

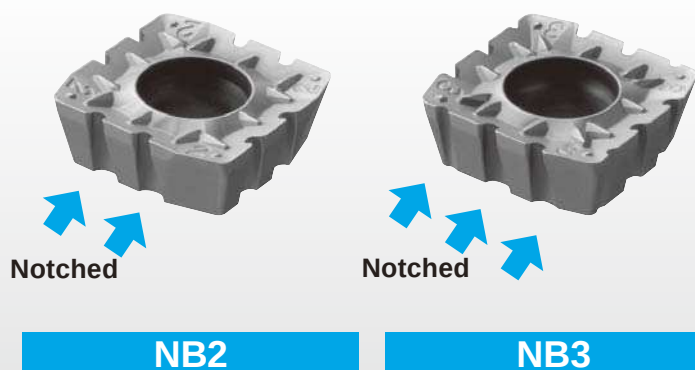
Face Mill for Heavy Milling MSRS



Facing

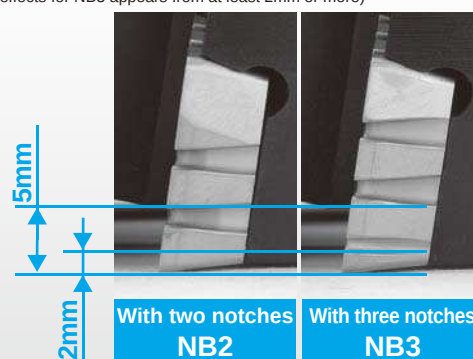
Notched insert reduces cutting force, chattering and enables efficient machining

Notched Insert



Notch effect

The effects of the notch can be seen at more than 5mm of vertical ap (effects for NB3 appears from at least 2mm or more)



Design to suppress chattering with low cutting force

Possible to machine thin-plate workpieces (low rigidity material such as can manufacturing equipment)



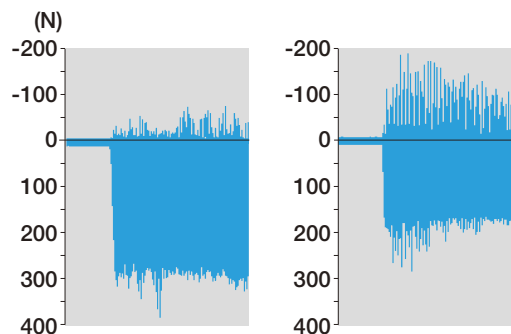
MSRS15160R-8T

Workpiece Material: C50 (S50C)
 $V_c=200\text{m/min}$ ($n=398\text{min}^{-1}$)
 $f_z=0.15\text{mm/t}$ ($V_f=477\text{mm/min}$), $a_p \times a_e=6 \times 100\text{mm}$
 (Machining of overhang from 15mm to 9mm)

Comparison of cutting force (radial force)

MSRS Type suppresses chattering since less force to lift workpiece is needed during machining.

Direction of lift up the workpiece



Direction of press down the workpiece

MSRS

Competitor A

Features of Toolholder

Coarse pitch type

Design of large chip pocket
 Good Chip Evacuation

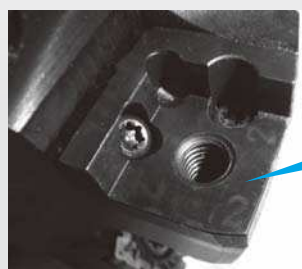
Adoption of cartridge (coarse pitch type)
 Damage prevention of base body

Display the applicable insert
 number (Notch number)

Close pitch type

Higher productivity due to close pitch design

Insert Replacement Identification



Insert number is transcribed as a result of the cutting tool load.

*Depending on the cutting conditions, marks are not transcribed.