

MILLING

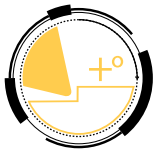
04-2022

MARCH 2022

METRIC

# NPA

New Product Announcement



Positive Insert  
Positioning



Dovetail

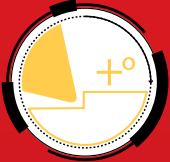


Double-Sided  
Insert



**NEODO**  
S90° LINE

## Expanded Range of NEODO S890 Indexable Milling Tools



Positive Insert Positioning



Dovetail



Double-Sided Insert

# NPA

## New Product Announcement

**NEODO**  
S90° LINE

## Highlights

### Increased Productivity and Cost Effectiveness

Following the success of the NEODO S890 family of indexable tools that mount square double-sided inserts with 8 cutting edges, **ISCAR** expands this family by introducing additional items:

- S890 SZMU 080408 inserts ... with 0.8 mm corner radius
- S890 FSZ D032-04-16-R08 facemill in a 32 mm diameter
- 25 mm and 32 mm diameter endmills designated S890 ESZ ...R08

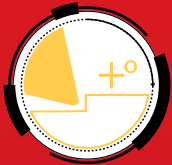
#### S890 SZMU 080408...inserts

The new 0.8 mm corner radius inserts are an addition to the existing range of inserts with 1.2 mm radius.

The new inserts have similar advantages to their predecessors

- A square double-sided pressed-to-size insert
- 8 helical right-hand cutting edges for machining at a depth of cut (D.O.C.) of up to 5 mm
- A special shaped rake face for ensuring a positive rake and reducing cutting forces when mounted on a tool
- A strong and durable insert structure
- A wide wiper flat for improving surface finish
- Effective and economical solution for milling face and square shoulders

The inserts are produced from SUMO TEC carbide grades that provide excellent performance and extended tool life.



Positive Insert Positioning



Dovetail



Double-Sided Insert

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#### S890 FSZ D032-04-16-R08

The new arbor-type 32 mm diameter face mill mounts S890 SZMU 0804... inserts and has a central bore in a diameter of 16 mm.

#### S890 ESZ ...R08

The new 25 mm and 32 mm diameter endmills feature a shank-type design configuration. They are available with cylindrical or Weldon shanks in a diameter range of 25 mm and 32 mm.

#### S890 ...R08 mill features:

- 90° cutting edge angle
- Maximum 5 mm D.O.C.
- Extremely rigid insert clamping due to the dovetail profile of an insert pocket and secured by clamping screws
- Higher tooth density for improved productivity
- Coolant holes (up to 125 mm diameter cutters) guarantee coolant directed to each cutting edge

NEODO S890 family provides the customer an effective and economical solution for milling face and square shoulder while ensuring excellent performance under diverse cutting conditions, including machining interrupted surfaces. Moreover, the insert design provides high cost-effectiveness for each cutting edge. The advanced cutting geometry of the NEODO indexable mill greatly contributes to reducing cutting forces, which guarantees smooth cutting and lower power consumption.

#### Machined materials

- ISO P (steel, ferritic and martensitic stainless steel)
- ISO K (cast iron) application groups

#### Advantages

- Productivity: High metal removal rates
- Economical: Inserts with 8 helical cutting edges
- Reliable: High process machining stability

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The new additions will expand the application range of the family, especially for efficient rough to semi-finish machining, predominantly steel and cast-iron when face milling next to shoulders under workpiece or work holding fixture constraints.

#### Cutting data

The table below defines initial feed rates.

For initial cutting speeds refer to **ISCAR**'s recommendations for carbide grades. For machining under unstable conditions, the table value of the initial feed should be reduced by 20-30%.

#### Availability

In stock.

### NEODO S890

**A new level of productivity and cost-effectiveness**

[Click for Short Video](#)

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### NEODO

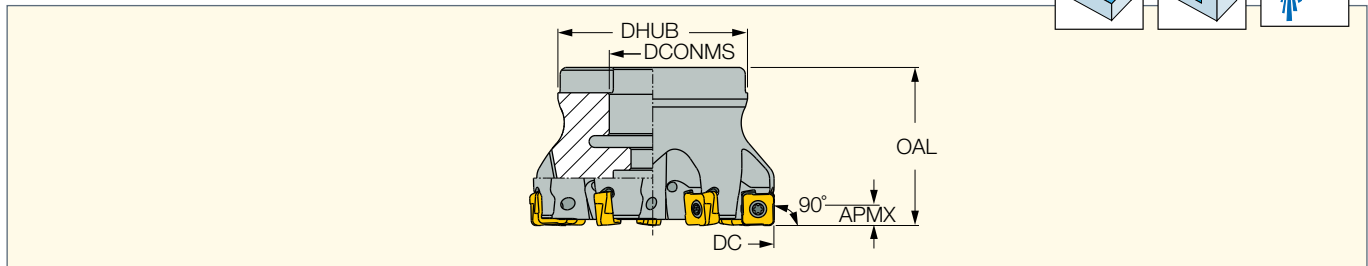
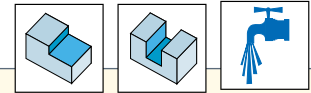
S90° LINE

### NEODO

S90° LINE

#### S890 FSZ-R08

Face Mills Carrying Double-Sided Square Inserts with 8 Cutting Edges



Designation	DC	APMX	OAL	CICT <sup>(1)</sup>	DCONMS	DHUB	Arbor	MIID <sup>(2)</sup>	
S890 FSZ D032-04-16-R08	32.00	5.00	32.00	4	16.00	30.00	A	S890 SZMU 0804...	0.20
S890 FSZ D040-05-16-R08	40.00	5.00	35.00	5	16.00	38.00	A	S890 SZMU 0804...	0.24
S890 FSZ D040-06-16-R08	40.00	5.00	35.00	6	16.00	38.00	A	S890 SZMU 0804...	0.34
S890 FSZ D050-06-22-R08	50.00	5.00	40.00	6	22.00	48.00	A	S890 SZMU 0804...	0.35
S890 FSZ D050-08-22-R08	50.00	5.00	40.00	8	22.00	48.00	A	S890 SZMU 0804...	0.39
S890 FSZ D063-07-22-R08	63.00	5.00	40.00	7	22.00	48.00	A	S890 SZMU 0804...	0.60
S890 FSZ D063-10-22-R08	63.00	5.00	40.00	10	22.00	48.00	A	S890 SZMU 0804...	0.58
S890 FSZ D080-08-27-R08	80.00	5.00	50.00	8	27.00	60.00	B	S890 SZMU 0804...	0.98
S890 FSZ D080-12-27-R08	80.00	5.00	50.00	12	27.00	60.00	B	S890 SZMU 0804...	0.93
S890 FSZ D100-10-32-R08	100.00	5.00	50.00	10	32.00	78.00	B	S890 SZMU 0804...	1.52
S890 FSZ D100-14-32-R08	100.00	5.00	50.00	14	32.00	78.00	B	S890 SZMU 0804...	1.50
S890 FSZ D125-12-40-R08	125.00	5.00	50.00	12	40.00	92.00	B	S890 SZMU 0804...	2.29
S890 FSZ D125-18-40-R08	125.00	5.00	50.00	18	40.00	92.00	B	S890 SZMU 0804...	2.32

<sup>(1)</sup> Number of inserts

<sup>(2)</sup> Master insert identification

#### Spare Parts



Designation	Screw	Key	Screw 1
S890 FSZ D032-04-16-R08	SR M3X0.5-L7.4 IP9	IP-9/151	SR M8X32 D11-C50-H6
S890 FSZ D040-05-16-R08	SR M3X0.5-L7.4 IP9	IP-9/151	SR M8X25DIN912
S890 FSZ D040-06-16-R08	SR M3X0.5-L7.4 IP9	IP-9/151	SR M8X25DIN912
S890 FSZ D050-06-22-R08	SR M3X0.5-L7.4 IP9	IP-9/151	SR M10X25 DIN912
S890 FSZ D050-08-22-R08	SR M3X0.5-L7.4 IP9	IP-9/151	SR M10X25 DIN912
S890 FSZ D063-07-22-R08	SR M3X0.5-L7.4 IP9	IP-9/151	SR M10X25 DIN912
S890 FSZ D063-10-22-R08	SR M3X0.5-L7.4 IP9	IP-9/151	SR M10X25 DIN912
S890 FSZ D080-08-27-R08	SR M3X0.5-L7.4 IP9	IP-9/151	
S890 FSZ D080-12-27-R08	SR M3X0.5-L7.4 IP9	IP-9/151	
S890 FSZ D100-10-32-R08	SR M3X0.5-L7.4 IP9	IP-9/151	
S890 FSZ D100-14-32-R08	SR M3X0.5-L7.4 IP9	IP-9/151	
S890 FSZ D125-12-40-R08	SR M3X0.5-L7.4 IP9	IP-9/151	
S890 FSZ D125-18-40-R08	SR M3X0.5-L7.4 IP9	IP-9/151	

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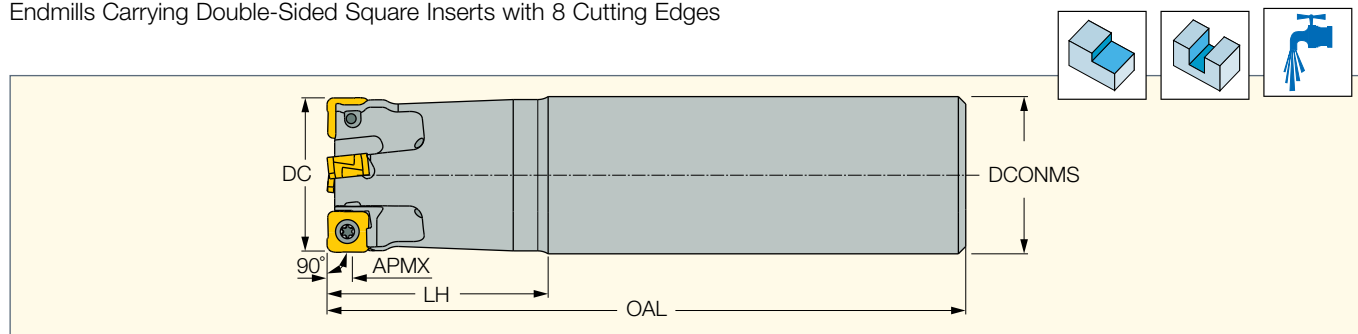
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## NEODO S90° LINE

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#### S890 ESZ-R08 Endmills Carrying Double-Sided Square Inserts with 8 Cutting Edges



Designation	DC	APMX	CICT <sup>(1)</sup>	LH	OAL	DCONMS	Shank <sup>(2)</sup>	MIID <sup>(3)</sup>	
S890 ESZ D25-3-C25-R08	25.00	5.00	3	35.0	120.00	25.00	C	S890 SZMU 0804	0.35
S890 ESZ D25-3-W25-R08	25.00	5.00	3	35.0	95.00	25.00	W	S890 SZMU 0804	0.07
S890 ESZ D32-4-C32-R08	32.00	5.00	4	45.0	130.00	32.00	C	S890 SZMU 0804	0.66
S890 ESZ D32-4-W32-R08	32.00	5.00	4	45.0	110.00	32.00	W	S890 SZMU 0804	0.17

<sup>(1)</sup> Number of inserts

<sup>(2)</sup> C-Cylindrical, W-Weldon

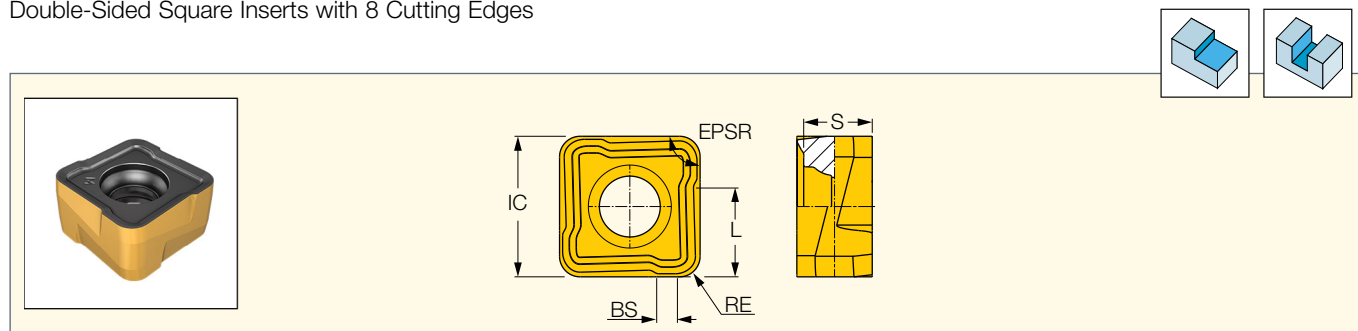
<sup>(3)</sup> Master insert identification

#### Spare Parts

Designation	Screw	Key
S890 ESZ-R08	SR M3X0.5-L7.4 IP9	IP-9/151

### NEODO S90° LINE

#### S890 SZMU-0804PN Double-Sided Square Inserts with 8 Cutting Edges



Designation	Dimensions							Tough ↔ Hard						Recommended Machining Data  f <sub>z</sub> (mm/t)
	IC	S	L	APMX	BS	RE	EPSR	IC845	IC830	IC5400	IC808	IC810	IC5100	
S890 SZMU 080408PNTR	8.20	4.00	5.20	5.00	1.60	0.80	88.4					•		0.12-0.25
S890 SZMU 080412PNTR	8.20	4.00	5.20	5.00	1.20	1.20	88.4					•	•	0.12-0.25
S890 SZMU 080408PNRMM	8.20	4.00	5.20	5.00	1.60	0.80	88.4		•		•			0.08-0.25
S890 SZMU 080412PNRMM	8.20	4.00	5.20	5.00	1.20	1.20	88.4	•	•	•	•			0.08-0.25

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## Starting feed for tools with S890 SZMU 08 inserts

ISO class DIN/ISO 513	Description	Workpiece material				f <sub>z</sub> , mm/tooth, for grades*				
		Typical representative		Hardness, HB	ISCAR mat. group**	IC 5100	IC810	IC808	IC830/ IC845	IC5400
		AISI/SAE/ASTM	DIN W.-Nr.							
<b>P</b>	Non-alloy steel	1020	1.0044	130-180	1			0.1-0.25	0.1-0.25	0.1-0.25
	Alloy steel	4340	1.6582	260-300	8			0.1-0.2	0.1-0.2	0.1-0.2
		4340	1.6582	HRC 35-42*	9			0.1-0.2	0.1-0.2	0.1-0.2
	High alloy steel	H13	1.2344	200-220	10			0.08-0.15	0.08-0.15	0.08-0.15
	Martensitic s.s	420	1.4021	200	12			0.08-0.15	0.08-0.15	0.08-0.15
<b>M</b>	Austenitic s.s.	304L	1.4306	200	14			0.1-0.15	0.1-0.15	0.1-0.15
		316L	1.4404	140	14			0.1-0.15	0.1-0.15	0.1-0.15
<b>K</b>	Grey cast iron	Class 40	0.6025 (GG25)	250	16	0.15-0.25	0.15-0.25			
	Nodular cast iron	Class 65-45-12	0.7050 (GGG50)	200	17	0.12-0.2	0.12-0.2			
<b>H</b>	Hard steel and cast iron	H11	1.2343	HRC 45-49	38.1			0.06-0.12	0.06-0.12	0.06-0.12
		P20	1.2330	HRC 50-55	38.2			0.05-0.1	0.05-0.1	0.05-0.1

\* Quenched and tempered

\*\* ISCAR material group in accordance with VDI 3323 standard

**When stepdown milling is performed using passes, the depth of cut per pass should not exceed the depth of cut recommended in the ISCAR catalog.**

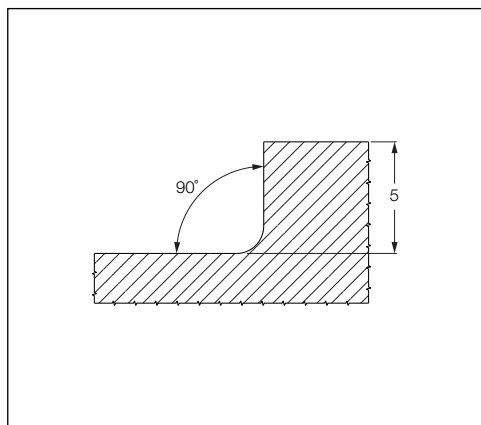


Fig. 1- Generated profile for a depth of cut of up to 5 mm

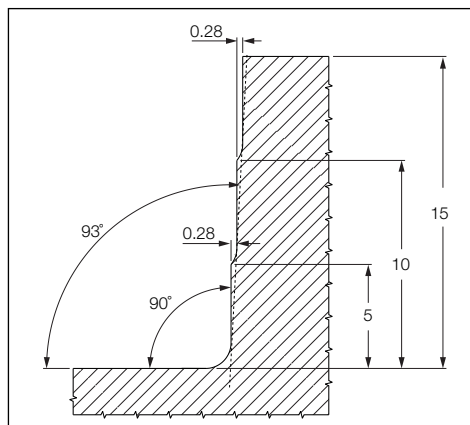


Fig. 2- Generated profile for a depth of cut in stepdown milling