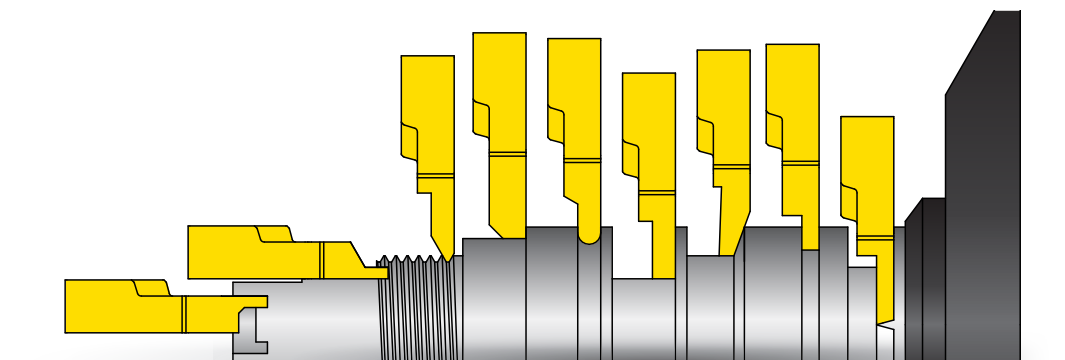




EXTERNAL MACHINING

ST-Cut

Precise Tools for Small Parts Machining



METRIC

ST-Cut

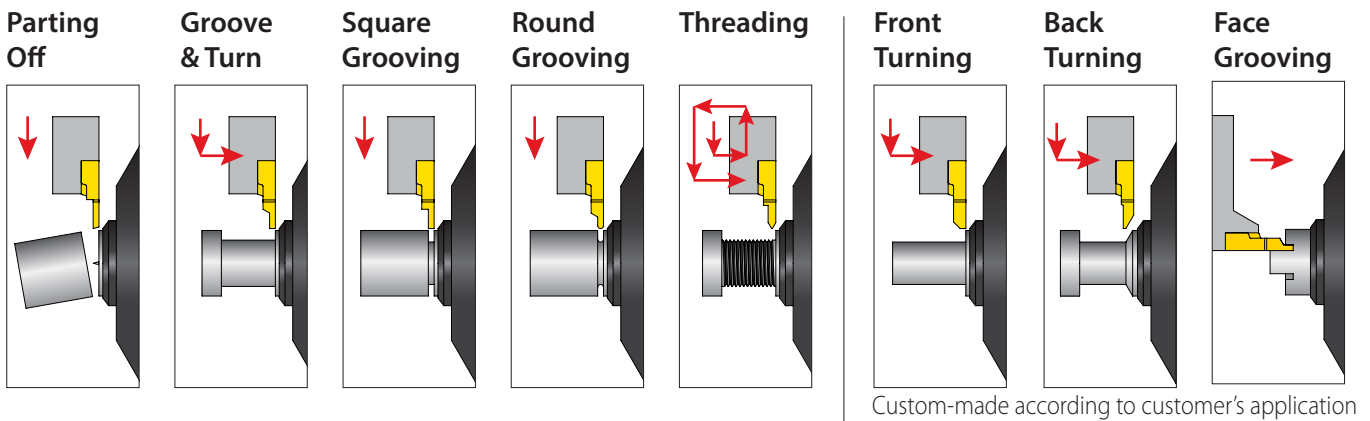
Precise Tools for Small Parts Machining

Vargus is pleased to introduce the New ST-Cut, an innovative solution for machining small parts on Swiss type machines.

Features and Benefits:

- Unique insert replacement system
- Quick and easy change of insert inside the machine from both sides of the tool
- High repeatability of the cutting edge on all axes
- 17mm maximum parting off diameter, with up to 3mm notch width
- Excellent rigidity
- Insert edge treatment for increased tool life

ST-Cut Applications



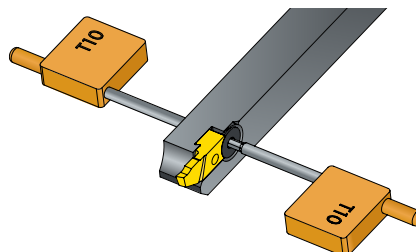
ST-Cut Unique Clamping System

- 1** Loosen the screw by turning it clockwise about 3-4 turns (for RH tools)*

* Counterclockwise for LH tools
- 2** Push the insert back slightly and remove the insert in a circular motion
- 3** Thoroughly clean the insert pocket
- 4** Tighten the screw by turning it counterclockwise (for RH tools)*

* Clockwise for LH tools

Double-sided screws for maximum accessibility on the machine



CONTENTS:

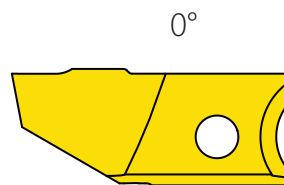
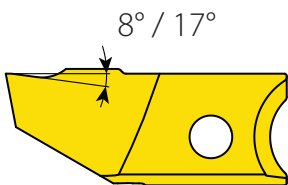
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ST-Cut Technical Data

Geo-Rake Angle

The maximum diameter for parting off is 17.0mm, and up to 3.0mm notch width.
The insert corner can pass the center of rotation up to 0.2mm maximum.

Rake Angle



Positive Rake Angle Chip Former

Recommended for specific applications, depending on the type of application and workpiece material. Relatively sharp edge, designed for less build-up on the insert cutting edge.
Highly recommended for Gummy materials such as Stainless Steel and Titanium.

Vargus also offers custom-made rake angles for defined applications.

0° Rake Angle Chip Former

Insert geometry designed for general use applications. Relatively dull edge, which creates fewer fractures. Recommended for High Alloy Steels and hard abrasive materials.

Grades

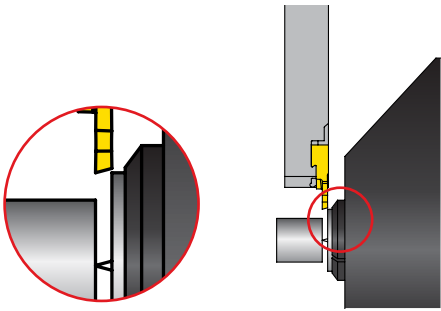
ST-Cut inserts are offered in two different grades: **VPG** and **VS020**.

VPG is PVD coated, for medium and high speeds.

VS020 is uncoated to ensure a sharper cutting edge, crucial for very small parts when the cutting speeds are relatively low and light cutting is required.

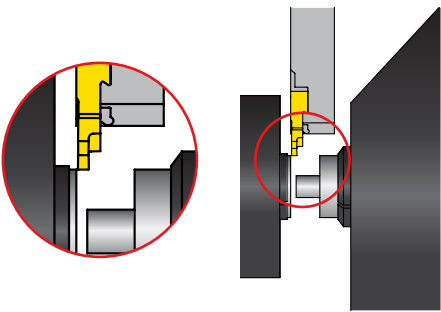
Grade	Application	Sample
VPG	Sub-micron substrate for a wide range of applications. Excellent anti-fracture resistance. AlTiN PVD coated P20, for medium to high cutting speeds. Excellent for alloy steel, stainless steel, and Titanium.	
VS020	Uncoated Sub-micron substrate for a wide range of applications. Excellent anti-fracture resistance. Recommended for medium to low cutting speeds. Excellent for alloy steel, stainless steel, and Titanium.	

Cutting Recommendations and Tool Types



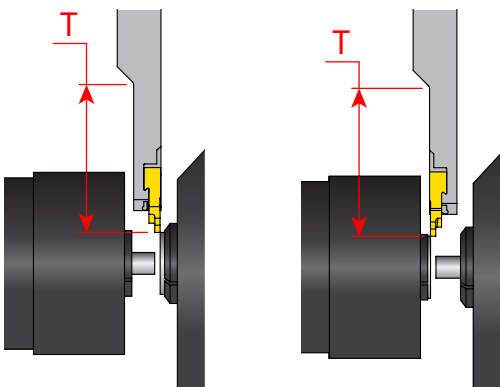
When parting off small diameter parts, without the support of the sub spindle, it is recommended to use an ST-Cut Parting Off insert with a lead angle, thereby eliminating the center boss (See Figure 1).

Figure 1:
Parting Off Close to Main Spindle -
STER...-85 RH tool with RH insert/RH
lead angle



When a sub spindle is used, which is the recommended method when parting off small parts, a neutral insert with a tougher notch is recommended to avoid scratches and burrs on the sides of the workpiece (See Figure 2).

Figure 2:
Parting Off Close to Sub Spindle -
STEL...-85 LH tool with LH insert



The ST-Cut tool offering includes “Stepped Tools” – STESR/L and STESRS – for short part lengths, where both the main and the sub-spindles are used. The maximum length exceeding the center of the workpiece is 0.20mm (See Figures 3 and 4).

Figure 3:
Parting Off Close
to Main Spindle –
STESR...-85 RH tool
with RH insert
(LH tool also available)

Figure 4:
Parting Off Close to Sub
Spindle – STESRS...-85
RH tool with LH insert



ST-Cut Recommended Cutting Speeds

In bar-feeder machines (Swiss Type, Slide Machines, etc.), turn speed limitations of the bar feeder often dictate the actual cutting speed.

The recommended cutting speeds in the table below should be used if the machine can achieve such speeds.

ST-Cut tools are also designed to work at much lower speeds, and up to 40% faster if needed, depending on the material properties, such as hardness and tensile strength.

Material Group	Vargus No.	Material	Vc [m/min]			
			Turning	Parting Off	Threading	
P Steel	1	Unalloyed Steel Low Carbon Steel	150	110	150	
	2					
	3					
	4	Low Alloy Steel Alloy Steel < 750 Rm [N/mm ²]	100	75	100	
	5					
	6					
	7	High Alloy Steel Alloy Steel > 750 Rm [N/mm ²]	75	55	75	
	8					
	9					
M Stainless Steel	11	Stainless Steel Stainless Steel	65	50	65	
	12					
N(K) Non-Ferrous Metals	34	Aluminum Alloys Aluminum Si > 12%	500	380	200	
	35					
	36					
	37					
	39	Copper and Copper Alloys Brass, Bronze	350	250	150	
	40					
S(M) Heat Resistant Material	19	High Temperature Alloys and Titanium Alloys	60	40	50	
	20					Titanium < 600 Rm [N/mm ²]
	21		35	30	35	
	22					Titanium > 900 Rm [N/mm ²]
	23					
24						



ST-Cut Nominal Feeds and Depth of Cut

The cutting conditions for Parting Off and Turning applications in the table below are recommended starting points, which may be increased by up to 30%, depending on material properties, such as hardness and tensile strength.

Material Group	Vargus No.	Material	Cutting Width (mm)	Parting Off	Turning		
				Feed (mm/rev)	Depth of Cut (mm)	Feed (mm/rev)	
P Steel	1	Unalloyed Steel Low Carbon Steel	0.5 - 1.0	0.04	0.05 - 1.2	0.06	
	2		1.2 - 1.8	0.08	1.2 - 2.5	0.12	
	3		2.0 - 3.0	0.12	2.5 - 4.0	0.18	
	4	Low Alloy Steel Alloy Steel < 750 Rm [N/mm ²]	0.5 - 1.0	0.03	0.05 - 1.2	0.04	
	5		1.2 - 1.8	0.06	1.2 - 2.5	0.08	
	6		2.0 - 3.0	0.10	2.5 - 4.0	0.14	
	7	High Alloy Steel Alloy Steel > 750 Rm [N/mm ²]	0.5 - 1.0	0.02	0.05 - 1.2	0.03	
	8		1.2 - 1.8	0.05	1.2 - 2.5	0.08	
	9		2.0 - 3.0	0.08	2.5 - 4.0	0.12	
M Stainless Steel	11	Stainless Steel	0.5 - 1.0	0.025	0.04 - 0.08	0.04	
	12		1.2 - 1.8	0.035	0.08 - 1.5	0.05	
			2.0 - 3.0	0.06	1.5 - 3.0	0.08	
N(K) Non-Ferrous Metals	34	Aluminum Alloys Aluminum Si > 12%	0.5 - 1.0	0.06	0.05 - 1.2	0.08	
	35		1.2 - 1.8	0.12	1.2 - 2.5	0.18	
	36		2.0 - 3.0	0.18	2.5 - 4.0	0.25	
	37	Copper and Copper Alloys Brass, Bronze	0.5 - 1.0	0.06	0.05 - 1.2	0.08	
	39		1.2 - 1.8	0.12	1.2 - 2.5	0.18	
	40		2.0 - 3.0	0.18	2.5 - 4.0	0.25	
S(M) Heat Resistant Material	19	High Temperature Alloys and Titanium Alloys	Titanium < 600 Rm [N/mm ²]	0.5 - 1.0	0.02	0.04 - 0.08	0.03
	20			1.2 - 1.8	0.04	0.08 - 1.5	0.06
	21			2.0 - 3.0	0.06	1.5 - 3.0	0.10
	22	Titanium > 900 Rm [N/mm ²]	0.5 - 1.0	0.01	0.04 - 0.08	0.02	
	23		1.2 - 1.8	0.025	0.08 - 1.5	0.04	
	24		2.0 - 3.0	0.04	1.5 - 3.0	0.08	

ST-Cut Inserts

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ST-Cut Inserts Ordering Code System

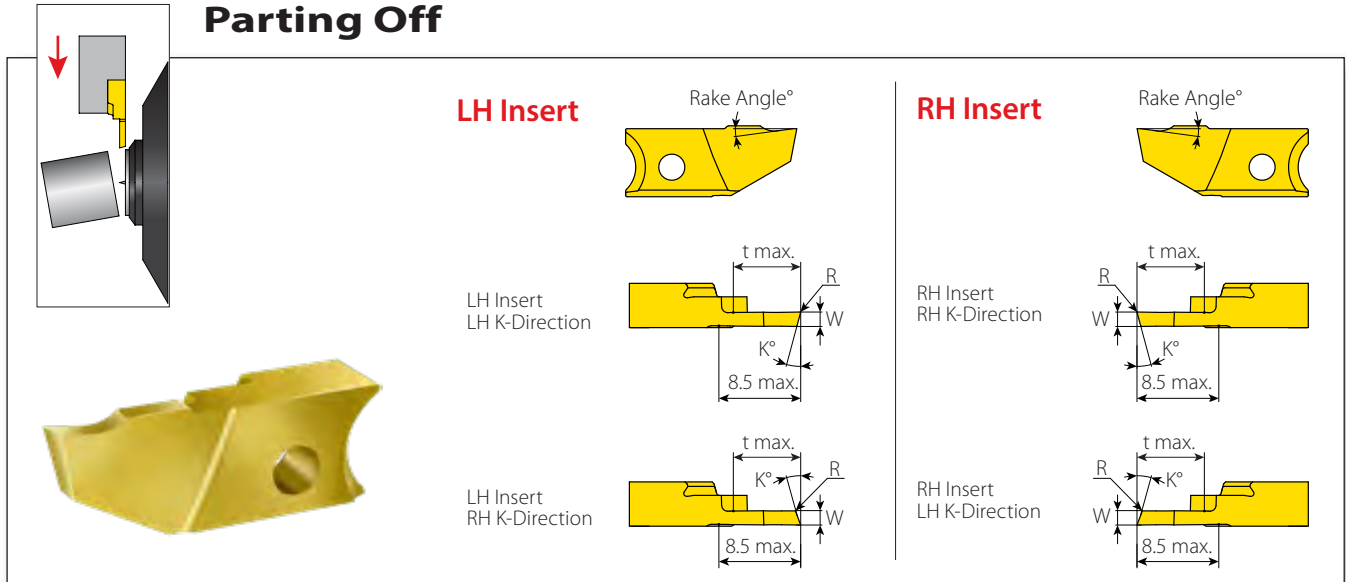
ST	85	R	P	0	-	0.7		35	00	-	00	R	E	
1	2	3	4	5		6	7	8	9		10	11	12	13

1 - Line Name ST - ST Cut	2 - Max. Radial Depth 85 - 8.5mm	3 - RH or LH R - Right Hand L - Left Hand	4 - Application P - Parting Off T - Groove Turn S - Square Grooving R - Round Grooving TH - Threading FT - Front Turning BT - Back Turning FG - Face Grooving Internal FP - Face Grooving External	5 - Rake Angle 0 - 0° 6 - 6° 10 - 10° 12 - 12° 15 - 15° 17 - 17°
-------------------------------------	--------------------------------------------	--------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------

6 - Grooving Width 0.5 - 3.0mm	7 - Thread Standard and Pitch (Threading) 60 - Partial 60° 55 - Partial 55°	8 - t max 15 - 1.5mm 35 - 3.5mm 50 - 5.0mm 55 - 5.5mm 70 - 7.0mm 85 - 8.5mm	9 - Corner Radius 00 - 0.0mm 0.05 - 0.05mm
6 - Corner Radius for Round Grooving Inserts 0.2 - 1.5mm			

10 - Approach Angle (for Parting Off) 00 - 0° 06 - 6° 15 - 15°	11 - Corner Lead Direction (Parting Off) R - Right Hand Direction L - Left Hand Direction None - Neutral Direction	12 - Special Insert Structure E - Treated Cutting Edge W - Wiper C - Chamfer CW - Chamfer & Wiper RW - Radius & Wiper	13 - Grade VPG VS020
	11 - Helix Side (Threading) RH - Right Hand Helix LH - Left Hand Helix	12 - Threading R - Close to Right Shoulder L - Close to Left Shoulder None - Neutral	

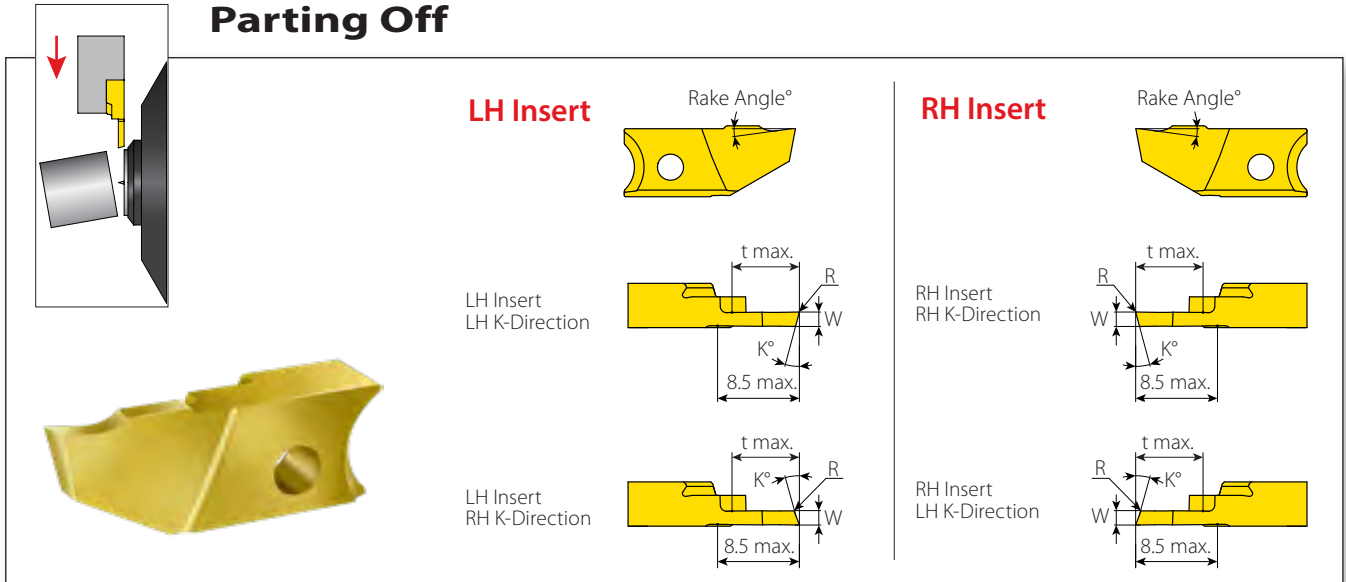
Parting Off



Ordering Code	Dimensions mm						Special Structure	Grade	
	W	R	t max.	K°	K° - Direction	Rake Angle		VS020	VPG
ST83RP0-0.515-00-15R	0.50	0	1.50	15	R	0	-	○	●
ST84LP0-0.515-00-15L	0.50	0	1.50	15	L	0	-	○	●
ST85RP0-0.735-00-06RE	0.70	0	3.50	6	R	0	E	○	●
ST85LP0-0.735-00-06LE	0.70	0	3.50	6	L	0	E	○	●
ST85RP0-1.050-00-06RE	1.00	0	5.00	6	R	0	E	○	●
ST85LP0-1.050-00-06LE	1.00	0	5.00	6	L	0	E	○	●
ST85RP0-1.550-00-15RE	1.50	0	5.00	15	R	0	E	○	●
ST85LP0-1.550-00-15LE	1.50	0	5.00	15	L	0	E	○	●
ST85RP0-1.570-0.05-15RE	1.50	0.05	7.00	15	R	0	E	○	●
ST85LP0-1.570-0.05-15LE	1.50	0.05	7.00	15	L	0	E	○	●
ST85RP0-2.085-00-15RE	2.00	0	8.50	15	R	0	E	○	●
ST85LP0-2.085-00-15LE	2.00	0	8.50	15	L	0	E	○	●
ST85RP0-2.085-0.05-15RE	2.00	0.05	8.50	15	R	0	E	○	●
ST85LP0-2.085-0.05-15LE	2.00	0.05	8.50	15	L	0	E	○	●
ST85RP8-0.735-00-15RE	0.70	0	3.50	15	R	8	E	○	●
ST85LP8-0.735-00-15LE	0.70	0	3.50	15	L	8	E	○	●
ST85RP8-1.050-00-15RE	1.00	0	5.00	15	R	8	E	○	●
ST85LP8-1.050-00-15LE	1.00	0	5.00	15	L	8	E	○	●
ST85RP8-0.735-00-15R	0.70	0	3.50	15	R	8	-	○	●
ST85LP8-0.735-00-15L	0.70	0	3.50	15	L	8	-	○	●
ST85RP8-1.050-00-15R	1.00	0	5.00	15	R	8	-	○	●
ST85LP8-1.050-00-15L	1.00	0	5.00	15	L	8	-	○	●
ST85RP8-1.570-00-15RE	1.50	0	7.00	15	R	8	E	○	●
ST85LP8-1.570-00-15LE	1.50	0	7.00	15	L	8	E	○	●
ST85RP8-1.570-0.05-15RE	1.50	0.05	7.00	15	R	8	E	○	●
ST85RP8-1.570-0.05-15LE	1.50	0.05	7.00	15	L	8	E	○	●
ST85RP8-2.085-00-15RE	2.00	0	8.50	15	R	8	E	○	●
ST85LP8-2.085-00-15LE	2.00	0	8.50	15	L	8	E	○	●
ST85RP8-2.085-0.05-15RE	2.00	0.05	8.50	15	R	8	E	○	●
ST85LP8-2.085-0.05-15LE	2.00	0.05	3.50	15	L	8	E	○	●

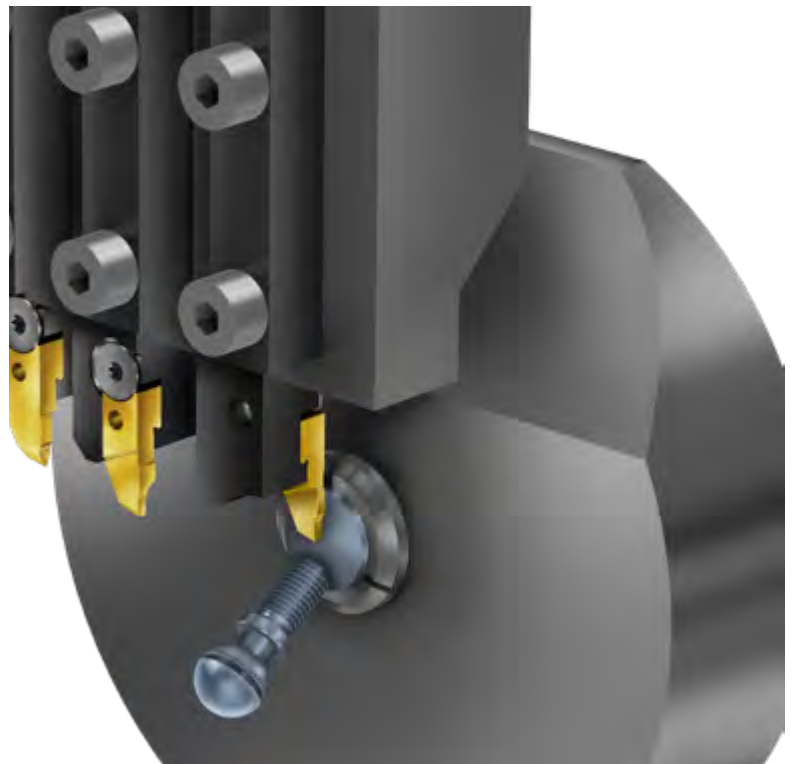
● In stock ○ Available upon request

Parting Off

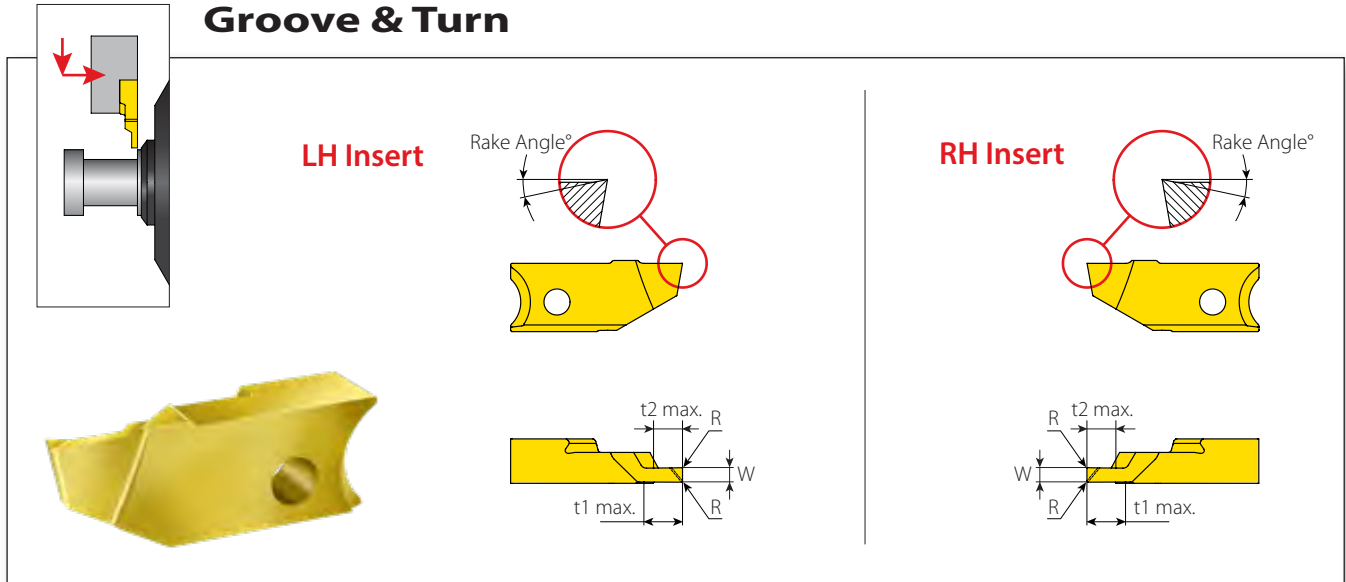


Ordering Code	Dimensions mm						Special Structure	Grade	
	W	R	t max	K°	K° - Direction	Rake Angle		VS020	VPG
ST85RP17-0.735-00-15RE	0.70	0	3.50	15	R	17	E	o	•
ST85LP17-0.735-00-15LE	0.70	0	3.50	15	L	17	E	o	•
ST85RP17-1.050-00-15RE	1.00	0	5.00	15	R	17	E	o	•
ST85LP17-1.050-00-15LE	1.00	0	5.00	15	L	17	E	o	•
ST85RP17-1.570-00-15RE	1.50	0	7.00	15	R	17	E	o	•
ST85LP17-1.570-00-15LE	1.50	0	7.00	15	L	17	E	o	•
ST85RP17-1.570-0.05-15RE	1.50	0.05	7.00	15	R	17	E	o	•
ST85RP17-1.570-0.05-15LE	1.50	0.05	7.00	15	L	17	E	o	•
ST85RP17-2.085-00-15RE	2.00	0	8.50	15	R	17	E	o	•
ST85LP17-2.085-00-15LE	2.00	0	8.50	15	L	17	E	o	•
ST85RP17-2.085-0.05-15RE	2.00	0.05	8.50	15	R	17	E	o	•
ST85LP17-2.085-0.05-15LE	2.00	0.05	8.50	15	L	17	E	o	•

• In stock o Available upon request



Groove & Turn



Groove & Turn Right Hand Inserts

Ordering Code	Dimensions mm					Special Structure	Grade	
	W	R	t1 max	t2 max	Rake Angle		VS020	VPG
ST85RT12-0.515-0.03E	0.50	0.03	4.00	1.50	12	E	○	●
ST85RT12-1.025-00E	1.00	0.00	4.00	2.50	12	E	○	●
ST85RT12-1.025-0.05E	1.00	0.05	4.00	2.50	12	E	○	●
ST85RT12-1.530-00E	1.50	0.00	4.00	3.00	12	E	○	●
ST85RT12-1.530-0.08E	1.50	0.08	4.00	3.00	12	E	○	●
ST85RT12-2.040-0.08E	2.00	0.08	6.50	4.00	12	E	○	●
ST85RT12-2.560-0.10E	2.50	0.10	6.50	6.00	12	E	○	●
ST85RT12-3.065-0.20E	3.00	0.20	6.50	6.50	12	E	○	●

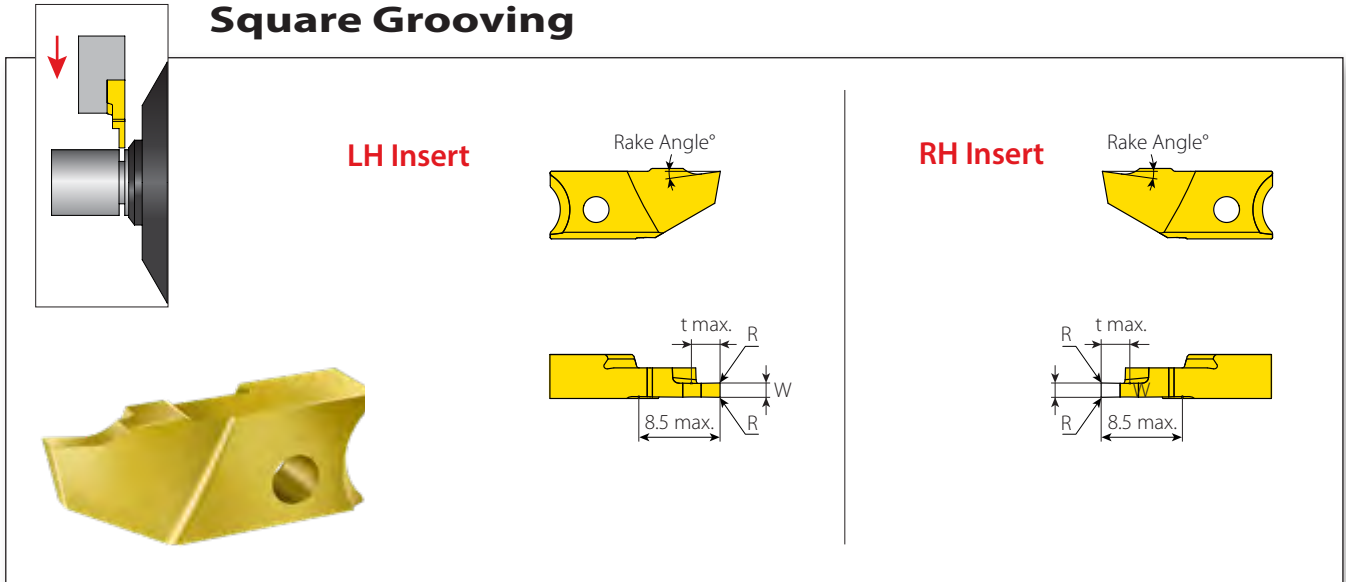
● In stock ○ Available upon request

Groove & Turn Left Hand Inserts

Ordering Code	Dimensions mm					Special Structure	Grade	
	W	R	t1 max	t2 max	Rake Angle		VS020	VPG
ST85LT12-0.515-0.03E	0.50	0.03	4.00	1.50	12	E	○	●
ST85LT12-1.025-00E	1.00	0.00	4.00	2.50	12	E	○	●
ST85LT12-1.025-0.05E	1.00	0.05	4.00	2.50	12	E	○	●
ST85LT12-1.530-00E	1.50	0.00	4.00	3.00	12	E	○	●
ST85LT12-1.530-0.08E	1.50	0.08	4.00	3.00	12	E	○	●
ST85LT12-2.040-0.08E	2.00	0.08	6.50	4.00	12	E	○	●
ST85LT12-2.560-0.10E	2.50	0.10	6.50	6.00	12	E	○	●
ST85LT12-3.065-0.20E	3.00	0.20	6.50	6.50	12	E	○	●

● In stock ○ Available upon request

Square Grooving



Square Grooving Right Hand Inserts

Ordering Code	Dimensions mm				Special Structure	Grade	
	W	R	t max	Rake Angle		VS020	VPG
ST85RS0-0.820-00E	0.80	0.00	2.00	0	E	○	●
ST85RS8-0.820-00E	0.80	0.00	2.00	8	E	○	●
ST85RS0-1.025-00E	1.00	0.00	2.50	0	E	○	●
ST85RS8-1.025-00E	1.00	0.00	2.50	8	E	○	●
ST85RS8-1.025-0.05E	1.00	0.05	2.50	8	E	○	●
ST85RS0-1.230-00E	1.20	0.00	3.00	0	E	○	●
ST85RS8-1.230-00E	1.20	0.00	3.00	8	E	○	●
ST85RS0-1.530-00E	1.50	0.00	3.00	0	E	○	●
ST85RS8-1.530-00E	1.50	0.00	3.00	8	E	○	●
ST85RS8-1.530-0.05E	1.50	0.05	3.00	8	E	○	●
ST85RS0-1.840-00E	1.80	0.00	4.00	0	E	○	●
ST85RS0-2.040-00E	2.00	0.00	4.00	0	E	○	●
ST85RS0-2.560-00E	2.50	0.00	6.00	0	E	○	●
ST85RS0-3.065-00E	3.00	0.00	6.50	0	E	○	●

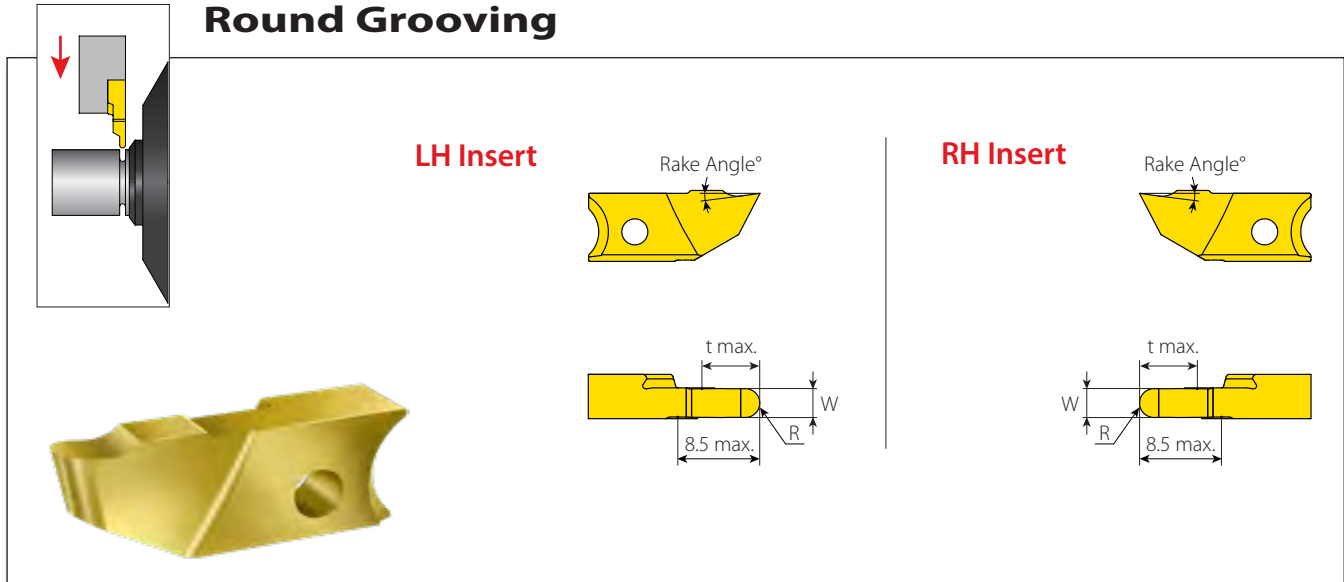
● In stock ○ Available upon request

Square Grooving Left Hand Inserts

Ordering Code	Dimensions mm				Special Structure	Grade	
	W	R	t max	Rake Angle		VS020	VPG
ST85LS0-0.820-00E	0.80	0.00	2.00	0	E	○	●
ST85LS8-0.820-00E	0.80	0.00	2.00	8	E	○	●
ST85LS0-1.025-00E	1.00	0.00	2.50	0	E	○	●
ST85LS8-1.025-00E	1.00	0.00	2.50	8	E	○	●
ST85LS8-1.025-0.05E	1.00	0.05	2.50	8	E	○	●
ST85LS0-1.230-00E	1.20	0.00	3.00	0	E	○	●
ST85LS8-1.230-00E	1.20	0.00	3.00	8	E	○	●
ST85LS0-1.530-00E	1.50	0.00	3.00	0	E	○	●
ST85LS8-1.530-00E	1.50	0.00	3.00	8	E	○	●
ST85LS8-1.530-0.05E	1.50	0.05	3.00	8	E	○	●
ST85LS0-1.840-00E	1.80	0.00	4.00	0	E	○	●
ST85LS0-2.040-00E	2.00	0.00	4.00	0	E	○	●
ST85LS0-2.560-00E	2.50	0.00	6.00	0	E	○	●
ST85LS0-3.065-00E	3.00	0.00	6.50	0	E	○	●

● In stock ○ Available upon request

Round Grooving



Round Grooving Right Hand Inserts

Ordering Code	Dimensions mm				Special Structure	Grade	
	W	R	t max	Rake Angle		VS020	VPG
ST85RR0-0.215E	0.40	0.20	1.50	0	E	◦	•
ST85RR0-0.520E	1.00	0.50	2.00	0	E	◦	•
ST85RR0-0.7530E	1.50	0.75	3.00	0	E	◦	•
ST85RR0-1.040E	2.00	1.00	4.00	0	E	◦	•
ST85RR8-1.040E	2.00	1.00	4.00	8	E	◦	•
ST85RR0-1.2550E	2.50	1.25	5.00	0	E	◦	•
ST85RR0-1.560E	3.00	1.50	6.00	0	E	◦	•
ST85RR8-1.560E	3.00	1.50	6.00	8	E	◦	•

◼ • In stock ◦ Available upon request

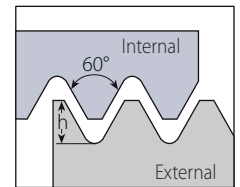
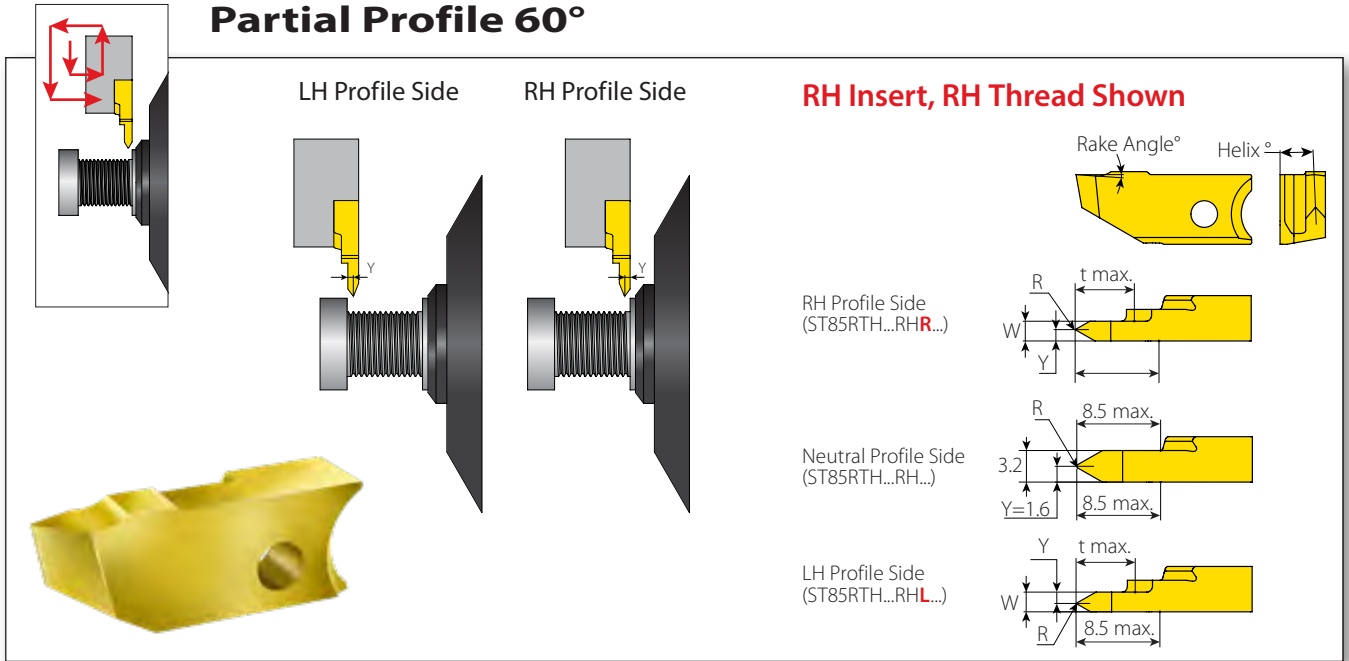
Round Grooving Left Hand Inserts

Ordering Code	Dimensions mm				Special Structure	Grade	
	W	R	t max	Rake Angle		VS020	VPG
ST85LR0-0.215E	0.40	0.20	1.50	0	E	◦	•
ST85LR0-0.520E	1.00	0.50	2.00	0	E	◦	•
ST85LR0-0.7530E	1.50	0.75	3.00	0	E	◦	•
ST85LR0-1.040E	2.00	1.00	4.00	0	E	◦	•
ST85LR8-1.040E	2.00	1.00	4.00	8	E	◦	•
ST85LR0-1.2550E	2.50	1.25	5.00	0	E	◦	•
ST85LR0-1.560E	3.00	1.50	6.00	0	E	◦	•
ST85LR8-1.560E	3.00	1.50	6.00	8	E	◦	•

◼ • In stock ◦ Available upon request

THREADING

Partial Profile 60°



Partial Profile 60° Right Hand Inserts

Ordering Code	Dimensions mm				Pitch mm / TPI	No. of Passes	Rake Angle	Helix °	Thread Direction	Profile Side	Grade	
	W	R	t max	Y							VS020	VPG
ST85RTH4AA60RHR	1.00	0.00	2.50	0.15	0.075 - 0.25/508-100	3-4	4	6	RH	R	○	●
ST85RTH4AA60RHL	1.00	0.00	2.50	0.15	0.075 - 0.25/508-100	3-4	4	6	RH	L	○	●
ST85RTH4AB60RHR	1.50	0.02	4.50	0.30	0.25 - 0.5/80-46	4-6	4	4	RH	R	○	●
ST85RTH4AB60RHL	1.50	0.02	4.50	0.30	0.25 - 0.5/80-46	4-6	4	4	RH	L	○	●
ST85RTH4A60RHR	2.00	0.05	6.5	0.85	0.5 - 1.5/46-16	4-10	4	2.5	RH	R	○	●
ST85RTH4A60RHL	2.00	0.05	6.5	0.85	0.5 - 1.5/46-16	4-10	4	2.5	RH	L	○	●
ST85RTH4G60RH	3.20	0.20	8.5	1.60	1.75 - 3.0/14-8	5-14	4	1.5	RH	N	○	●

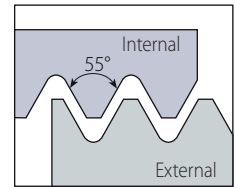
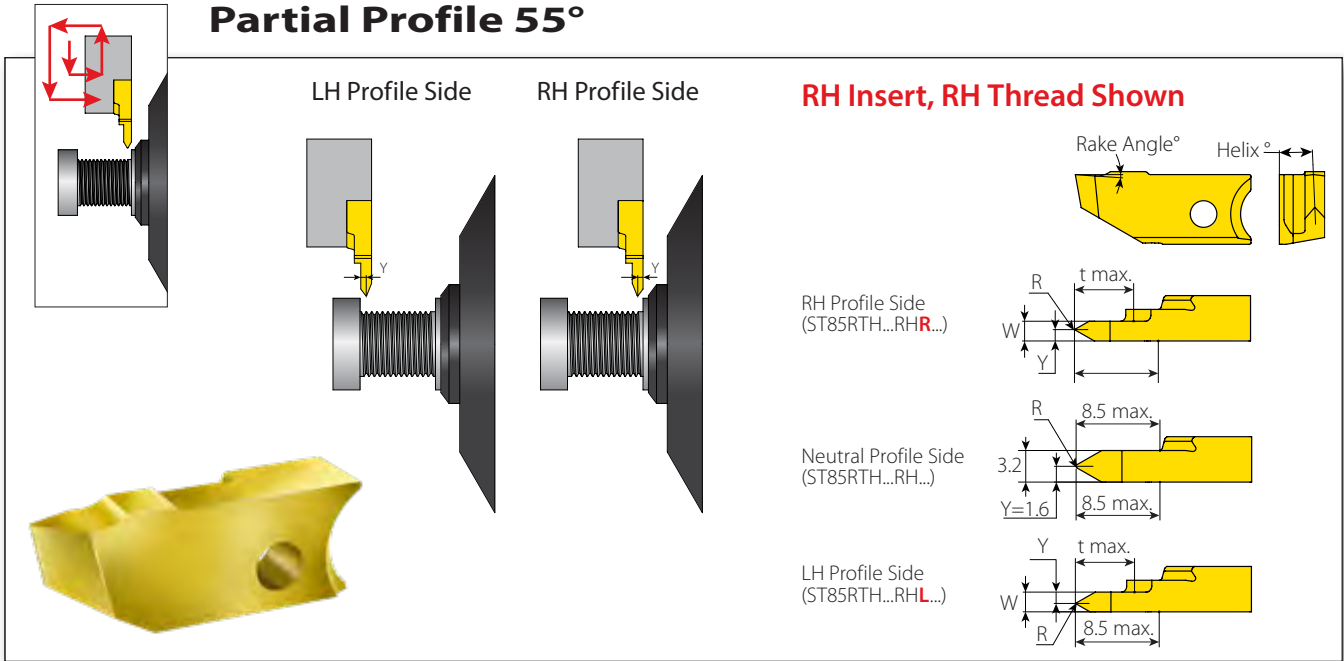
● In stock ○ Available upon request

Partial Profile 60° Left Hand Inserts

Ordering Code	Dimensions mm				Pitch mm / TPI	No. of Passes	Rake Angle	Helix °	Thread Direction	Profile Side	Grade	
	W	R	t max	Y							VS020	VPG
ST85LTH4AA60RHR	1.00	0.00	2.50	0.15	0.075 - 0.25/508-100	3-4	4	6	RH	R	○	●
ST85LTH4AA60RHL	1.00	0.00	2.50	0.15	0.075 - 0.25/508-100	3-4	4	6	RH	L	○	●
ST85LTH4AB60RHR	1.50	0.02	4.50	0.30	0.25 - 0.5/80-46	4-6	4	4	RH	R	○	●
ST85LTH4AB60RHL	1.50	0.02	4.50	0.30	0.25 - 0.5/80-46	4-6	4	4	RH	L	○	●
ST85LTH4A60RHR	2.00	0.05	6.5	0.85	0.5 - 1.5/46-16	4-10	4	2.5	RH	R	○	●
ST85LTH4A60RHL	2.00	0.05	6.5	0.85	0.5 - 1.5/46-16	4-10	4	2.5	RH	L	○	●
ST85LTH4G60RH	3.20	0.20	8.5	1.60	1.75 - 3.0/14-8	5-14	4	1.5	RH	N	○	●

● In stock ○ Available upon request

Partial Profile 55°



Partial Profile 55° Right Hand Inserts

Ordering Code	Dimensions mm				Pitch mm / TPI	No. of Passes	Rake Angle	Helix °	Thread Direction	Profile Side	Grade	
	W	R	t max	Y							VS020	VPG
ST85RTH4A55RHR	2.00	0.06	6.50	0.85	0.5 - 1.5/46-16	4-10	4	2.5	RH	R	○	●
ST85RTH4A55RHL	2.00	0.06	6.50	0.85	0.5 - 1.5/46-16	4-10	4	2.5	RH	L	○	●
ST85RTH4G55RH	3.20	0.25	8.50	1.60	1.75 - 3.0/14-8	5-14	4	1.5	RH	N	○	●

● In stock ○ Available upon request

Partial Profile 55° Left Hand Inserts

Ordering Code	Dimensions mm				Pitch mm / TPI	No. of Passes	Rake Angle	Helix °	Thread Direction	Profile Side	Grade	
	W	R	t max	Y							VS020	VPG
ST85LTH4A55RHR	2.00	0.06	6.50	0.85	0.5 - 1.5/46-16	4-10	4	2.5	RH	R	○	●
ST85LTH4A55RHL	2.00	0.06	6.50	0.85	0.5 - 1.5/46-16	4-10	4	2.5	RH	L	○	●
ST85LTH4G55RH	3.20	0.25	8.50	1.60	1.75 - 3.0/14-8	5-14	4	1.5	RH	N	○	●

● In stock ○ Available upon request

ST-Cut External Tools

Square Shank Tools.....	16
Stepped Square Shank Tools.....	17
Square Shanks 90° Tools.....	18

ST-Cut Tools - Ordering Code System

ST	E		SR	810		85	T30	
1	2	3	4	5	-	6	7	8

1- Line Name	2- Type	3- Approach Angle	4- RH or LH
ST - ST Cut	E - Square Shank R - Round Shank	None - 0° 90 - 90° 45 - 45°	R - RH Tool L - LH Tool SR - RH Stepped Shank, Sub spindle relief. See figure 1 SL - LH Stepped Shank, Main spindle relief SRS - RH Stepped Shank. Insert close to Sub spindle (left side). See figure 2 SLS - LH Stepped Shank. Close to Main spindle (right side)

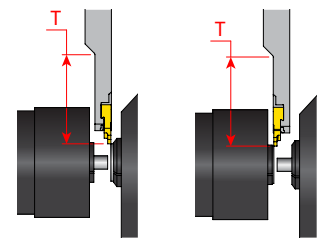



Figure 1
SR Tool - RH tool
with RH insert

Figure 2
SRS Tool - RH tool
with LH insert


5- Shank Size / Diameter	6- Max Radial Depth	7- Radial Depth Depth (Stepped Toolholders)	8- Coolant
0810 - 8x10mm 1010 - 10x10mm 1212 - 12x12mm 1616 - 16x16mm 2020 - 20x20mm 10 - Ø10mm	85 - Max Radial Depth 8.5mm	None - Non Stepped Shank T30 - Limit Depth of Step 30mm T40 - Limit Depth of Step 40mm	None - No coolant C - Coolant

Torque Limiting Accessories (Sold Separately):



Torque Limiting Handles

Ordering Code	Item Number	Range
VTRF 	013-01038	0.6 Nm to 3.0 Nm

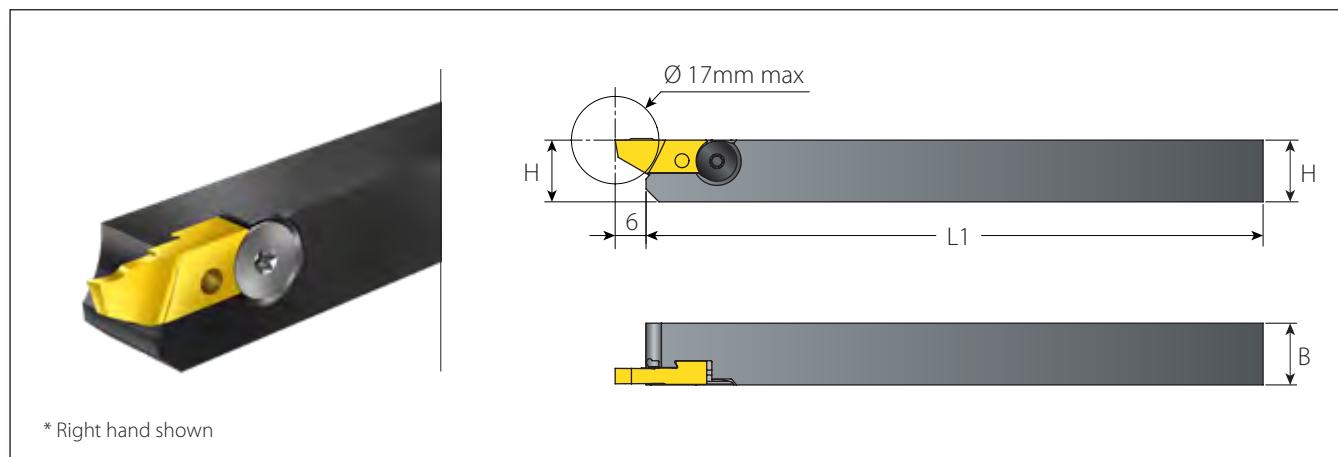
Torque Limiting Adapters

Ordering Code	Item Number	Torque Max (Nm)
 D02-12 -3.0Nm	013-01084	3.0




Torque Limiting Bits

Ordering Code	Item Number	Bit Type
 BIT25-TX10	013-01094	 Torx




Square Shank Tools



Square Shank **Right Hand** Tools

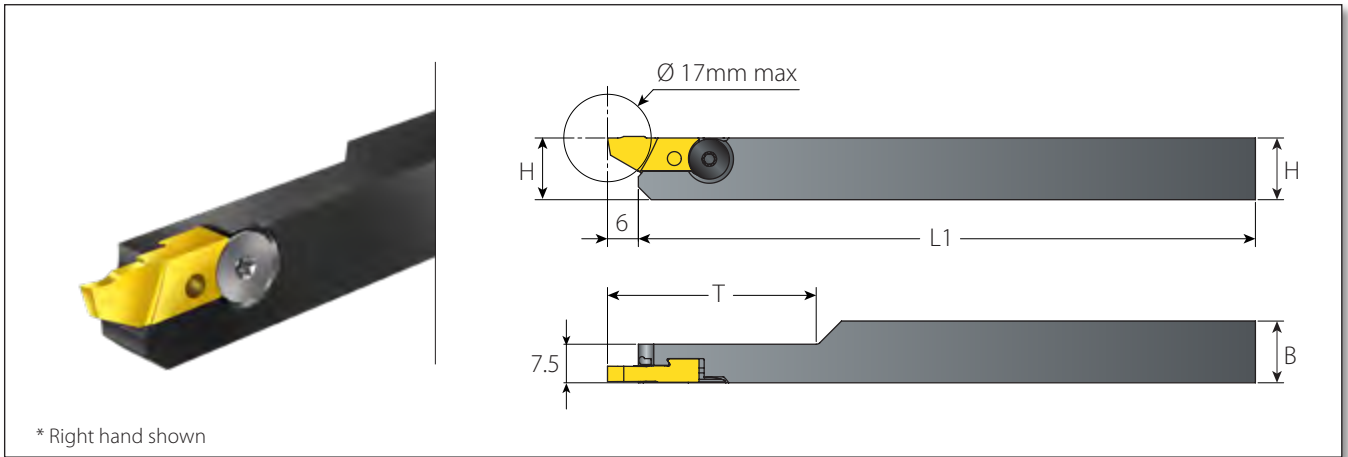
Insert Size	Ordering Code	Dimensions mm		Spare Parts		
		HxB	L1			
85	STER0810-85	8x10	110	SM5x0.8x9-T10 LH Torque Limit: 3.0Nm	K3T	D02-12-3.0Nm
	STER1010-85	10x10	110			
	STER1212-85	12x12	120			
	STER1616-85	16x16	120			
	STER2020-85	20x20	120			

Square Shank **Left Hand** Tools

Insert Size	Ordering Code	Dimensions mm		Spare Parts		
		HxB	L1			
85	STEL0810-85	8x10	110	SM5x0.8x9-T10 Torque Limit: 3.0Nm	K3T	D02-12-3.0Nm
	STEL1010-85	10x10	110			
	STEL1212-85	12x12	120			
	STEL1616-85	16x16	120			
	STEL2020-85	20x20	120			

I * Item sold separately. See page 15 for more details.

Stepped Square Shank Tools



Stepped Square Shank Right Hand Tools (STESR)

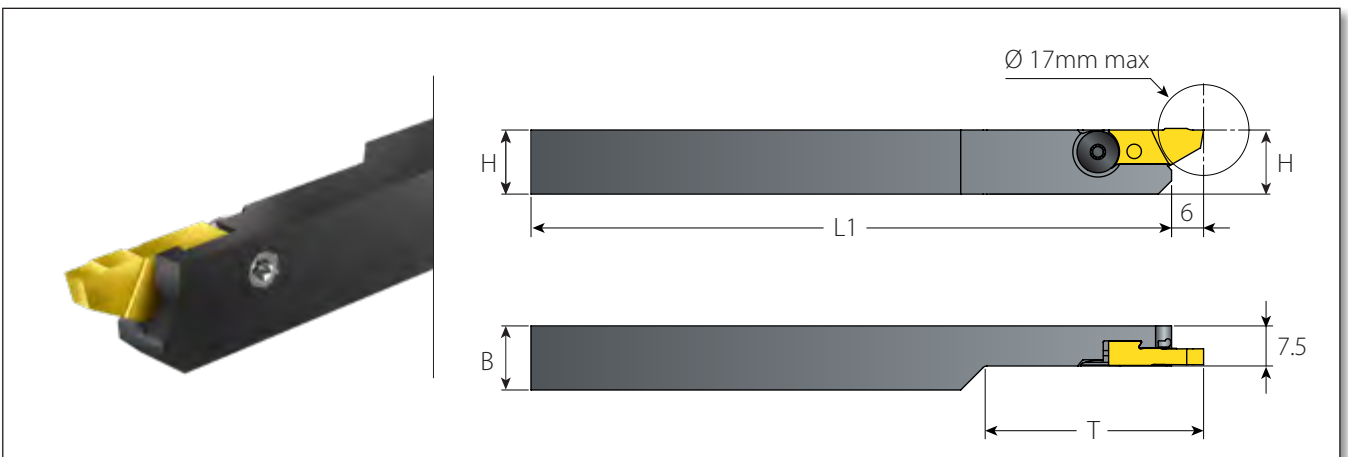
Insert Size	Ordering Code	Dimensions mm			Screw	Key	Torque Limiting Adapter*
		HxB	L1	T			
85	STESR0810-85T30	08x10	110	30	SM5x0.5x7-T10 Torque Limit: 3.0Nm	K3T	D02-12-3.0Nm
	STESR1010-85T30	10x10	110	30			
	STESR1212-85T40	12x12	120	40			
	STESR1616-85T40	16x16	120	40			

Spare Parts

Stepped Square Shank Left Hand Tools (STESL)

Insert Size	Ordering Code	Dimensions mm			Screw	Key	Torque Limiting Adapter*
		HxB	L1	T			
85	STESL0810-85T30	08x10	110	30	SM5x0.5x7-T10 Torque Limit: 3.0Nm	K3T	D02-12-3.0Nm
	STESL1010-85T30	10x10	110	30			
	STESL1212-85T40	12x12	120	40			
	STESL1616-85T40	16x16	120	40			

Spare Parts



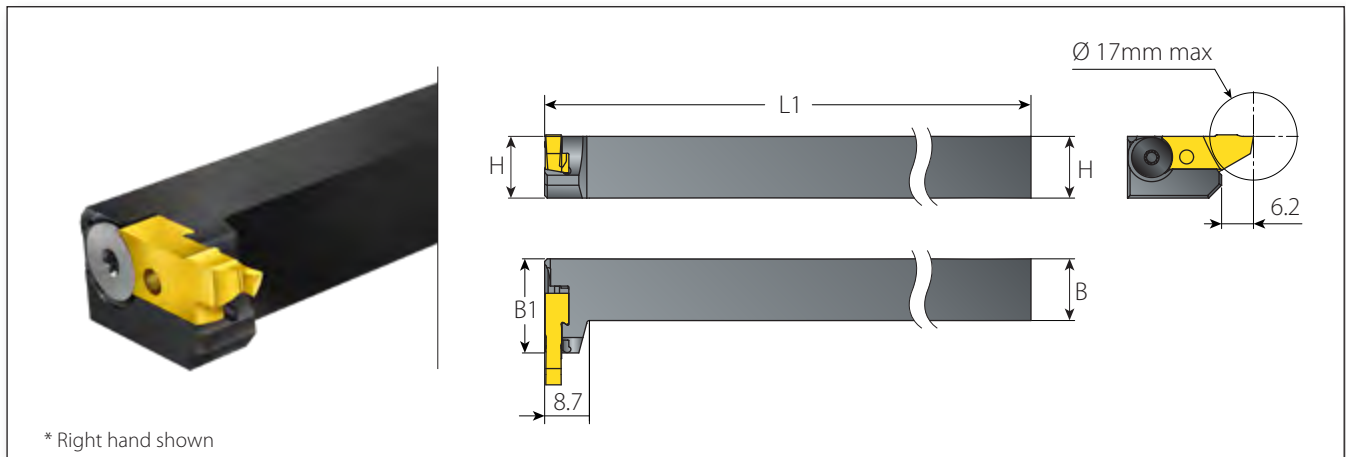
Stepped Square Shank Right Hand Tools (STESRS)

Insert Size	Ordering Code	Dimensions mm			Screw	Key	Torque Limiting Adapter*
		HxB	L1	T			
85	STESRS1010-85T30	10x10	110	30	SM5x0.5x7-T10 Torque Limit: 3.0Nm	K3T	D02-12-3.0Nm
	STESRS1212-85T40	12x12	120	40			
	STESRS1616-85T40	16x16	120	40			

Spare Parts




* Item sold separately. See page 15 for more details.

Square Shanks 90° Tools



Square Shank 90° Right Hand Tools

Spare Parts

Insert Size	Ordering Code	Dimensions mm					
		HxB	L1	B1	Screw	Key	Torque Limiting Adapter*
85	STE90R1010-85	10x10	110	18.3	SM5x0.8x9-T10 Torque Limit: 3.0Nm	K3T	D02-12-3.0Nm
	STE90R1212-85	12x12	120	18.3			

* Item sold separately. See page 15 for more details.

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Unique indexable inserts with 3 cutting edges and close to shoulder tools for groove turning, grooving, and parting off applications



VARDEX

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WITH HIGH PRESSURE COOLANT
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