NPA
New Product Announcement
MILLING | 34-2021 | SEPTEMBER 2021 • METRIC | PAGE 1 / 5

MILL4FEED
HIGH FEED

The MILL-4-FEED Family Application Range Expands with New Inserts

Member IMC Group
ISCAR

MILL4FEED HIGH FEED

Highlights

In response to the growing market demands, ISCAR is expanding the MILL-4-FEED family of fast feed milling tools by adding the following new products:

FFQ4 SOMW... Insert Features

- Flat chipformer available for insert sizes 09,12,17.
- 4 indexable reinforced cutting edges.
- Increased corner radius for improved performance in near-to-wall machining.
- Produced from ISCAR's advanced SUMOTEC carbide grade for assured high productivity.
- The combination of advanced design with high-technology carbide grades results in significantly improved resistance to edge breakage and chipping, which provides better tool life and opens opportunities for increasing productivity in fast feed milling, especially cutting hard materials and machining continuous surfaces.

Marketing

We expect these new inserts will expand the application field of the MILL-4-FEED family and will provide ISCAR's customers with a reliable solution for machining hard materials in fast feed milling with significant impact loading. The new inserts will promote the increase of ISCAR'S market share of milling products.

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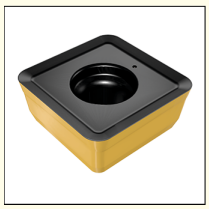
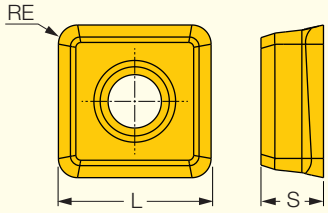
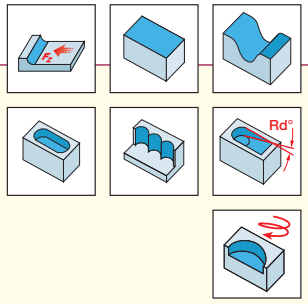
FFQ4 SOMT/W 0904

Square Single-Sided Inserts with 4 Cutting Edges for Fast Feed Milling

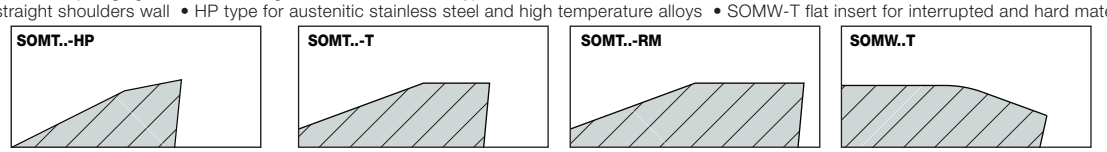






Designation	Dimensions L	S	RE	Tough ↔ Hard IC882	IC830	IC5820	IC808	IC810
FFQ4 SOMT 090412T	8.50	3.90	1.20		●		●	●
FFQ4 SOMT 0904RM-T	8.60	3.80	1.20				●	
FFQ4 SOMT 0904RM-HP	8.60	3.80	1.20	●				
FFQ4 SOMT 090412HP	8.50	3.80	1.20	●	●	●	●	
NEW FFQ4 SOMW 090420T	8.80	3.90	2.00				●	

• For side plunging, the initial cutting feed is 0.1 mm/t • T type for steel, ferritic and martensitic stainless steel, cast iron • RM-.. reinforced radius type for machining near straight shoulders wall • HP type for austenitic stainless steel and high temperature alloys • SOMW-T flat insert for interrupted and hard material up to 60 HRC



Averaged cutting data for FFQ4-09 fast feed cutters

Workpiece Material: ISO classDIN/ ISO 513	Description	ISCAR mat. group*	Hardness, HB	Typical representstive: AISI/SAE/ASTM	DIN W.-Nr.	Insert type	Carbide grade	D.O.C. Ap [mm]: Recom-mended	Range	Cutting speed V_c, [m/min]	Feed f_z [mm/tooth]: Recom-mended	Range	Coolant
P	Non-alloysteel	1-5	130-180	1020	1.0402	T / RM-T	IC808	1.0	0.4-1.2	150-220	1.2	0.5-1.5	Dry
							IC830			140-200	1.3	0.5-1.5	Dry/Wet
	Low alloysteel	6-8	260-300	4340	1.6582		IC808			140-200	1.2	0.5-1.5	Dry
							IC830			120-180	1.3	0.5-1.5	Dry/Wet
		9	HRC 35-42	3135	1.5710		IC808			130-180	1.2	0.5-1.4	Dry
							IC830			120-160	1.2	0.5-1.4	Dry/Wet
	High alloysteel	10-11	200-220	H13	1.2344		IC808			120-170	1.2	0.5-1.4	Dry
							IC830			100-150	1.3	0.5-1.4	Dry/Wet
	Ferritic/martensitic stainless steel	12-13	200	420	1.4021		IC808			110-160	1.2	0.5-1.4	Dry
							IC830			100-150	1.3	0.5-1.4	Dry/Wet
M	Austenitic stainless steel	14	200	304L	1.4306	HP	IC830	1.0	0.4-1.2	80-140	1.0	0.5-1.2	Wet
							IC808			100-160	1.0	0.5-1.2	
							IC5820			100-160	1.0	0.5-1.3	
							IC882			80-130	1.0	0.5-1.4	
K	Grey cast iron	15-16	250	Class 40	0.6025 (GG25)	T20 / RM-T	IC810	1.2	0.4-1.2	150-220	1.2	0.5-1.5	Dry
	Nodular cast iron	17-18	200	Class 65-45-12	0.7050 (GGG50)		IC810			120-200	1.2	0.5-1.5	
S	High temperature alloys and titanium	33-35	340	Inconel 718	2.4668	HP	IC830	1.0	0.4-1.2	25-35	0.5	0.5-1.0	Wet
							IC808			25-36	0.5	0.5-1.0	
							IC5820			25-40	0.5	0.5-1.0	
							IC882			25-35	0.5	0.5-1.0	
		36-37	HRC 35-40	AMS R56400	3.7165 (Ti6Al4V ELI)		IC830			40-55	0.6	0.5-1.0	
							IC808			40-55	0.6	0.5-1.0	
							IC5820			30-60	0.6	0.5-1.0	
							IC882			35-55	0.6	0.5-1.0	
H	Hardened steel	38	HRC 45-49	HARDOX 450 plate		SOMW	IC808	1	0.3-1.0	55-75	0.5	0.3-1.0	Dry
			HRC 58-62	D2	1.2379			0.3**	0.3-1.0	50-70	0.3	0.3-0.5	

* ISCAR material group in accordance with VDI 3323 standard

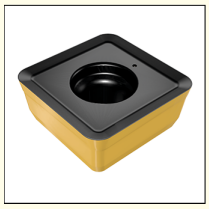
** For better performance it recommended to machine with a width of cut up to 0.4*DC

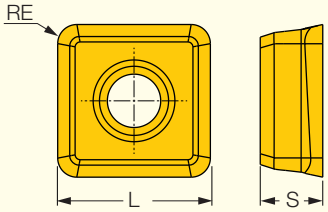
For machining in unstable conditions, the recommended cutting data should be reduced by 20-30%

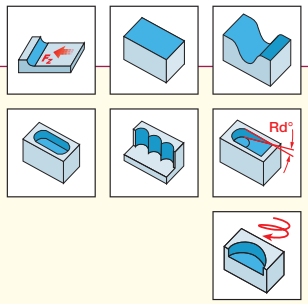
MILL4FEED HIGH FEED

FFQ4 SOMT/W 1205

Square Single-Sided Inserts with 4 Cutting Edges for Fast Feed Milling

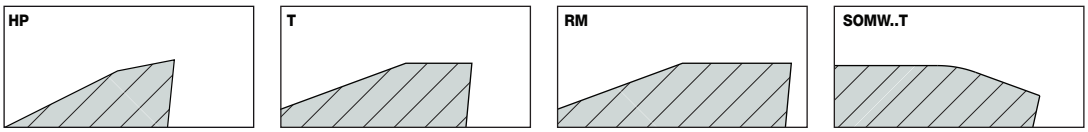






Designation	Dimensions L	S	RE	Tough ↔ Hard IC882	IC830	IC5820	IC808	IC810
FFQ4 SOMT 1205RM-HP	12.70	5.20	1.60	●	●			
FFQ4 SOMT 1205RM-T	12.70	5.20	1.60				●	
FFQ4 SOMT 120516HP	12.70	5.20	1.60	●	●	●	●	
FFQ4 SOMT 120516T	12.70	5.20	1.60		●		●	
FFQ4 SOMT 120516T20	12.70	5.20	1.60					●
NEW FFQ4 SOMW 120530T	13.00	5.30	3.00				●	

• For side plunging, the initial cutting feed is 0.1 mm/t • T- for steel, ferritic and martensitic stainless steel, cast iron and hardened steel • RM-.. type for interrupted cut and machining near straight shoulders wall • HP- for austenitic stainless steel and high temperature alloys • T20- for grey and nodular cast iron • SOMW-T flat insert for interrupted and hard material up to 60 HRC



Averaged cutting data for FFQ4-12 fast feed cutters

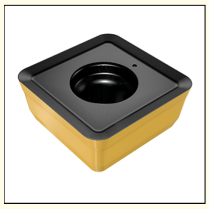
ISO classDIN/ ISO 513	Workpiece Material: Description	ISCAR mat. group*	Hardness, HB	Typical representstive: AISI/SAE/ASTM	DIN W.-Nr.	Insert type	Carbide grade	D.O.C. Ap [mm]: Recom-mended	Range	Cutting speed V_c, [m/min]	Feed f_z [mm/tooth]: Recom-mended	Range	Coolant
P	Non-alloysteel	1-5	130-180	1020	1.0402	T / RM-T	IC808	1.2	0.4-1.5	150-220	1.5	0.5-2.0	Dry
							IC830			140-200	1.6	0.5-2.0	Dry/Wet
	Low alloysteel	6-8	260-300	4340	1.6582		IC808			140-200	1.5	0.5-2.0	Dry
							IC830			120-180	1.6	0.5-2.0	Dry/Wet
		9	HRC 35-42	3135	1.5710		IC808			130-180	1.5	0.5-1.8	Dry
							IC830			120-160	1.5	0.5-1.8	Dry/Wet
	High alloysteel	10-11	200-220	H13	1.2344		IC808			120-170	1.3	0.5-1.8	Dry
							IC830			100-150	1.4	0.5-1.8	Dry/Wet
	Ferritic/martensitic stainless steel	12-13	200	420	1.4021		IC808			110-160	1.3	0.5-1.8	Dry
							IC830			100-150	1.4	0.5-1.8	Dry/Wet
M	Austenitic stainless steel	14	200	304L	1.4306	HP	IC830	1.0	0.4-1.5	80-140	1.0	0.5-1.5	Wet
							IC808			100-160	1.0	0.5-1.5	
							IC5820			100-160	1.0	0.5-1.6	
							IC882			80-130	1.0	0.5-1.8	
K	Grey cast iron	15-16	250	Class 40	0.6025 (GG25)	T20 / RM-T	IC810	1.5	0.4-1.5	150-220	1.5	0.5-2.0	Dry
	Nodular cast iron	17-18	200	Class 65-45-12	0.7050 (GGG50)		IC810			120-200	1.5	0.5-2.0	
S	High temperature alloys and titanium	33-35	340	Inconel 718	2.4668	HP	IC830	1.0	0.4-1.5	25-35	0.5	0.5-1.0	Wet
							IC808			25-36	0.5	0.5-1.0	
							IC5820			25-40	0.5	0.5-1.0	
							IC882			25-35	0.5	0.5-1.0	
		36-37	HRC 35-40	AMS R56400	3.7165 (Ti6Al4V ELI)		IC830			40-55	0.6	0.5-1.0	
							IC808			40-55	0.6	0.5-1.0	
							IC5820			30-60	0.6	0.5-1.0	
							IC882			35-55	0.6	0.5-1.0	
H	Hardened steel	38	HRC 45-49	HARDOX 450 plate		SOMW	IC808	1.0	0.3-1.2	55-75	0.5	0.3-1.0	Dry
			HRC 58-62	D2	1.2379			0.5**	0.3-1.2	50-70	0.3	0.3-0.5	

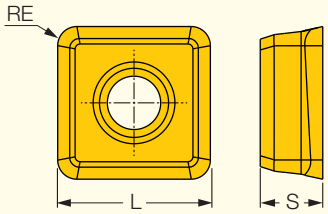
* ISCAR material group in accordance with VDI 3323 standard
** For better performance it recommended to machine with a width of cut up to 0.4*DC
For machining in unstable conditions, the recommended cutting data should be reduced by 20-30%

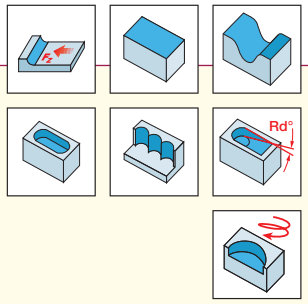
MILL4FEED HIGH FEED

FFQ4 SOMT/W 1706

Square Single-Sided Inserts with 4 Cutting Edges for Fast Feed Milling

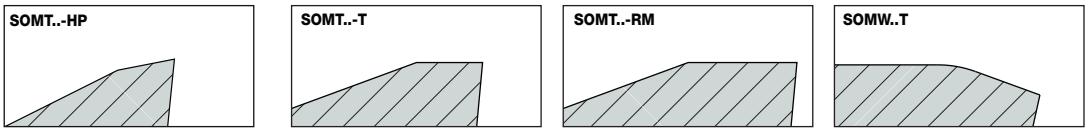






Designation	Dimensions L	S	RE	Tough ↔ Hard IC882	IC830	IC808	IC810
FFQ4 SOMT 1706RM-HP	17.50	6.00	2.50		•		
FFQ4 SOMT 1706RM-T	17.50	6.00	2.50			•	
FFQ4 SOMT 170625HP	17.50	6.00	2.50	•	•	•	
FFQ4 SOMT 170625T	17.50	6.00	2.50		•	•	•
NEW FFQ4 SOMW 170640T	18.00	6.10	4.00			•	

• For side plunging, the initial cutting feed is 0.1 mm/t • T type for steel, ferritic and martensitic stainless steel, cast iron and hardened steel • RM-.. type for interrupted cut and machining near straight shoulders wall • HP type for austenitic stainless steel and high temperature alloys • SOMW-T flat insert for interrupted and hard material up to 60 HRC



Averaged cutting data for FFQ4-17 fast feed cutters

Workpiece Material: ISO classDIN/ ISO 513	Description	ISCAR mat. group*	Hardness, HB	Typical representstive: AISI/SAE/ASTM	DIN W.-Nr.	Insert type	Carbide grade	D.O.C. Ap [mm]: Recom-mended	Range	Cutting speed Vc, [m/min]	Feed fz [mm/tooth]: Recom-mended	Range	Coolant
P	Non-alloysteel	1-5	130-180	1020	1.0402	T / RM-T	IC808	2.5	0.4-3.0	150-220	1.5	0.5-2.0	Dry
							IC830			140-200	1.6	0.5-2.0	Dry/Wet
	Low alloysteel	6-8	260-300	4340	1.6582		IC808			140-200	1.5	0.5-2.0	Dry
							IC830			120-180	1.6	0.5-2.0	Dry/Wet
		9	HRC 35-42	3135	1.5710		IC808			130-180	1.5	0.5-1.8	Dry
							IC830			120-160	1.5	0.5-1.8	Dry/Wet
	High alloysteel	10-11	200-220	H13	1.2344		IC808			120-170	1.3	0.5-1.8	Dry
							IC830			100-150	1.4	0.5-1.8	Dry/Wet
	Ferritic/martensitic stainless steel	12-13	200	420	1.4021		IC808			110-160	1.3	0.5-1.8	Dry
							IC830			100-150	1.4	0.5-1.8	Dry/Wet
M	Austenitic stainless steel	14	200	304L	1.4306	HP	IC830	2.0	0.4-3.0	80-140	1.0	0.5-1.5	Wet
							IC808			100-160	1.0	0.5-1.5	
							IC5820			100-160	1.0	0.5-1.6	
							IC882			80-130	1.0	0.5-1.8	
K	Grey cast iron	15-16	250	Class 40	0.6025 (GG25)	T20 / RM-T	IC810	3.0	0.4-3.0	150-220	1.5	0.5-2.0	Dry
	Nodular cast iron	17-18	200	Class 65-45-12	0.7050 (GGG50)		IC810			120-200	1.5	0.5-2.0	
S	High temperature alloys and titanium	33-35	340	Inconel 718	2.4668	HP	IC830	1.5	0.4-3.0	25-35	0.5	0.5-1.0	Wet
							IC808			25-36	0.5	0.5-1.0	
							IC5820			25-40	0.5	0.5-1.0	
							IC882			25-35	0.5	0.5-1.0	
		36-37	HRC 35-40	AMS R56400	3.7165 (Ti6Al4V ELI)		IC830			40-55	0.6	0.5-1.0	
							IC808			40-55	0.6	0.5-1.0	
							IC5820			30-60	0.6	0.5-1.0	
							IC882			35-55	0.6	0.5-1.0	
H	Hardened steel	38	HRC 45-49	HARDOX 450 plate		SOMW	IC808	1	0.3-2.5	55-75	0.5	0.3-1.0	Dry
			HRC 58-62	D2	1.2379			0.5**	0.3-2.5	50-70	0.3	0.3-0.5	

* ISCAR material group in accordance with VDI 3323 standard

** For better performance it recommended to machine with a width of cut up to 0.4*DC

For machining in unstable conditions, the recommended cutting data should be reduced by 20-30%