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New PVD turning grade

DTP4015S

ISO
S

Cutting the **toughest** materials, **smoothly**!



Copper colour edges dual tone insert for **low friction** in 'S' class materials.

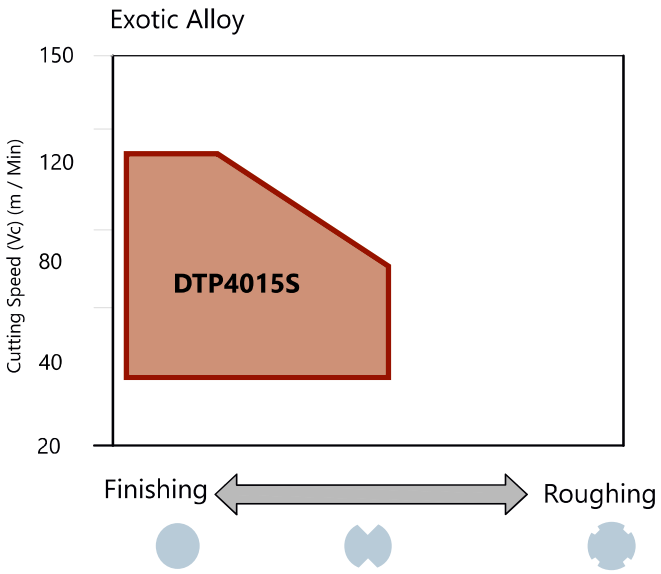
Precision **turning** even under extreme heat and load.

Brochure/MDC/2025/006/26E1

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Application area



Machining of **exotic materials** is often challenging due to peculiar properties of the workpiece materials. High work hardening, lower thermal conductivity etc., often leading to a high thermal as well as mechanical load at the cutting edge. This challenge is effectively met with the help of a **specially engineered grade DTP4015S.**

DTP4015S is the first choice grade for Machining of Heat Resistant Alloy Steels and Nickel and cobalt based Superalloys under finishing to semi finishing conditions. Ideal for machining of Engine Valves.

Grade description

- **Advanced Coating**: High wear-resistance with excellent adhesion and low friction for longer tool life.
- **A dual tone insert with copper colour at the cutting edges.**
- **Built for the heat saturation and loads** encountered in exotic machining.
- **Application Focus**: Specifically designed for machining of Engine valves.
- **High-Temperature Performance**: Withstands extreme heat generated at the cutting edge.
- **Stable Cutting**: Strong substrate ensures stable performance under continuous cuts to light interruptions.
- **Wider Application area**: One grade can substitute for 2 grades (S10 and S20), leading to better inventory control and savings.

RECOMMENDED Cutting parameters

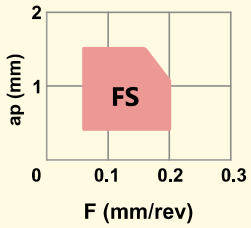
Material	Parameters	for DTP4015S
HRSA and Nickel/Cobalt based Superalloys	Speed (m/min)	40 — **60** (Ideal condition) — 110
	Feed (mm/tooth)	0.1 — **0.15** (Ideal condition) — 0.20
	Depth of Cut (mm)	0.5 — **1.00** — 2.00
Titanium Alloys	Speed (m/min)	40 — **50** (Ideal condition) — 70
	Feed (mm/tooth)	0.1 — **0.2** (Ideal condition) — 0.25
	Depth of Cut (mm)	0.5 — **1.00** — 2.50

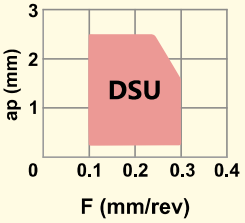
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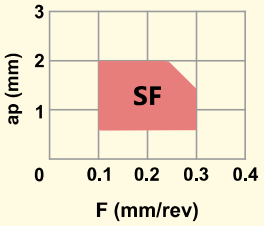
Chipbreaker application range

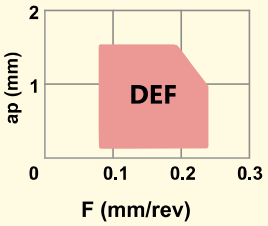
Positive

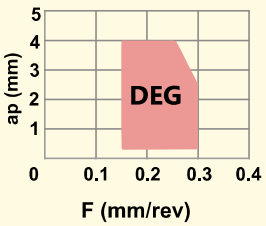


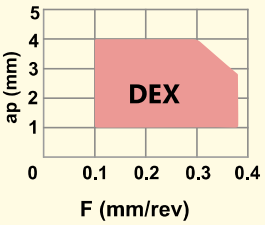


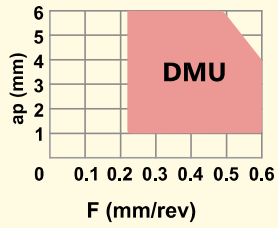
Negative

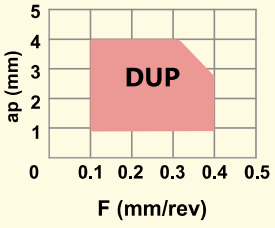












Success Case

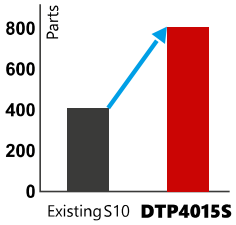
198% times tool life

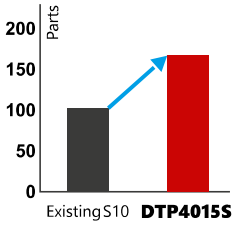
Profile Turning of EN-52 Engine Valve

Continuous Cut

Insert: TNMG160408-SF-DTP4015S

Vc=150m/min, f=0.2mm/rev, ap=0.3mm, Wet





OD + Chamfer machining of 21-4-N Engine Valve

Continuous Cut

Insert: SNMG120408-SF-DTP4015S

Vc=93/133m/min, f=0.12/0.14mm/rev, ap=0.3/0.15mm, Wet

160% times tool life

Savings through better inventory control

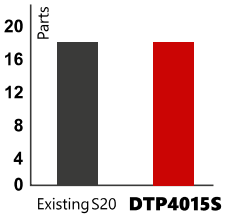
Turning of Martensitic stainless steel on a wobbling shaft (L/D = 5)

Excellent toughness and wear resistance

Continuous cut

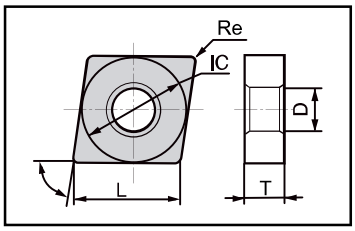
Insert: TNMG160408-SF-DTP4015S

Vc=98m/min, f=0.22mm/rev, ap=0.6mm, Wet



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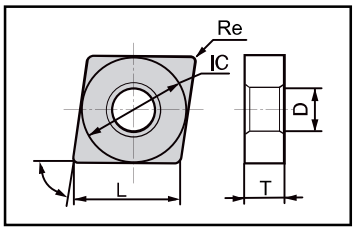
In Stock - ● Make to Order - ○

NEW In Stock - ● Make to Order - ○ (All dimensions are in mm)

Shape	Catalogue No.	Re Nose Radius	Grade DTP4015S	IC Inscribed circle	T Thickness	D Hole Dia.
Positive with Chip Breaker Geometry						
C 80°	CCMT060202-FS	0.2	●	6.35	2.38	2.8
	CCMT060204-FS	0.4	●	6.35	2.38	2.8
	CCMT060204-DSU	0.4	●	6.35	2.38	2.8
	CCMT060208-FS	0.8	●	6.35	2.38	2.8
	CCMT060208-DSU	0.8	●	6.35	2.38	2.8
	CCMT09T304-FS	0.4	●	6.35	3.97	4.4
	CCMT09T308-FS	0.8	●	6.35	3.97	4.4
	CCMT120404-FS	0.4	●	9.525	4.76	5.5
	CCMT120408-FS	0.8	●	9.525	4.76	5.5
D 55°	DCMT11T304-FS	0.4	●	9.525	3.97	4.4
	DCMT11T308-FS	0.8	●	9.525	3.97	4.4
S 90°	SCMT09T304-FS	0.4	●	9.525	3.97	4.4
	SCMT09T304-DSU	0.4	●	9.525	3.18	3.4
	SCMT09T308-FS	0.8	●	9.525	3.97	4.4
	SCMT09T308-DSU	0.8	●	9.525	3.18	3.4
	SCMT120404-FS	0.4	●	9.525	4.76	5.5
	SCMT120408-FS	0.8	●	9.525	4.76	5.5
T 60°	TPGW110304	0.4	●	6.35	3.18	3.4
	TCMT110204-FS	0.4	●	9.525	2.38	2.8
	TCMT110208-FS	0.8	●	9.525	2.38	2.8
	TCMT16T304-FS	0.4	●	9.525	3.97	4.4
	TCMT16T308-FS	0.8	●	9.525	3.97	4.4
	TCMT220408-DSK	0.8	●	12.7	4.76	5.5
V 35°	VBMT160404-FS	0.4	●	12.7	4.76	4.4
	VBMT160408-FS	0.8	●	12.7	4.76	4.4
	VCMT160404-FS	0.4	●	12.7	4.76	4.4
	VCMT160408-FS	0.8	●	12.7	4.76	4.4

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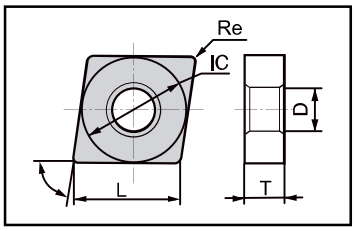
In Stock - ● Make to Order - ○

NEW In Stock - ● Make to Order - ○ **(All dimensions are in mm)**

Shape	Catalogue No.	Re Nose Radius	Grade DTP4015S	IC Inscribed circle	T Thickness	D Hole Dia.
Negative with Chip Breaker Geometry						
C 80°	CNMG120404-SF	0.4	●	12.7	4.76	5.16
	CNMG120404-DSU	0.4	●	12.7	4.76	5.16
	CNMG120404-DUP	0.4	●	12.7	4.76	5.16
	CNMG120408-SF	0.8	●	12.7	4.76	5.16
	CNMG120408-DEG	0.8	●	12.7	4.76	5.16
	CNMG120408-DEX	0.8	●	12.7	4.76	5.16
	CNMG120408-DMU	0.8	●	12.7	4.76	5.16
	CNMG120408-DUP	0.8	●	12.7	4.76	5.16
	CNMG120412-SF	1.2	●	12.7	4.76	5.16
	CNMG120412-DEG	1.2	●	12.7	4.76	5.16
	CNMG120412-DMU	1.2	●	12.7	4.76	5.16
	CNMG160612-DMU	1.2	●	15.875	6.35	6.35
D 55°	DNMG150408-DMU	0.8	●	12.7	4.76	5.16
	DNMG150412-DMU	1.2	●	12.7	4.76	5.16
	DNMG150604-SF	0.4	●	12.7	6.35	5.16
	DNMG150608-SF	0.8	●	12.7	6.35	5.16
	DNMG150608-DEG	0.8	●	12.7	6.35	5.16
S 90°	SNMG120404-MF	0.4	●	12.7	4.76	5.16
	SNMG120408-SF	0.8	●	12.7	4.76	5.16
	SNMG120408-DSU	0.8	●	12.7	4.76	5.16
	SNMG120408-DUP	0.8	●	12.7	4.76	5.16
T 60°	TNMG160402-DSU	0.2	●	9.525	4.76	3.81
	TNMG160404-SF	0.4	●	9.525	4.76	3.81
	TNMG160404-DEF	0.4	●	9.525	4.76	3.81
	TNMG160404-DEX	0.4	●	9.525	4.76	3.81
	TNMG160404-DSU	0.4	●	9.525	4.76	3.81
	TNMG160404-DUP	0.4	●	9.525	4.76	3.81
	TNMG160408-SF	0.8	●	9.525	4.76	3.81
	TNMG160408-DEG	0.8	●	9.525	4.76	3.81
	TNMG160408-DEX	0.8	●	9.525	4.76	3.81

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In Stock - ● Make to Order - ○

NEW In Stock - ● Make to Order - ○ **(All dimensions are in mm)**

Shape	Catalogue No.	Re Nose Radius	Grade DTP4015S	IC Inscribed circle	T Thickness	D Hole Dia.
Negative with Chip Breaker Geometry						
T 60°	**TNMG160408-DGU**	**0.8**	●	9.525	4.76	3.81
	TNMG160408-DSU	**0.8**	●	9.525	4.76	3.81
	TNMG160408-DUP	**0.8**	●	9.525	4.76	3.81
	TNMG160412-SF	**1.2**	●	9.525	4.76	3.81
	TNMG160412-DEX	**1.2**	●	9.525	4.76	3.81
	TNMG160412-DUP	**1.2**	●	9.525	4.76	3.81
V 35°	**VNMG160402-DSU**	**0.2**	●	9.525	4.76	3.81
	VNMG160404-SF	**0.4**	●	9.525	4.76	3.81
	VNMG160404-DSU	**0.4**	●	9.525	4.76	3.81
	VNMG160408-SF	**0.8**	●	9.525	4.76	3.81
	VNMG160408-DEG	**0.8**	●	9.525	4.76	3.81
	VNMG160408-DEX	**0.8**	●	9.525	4.76	3.81
W 80°	**WNMG080404-SF**	**0.4**	●	12.7	4.76	5.16
	WNMG080408-SF	**0.8**	●	12.7	4.76	5.16
	WNMG080412-SF	**1.2**	●	12.7	4.76	5.16
	WNMG080412-DMU	**1.2**	●	12.7	4.76	5.16

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Scan for ordering codes and technical details

Double Hexa

Steel & Cast Iron Milling

MGSM

General Shoulder Milling

MEH Hardmill

Endmills for Die & Mould

Turning Holders

Turning and Boring

DTC2000P

Steel Turning

DTC3000K

Cast Iron Turning

DTP5035M

Stainless Steel Turning

DTP4015S

Exotic Alloy Turning

Powered by

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