

# TUNGTHREAD

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Tungaloy Report No. 375S2-G

## Expansion of insert & tool holder for small diameter internal threading



**INDUSTRY 4.0**  
*FEED the SPEED!*



For more information

## Efficient internal thread turning of small diameter holes!



Conventional

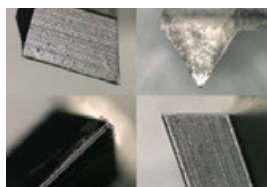
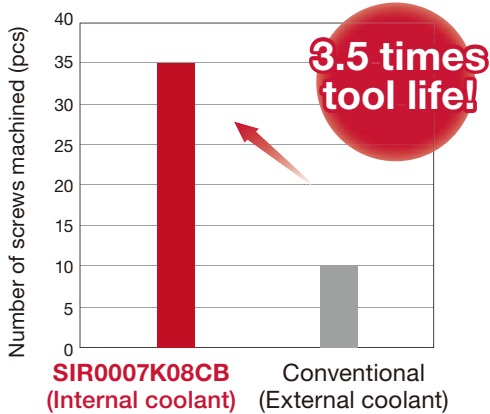
**New**



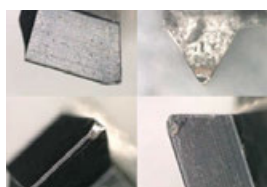
- Economical 3-edged insert
- For small holes in diameters 7.4 mm and larger
- Through-coolant holders are also available

- Single-edged insert
- For hole diameters in 9.0 mm and larger
- No through-coolant

### Cutting performance



SIR0007K08CB (Internal coolant) After 30 threaded



Conventional After 10 threaded

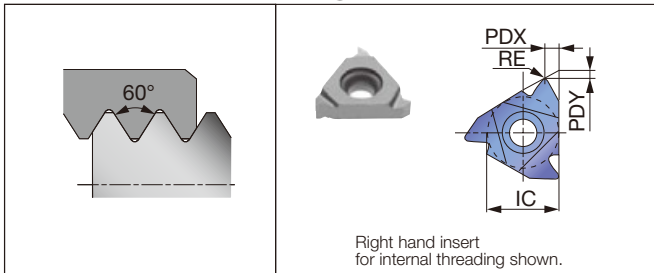


- M** Holder : SIR0007K08CB (Internal coolant)  
 Insert : 08IRA60 AH725  
 Workpiece material : SUS316L  
 Cutting speed : Vc = 60 m/min  
 Pitch : 0.75 mm  
 Machining : Internal threading  
 Infeed method : Radial infeed  
 Coolant : Wet

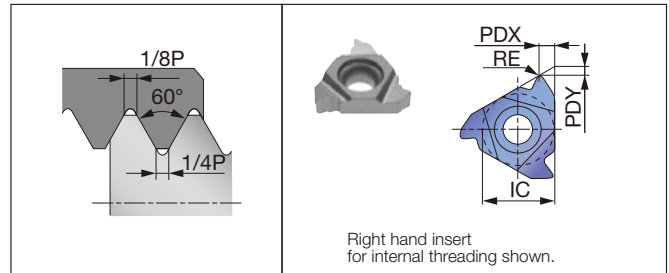
### Standard cutting conditions

ISO	Workpiece materials	Hardness	Cutting speed Vc (m/min)	
			AH725	GH330
<b>P</b>	Carbon steel	< 200 HB	80 - 180	80 - 170
		> 200 HB	60 - 160	60 - 130
<b>M</b>	Stainless steel	-	50 - 130	70 - 120

## 60° thread angle



## ISO metric



### Partial-profile inserts

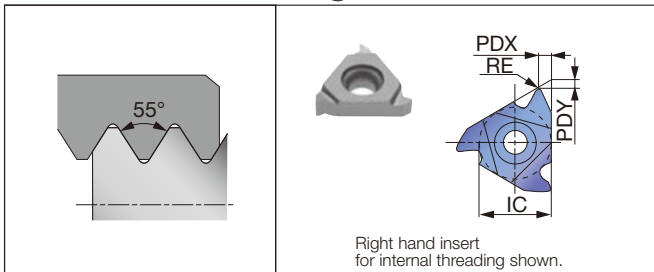
Insert size	Pitch	TPI	Hand of cut	Internal insert							
				Designation	Grades		IC	PDX	PDY	RE	
					Coating						
06	0.5-1.25	48-20	R	<b>06IRA60</b>	AH725	GH330	●	4	0.6	0.6	0.04
08	0.5-1.5	48-16	R	<b>08IRA60</b>			●	5	0.7	0.6	0.04

### Full-profile inserts

Insert size	Pitch	TPI	Hand of cut	Internal insert							
				Designation	Grades		IC	PDX	PDY	RE	
					Coating						
06	0.5		R	<b>06IR05ISO</b>			●	4	0.4	0.6	0.04
06	0.75		R	<b>06IR075ISO</b>			●	4	0.5	0.6	0.05
06	1		R	<b>06IR10ISO</b>			●	4	0.6	0.6	0.05
06	1.25		R	<b>06IR125ISO</b>			●	4	0.6	0.6	0.07
08	1		R	<b>08IR10ISO</b>			●	5	0.6	0.6	0.05
08	1.25		R	<b>08IR125ISO</b>			●	5	0.7	0.7	0.07
08	1.5		R	<b>08IR15ISO</b>			●	5	0.7	0.7	0.09
08	1.75		R	<b>08IR175ISO</b>			●	5	0.8	0.6	0.1

●: New / Package quantity = 5 pcs.

## 55° thread angle



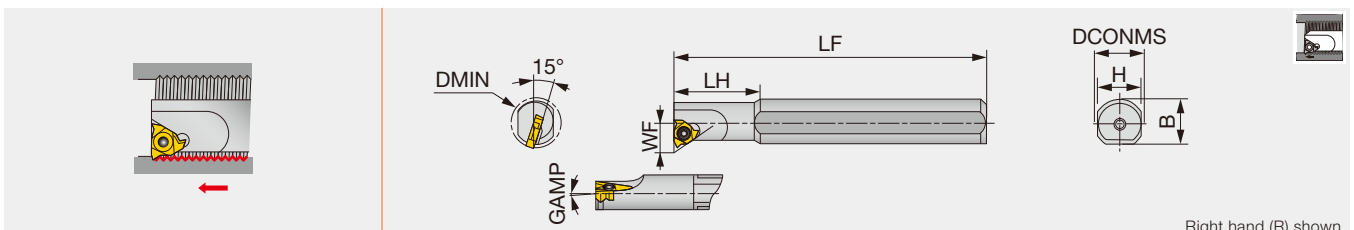
### Partial-profile inserts

Insert size	Pitch	TPI	Hand of cut	Internal insert							
				Designation	Grades		IC	PDX	PDY	RE	
					Coating						
06	0.5-1.25	48-20	R	<b>06IRA55</b>	AH725	GH330	●	4	0.5	0.5	0.05
08	0.5-1.5	48-16	R	<b>08IRA55</b>			●	5	0.7	0.6	0.05

**New**

## SIR

### Internal threading bars, Screw-on clamp



Designation	Material	DMIN	DCONMS	WF	LF	LH	H	B	GAMP	Coolant hole	Insert
SIR0005H06	STEEL	6.4	12	4.3	100	12	11	-	1.5°	Without	06IR...
SIR0007K08	STEEL	8	16	5.3	125	18	15	-	1.5°	Without	08IR...
SIR0005H06CB	CARBIDE	6.4	6	4.3	100	25	5	-	1.5°	With	06IR...
SIR0007K08CB	CARBIDE	7.8	8	5.3	125	30	7	-	1.5°	With	08IR...

Note: The right hand insert (\*\*IR...type) is used for the right hand toolholders (SIR...type).  
Recommend over 1 mm clearance between internal diameter of thread and each tools DMIN.

### SPARE PARTS

Designation	Clamping screw	Wrench
SIR0005H06...	SR 14-552	T-6F-S
SIR0007K08...	SR 14-558	T-6F-S

### Applicable thread size

Description	ISO metric	Unified IRA60 Insert	Parallel pipe IRA55 Insert
SIR0005H06...	≥ M9	≥ 3/8-24 UNF	≥ G1/8
SIR0007K08...	≥ M11	≥ 7/16-20 UNF	≥ G1/4

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