B5	R100B5	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471
R10B5-LH	R100B5-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B		R118	RSH4129	RSS2471
TR10B5-LH	R100B5-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471
R10A5C	R100A5C	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A				
TR10A5C	R100A5C	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109			
R10A5C-LH	R100A5C-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A				
TR10A5C-LH	R100A5C-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109			
R10F5	R100F5	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10F5	R100F5	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10F5-LH	R100F5-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10F5-LH	R100F5-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10F5C	R100F5C	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A				
TR10F5C	R100F5C	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109			
R10A595C	R100A595C	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A				
TR10A595C	R100A595C	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109			
R10A595C-LH	R100A595C-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A				
TR10A595C-LH	R100A595C-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109			
R10F595	R100F595	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10F595	R100F595	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10F595C	R100F595C	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A				
TR10F595C	R100F595C	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109			
R10F595C-LH	R100F595C-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A				
TR10F595C-LH	R100F595C-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109			
R10A5L	R100A5L	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A5L	R100A5L	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10A5L-LH	R100A5L-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A5L-LH	R100A5L-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10B5L	R100B5L	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B		R118	RSH4129	RSS2471
TR10B5L	R100B5L	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471
R10B5L-LH	R100B5L-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B		R118	RSH4129	RSS2471
TR10B5L-LH	R100B5L-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471
R10F5L	R100F5L	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10F5L	R100F5L	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10A545	R100A545	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A545	R100A545	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10A545-LH	R100A545-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A545-LH	R100A545-LH	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10B545	R100B545	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B		R118	RSH4129	RSS2471
TR10B545	R100B545	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471
R10A90	R100A90	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103A		R118	RSH4129	RSS2471
TR10A90	R100A90	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103AT		R109	R118	RSH4129	RSS2471
R10B90	R100B90	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120		R103B				
TR10B90	R100B90	R115	R102	R105	R104	R76	R108	R77	R77D	RS35120	R103BT		R109	R118	RSH4129	RSS2471

## Mounting Dimensions Angular Mounted Units - R & TR Units

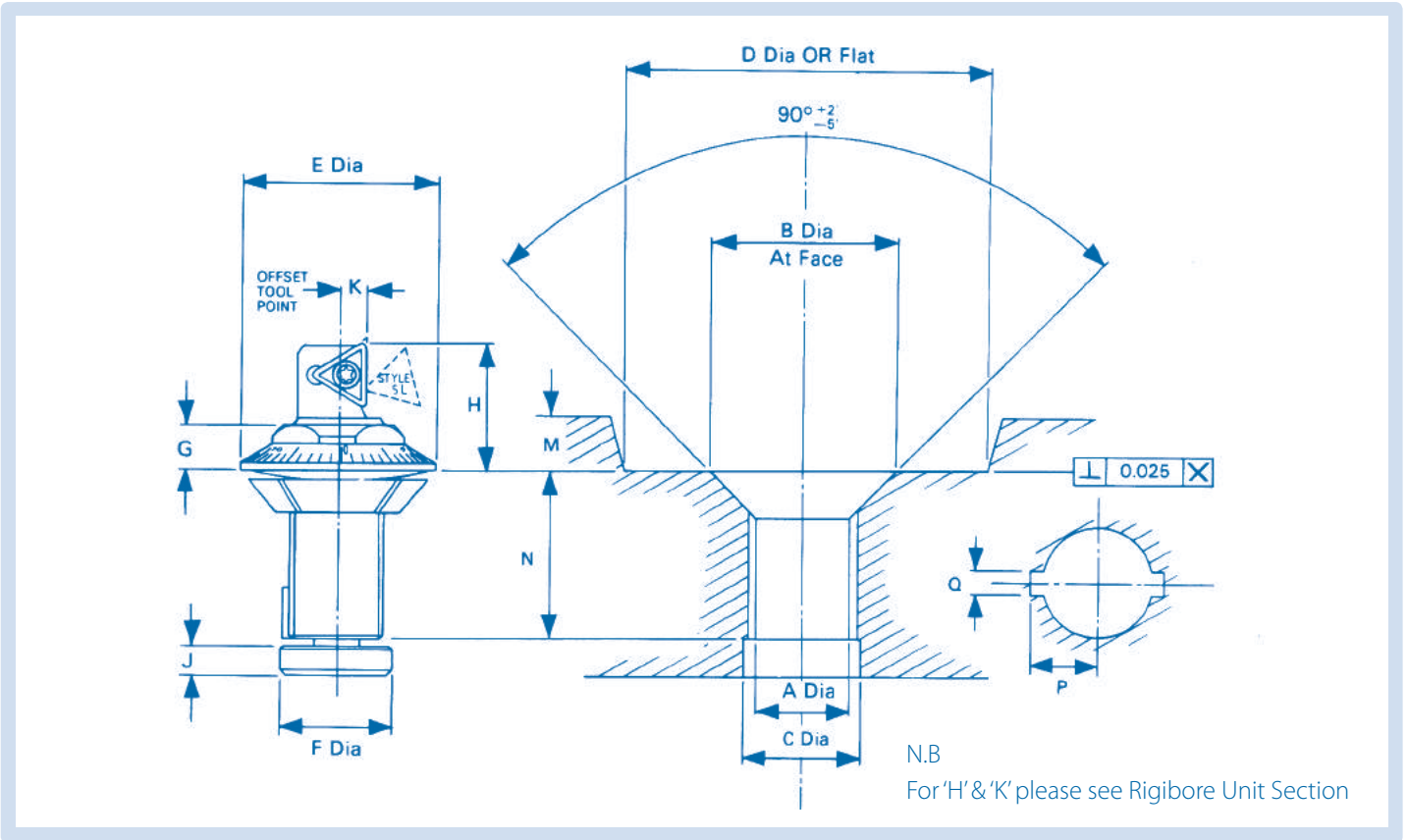


N.B  
 'H' – over datum rad  
 'K' – to sharp point  
 For 'H' & 'K' please see  
 Rigibore Unit Section

## Technical Data – Hole Dimensions for Standard Rigibore Units – Metric

UNIT PREFIX	A +0.13 -0 Ø	B +0.13 -0 Ø	C +0.25 -0 Ø	D +/-0.25	E +/-0.05	F +/-0.1	G +0 -0.02	J +0.1 -0	M (Std)	N +0.25 -0	P +0.05 -0	Q +0.02 -0
R2B	6.35	12.80	8.00	19.00	13.70	7.80	3.00	1.85	4.00	6.35	3.80	1.60
R2B_/TR2B_										9.50		
R2A_/TR2A_										12.70		
R2F_/TR2F_										12.70		
R3B	7.937	16.00	11.30	26.00	18.00	11.00	4.00	4.00	5.50	11.90	5.05	2.34
R3A_/TR3A_										15.90		
R3F_/TR3F_										15.90		
R5B	12.70	25.66	16.00	38.00	27.00	15.60	5.60	7.00	5.50	19.00	7.55	3.155
R5A_/TR5A_										25.40		
R5F_/TR5F_										25.40		
R7B	19.05	35.20	24.00	48.00	37.50	23.70	8.70	13.00	11.00	25.40	11.35	4.76
R7A_/TR7A_										31.75		
R7F_/TR7F_										31.75		
R10B	25.40	44.70	32.00	57.00	48.00	31.50	9.40	16.50	14.50	35.00	14.95	6.32
R10A_/TR10A_										47.60		
R10F_/TR10F_										47.60		

## Mounting Dimensions Square Mounted Units



## Technical Data – Mounting Dimensions for Standard Rigibore Units – Imperial

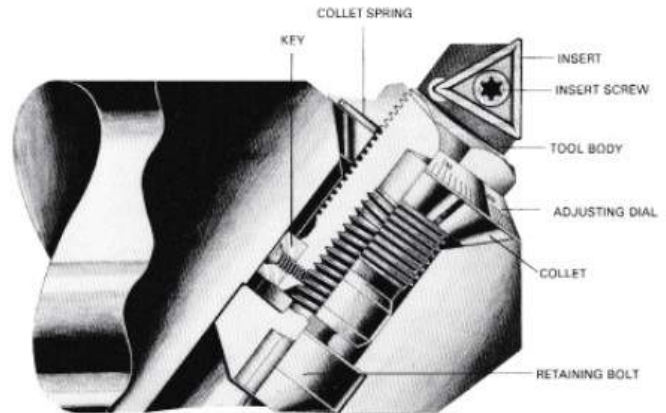
UNIT PREFIX	A +.0005 -0 Ø	B +.005 -0 Ø	C +.010 -0 Ø	D +.01	E +/-0.002 Ø	F +/-0.004 Ø	G +0 -0.008	J +.004 -0	M (Std)	N +.010 -0 B/A	P +.002 -0	Q +.001 -0
R2B_S										.2500		
R2B_TR2B_	.2500	.5040	.3150	.7500	.5400	.3070	.1180	.1180	.1570	.3750	.1500	.0630
R2A_TR2A_										.5000		
R2F_TR2F_												
R3B_TR3B_	.3125	.6300	.4450	1.030	.7090	.4330	.1580	.1580	.2170	.4690	.1990	.0920
R3A_TR3A_										.6250		
R3F_TR3F_												
R5B_TR5B_	.5000	1.010	.6300	1.500	1.063	.6100	.2200	.2760	.2170	.7500	.2970	.1240
R5A_TR5A_										1.000		
R5F_TR5F_												
R7B_TR7B_	.7500	1.386	.9450	1.870	1.476	.9330	.3430	.5120	.4330	1.000	.4470	.1870
R7A_TR7A_										1.250		
R7F_TR7F_												
R10B_TR10B_	1.000	1.760	1.260	2.250	1.890	1.240	.3700	.6500	.5710	1.375	.5890	.2490
R10A_TR10A_										1.875		
R10F_TR10F_												

## Rigibore Units INSTRUCTIONS FOR USE

Type 'R' for roughing and semi-finish boring type

'TR' for finish boring

'F' for larger diameter boring



The collet clamping system of Rigibore units offers substantial advantages over similar units by firmly clamping the tool when the assembly is tensioned. The collet spring also keeps the dial in place when the retaining bolt is released for adjustment.

Dial graduations are easily read and each produces an adjustment of 0.01mm/.0004in on radius (0.02mm/.0008in on diameter). Graduations can be readily split to provide an even finer setting capability.

On top-adjusting (TR) units, modified components and additional spring washers at the back provide fine adjustment without releasing the retaining bolt.

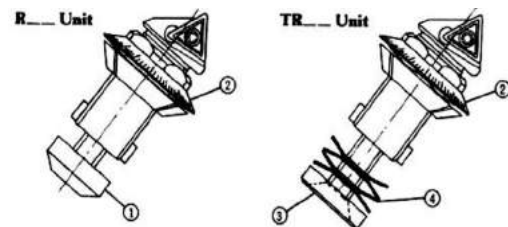
### Operating Instructions - The Standard Unit - Type 'R' - For Roughing & Semi-Finishing

Torque values for bolt (1) on Rigibore 'R' Units

Unit Size	Min	Max
R2_---	7 inch lbs / 0.8Nm	10 inch/lbs / 1.1Nm
R3_---	12 inch lbs / 1.4Nm	16 inch lbs / 1.8Nm
R5_---	30 inch lbs / 4.3Nm	45 inch lbs / 5.1Nm
R7_---	75 inch lbs / 8.5Nm	90 inch lbs / 10.2Nm
R10_---	130 inch lbs / 14.7Nm	150 inch lbs / 17.0Nm

**Note:** minimum torque value is that at which the unit effectively clamps, maximum torque value is that at which the unit becomes difficult to unclamp

In roughing applications, at speeds in the region of 350 / 360 ft/min or 105 / 110 meters/min depths of cut of .125" / 5mm on size 5 units and .400" / 10mm on size 7 and 10 units have been recorded at feeds up to .008" / 0.2mm (These figures will vary depending on material and other cutting conditions).



1. Insert the Rigibore Unit into the boring bar & screw in the bolt (1). Roughly adjust the tool by turning the dial (2) - clockwise to increase diameter / anticlockwise to decrease diameter - to the approximate diameter required - with the retaining bolt (1) tightened only sufficiently to tension the assembly.
2. Using the correct spanner/wrench lightly tighten the dial (2) onto the bar flat and check for size
3. To re-adjust, release the retaining bolt (1) approximately one-quarter turn. **Note:** care should be taken in releasing the retaining bolt to retain tension in the assembly. Adjust with spanner/wrench, the desired graduation and firmly tighten the retaining bolt.

**Do not over tighten.** Each graduation on the dial adjusts .0004" / 0.01mm on radius. For adjustments finer than one graduation, use the Vernier scale marked on the boring bar.

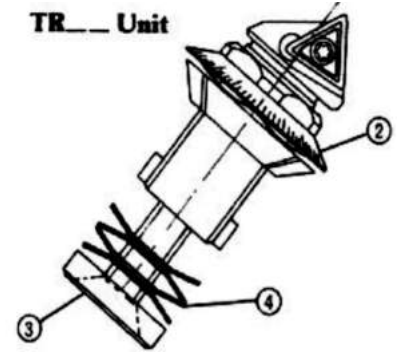
## Operating Instructions - Top Adjusting Units - Type 'TR' - For Fine Boring/Finishing

### Recommended for depths of cut up to .010"/ 0.25mm

1. Insert the unit and roughly adjust as for type 'R'
2. Using a hexagon wrench, tighten the retaining screw (3) to fully compress the spring stack (4) and back-off ½ turn max.
3. Obtain final size by adjusting the dial (2) only. Do not change the retaining screw setting.

Note: When adjusting for a smaller diameter, always adjust under-size and then adjust clockwise to size.

'TR' units are supplied with retaining screw and spring stack assembled in the correct order.



In the event that the spring stack becomes separated from the retaining screw and needs to be fitted, always remember that the disc spring nearest the unit should be with its outer rim towards the unit and other disc springs alternating as illustrated.

4. This will ensure that the outer rim of the disc spring seats against the counterbore in the back of the boring bar (note: the number of disc springs varies with the unit size).

In extreme cutting conditions i.e. interrupted cuts etc. the action of the 'TR' unit can be made more rigid by re-stacking these disc springs as shown in illustration (5) i.e. double stacking, but note that this will halve the adjustment range and must be pre-loaded by backing off the retaining screw only ¼ turn (or less).

Additional disc springs may have to be purchased to achieve this.

'TR' Units, as supplied, are fitted with:	
Unit	Disc Springs
Size 2	6
Size 3	5
Size 5	3
Size 7	4
Size 10	4

For flexibility of use, the 'TR' unit can be used as for the standard 'R' unit, i.e. by fully tightening the retaining screw. In this way, the 'TR' unit becomes only marginally less rigid than the standard 'R' unit but will reduce the effective life of the disc springs that lose their spring characteristics after sustained full compression.

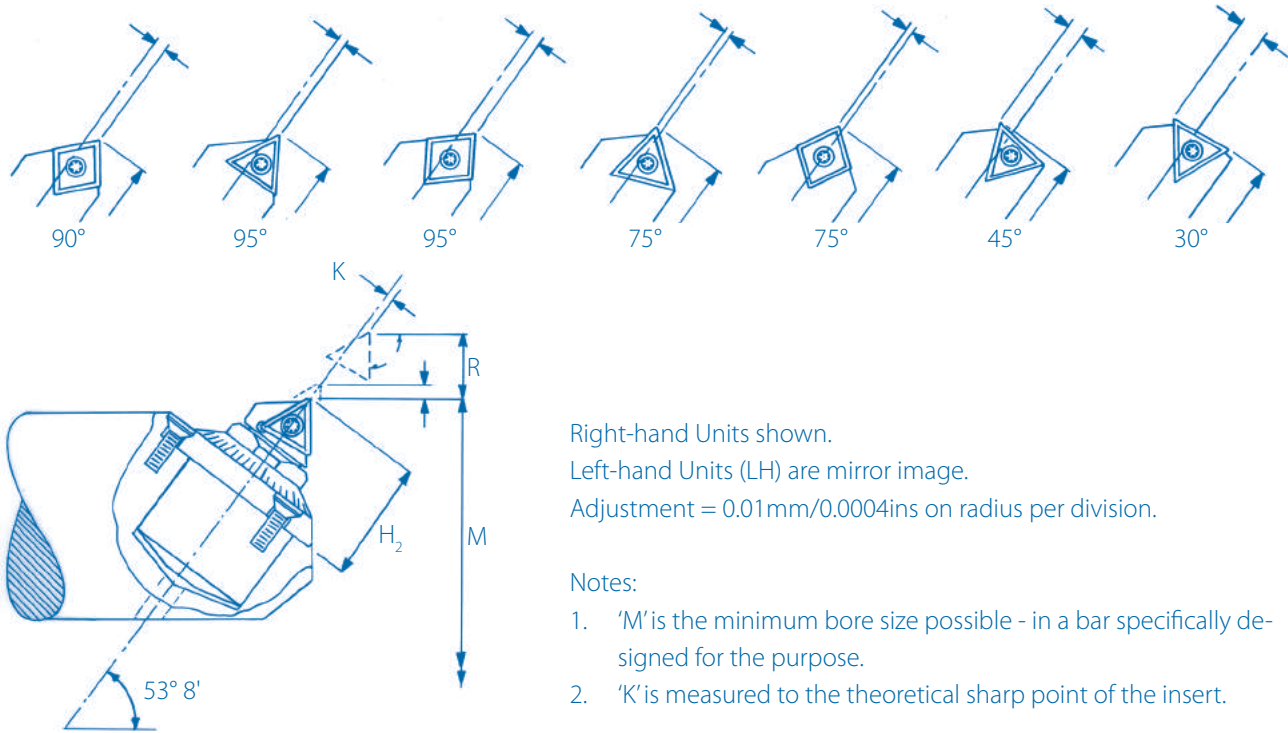
## Operating Instructions - Bush Mounted Units - Type 'BTR/MBTR'

Bush units are offered in both 2 screw and 3 screw types to interchange with most other units of this type. The common feature of all bush units is that they are constructed of a bush plus a 'TR' unit.

**All instructions applicable to 'TR' units also apply to MBTR/BTR bush units.**

## MBTR/SAB Bush Units – For Fine-Finishing

### Technical Specification



## MBTR/SAB Bush Units – Angular Mounted - Size 1 Units (for fine-finishing)

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adj		H2 Min Height		K Tool Point Offset		Insert	Unit Code
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	24.00	.945	0.20	.008	2.00	.079	13.10	.516	1.35	.053	TC__06T1 (02)	MBTR/SAB1-2B2
75°							13.70	.539	-1.50	-.059		MBTR/SAB1-2B2-LH
45°							13.70	.539	-1.60	-.063		MBTR/SAB1-2B2L
					MBTR/SAB1-2B2L-LH							
												MBTR/SAB1-2B245

## MBTR/SAB Bush Units – Angular Mounted – Size 2 Units (for fine-finishing)

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adj		H2 Min Height		K Tool Point Offset		Insert	Unit Code
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	30.00	1.181	0.28	.011	4.00	.157	16.50	0.650	1.32	.052	MBTR/SAB2-3B1	TC__06T1 (02)
											MBTR/SAB2-3B1-LH	
							75°	18.70	.736	0.80	.031	MBTR/SAB2-3B2
											MBTR/SAB2-3B2-LH	
45°							16.35	.644	0.20	.031	MBTR/SAB2-3B2C	CC__0602 (04)
											MBTR/SAB2-3B2C-LH	
		18.80	.740	1.10	-.043	MBTR/SAB2-3B2L	TC__0902 (04)					
					MBTR/SAB2-3B2L-LH							
												MBTR/SAB2-3B245

### MBTR/SAB Bush Units – Angular Mounted - Size 3 Units (for fine-finishing)

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adj		H2 Min Height		K Tool Point Offset		Insert	Unit Code
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	40.00	1.575	0.40	0.16	5.60	.220	22.80	.898	2.30	.091	TC__ 1102 (04)	MBTR/SAB3-5B2M
21.75							.856	1.20	.047	CC__ 0602 (04)	MBTR/SAB3-5B2CM	
											MBTR/SAB3-5B2CLH-M	
75°						22.40	.882	1.30	.051	TC__ 1102 (04)	MBTR/SAB3-5B2LM	
									MBTR/SAB3-5B2L-LHM			
45°						22.85	.900	-1.60	-.063		MBTR/SAB3-5B245M	
											MBTR/SAB3-5B245-LH	
0°							16.30	.642			MBTR/SAB3-5B230M	

### MBTR/SAB Bush Units – Angular Mounted - Size 4 Units (for fine-finishing)

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adj		H2 Min Height		K Tool Point Offset		Insert	Unit Code
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	58.0	2.283	0.60	.024	8.00	.315	31.55	1.242	-.040	-.016	TC__ 16T3 (08)	MBTR/SAB4-7B2
32.57							1.282	1.60	.063	CC__ 09T3 (04)	MBTR/SAB4-7B2C	
											MBTR/SAB4-7B2C-LH	
75°						29.40	1.157	-3.20	-.126	TC__ 16T3 (08)	MBTR/SAB4-7B2L	
									MBTR/SAB4-7B2L-LH			
45°							31.50	1.240			MBTR/SAB4-7B245	

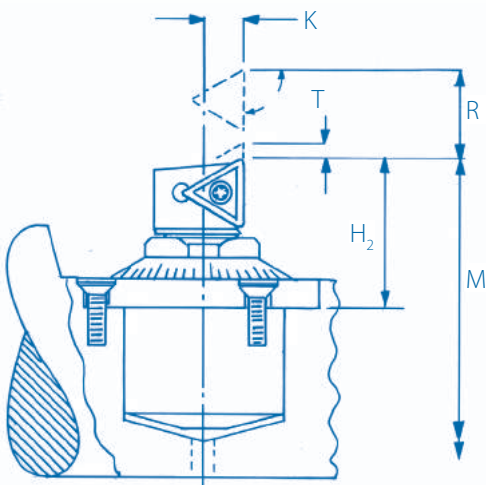
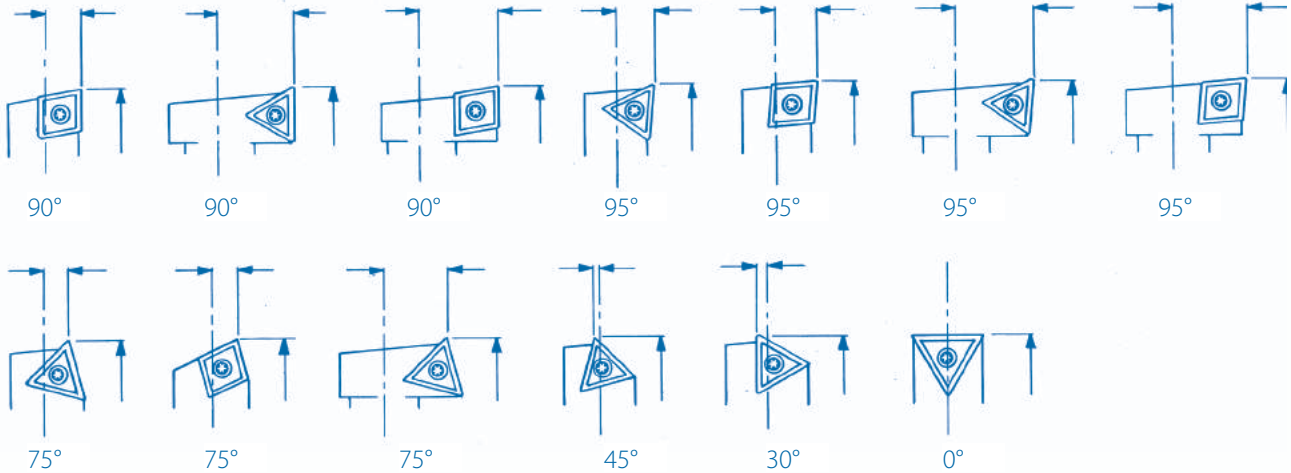
For operating instructions please see page 80

### Spares and Accessories - MBTR/SAB Bush Units - Angular Mounted

Tool	Insert Screw	Retaining Screw & Wrench Kit	Adjusting Wrench	Torx Wrench	Torx Driver				
MBTR/SAB1-2B2	RS2045	BTR001/10/3	R26	R27	R27D				
MBTR/SAB1-2B2LH									
MBTR/SAB1-2B2L									
MBTR/SAB1-2B245									
MBTR/SAB2-3B1									
MBTR/SAB2-3B1-LH	RS2263	BTR001/10/3	R36	R37	R37D				
MBTR/SAB2-3B2									
MBTR/SAB2-3B2-LH									
MBTR/SAB2-3B2C	RS2560								
MBTR/SAB2-3B2C-LH									
MBTR/SAB2-3B2L									
MBTR/SAB2-3B2L-LH									
MBTR/SAB2-3B245	RS2263								
MBTR/SAB3-5B2M	RS2560					BTR001/7/3	R36	R37	R37D
MBTR/SAB3-5B2LH-M									
MBTR/SAB3-5B2CM									
MBTR/SAB3-5B2CLH-M									
MBTR/SAB3-5B2LM									
MBTR/SAB3-5B2L-LHM									
MBTR/SAB3-5B245M									
MBTR/SAB3-5B245-LH									
MBTR/SAB3-5B230M									
MBTR/SAB4-7B2		RS4084	BTR001/8/3	R76	R77				
MBTR/SAB4-7B2-LH									
MBTR/SAB4-7B2C									
MBTR/SAB4-7B2C-LH									
MBTR/SAB4-7B2L									
MBTR/SAB4-7B2L-LH									
MBTR/SAB4-7B245									

## MBTR/SAB Bush Units – For Fine-Finishing

### Technical Specification



Right-hand Units shown.  
 Left-hand Units (LH) are mirror image.  
 Adjustment = 0.01mm/0.0004ins on radius per division.

#### Notes:

1. 'M' is the minimum bore size possible - in a bar specifically designed for the purpose.
2. 'K' is measured to the theoretical sharp point of the insert.

## MBTR/SAB Bush Units – Square Mounted - Size 1 Units (for fine-finishing)

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adj		H2 Min Height		K Tool Point Offset		Insert	Unit Code
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	25.0	.984	0.25	.010	2.50	.098	13.10	.516	2.00	.079	TC__06T1 (02)	MBTR/SAB1-2B5
									7.50	.295		MBTR/SAB1-2B5-LH
75°									2.00	.079		MBTR/SAB1-2F5S
45°												MBTR/SAB1-2B5L
0°												MBTR/SAB1-2B5L-LH
												MBTR/SAB1-2B545
												MBTR/SAB1-2B90

### MBTR/SAB Bush Units – Square Mounted - Size 2 Units (for fine-finishing)

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adj		H2 Min Height		K Tool Point Offset		Insert	Unit Code
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	33.0	1.300	0.35	.014	5.00	.197	17.55	.691	3.00	.118	TC__0902 (04)	MBTR/SAB2-3B5
							16.35	.644	4.00	.157	CC__0602 (04)	MBTR/SAB2-3B5C
75°	33.0	1.300	0.35	.014	5.00	.197	18.15	.715	9.40	.370	TC__0902 (04)	MBTR/SAB2-3B5C-LH
45°	33.0	1.300	0.35	.014	5.00	.197	17.55	.691	2.00	.079	TC__0902 (04)	MBTR/SAB2-3B55-LH
0°	33.0	1.300	0.35	.014	5.00	.197	19.75	.778	-0.80	-.031	TC__0902 (04)	MBTR/SAB2-3B5L-LH
									-	-		MBTR/SAB2-3B545
												MBTR/SAB2-3B90

### MBTR/SAB Bush Units – Square Mounted - Size 3 Units (for fine-finishing)

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adj		H2 Min Height		K Tool Point Offset		Insert	Unit Code
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	45.0	1.770	0.50	.020	7.00	.276	21.95	.864	5.40	.213	TC__1102 (04)	MBTR/SAB3-5B5M
75°	45.0	1.770	0.50	.020	7.00	.276	21.75	.864	5.40	.213	CC__0602 (04)	MBTR/SAB3-5B5CM
45°	45.0	1.770	0.50	.020	7.00	.276	21.95	.864	15.00	.591	TC__1102 (04)	MBTR/SAB3-5F5SM
0°	45.0	1.770	0.50	.020	7.00	.276	21.85	.860	-1.60	-.063		MBTR/SAB3-5B5LM
									-	-		MBTR/SAB3-5B5L-LHM
												MBTR/SAB3-5B545M
												MBTR/SAB3-5B90M

### MBTR/SAB Bush Units – Square Mounted - Size 4 Units (for fine-finishing)

Approach Angle	Min Bore Possible		T Top Adj		R Total Radial Adj		H2 Min Height		K Tool Point Offset		Insert	Unit Code
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch		
90°	63.0	2.480	0.75	.030	10.0	.394	31.50	1.240	8.35	.329	TC__16T3 (08)	MBTR/SAB4-7B5
75°	63.0	2.480	0.75	.030	10.0	.394	31.40	1.236	6.35	.250	CC__09T3 (08)	MBTR/SAB4-7B5C
45°	63.0	2.480	0.75	.030	10.0	.394	31.50	1.240	6.20	.244	TC__16T3 (08)	MBTR/SAB4-7B5L-LH
0°	63.0	2.480	0.75	.030	10.0	.394	29.00	1.142	-1.60	-.630		MBTR/SAB4-7B545
									-	-		MBTR/SAB4-7B90

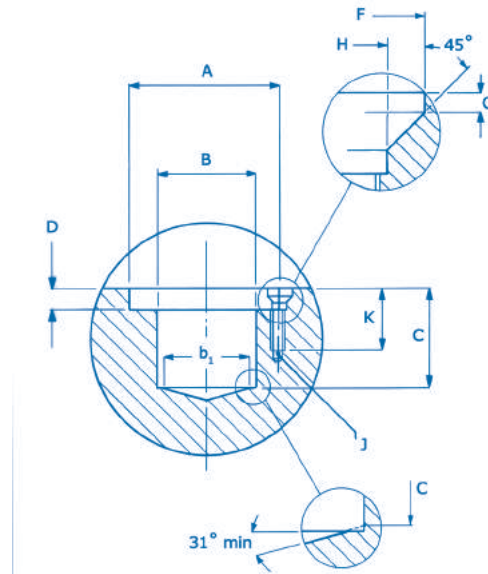
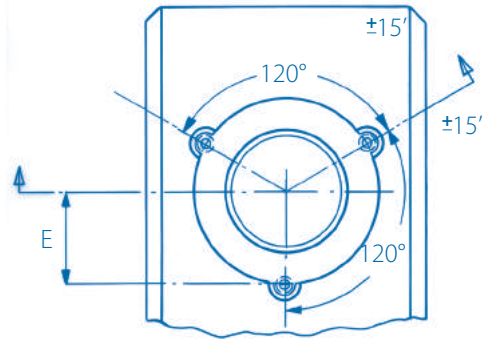
For operating instructions please see page 80

### Spares and Accessories - MBTR/SAB Bush Units - Square Mounted

Tool	Insert Screw	Retaining Screw & Wrench Kit	Adjusting Wrench	Torx Wrench	Torx Driver
MBTR/SAB1-2B5	RS2045	BTR001/10/3	R26	R27	R27D
MBTR/SAB1-2B5-LH					
MBTR/SAB1-2B5L					
MBTR/SAB1-2B5L-LH					
MBTR/SAB1-2B545					
MBTR/SAB1-2F55					
MBTR/SAB1-2B90					
MBTR/SAB2-3B5	RS2263	BTR001/10/3	R36	R37	R37D
MBTR/SAB2-3B5-LH	RS2560				
MBTR/SAB2-3B5C					
MBTR/SAB2-3B5C-LH	RS2263				
MBTR/SAB2-3B55					
MBTR/SAB2-3B55-LH					
MBTR/SAB2-3B55					
MBTR/SAB2-3B5L-LH					
MBTR/SAB2-3B545					
MBTR/SAB2-3B90					
MBTR/SAB3-5B5M		RS2560	BTR001/7/3	R36	R37
MBTR/SAB3-5B5-LHM					
MBTR/SAB3-5B5CM					
MBTR/SAB3-5B5C-LHM					
MBTR/SAB3-5F55M					
MBTR/SAB3-5B5LM					
MBTR/SAB3-5B5L-LHM					
MBTR/SAB3-5B545M					
MBTR/SAB3-5B90M					
MBTR/SAB4-7B5	RS4084	BTR001/8/3	R76	R77	R77D
MBTR/SAB2-7B5-LH					
MBTR/SAB4-7B5C					
MBTR/SAB4-7B5L					
MBTR/SAB4-7B5L-LH					
MBTR/SAB4-7B545					
MBTR/SAB4-7B90					



## Mounting Dimensions For MBTR/SAB Units



Dimension	Tolerance		MBU1 MBTR/SAB1		MBU2 MBTR/SAB2		MBU3 MBTR/SAB3		MBU4 MBTR/SAB4	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
A	+0.2	+0.008	19.0	.7480	25.0	.9843	30.0	1.1811	46.0	1.8110
$\emptyset$	-0	-0								
BH7			16.0	.6299	20.0	.7874	22.0	.8661	32.0	1.2598
$\emptyset$										
b1	Drill point min		14.50	.571	18.50	.728	20.50	.807	30.50	1.200
C	+0.2	+0.008	12.50	.492	15.50	.610	24.00	.945	36.00	1.417
$\emptyset$	-0	-0								
D			3.70	.146	4.00	.157	5.00	.197	6.30	.248
E	+/-0.05	+/-0.002	9.65	.380	12.5	.492	15.4	.606	23.0	.906
F	+0.1	+0.004	4.6	.181	4.6	.181	6.5	.256	11.6	.457
$\emptyset$	-0	-0								
G			2.5	.098	1.6	.063	1.8	.071	0	0
H			3.2	.126	3.2	.126	4.3	.169	5.4	.213
$\emptyset$										
J			M3X0.5		M3X0.5		M4X0.7		M5X0.8	
$\emptyset$										
K			10.0	.393	9.0	.354	13.0	.512	16.0	.630

For operating instructions please see page 80

## MBX Units

Accuracy through rigidity  
for fine-finishing

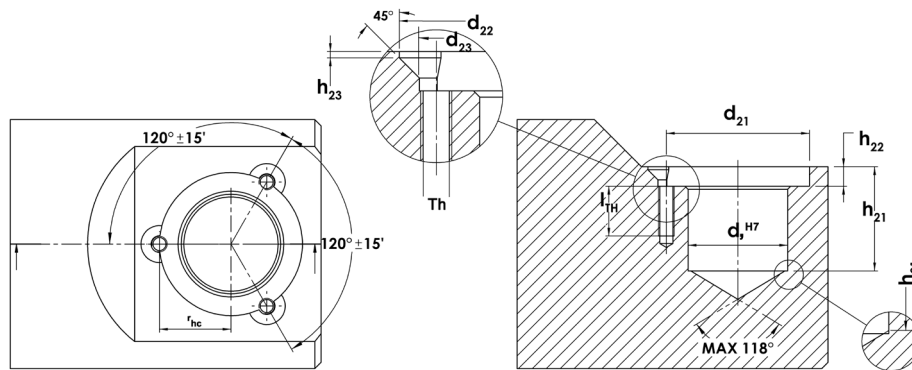
### Features

- These units are designed for building into boring tools
- The units are pre-tensioned, eliminating backlash and adjustment is made from the front only
- Each graduation on the adjustment dial is 0.005 / .0002" on radius
- Each vernier graduation on the bush is 0.001mm/.0004" on radius



### Rigibore 'MBX' Units - Technical Specification

#### Rigibore 'MBX' Units - Mounting Dimensions



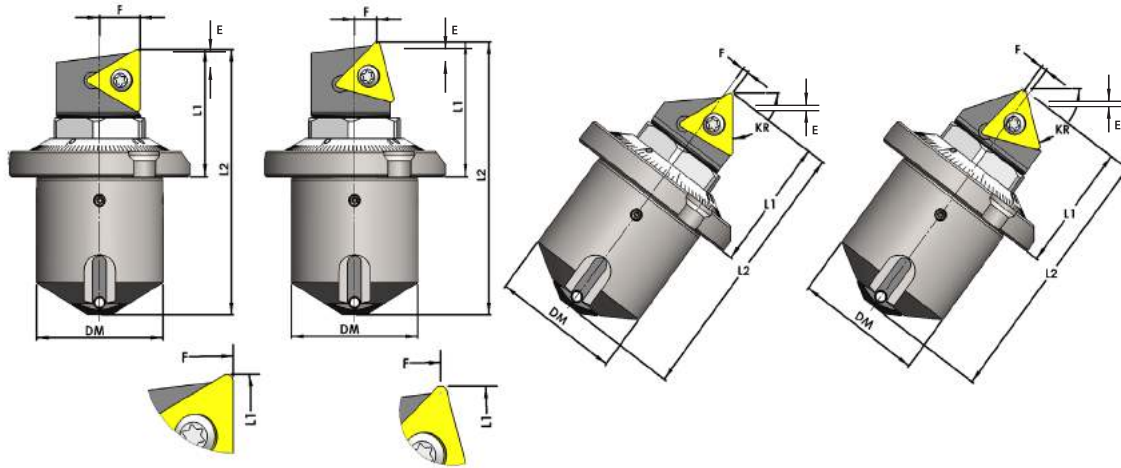
T Style Insert	C Style Insert	d, H7	d <sub>21</sub> <sup>1</sup> +0.2	d <sub>22</sub> <sup>1</sup>	d <sub>23</sub>	h <sub>21</sub> <sup>2</sup>	h <sub>22</sub>	h <sub>23</sub> <sup>1</sup>	L <sub>TH</sub>	r <sub>hc</sub>	T <sub>h</sub>
	06	16	19	4.6	3.2	11.5	2.8	1.6	9	9.65+/-0.02	M3
06		20	25			15.5	4				
11		22	30	6.5	4.3	24	5	1.8	13	15.4+/-0.05	M4
16		32	46	11.9	5.4	33	6.3	-	16	23+/-0.05	M5

#### Rigibore 'MBX' Units - Spares and Accessories

Size	Insert	Insert Screw	Retaining Screw and Wrench Kit	Adjusting Spanner	Torx Wrench	Torx Driver
MBX1	CC..0602	RS2560	BTR001/10/3	R36	R37	R37D
	TC..06T1	RS2045			R27	R27D
MBX2	TC..0902	RS2263		R46	R37	R37D
MBX3	TC..1102	RS2560	BTR001/7/3	R36		
MBX4	TC..16T3	RS4084	BTR001/8/3	R76	R77	R77D

## Rigibore 'MBX' Units – Straight & Angular

RIGHT HAND VERSION - Shown



	Entering Angle KR	Insert type	Ordering code	DM	F1 <sup>1</sup>	L1 <sup>2</sup>	L1 <sup>3</sup>	L2	D MIN <sup>4</sup>	E MAX	
	90°	CC..060204	MBX1-590C06	16	5.10	13.20	13.30	25.10	27.00	2.5	
			MBX1-590C06-LH							3.5	
		TC..090204	MBX2-590T09	20	6.30	18.01	18.30	33.40	36.50	6.0	
			MBX2-590T09-LH							10.0	
	75°	CC..060204	MBX1-575C06	16	2.45	13.83	14.20	26.00	28.60	2.5	
			MBX1-575C06-LH							3.5	
		TC..090204	MBX2-575T09	20	3.70	18.83	19.20	34.30	38.10	6.0	
			MBX2-575T09-LH							10.0	
	90°	CC..060204	MBX1-290C06	16	0.40	14.08	14.30	26.00	25.30	0°	2.0
			MBX1-290C06-LH								
		TC..06T102	MBX1-290T06	20	1.00	18.70	19.10	34.20	32.50		4.8
			MBX1-290T06-LH								8.0
	75°	TC..090204	MBX2-290T09	22	1.20	22.60	23.00	46.80	42.00	2.0	
			MBX2-290T09-LH								2.8
		TC..110204	MBX3-290T11	32	1.40	32.51	33.30	66.60	59.40	4.8	
			MBX3-290T11-LH							8.0	
	90°	CC..060204	MBX1-275C06	16	0.85	14.05	14.40	26.10	26.60	0°	2.0
			MBX1-275C06-LH			14.23					
		TC..06T102	MBX2-275T09	20	0.50	18.86	19.20	34.30	34.00		2.8
			MBX2-275T09-LH								4.8
	75°	TC..090204	MBX3-275T11	22	0.25	22.56	22.90	46.70	43.50	2.0	
			MBX3-275T11-LH								2.8
		TC..110204	MBX4-275T16	32	2.00	30.91	31.60	64.90	60.80	4.8	
			MBX4-275T16-LH							8.0	

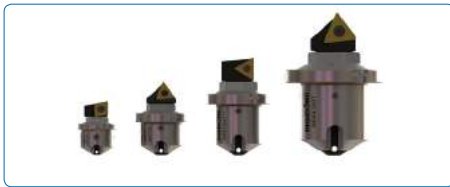
- 90° And 75° approach angular mounted and 75° approach square mounted, centre of nose radius, 90° approach straight mounting over insert
- Over datum rad for insert size
- Sharp point
- Minimum hole diameter calculated on the largest nose radius available

## MBX - Standard Boring Bars

Accuracy through rigidity  
For fine-finishing

### Key Features

- These units are designed for building into boring tools
- The units are pre-tensioned, eliminating backlash and adjustment is made from the front only
- Each graduation on the adjustment dial is 0.005mm / .0002" on radius
- Each vernier graduation on the bush is 0.001mm / .0004" on radius



### Part Number Explanation

32	1	-	254	-	290	-	095
32	Size 32 Straight Shank						
1	MBX Unit size 1						
254	Boring Diameter Range Start = 25.4mm						
290	Boring Diameter Range End = 29.0mm						
095	Maximum Depth of Bore = 95.0mm						



	Entering Angle KR	Insert type	Ordering code	DM	F1 <sup>1</sup>	L1 <sup>2</sup>	L1 <sup>3</sup>	L2	D MIN <sup>4</sup>	E MAX		
	90°	CC..060204	MBX1-290C06	16	0.40	14.08	14.30	26.00	25.30	0°	2.0	
			MBX1-290C06-LH									
		TC..06T102	MBX1-290T06	20	1.00	18.70	19.10	34.20	32.50			24.80
			MBX1-290T06-LH									
		TC..090204	MBX2-290T09	22	1.20	22.60	23.00	46.80	42.00			4.8
			MBX2-290T09-LH									
TC..110204	MBX3-290T11	32	1.40	32.51	33.30	66.60	59.40	8.0				
	MBX3-290T11-LH											
TC..16T308	MBX4-290T16	16	0.85	14.05	14.40	26.10	26.60	2.0				
	MBX4-290T16-LH											
	75°	CC..060204	MBX1-275C06	16	0.85	14.05	14.40	26.10	26.60	0°	2.0	
			MBX1-275C06-LH									
		TC..06T102	MBX1-275T06	20	0.50	18.86	19.20	34.30	34.00			2.8
			MBX1-275T06-LH									
		TC..090204	MBX2-275T09	22	0.25	22.56	22.90	46.70	43.50			4.8
			MBX2-275T09-LH									
TC..110204	MBX3-275T11	32	2.00	30.91	31.60	64.90	60.80	8.0				
	MBX3-275T11-LH											
TC..16T308	MBX4-275T16	16	0.85	14.05	14.40	26.10	26.60	2.0				
	MBX4-275T16-LH											

1. 90° And 75° approach angular mounted and 75° approach square mounted, centre of nose radius, 90° approach straight mounting over insert
2. Over datum rad for insert size
3. Sharp point
4. Minimum hole diameter calculated on the largest nose radius available

## Rigibore 'MBX' Standard Boring Bars - Angular

Shank	Part Number	Boring Range	Bar Length	Unit
25SS	251-254-290-095	25.4-29.0	95.0	MBX1-290C06
	251-289-325-110	28.5-32.5	110.0	
	251-324-360-122	32.4-36.0	122.0	
32SS	321-254-290-095	25.4-29.0	95.0	
	321-289-325-110	28.9-32.5	110.0	
	321-324-360-122	32.4-36.0	122.0	
	322-359-411-129	35.9-41.1	129.0	MBX2-290T09
322-410-462-149	41.0-46.2	149.0		
40SS	402-359-411-129	35.9-41.1	129.0	
	402-410-462-149	41.0-46.2	149.0	
	403-461-553-171	46.1-55.3	171.0	MBX3-290T11
	403-552-644-200	55.2-64.4	200.0	
	404-643-799-200	64.3-79.9		MBX4-290T16
	404-798-954-200	79.8-95.4		
	404-953-1109-200	95.3-110.9		
50SS	503-461-553-171	46.1-55.3		171.0
	503-552-644-200	55.2-64.4	200.0	
	504-643-799-200	64.3-79.9		MBX4-290T16
	504-798-954-200	79.8-95.4		
	504-953-1109-200	95.3-110.9		



For shank dimensions please refer to page 2

## MBX Units

Accuracy through rigidity  
For fine-finishing

### INSTRUCTIONS FOR USE



## Technical Information and Instructions for Use

### 1. Mounting

Ensure that the unit is correctly secured in its mounting hole and the 3 screws are clamping correctly.

### 2. Adjustment

The units are pre-tensioned and adjustment is made from the front only. To adjust outward, rotate the dial clockwise with the correct adjusting spanner. Each graduation on the adjusting dial = 0.005mm/.0002 inch on radius. Each graduation on the bush = 0.001mm/.00004inch adjustment on radius.

When adjusting downward, rotate the dial in the opposite direction a little more than required and adjust up to the new setting on the dial.

### 3. Maintenance

The unit is lubricated and assembled to very close tolerances. It should not require any further attention under normal operating conditions. If a unit is accidentally damaged, it is recommended that it is returned to Rigibore for assessment / repair.

CAD files & additional support information : [www.rigibore.com/en/rigibore-units/](http://www.rigibore.com/en/rigibore-units/)



## Inserts by Rigibore®

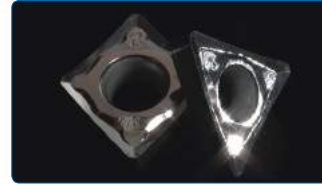
All areas of production catered for including low speed roughing, interrupted cuts and optimised machining of specialist materials.

Ground to ISO H tolerance, long lasting, fast metal removal.

## Finishing

### Choice of geometries - Uncoated and coated grades

Inserts for cast iron, aluminum, steel, brass, bronze and titanium alloys.



### Rigibore Insert Grades

Grade	I.S.O	ANSI	Description	Coating	Materials
RC217	M10 - M25 K05 - K25	C2-C3	High-speed finishing. Exceptional resistance to wear, oxidation & thermal shock	PVD composite coated	Cast iron heat-resisting titanium alloy
R71	P05-P25 M10-M20	P6-P7	Light roughing & finishing. High cutting speeds with moderate feeds. High resistance to wear & thermal shock	Uncoated	Steel, cast steel
R22	K10-K25 M10-M30	C2-C3	Wide range of applications. High resistance to wear & good edge sharpness. Moderate cutting	Micro-grain uncoated	Cast Iron, ferrous materials, heat resisting titanium alloy & aircraft aluminum

### Chipbreaker Geometries

A choice of 4 geometries is available to suit most applications  
Ultra-precision ground to I.S.O. "H" tolerance for indexing within .0005"/0.013mm

0° T.R.	Brass, S.G. Cast Iron, hardened steel, short-chipping Bronze
8° T.R.	Alloy steels, tool steels, some bronzes, some grey cast irons & tougher materials
14° T.R.	Mild steels, stainless steels, some tool steels, heat-resisting steel alloys, hard plastics
22° T.R.	Aluminum, aluminum alloys, soft plastics, rubber, magnesium alloys, copper

### Inserts for Aluminum

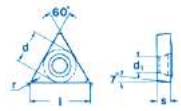
Size	Order Code	Available Grades	d (I.C)		l*		d1		s		r	
			inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
06-16	TCHT 06 11 04 FN-AL	R22	.156	3.97	.27	6.87	.087	2.2	.078	1.98	.016	0.4
	TCHT 09 02 04 FN-AL		.22	5.56	.38	9.63	.098	2.5	.094	2.38		
	TCHT 11 02 04 FN-AL		.25	6.35	.43	11.0	.11	2.8	.094	2.38		
	TCHT 16 T3 08 FN-AL		.375	9.525	.65	16.5	.17	4.4	.156	3.97	.031	0.8
06-12	CCHT 06 02 04 FN-AL	R22	.25	6.35	.25	6.35	.11	2.8	.094	2.38	.016	0.4
	CCHT 09 T3 08 FN-AL		.375	9.525	.375	9.525	.17	4.4	.156	3.97	.031	0.8
	CCHT 12 02 08 FN-AL		.5	12.7	.5	12.7	.217	5.5	.187	4.74		



TCHX



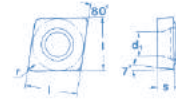
TCHW



CCHX



CCHW



Inserts for all uses L = Left hand (boring), R = Right hand (turning)

Size	Order Code	Available Grades	Top Rake (deg)	d (I.C)		l*		d1		s		r		
				inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	
6	TCHW 06 T1 02	RC217, R22	0	0.156	3.97	0.27	6.87	0.087	2.2	0.078	1.98	0.008	0.2	
	TCHW 06 T1 04											0.016	0.4	
	TCHW 06 T1 08	RC217	0.031									0.8		
	TCHX 06 T1 01 - L22	R22	0.004									0.1		
	TCHX 06 T1 02 - L08	R71	8									0.008	0.2	
	TCHX 06 T1 02 - L14		14											
	TCHX 06 T1 02 - L22	R22	22									0.016	0.4	
	TCHX 06 T1 04 - L08	R71	8											
9	TCHW 09 02 02	RC217, R22	0	0.219	5.56	0.379	9.63	0.098	2.5	0.094	2.38	0.008	0.2	
	TCHW 09 02 04											0.016	0.4	
	TCHW 09 02 08											0.031	0.8	
	TCHX 09 02 01 - L22	R22	22									0.008	0.2	
	TCHX 09 02 02 - L14	R71	14											
	TCHX 09 02 02 - L22	R22	22									0.008	0.2	
	TCHX 09 02 04 - L08	R71	8											
	TCHX 09 02 04 - L14		14									0.016	0.4	
11	TCHW 11 02 02	RC217, R22	0	0.25	6.35	0.433	11	0.11	2.8	0.094	2.38	0.008	0.2	
	TCHW 11 02 04											0.016	0.4	
	TCHW 11 02 08											0.031	0.8	
	TCHX 11 02 01 - L22	R22	22									0.004	0.1	
	TCHX 11 02 02 - L08	R71	8											
	TCHX 11 02 04 - L08		14									0.016	0.4	
	TCHX 11 02 04 - L14	14												
16	TCHW 16 T3 02	R22	0	0.375	9.525	0.65	16.5	0.173	4.4	0.156	3.97	0.008	0.2	
	TCHW 16 T3 04	RC217, R22										0.016	0.4	
	TCHW 16 T3 08											0.031	0.8	
	TCHW 16 T3 12											0.047	1.2	
	TCHX 16 T3 04 - L14	R71										14	0.016	0.4
	TCHX 16 T3 08 - L22	R22										22	0.031	0.8
6	CCHW 06 02 04	RC217, R22	0	0.25	6.35	0.25	6.35	0.11	2.8	0.094	2.38	0.016	0.4	
	CCHW 06 02 08	RC217										0.031	0.8	
	CCHX 06 02 04 - L14											14	0.008	0.2
	CCHX 06 02 02 - L22	R22										22		
	CCHX 06 02 04 - L08	RC217, R22, R71										8	0.016	0.4
	CCHX 06 02 04 - R08	R22										8		
	CCHX 06 02 04 - L14	R71										14		
9	CCHW 09 T3 04	RC217, R22	0	0.375	9.525	0.375	9.525	0.173	4.4	0.156	3.97	0.016	0.4	
	CCHW 09 T3 08	RC217										0.031	0.8	
	CCHX 09 T3 02 - L08											8	0.008	0.2
	CCHX 09 T3 04 - L08	RC217, R71										8	0.016	0.4
	CCHX 09 T3 08 - L08	RC217											0.031	0.8
12	CCHW 12 04 08	RC217	0	0.5	12.7	0.5	12.7	0.216	5.5	0.187	4.74	0.031	0.8	
4	CPHW 04 T1 04	RC217, R22	0	0.187	4.76	0.189	4.8	0.085	2.15	0.078	1.98	0.016	0.4	