E

Threading Tools

Threading Insert Identification System

①Insert Size	
Size	IC(mm)
08	5
11	6.35
16	9.525
22	12.7
27	15.875

③Hand of Insert
R=Right
L= Left
□=R&L

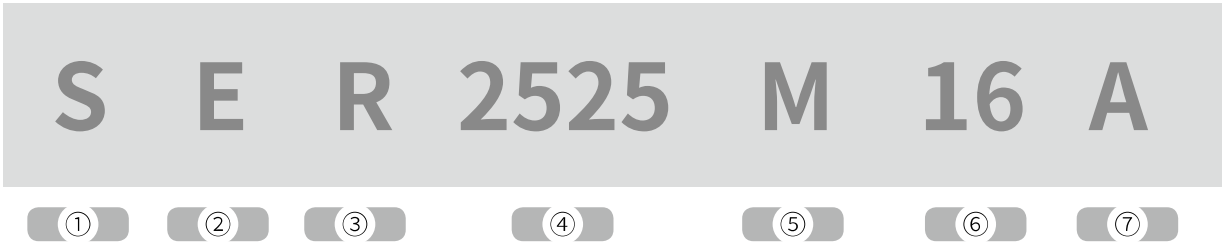
⑤Thread Standard
60=Partial Profile 60°
55=Partial Profile 55°
ISO=ISO Metric
UN=American UN
W=Whitworth
NPT=National Pipe Thread
BSPT=British BSPT
ACME=American ACME
STACME=American Stub ACME
ABUT=
API=API Thread
UNJ=American Aerospace Thread

⑥Additional Information
Geometry or Teeth

②Thread Style
E=External
I=Internal
□=E&I

④Pitch		
Full Profile		
mm	TPI	
0.35-5.0	72-5	
Partial Profile		
Size	mm	TPI
A	0.5-1.5	48-16
AG	0.5-3.0	48-8
G	1.75-3.0	14-8
N	3.5-5.0	7-5

Threading Holder Identification System



①Clamping System
S=Screw
C=Clamp

②Process Type
E=External
I=Internal

③Cutting Direction
R=Right hand
L=Left hand
N=None

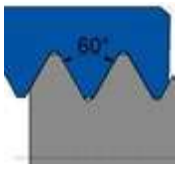
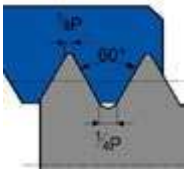
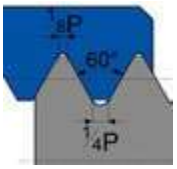
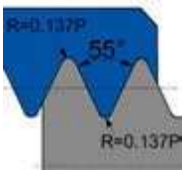
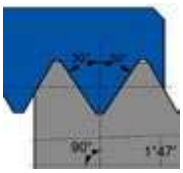
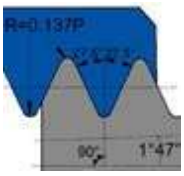
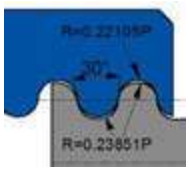
④Shank Size	
External Holder	
Shank Size	hxb
2525	25x25mm
Internal Bar	
Shank Size	Diameter
0025	Diameter 25mm

⑤Thread	
Type	Length
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300
U	350
V	400

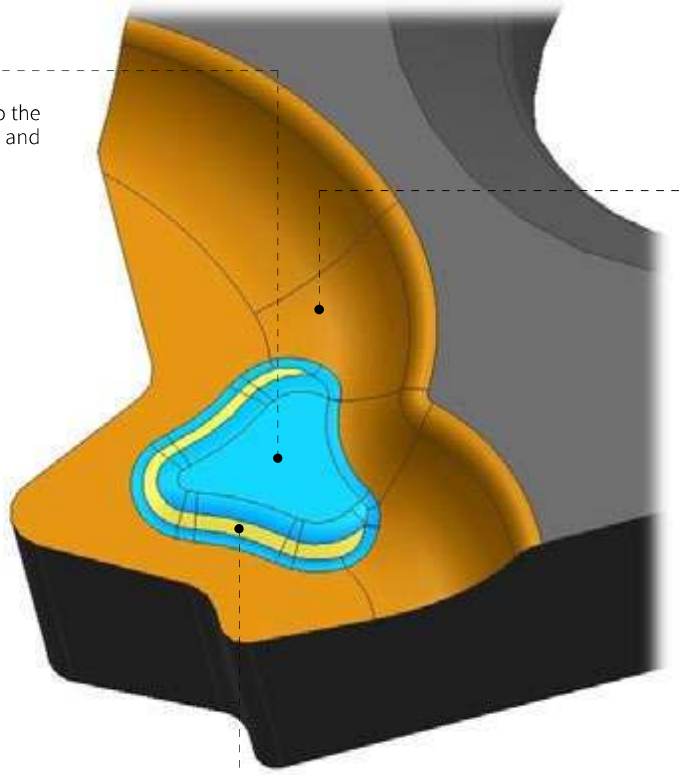
⑥Insert Size	
Type	IC(mm)
08	5
11	6.35
16	9.525
22	12.7
27	15.875

⑦Additional
A=Steel holder with inner coolant
C=Carbide holder
E=Carbide holder with inner coolant
□=steel holder without inner coolant

Overview of Threading Tools

Application	Thread Type	Thread Sketch	ThreadCode	Pitch	Page
For general industry	Partial Profile 60° Thread		60°	0.5-5.0 (mm)	P146
	Partial Profile 55° Thread		55°	48-5 (TPI)	P147
	ISO Metric Thread		ISO	1.0-5.0 (mm)	P148
	UN Thread		UN	24-8 (TPI)	P150
Thread for pipe fittings and couplings for gas, water and sewage.	Whitworth Thread		W	19-11 (TPI)	P151
	NPT Thread		NPT	27-8 (TPI)	P152
Thread for pipe fittings and couplings for gas, steam and water lines.	BSPT Thread		BSPT	28-11 (TPI)	P153
Thread for pipe couplings in food and fire fighting industry.	Round Thread(DIN 405)		RD	10-4 (TPI)	P154

TC — Special Geometry



Raised platform

Good chip control, apply to the radial infeed, flank infeed and incremental infeed

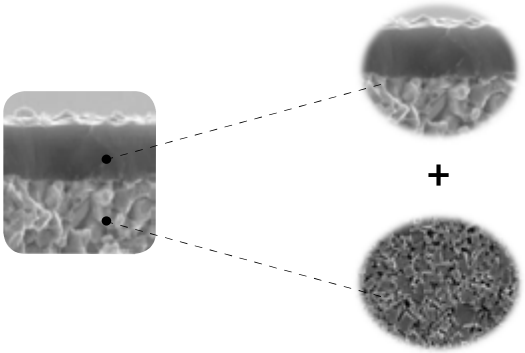
Wide chip room

Smooth chip discharge due to wide chip room

Curved surface

Increase the cooling area to avoid the carter wear

GM3225 — General grade for thread turning



New TiAlN nano-structure coating

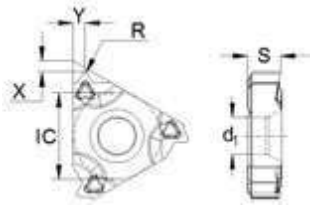
New TiAlN nano-structure coating with excellent heat resistance and bonding resistance.

Micro-grain carbide substrate

Micro-grain carbide substrate with high wear resistance and good roughness, suitable for thread turning of general material.

Partial Profile 60°

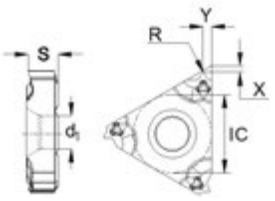
▶ External



Ordering Code		Pitch (mm)	Dimensions (mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	16 ERA60-TC	0.5-1.5	0.8	0.9	0.08	9.525	3.47	4	●
	16 ERAG60-TC	0.5-3.0	1.1	1.5	0.08	9.525	3.47	4	●
	16 ERG60-TC	1.75-3.0	1.2	1.7	0.25	9.525	3.47	4	●
	22 ERN60-TC	3.5-5.0	1.7	2.5	0.51	12.7	4.71	5	●

●Stock ○Available Up Order

▶ Internal

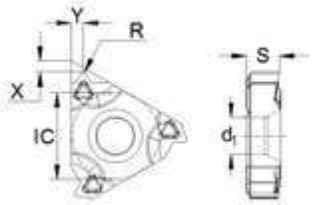


Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	08 IRA60-TC	0.5-1.5	0.6	0.7	0.08	5.00	2.25	2.68	●
	11 IRA60-TC	0.5-1.5	0.8	0.9	0.08	6.35	3.00	3.2	●
	16 IRA60-TC	0.5-1.5	0.8	0.9	0.08	9.525	3.47	4	●
	16 IRAG60-TC	0.5-3.0	1.1	1.5	0.08	9.525	3.47	4	●
	16 IRG60-TC	1.75-3.0	1.2	1.7	0.13	9.525	3.47	4	●
	22 IRN60-TC	3.5-5.0	1.7	2.5	0.25	12.7	4.71	5	●

●Stock ○Available Up Order

Partial Profile 55°

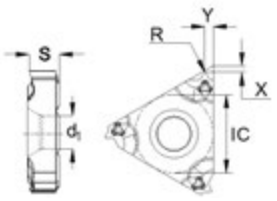
▶ External



Ordering Code		Pitch (TPI)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	16 ERA55-TC	48-16	0.8	0.9	0.08	9.525	3.47	4	●
	16 ERAG55-TC	48-8	1.1	1.5	0.08	9.525	3.47	4	●
	16 ERG55-TC	14-8	1.2	1.7	0.21	9.525	3.47	4	●
	22 ERN55-TC	7-5	1.7	2.5	0.44	12.7	4.71	5	●

●Stock ○Available Up Order

▶ Internal

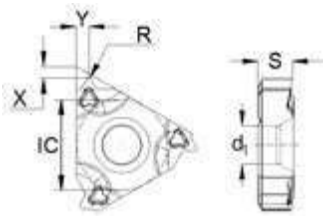


Ordering Code		Pitch (TPI)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	11 IRA55-TC	48-16	0.8	0.9	0.08	6.35	3	3.2	●
	16 IRA55-TC	48-16	0.8	0.9	0.08	9.525	3.47	4	●
	16 IRAG55-TC	48-8	1.1	1.5	0.08	9.525	3.47	4	●
	16 IRG55-TC	14-8	1.2	1.7	0.21	9.525	3.47	4	●
	22 IRN55-TC	7-5	1.7	2.5	0.44	12.7	4.71	5	●

●Stock ○Available Up Order

Metric 60°

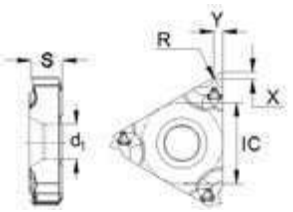
▶ External



Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	16 ER1.00ISO-TC	1.00	0.8	0.7	0.14	9.525	3.47	4	●
	16 ER1.25ISO-TC	1.25	0.8	0.9	0.18	9.525	3.47	4	●
	16 ER1.50ISO-TC	1.50	0.8	1.0	0.22	9.525	3.47	4	●
	16 ER1.75ISO-TC	1.75	1.2	1.2	0.25	9.525	3.47	4	●
	16 ER2.00ISO-TC	2.00	1.2	1.3	0.29	9.525	3.47	4	●
	16 ER2.50ISO-TC	2.50	1.2	1.5	0.36	9.525	3.47	4	●
	16 ER3.00ISO-TC	3.00	1.2	1.5	0.43	9.525	3.47	4	●
	22 ER3.50ISO-TC	3.50	1.6	2.3	0.45	12.7	4.71	5	●
	22 ER4.00ISO-TC	4.00	1.6	2.3	0.52	12.7	4.71	5	●
	22 ER4.50ISO-TC	4.50	1.7	2.4	0.58	12.7	4.71	5	●
	22 ER5.00ISO-TC	5.00	1.7	2.5	0.63	12.7	4.71	5	●
	22 ER5.50ISO-TC	5.50	1.9	2.7	0.72	12.7	4.71	5	●
	22 ER6.00ISO-TC	6.00	1.9	2.7	0.78	12.7	4.71	5	●

●Stock ○Available Up Order

▶ Internal

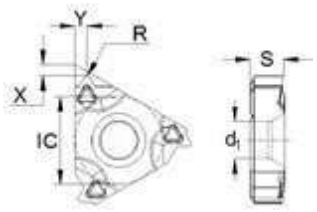


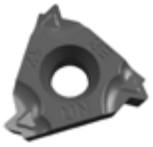
Ordering Code	Pitch (mm)	Dimensions(mm)						Availability
		X	Y	R	IC	S	d1	GM3225
11 IR1.00ISO-TC	1.00	0.8	0.7	0.07	6.35	3.00	3.2	●
11 IR1.25ISO-TC	1.25	0.8	0.9	0.09	6.35	3.00	3.2	●
11 IR1.50ISO-TC	1.50	0.8	1.0	0.11	6.35	3.00	3.2	●
11 IR1.75ISO-TC	1.75	0.9	1.1	0.13	6.35	3.00	3.2	●
11 IR2.00ISO-TC	2.00	0.9	1.1	0.15	6.35	3.00	3.2	●
16 IR1.00ISO-TC	1.00	0.8	0.7	0.07	9.525	3.47	4	●
16 IR1.25ISO-TC	1.25	0.8	0.9	0.09	9.525	3.47	4	●
16 IR1.50ISO-TC	1.50	0.8	1.0	0.11	9.525	3.47	4	●
16 IR1.75ISO-TC	1.75	1.2	1.2	0.13	9.525	3.47	4	●
16 IR2.00ISO-TC	2.00	1.2	1.3	0.15	9.525	3.47	4	●
16 IR2.50ISO-TC	2.50	1.2	1.5	0.18	9.525	3.47	4	●
16 IR3.00ISO-TC	3.00	1.2	1.5	0.22	9.525	3.47	4	●
22 IR3.50ISO-TC	3.50	1.6	2.3	0.22	12.7	4.71	5	●
22 IR4.00ISO-TC	4.00	1.6	2.3	0.25	12.7	4.71	5	●
22 IR4.50ISO-TC	4.50	1.6	2.4	0.28	12.7	4.71	5	●
22 IR5.00ISO-TC	5.00	1.6	2.3	0.32	12.7	4.71	5	●
22 IR5.50ISO-TC	5.50	1.6	2.3	0.36	12.7	4.71	5	●
22 IR6.00ISO-TC	6.00	1.6	2.4	0.39	12.7	4.71	5	●

●Stock ○Available Up Order

UN 60°

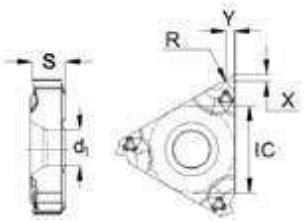
▶ External

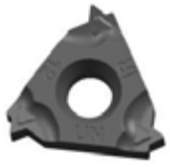


Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	16 ER24UN-TC	24	0.8	0.8	0.15	9.525	3.47	4	●
	16 ER20UN-TC	20	0.8	0.9	0.18	9.525	3.47	4	●
	16 ER18UN-TC	18	0.8	1.0	0.20	9.525	3.47	4	●
	16 ER16UN-TC	16	0.9	1.1	0.23	9.525	3.47	4	●
	16 ER14UN-TC	14	1.2	1.5	0.26	9.525	3.47	4	●
	16 ER12UN-TC	12	1.2	1.5	0.31	9.525	3.47	4	●
	16 ER10UN-TC	10	1.2	1.5	0.37	9.525	3.47	4	○
	16 ER8UN-TC	8	1.3	1.7	0.46	9.525	3.47	4	●

●Stock ○Available Up Order

▶ Internal

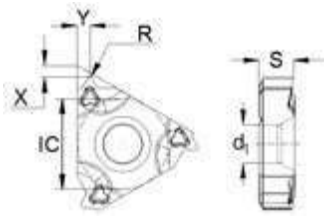


Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	11 IR20UN-TC	20	0.8	0.9	0.09	6.35	3.00	3.2	●
	11 IR18UN-TC	18	0.8	1.0	0.10	6.35	3.00	3.2	●
	16 IR24UN-TC	24	0.8	0.8	0.08	9.525	3.47	4	●
	16 IR20UN-TC	20	0.8	0.9	0.09	9.525	3.47	4	●
	16 IR18UN-TC	18	0.8	1.0	0.10	9.525	3.47	4	●
	16 IR16UN-TC	16	0.9	1.1	0.12	9.525	3.47	4	●
	16 IR14UN-TC	14	1.2	1.5	0.13	9.525	3.47	4	●
	16 IR12UN-TC	12	1.2	1.5	0.16	9.525	3.47	4	●
	16 IR10UN-TC	10	1.2	1.5	0.19	9.525	3.47	4	○
	16 IR8UN-TC	8	1.3	1.7	0.23	9.525	3.47	4	●

●Stock ○Available Up Order

Whitworth 55°

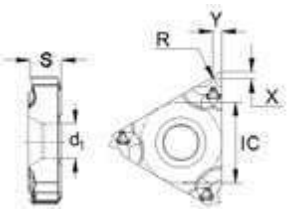
▶ External



Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	16 ER19W-TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 ER18W-TC	18	0.8	1.0	0.18	9.525	3.47	4	●
	16 ER16W-TC	16	0.9	1.1	0.20	9.525	3.47	4	●
	16 ER14W-TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 ER12W-TC	12	1.2	1.5	0.28	9.525	3.47	4	●
	16 ER11W-TC	11	1.2	1.5	0.30	9.525	3.47	4	●
	16 ER10W-TC	10	1.1	1.5	0.34	9.525	3.47	4	●

●Stock ○Available Up Order

▶ Internal

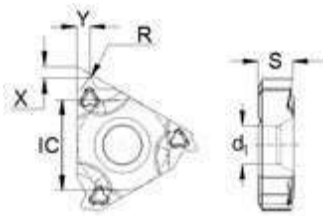


Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	11 IR19W-TC	19	0.9	1.1	0.19	6.35	3.00	3.2	●
	11 IR14W-TC	14	0.9	1.1	0.27	6.35	3.00	3.2	●
	16 IR19W-TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 IR18W-TC	18	0.8	1.0	0.18	9.525	3.47	4	●
	16 IR16W-TC	16	0.9	1.1	0.2	9.525	3.47	4	●
	16 IR14W-TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 IR12W-TC	12	1.2	1.5	0.28	9.525	3.47	4	●
	16 IR11W-TC	11	1.2	1.5	0.30	9.525	3.47	4	●
	16 IR8W-TC	8	1.2	1.5	0.41	9.525	3.47	4	●

●Stock ○Available Up Order

NPT 60°

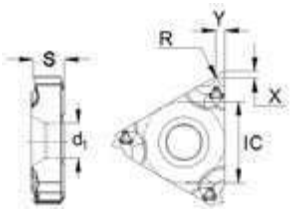
▶ External

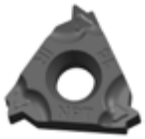


Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	16 ER27NPT-TC	27	0.7	0.8	0.13	9.525	3.47	4	●
	16 ER18NPT-TC	18	0.8	1.0	0.20	9.525	3.47	4	●
	16 ER14NPT-TC	14	1.2	1.5	0.22	9.525	3.47	4	●
	16 ER11.5NPT-TC	11.5	1.2	1.5	0.25	9.525	3.47	4	●
	16 ER8NPT-TC	8	1.3	1.8	0.30	9.525	3.47	4	●

●Stock ○Available Up Order

▶ Internal

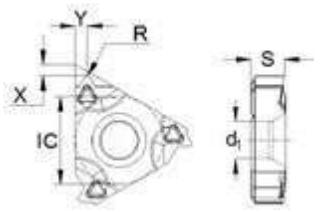


Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	11 IR18NPT-TC	18	0.8	1.0	0.20	6.35	3.00	3.2	●
	16 IR27NPT-TC	27	0.7	0.8	0.13	9.525	3.47	4	●
	16 IR18NPT-TC	18	0.8	1.0	0.20	9.525	3.47	4	●
	16 IR14NPT-TC	14	1.2	1.5	0.22	9.525	3.47	4	●
	16 IR11.5NPT-TC	11.5	1.2	1.5	0.25	9.525	3.47	4	●
	16 IR8NPT-TC	8	1.3	1.8	0.30	9.525	3.47	4	●

●Stock ○Available Up Order

BSPT 55°

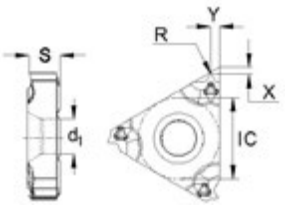
▶ External



Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	16 ER28BSPT-TC	28	0.7	0.8	0.11	9.525	3.47	4	●
	16 ER19BSPT-TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 ER14BSPT-TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 ER11BSPT-TC	11	1.2	1.5	0.30	9.525	3.47	4	●

●Stock ○Available Up Order

▶ Internal

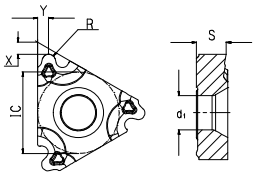


Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	11 IR19BSPT-TC	19	0.8	1.0	0.18	6.35	3.00	3.2	●
	11 IR14BSPT-TC	14	0.9	1.1	0.24	6.35	3.00	3.2	●
	16 IR28BSPT-TC	28	0.7	0.8	0.11	9.525	3.47	4	●
	16 IR19BSPT-TC	19	0.8	1.0	0.17	9.525	3.47	4	●
	16 IR14BSPT-TC	14	1.2	1.5	0.24	9.525	3.47	4	●
	16 IR11BSPT-TC	11	1.2	1.5	0.30	9.525	3.47	4	●

●Stock ○Available Up Order

Round 30°

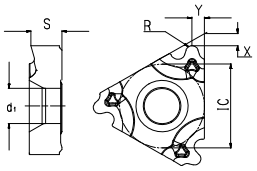
▶ External



Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	16 ER10RD-TC	10	1.1	1.2	0.60	9.525	3.47	4	○
	16 ER8RD-TC	8	1.4	1.3	0.75	9.525	3.47	4	●
	16 ER6RD-TC	6	1.4	1.5	1.00	9.525	3.47	4	●
	22 ER4RD-TC	4	2.2	2.3	1.51	12.7	4.71	5	○

●Stock ○Available Up Order

▶ Internal



Ordering Code		Pitch (mm)	Dimensions(mm)						Availability
			X	Y	R	IC	S	d1	GM3225
	16 IR10RD-TC	10	1.1	1.2	0.55	9.525	3.47	4	○
	16 IR8RD-TC	8	1.4	1.3	0.70	9.525	3.47	4	●
	16 IR6RD-TC	6	1.4	1.5	0.936	9.525	3.47	4	●
	22 IR4RD-TC	4	2.2	2.3	1.40	12.7	4.71	5	○

●Stock ○Available Up Order

Thread Turning Toolholders

SER/L Series

External Toolholders

Ordering Code	Stocks		Insert	Dimensions(mm)						Shim	Insert Screw	ShimScrew	Wrench
	R	L		H	B	L	f	h	L_1				
SER/L1212F11	○	○	11ER/L···	12	12	80	16	12	20.5	-	SI60M 025080···	-	TT08PH
SER/L1212F16	●	○	16ER/L···	12	12	80	16	12	22	-	SI60M 035090···	-	TT15PH
SER/L1616H16	●	○		16	16	100	20	16	20.5	DEN16..	SI60M 035120···	SSBM 030060H	TT15PH
SER/L2020K16	●	●		20	20	125	25	20	30				
SER/L2525M16	●	●		25	25	150	32	25	30				
SER/L3232P16	●	○		32	32	170	40	32	30				
SER/L2525M22	●	○	22ER/L···	25	25	150	32	25	36	DEN22..	SI60M 040160···	SSBM 040060H	TT15PH
SER/L3232P22	●	○		32	32	170	40	32	36				
SER/L4040R22	●	○		40	40	200	50	40	36				
SER/L3232P27	●	○	27ER/L···	32	32	170	40	32	40	DEN27..	SI60M 050200···	SSBM 040060H	TT20PH
SER/L4040R27	●	○		40	40	200	50	40	40				

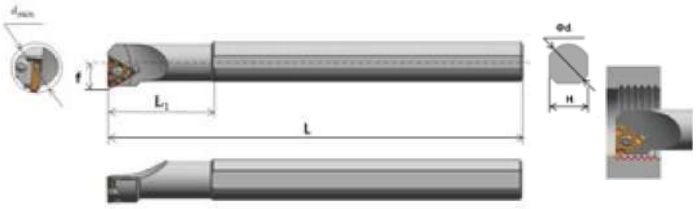
※SI60M035090···is meaning of M3.5×9

●Stock ○Available Up Order

Thread Turning Toolholders

SIR/L Series

External Toolholders



Ordering Code	Pitch		Insert	Dimensions (mm)						Shim	Insert Screw	ShimScrew	Wrench
	R	L		dmin	Φd	H	L	f	L1				
SIR/L0008K08	●	○	08IR/L…	9.9	08	7	125	5.5	20	-	SI60M 022050…	-	TT06PH
SIR/L0010K11	●	○	11IR/L…	13	10	9	125	7.3	25	-	SI60M 025080…	-	TT08PH
SIR/L0010K11-A16	●	○		13	16	15	125	7.3	30				
SIR/L0012K11	●	○		15	12	11	125	8.4	28				
SIR/L0012K11-A16	●	○		15	16	15	125	8.4	36				
SIR/L0013M16	●	○	16IR/L…	17	16	15	150	10.3	32	-	SI60M 035090…	-	TT15PH
SIR/L0016Q16	●	○		20	16	15	180	11.5	40				
SIR/L0020Q16	●	○		24	20	18	180	13.4	40	DIN16..	SI60M 035120…	SSBM 030060H	TT15PH
SIR/L0025R16	●	○		29	25	23	200	16.3	45				
SIR/L0032S16	●	○		36	32	30	250	19.6	50				
SIR/L0040T16	●	○		44	40	38	300	23.8	55				
SIR/L0050U16	○	○		56	50	48	350	28.7	60				
SIR/L0020Q22	○	○	22IR/L…	27	20	18	180	14.9	40	-	SI60M 040120…	-	TT15PH
SIR/L0025R22	●	○		32	25	23	200	18.1	45	DIN22..	SI60M 040160…	SSBM 040060H	TT15PH
SIR/L0032S22	●	○		39	32	30	250	21.5	50				
SIR/L0040T22	●	○		47	40	38	300	25.8	55				
SIR/L0050U22	○	○		57	50	48	350	29.8	70				
SIR/L0032S27	○	○	27IR/L…	40	32	30	250	22.4	60	DIN27..	SI60M 050200…	SSBM 040060H	TT20PH
SIR/L0040T27	○	○		48	50	36	300	26.4	60				
SIR/L0050U27	○	○		58	60	45	350	31.4	75				

※SI60M035090…is meaning of M3.5×9

●Stock ○Available Up Order

Cutting Speed Recommendation Table

Workpiece Material				Material Hardness	Cutting Speed Vc (m/min)
					Grade
					GM3225
P	Carbon Steel	Low-carbon (C=0.1-0.25%)		HB125	160 (120-230)
		Medium-carbon (C=0.25-0.55%)		HB150	150 (100-195)
		High-carbon (C=0.55-0.80%)		HB170	140 (90-180)
	Low-alloy Steel	Non-hardened		HB180	130 (100-180)
		Hardened and tempered		HB275	100 (75-140)
		Hardened and tempered		HB350	80 (60-130)
	High-alloy Steel	Annealed		HB200	110 (80-140)
		Hardened and tempered		HB325	90 (70-115)
	Steel Castings	Unalloyed		HB180	200 (180-220)
		Low-alloy		HB200	110 (70-150)
		High-alloy		HB225	100 (60-120)
		Manganese steel (12-14% Mn)		HB250	40 (40-50)
M	Stainless Steel	Austenitic		HB180	120 (90-140)
		Ferritic/Martensitic		HB200	140 (70-170)
		Duplex stainless steel		HB230	90 (60-120)
K	Malleable Cast Iron	Ferritic		HB130	130 (110-170)
		Pearlitic		HB230	100 (85-145)
	Gray Cast Iron	Low tensile strength		HB180	120 (100-160)
		High tensile strength		HB260	100 (80-140)
	Nodular Cast Iron	Ferritic		HB160	125 (110-160)
		Pearlitic		HB250	100 (80-120)
N	Wrought Aluminum Alloys	Non aging		HB60	500 (350-700)
		Aged		HB100	400 (300-500)
	Cast Aluminum Alloys	Non aging		HB75	450 (300-500)
		Aged		HB90	290 (200-400)
		Containing silicon (13-22% Si)		HB130	200 (100-300)
	Copper and Copper Alloys	Brass		HB90	220 (100-300)
		Bronze and non-leaded copper		HB100	180 (80-255)
S	Heat-resistant Alloys	Iron base	Annealed	HB200	45 (35-60)
			Aged	HB280	35 (25-50)
		Nickel base and cobalt base	Annealed	HB250	25 (15-30)
			Aged	HB350	15 (10-25)
			Cast	HB320	13 (10-20)
	Titanium Alloys	Commercial pure (99.5% Ti)		400Rm	150 (140-170)
		α+β alloys		1050Rm	60 (50-70)
H	High Hardness Materials	Hardened steel		HRC55	45 (40-50)
		Chilled cast iron		HB400	40 (30-50)

Cutting Passes and Radial Infeed Recommendation Table

▶ ISO Metric / External

Pitch (mm)	1.00	1.25	1.50	1.75	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00
Total infeed (mm)	0.65	0.79	0.95	1.11	1.26	1.56	1.88	2.18	2.49	2.79	3.10	3.39	3.70
Total passes	5	6	6	8	8	10	12	12	13	14	14	16	16
No. of infeed	Radial infeed per pass (mm)												
1	0.16	0.17	0.20	0.17	0.20	0.20	0.20	0.24	0.24	0.27	0.29	0.27	0.30
2	0.15	0.15	0.19	0.17	0.19	0.19	0.19	0.23	0.22	0.25	0.28	0.26	0.29
3	0.14	0.14	0.18	0.16	0.18	0.18	0.19	0.22	0.22	0.24	0.27	0.26	0.29
4	0.12	0.13	0.16	0.15	0.17	0.17	0.18	0.21	0.21	0.23	0.26	0.25	0.28
5	0.08	0.12	0.14	0.14	0.16	0.17	0.17	0.21	0.21	0.23	0.25	0.25	0.27
6		0.08	0.08	0.13	0.15	0.16	0.17	0.20	0.20	0.22	0.25	0.24	0.26
7				0.11	0.13	0.15	0.16	0.18	0.19	0.21	0.24	0.23	0.26
8				0.08	0.08	0.14	0.15	0.17	0.18	0.20	0.23	0.23	0.25
9						0.12	0.14	0.16	0.17	0.19	0.22	0.22	0.24
10						0.08	0.13	0.15	0.16	0.18	0.20	0.21	0.23
11							0.12	0.13	0.15	0.17	0.19	0.20	0.22
12							0.08	0.08	0.14	0.16	0.17	0.19	0.20
13									0.12	0.14	0.15	0.18	0.19
14									0.18	0.10	0.10	0.16	0.17
15												0.14	0.15
16												0.10	0.10

▶ ISO Metric/ Internal

Pitch (mm)	1.00	1.25	1.50	1.75	2.00	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00
Total infeed (mm)	0.63	0.77	0.92	1.05	1.20	1.48	1.78	2.03	2.31	2.61	2.88	3.19	3.44
Total passes	5	6	6	8	8	10	12	12	13	14	14	16	16
No. of infeed	Radial infeed per pass (mm)												
1	0.15	0.16	0.20	0.16	0.19	0.19	0.19	0.22	0.21	0.23	0.26	0.25	0.28
2	0.14	0.15	0.18	0.15	0.18	0.18	0.18	0.21	0.21	0.23	0.26	0.25	0.27
3	0.13	0.14	0.17	0.15	0.17	0.17	0.18	0.20	0.20	0.22	0.25	0.24	0.26
4	0.12	0.13	0.15	0.14	0.16	0.17	0.17	0.20	0.19	0.22	0.24	0.24	0.26
5	0.08	0.11	0.13	0.13	0.15	0.16	0.16	0.19	0.19	0.21	0.24	0.23	0.26
6		0.08	0.08	0.12	0.14	0.15	0.16	0.18	0.18	0.20	0.23	0.22	0.24
7				0.11	0.12	0.14	0.15	0.17	0.18	0.20	0.22	0.22	0.24
8				0.08	0.08	0.13	0.14	0.16	0.17	0.19	0.21	0.22	0.23
9						0.12	0.14	0.15	0.16	0.18	0.20	0.20	0.22
10						0.08	0.12	0.14	0.15	0.17	0.19	0.20	0.21
11							0.11	0.12	0.14	0.16	0.18	0.19	0.20
12							0.08	0.08	0.13	0.15	0.16	0.18	0.19
13									0.12	0.14	0.15	0.17	0.18
14									0.08	0.10	0.10	0.16	0.16
15												0.14	0.15
16												0.10	0.10

▶ UN / External

Pitch (mm)	24	20	18	16	14	12	10	8
Total infeed (mm)	0.70	0.84	0.92	1.04	1.17	1.35	1.62	2.02
Total passes	5	6	6	7	8	8	10	12
No. of infeed	Radial infeed per pass (mm)							
1	0.18	0.18	0.20	0.19	0.18	0.22	0.21	0.22
2	0.16	0.17	0.18	0.18	0.18	0.21	0.20	0.21
3	0.15	0.15	0.17	0.17	0.17	0.20	0.19	0.20
4	0.13	0.14	0.15	0.16	0.16	0.19	0.18	0.20
5	0.08	0.12	0.13	0.14	0.15	0.17	0.17	0.19
6		0.08	0.08	0.12	0.14	0.15	0.16	0.18
7				0.08	0.12	0.13	0.15	0.17
8					0.08	0.08	0.14	0.16
9							0.12	0.15
10							0.08	0.14
11								0.12
12								0.08

▶ UN / Internal

Pitch (mm)	24	20	18	16	14	12	10	8
Total infeed (mm)	0.66	0.78	0.86	0.96	1.07	1.25	1.48	2.03
Total passes	5	6	6	7	8	8	10	12
No. of infeed	Radial infeed per pass (mm)							
1	0.16	0.16	0.18	0.17	0.16	0.20	0.19	0.22
2	0.15	0.16	0.17	0.16	0.16	0.19	0.18	0.21
3	0.14	0.14	0.16	0.15	0.15	0.18	0.17	0.20
4	0.12	0.13	0.14	0.14	0.14	0.17	0.17	0.20
5	0.08	0.12	0.13	0.13	0.14	0.16	0.16	0.19
6		0.08	0.08	0.12	0.13	0.14	0.15	0.18
7				0.08	0.11	0.13	0.14	0.17
8					0.08	0.08	0.13	0.16
9							0.12	0.15
10							0.08	0.14
11								0.12
12								0.08

▶ Whitworth / External& Internal

Pitch (mm)	19	18	16	14	12	11	10	8
Total infeed (mm)	0.90	0.97	1.08	1.20	1.42	1.51	1.70	2.10
Total passes	6	7	8	8	8	9	10	12
No. of infeed	Radial infeed per pass (mm)							
1	0.19	0.17	0.17	0.19	0.23	0.22	0.22	0.23
2	0.18	0.16	0.16	0.18	0.22	0.21	0.21	0.22
3	0.17	0.16	0.15	0.17	0.21	0.20	0.20	0.21
4	0.15	0.15	0.15	0.16	0.19	0.19	0.19	0.21
5	0.13	0.13	0.14	0.15	0.18	0.18	0.18	0.20
6	0.08	0.12	0.13	0.14	0.16	0.16	0.17	0.19
7		0.08	0.11	0.12	0.14	0.15	0.16	0.18
8			0.08	0.08	0.08	0.13	0.15	0.17
9						0.08	0.13	0.16
10							0.08	0.14
11								0.12
12								0.08

▶ BSPT / External& Internal

Pitch (mm)	28	19	14	11
Total infeed (mm)	0.62	0.90	1.20	1.51
Total passes	5	6	8	9
No. of infeed	Radial infeed per pass (mm)			
1	0.15	0.19	0.19	0.22
2	0.14	0.18	0.18	0.21
3	0.13	0.17	0.17	0.20
4	0.12	0.15	0.16	0.19
5	0.08	0.13	0.15	0.18
6		0.08	0.14	0.16
7			0.12	0.15
8			0.08	0.13
9				0.08

▶ NPT / External& Internal

Pitch (mm)	27	18	14	11.5	8
Total infeed (mm)	0.76	1.11	1.42	1.73	2.48
Total passes	6	8	10	12	15
No. of infeed	Radial infeed per pass (mm)				
1	0.15	0.17	0.18	0.18	0.21
2	0.15	0.17	0.17	0.17	0.21
3	0.14	0.16	0.16	0.17	0.20
4	0.13	0.15	0.16	0.16	0.20
5	0.11	0.14	0.15	0.16	0.19
6	0.08	0.13	0.14	0.15	0.18
7		0.11	0.14	0.15	0.18
8		0.08	0.13	0.14	0.17
9			0.11	0.13	0.17
10			0.08	0.12	0.16
11				0.11	0.15
12				0.08	0.14
13					0.13
14					0.11
15					0.08

▶ Round / External

Pitch (mm)	10	8	6	4
Total infeed (mm)	1.30	1.63	2.17	2.95
Total passes	8	10	12	14
No. of infeed	Radial infeed per pass (mm)			
1	0.21	0.21	0.24	0.30
2	0.20	0.20	0.23	0.29
3	0.19	0.19	0.22	0.28
4	0.18	0.19	0.21	0.27
5	0.16	0.18	0.20	0.26
6	0.15	0.17	0.19	0.25
7	0.13	0.15	0.18	0.24
8	0.08	0.14	0.17	0.23
9		0.12	0.16	0.22
10		0.08	0.15	0.21
11			0.13	0.19
12			0.08	0.18
13				0.15
14				0.10

▶ Round / Internal

Pitch (mm)	10	8	6	4
Total infeed (mm)	1.34	1.64	2.18	2.98
Total passes	8	10	12	14
No. of infeed	Radial infeed per pass (mm)			
1	0.22	0.21	0.24	0.30
2	0.21	0.20	0.23	0.29
3	0.20	0.20	0.22	0.29
4	0.18	0.19	0.21	0.28
5	0.17	0.18	0.21	0.27
6	0.15	0.17	0.20	0.26
7	0.13	0.16	0.19	0.25
8	0.08	0.14	0.17	0.24
9		0.12	0.16	0.23
10		0.08	0.15	0.21
11			0.13	0.20
12			0.08	0.18
13				0.16
14				0.10

Attention:Infeeds of less than 0.05mm should be avoided, for austenitic stainless steels not less than 0.08mm.