



# MILLSTAR® TOOLING

## Quad Force Tooling System Offers 4-in-1 Performance Versatility



Millstar has launched the Quad Force Machining Tooling System with 4-in-1 performance versatility. The solid carbide tooling system provides 4 cutting actions in 1 for satisfying application requirements in nearly any industry and expert metal removal rates in soft or hard tool/die steels, stainless steels and titanium. The Quad Force Machining Tooling System features a hybrid combination of geometries including high feed geometry, variable flute geometry, variable helix geometry, and offset geometry. QFM performs high feed machining, trochoidal machining, side/slot milling and plunge milling.

### Quad Force Machining Program – Inch

Part Number	Cutting Diameter	Shank Diameter	Length of Flute	Overall Length	Programmable Radius
QFM-0125-HSN	1/8	1/8	1/2	1 1/2	0.018
QFM-0187-HSN	3/16	3/16	5/8	2	0.021
QFM-0250-HSN	1/4	1/4	3/4	2 1/2	0.032
QFM-0375-HSN	3/8	3/8	1	2 1/2	0.140
QFM-0500-HSN	1/2	1/2	1.2	3	0.170
QFM-0625-HSN	5/8	5/8	1.45	3 1/2	0.200
QFM-0750-HSN	3/4	3/4	1.7	4	0.250
QFM-1000-HSN	1	1	2.2	4	0.310

### Quad Force Machining Program – Metric (mm)

Part Number	Cutting Diameter	Shank Diameter	Length of Flute	Overall Length	Programmable Radius
QFM-04-HSN	4	4	14	51	0,57
QFM-06-HSN	6	6	20	63	0,80
QFM-08-HSN	8	8	20	63	1,10
QFM-10-HSN	10	10	25	70	3,30
QFM-12-HSN	12	12	29	76	4,20
QFM-16-HSN	16	16	37	89	5

### Quad Force Application Data – Inch (QFM-0375-HSN)

	Side/Slot Milling	High Feed Machining	Trochoidal	Plunge Milling
Tool Diameter	0.375"	0.375"	0.375"	0.375"
Spindle Speed	6265 RPM	6265 RPM	6265 RPM	6265 RPM
Feed Rate	225 IPM	225 IPM	225 IPM	225 IPM
Depth of Cut	0.750"	0.012"	0.750"	0 - 0.750"
Width of Cut	0.012"	0.225"	0.012"	0.012"
Metal Removal Rate	2.03	1.12	2.03	2.03
Material	P20	P20	P20	P20

### Quad Force Application Data – Metric (QFM-10-HSN)

	Side/Slot Milling	High Feed Machining	Trochoidal	Plunge Milling
Tool Diameter	10 mm	10 mm	10 mm	10 mm
Spindle Speed	6265 RPM	6265 RPM	6265 RPM	6265 RPM
Feed Rate	5700	5700	5700	5700
Depth of Cut	20 mm	0.3 mm	0.3 mm	0 - 20 mm
Width of Cut	0.3 mm	6 mm	6 mm	0.3 mm
Metal Removal Rate	34.2	10.26	10.26	34.2
Material	P20	P20	P20	P20

