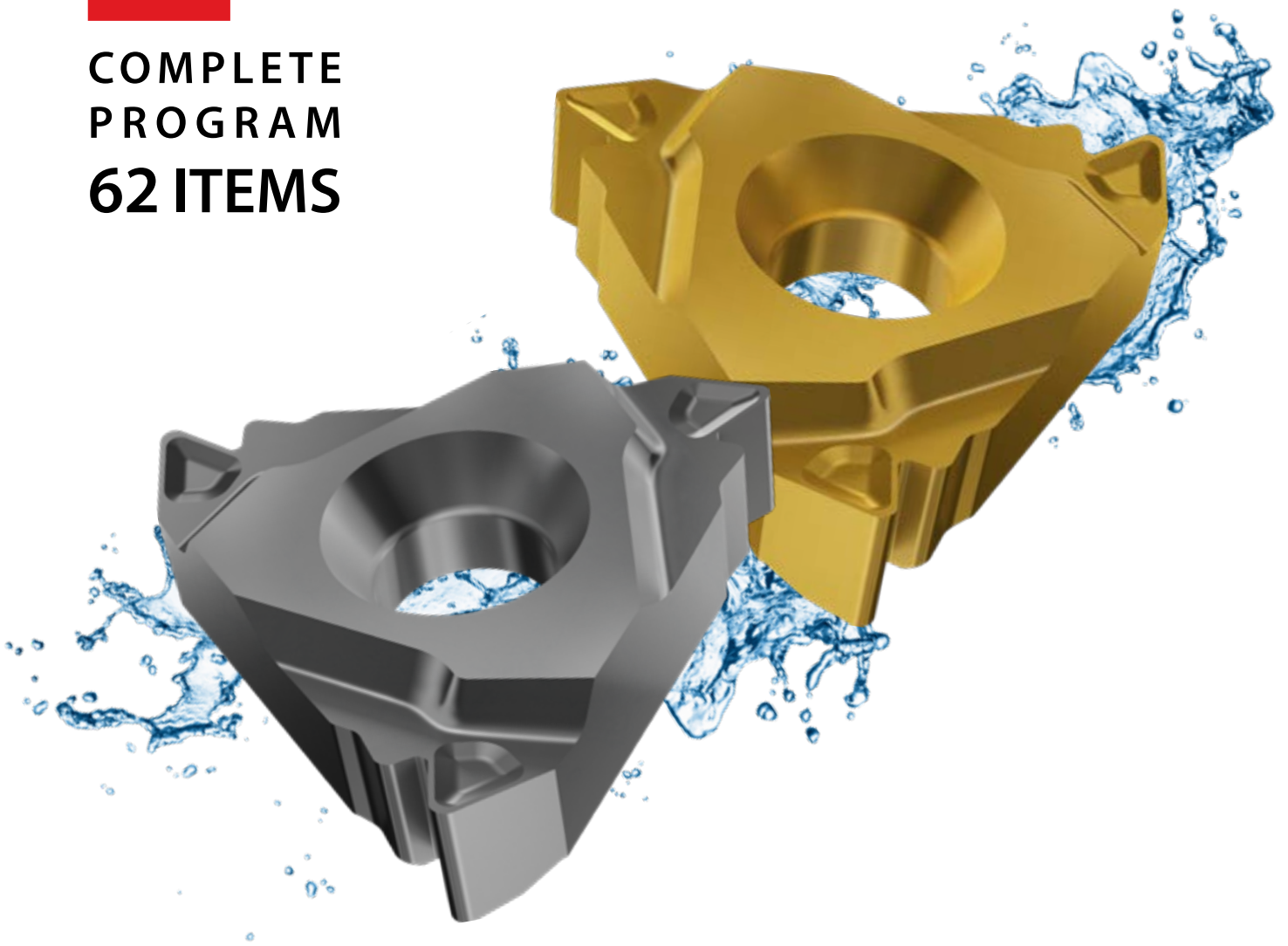


FS LINE

Fully Sintered Inserts | METRIC

**COMPLETE
PROGRAM
62 ITEMS**

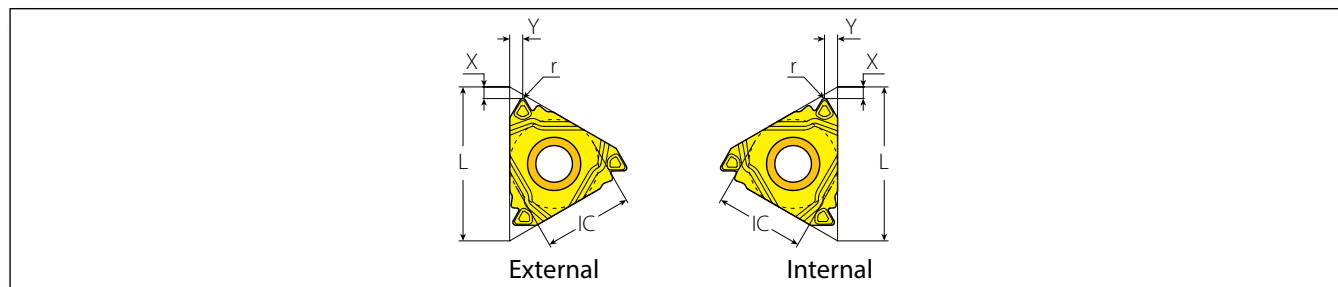


NEW 10-PIECE SNAP-OFF PACKAGING

All FS Line inserts are sold in sets of 10, with double-insert snap off boxes for your convenience

FS LINE Features and Benefits:

- Economical solution for all industries
- The program offers 62 of the most popular profiles for external and internal inserts
- IC range: 1/4" (11), 3/8" (16), 1/2" (22)
- Threading standards: Partial Profile 60°, Partial Profile 55°, ISO Metric, American UN, Whitworth, NPT, BSPT & API Round
- FS Line inserts are suitable with all standard Thread Turning Holders



Partial Profile 60°

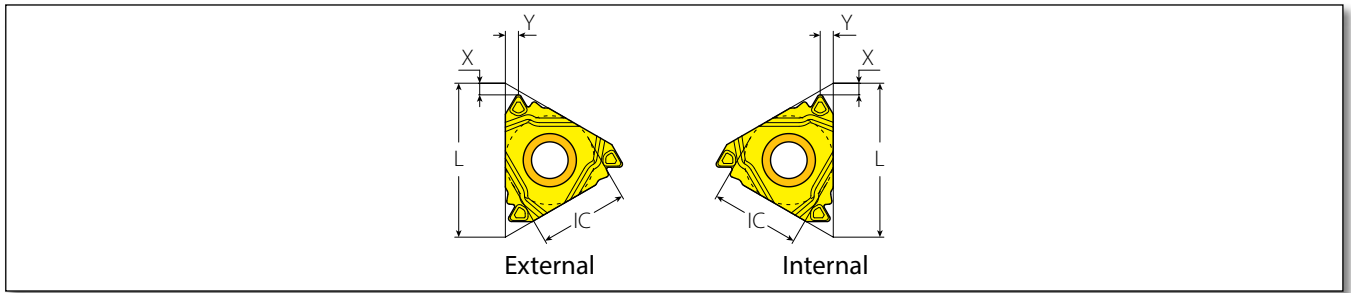
	Insert Size		Pitch		Ordering Code		Market Description	Dimensions mm			Anvil	
	IC	L mm	mm	TPI	RH			r	X	Y	RH	Toolholder
External	3/8"	16	0.5-1.5	48-16	3FSERA60...	16FSERA60...	0.06	0.8	0.9	YE3	AL...-3	
			1.75-3.0	14-8	3FSERG60...	16FSERG60...	0.27	1.3	1.7			
			0.5-3.0	48-8	3FSERAG60...	16FSERAG60...	0.08	1.2	1.7			
	1/2"	22	3.5-5.0	7-5	4FSERN60...	22FSERN60...	0.54	1.7	2.5	YE4	AL...-4	
Internal	1/4"	11	0.5-1.5	48-16	2FSIRA60...	11FSIRA60...	0.05	0.8	0.9	-	NVR...-2	
			0.5-1.5	48-16	3FSIRA60...	16FSIRA60...	0.05	0.8	1.0			
	3/8"	16	1.75-3.0	14-8	3FSIRG60...	16FSIRG60...	0.16	1.1	1.5	YI3	A/NVR...-3	
			0.5-3.0	48-8	3FSIRAG60...	16FSIRAG60...	0.05	1.1	1.6			
			1/2"	22	3.5-5.0	7-5	4FSIRN60...	22FSIRN60...	0.32			1.7

Partial Profile 55°

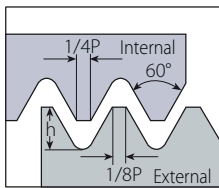
	Insert Size		Pitch		Ordering Code		Market Description	Dimensions mm			Anvil	
	IC	L mm	mm	TPI	RH			r	X	Y	RH	Toolholder
External	3/8"	16	1.75-3.0	14-8	3FSERG55...	16FSERG55...	0.22	1.2	1.7	YE3	AL...-3	
			0.5-3.0	48-8	3FSERAG55...	16FSERAG55...	0.07	1.1	1.7			
Internal	3/8"	16	1.75-3.0	14-8	3FSIRG55...	16FSIRG55...	0.22	1.1	1.7	YI3	A/NVR...-3	
			0.5-3.0	48-8	3FSIRAG55...	16FSIRAG55...	0.07	1.1	1.7			

ISO Metric | Defined by: R262 (DIN 13) | Tolerance class: 6g/6H

	Insert Size		Pitch		Ordering Code		Market Description	Dimensions mm			Anvil	
	IC	L mm	mm		RH			h min	X	Y	RH	Toolholder
External	3/8"	16	1.0		3FSER1.0ISO...	16FSER1.0ISO...	0.61	1.5	0.7	YE3	AL...-3	
			1.25		3FSER1.25ISO...	16FSER1.25ISO...	0.77	1.4	0.8			
			1.5		3FSER1.5ISO...	16FSER1.5ISO...	0.92	1.3	0.9			
			1.75		3FSER1.75ISO...	16FSER1.75ISO...	1.07	1.0	1.1			
			2.0		3FSER2.0ISO...	16FSER2.0ISO...	1.23	1.4	1.3			
			2.5		3FSER2.5ISO...	16FSER2.5ISO...	1.53	1.6	1.5			
			3.0		3FSER3.0ISO...	16FSER3.0ISO...	1.84	1.6	1.6			
Internal	1/4"	11	1.0		2FSIR1.0ISO...	11FSIR1.0ISO...	0.58	1.0	0.6	-	NVR...-2	
			1.5		2FSIR1.5ISO...	11FSIR1.5ISO...	0.87	0.9	0.8			
			2.0		2FSIR2.0ISO...	11FSIR2.0ISO...	1.15	0.9	1.0			
	3/8"	16	1.0		3FSIR1.0ISO...	16FSIR1.0ISO...	0.58	1.4	0.7	YI3	A/NVR...-3	
			1.25		3FSIR1.25ISO...	16FSIR1.25ISO...	0.72	1.3	0.8			
			1.5		3FSIR1.5ISO...	16FSIR1.5ISO...	0.87	1.2	0.9			
			1.75		3FSIR1.75ISO...	16FSIR1.75ISO...	1.01	1.0	1.1			
			2.0		3FSIR2.0ISO...	16FSIR2.0ISO...	1.15	1.3	1.3			
			2.5		3FSIR2.5ISO...	16FSIR2.5ISO...	1.44	1.3	1.4			
			3.0		3FSIR3.0ISO...	16FSIR3.0ISO...	1.73	1.2	1.5			



American UN | Defined by: ANSI B1.1:74 | Tolerance class: 2A/2B



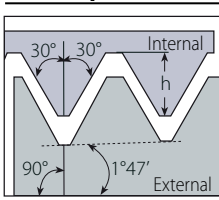
	Insert Size		Pitch	Ordering Code	Market Description	Dimensions mm			Anvil	
	IC	L mm	TPI	RH		h min	X	Y	RH	Toolholder
External	3/8"	16	24	3FSER24UN...	16FSER24UN...	0.65	1.4	0.8	YE3	AL...-3
			20	3FSER20UN...	16FSER20UN...	0.78	1.4	0.8		
			18	3FSER18UN...	16FSER18UN...	0.87	1.2	0.9		
			16	3FSER16UN...	16FSER16UN...	0.97	1.2	1.1		
			14	3FSER14UN...	16FSER14UN...	1.11	0.9	1.2		
			12	3FSER12UN...	16FSER12UN...	1.30	1.3	1.4		
Internal	3/8"	16	20	3FSIR20UN...	16FSIR20UN...	0.73	1.3	0.8	YI3	A/NVR...-3
			18	3FSIR18UN...	16FSIR18UN...	0.81	1.2	0.9		
			16	3FSIR16UN...	16FSIR16UN...	0.92	1.1	0.9		
			14	3FSIR14UN...	16FSIR14UN...	1.05	1.1	1.1		
			12	3FSIR12UN...	16FSIR12UN...	1.22	1.4	1.4		
			8	3FSIR8UN...	16FSIR8UN...	1.83	1.2	2.5		

Whitworth for BSW, BSP | Defined by: B.S.84:1956, DIN 259, ISO228/1:1982 | Tolerance class: Medium class A



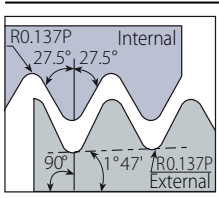
	Insert Size		Pitch	Ordering Code	Market Description	Dimensions mm			Anvil	
	IC	L mm	TPI	RH		h min	X	Y	RH	Toolholder
External	3/8"	16	19	3FSER19W...	16FSER19W...	0.86	1.2	0.9	YE3	AL...-3
			14	3FSER14W...	16FSER14W...	1.16	1.0	1.2		
			11	3FSER11W...	16FSER11W...	1.48	1.4	1.5		
Internal	1/4"	11	19	2FSIR19W...	11FSIR19W...	0.86	1.2	1.9	-	NVR...-2
			14	2FSIR14W...	11FSIR14W...	1.16	1.0	1.0		
	3/8"	16	14	3FSIR14W...	16FSIR14W...	1.16	1.2	1.2	YI3	A/NVR...-3
			11	3FSIR11W...	16FSIR11W...	1.48	1.3	1.4		

NPT | Defined by: USAS B2.1:1968 | Tolerance class: Standard NPT



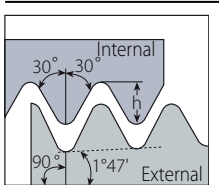
	Insert Size		Pitch	Ordering Code	Market Description	Dimensions mm			Anvil	
	IC	L mm	TPI	RH		h min	X	Y	RH	Toolholder
External	3/8"	16	18	3FSER18NPT...	16FSER18NPT...	1.01	1.0	0.9	YE3	AL...-3
			14	3FSER14NPT...	16FSER14NPT...	1.33	0.9	1.2		
			11.5	3FSER11.5NPT...	16FSER11.5NPT...	1.64	1.1	1.5		
			8	3FSER8NPT...	16FSER8NPT...	2.42	1.1	1.7		
Internal	3/8"	16	14	3FSIR14NPT...	16FSIR14NPT...	1.33	1.1	1.2	YI3	A/NVR...-3
			11.5	3FSIR11.5NPT...	16FSIR11.5NPT...	1.64	1.2	1.4		
			8	3FSIR8NPT...	16FSIR8NPT...	2.42	1.2	1.8		

BSPT | Defined by: B.S. 21:1985 | Tolerance class: Standard BSPT



	Insert Size		Pitch	Ordering Code	Market Description	Dimensions mm			Anvil	
	IC	L mm	TPI	RH		h min	X	Y	RH	Toolholder
External	3/8"	16	14	3FSER14BSPT...	16FSER14BSPT...	1.16	0.9	1.0	YE3	AL...-3
			11	3FSER11BSPT...	16FSER11BSPT...	1.48	1.1	1.3		
Internal	3/8"	16	14	3FSIR14BSPT...	16FSIR14BSPT...	1.16	1.1	1.2	YI3	A/NVR...-3
			11	3FSIR11BSPT...	16FSIR11BSPT...	1.48	1.2	1.4		

API Round Casing & Tubing | Defined by: API STD. 5B:1979 | Tolerance class: Standard API RD



	Insert Size		Pitch	Ordering Code	Market Description	Dimensions mm			Anvil	
	IC	L mm	TPI	RH		h min	X	Y	RH	Toolholder
Internal	3/8"	16	10	3FSIR10APIRD...	16FSIR10APIRD...	1.41	1.2	1.5	YEI3- APIRD or YI3	AVRC... 3APIRD or AVRC...-3

FS LINE Grades:

- **FSK Grade** - TiN coated carbide grade for general use
- **FST Grade** - TiAlN coated carbide grade for general use

FS LINE Test Kits:

- 62 different FS Line Test Kits are available in limited quantities.
- Each kit contains the same insert in **two different grades**:
 - 1 thread profile **FSK grade**
 - 1 thread profile **FST grade**
- Contact your Vargus sales representative for details.



The Complete FS Line Program

Partial 60		Partial 55		ISO		UN		W		NPT		BSPT		APIRD
EX	IN	EX	IN	EX	IN	EX	IN	EX	IN	EX	IN	EX	IN	IN
3FSERA60	2FSIRA60	3FSERAG55	3FSIRG55	3FSER1.0ISO	2FSIR1.0ISO	3FSER24UN	3FSIR20UN	3FSER19W	2FSIR19W	3FSER18NPT	3FSIR14NPT	3FSER14BSPT	3FSIR14BSPT	3FSIR10APIRD
3FSER60	3FSIRA60	3FSER55	3FSIRG55	3FSER1.25ISO	2FSIR1.5ISO	3FSER20UN	3FSIR18UN	3FSER14W	2FSIR14W	3FSER14NPT	3FSIR11.5NPT	3FSER11BSPT	3FSIR11BSPT	
3FSERAG60	3FSIRG60			3FSER1.5ISO	2FSIR2.0ISO	3FSER18UN	3FSIR14UN	3FSER11W	3FSIR14W	3FSER11.5NPT	3FSIR8NPT			
4FSERN60	3FSIRAG60			3FSER1.75ISO	3FSIR1.0ISO	3FSER16UN	3FSIR16UN		3FSIR11W	3FSER8NPT				
	4FSIRN60			3FSER2.0ISO	3FSIR1.25ISO	3FSER14UN	3FSIR12UN							
				3FSER2.5ISO	3FSIR1.5ISO	3FSER12UN	3FSIR8UN							
				3FSER3.0ISO	3FSIR1.75ISO	3FSER8UN								
					3FSIR2.0ISO									
					3FSIR2.5ISO									
					3FSIR3.0ISO									

**COMPLETE
PROGRAM
62 ITEMS**



The NEW **FS LINE** is now included in the **VARGUS GENiUS™**, the most advanced Tool Selector and CNC Program Generator in the metal cutting tools industry.

