

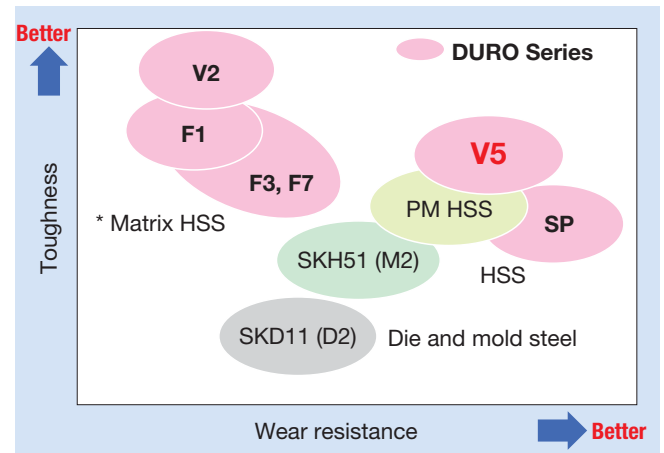
Special steel for cold working precise die and mold

DURO-V5

Well balanced steel in high wear resistance and high toughness!!

DURO-V5 is made by using NACHI's original steel manufacturing and refining technologies. It combines the toughness of Matrix HSS with the wear resistance that is higher than SKH51 (M2).

- High purification reduces levels of non-metallic inclusions for super toughness and great fatigue strength
- Carbide volume and size are the best controlled to get superior balance of toughness and wear resistance.



* Matrix HSS: Tough HSS grades with less carbides.

Features

Applications	Features	Hardness (HRC)
Cold working die and mold steel	<ul style="list-style-type: none"> ● Higher wear resistance than Matrix HSS or SKH51 (M2). ● Good toughness like Matrix HSS and higher than SKH51 (M2). ● Well balanced wear resistance and toughness in the range of 60 to 62 HRC. 	56 ~ 62

Applications

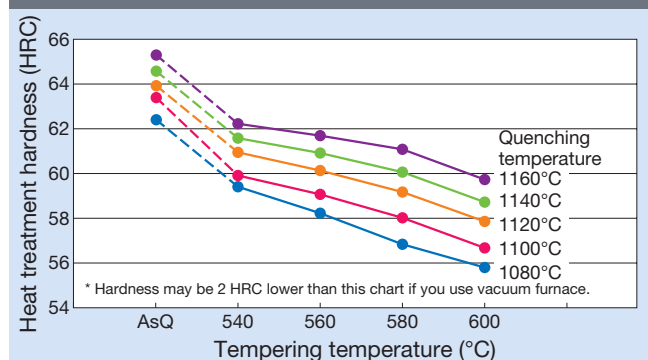
- Fine-blanking die for hard-workable materials like high-tensile steel sheets
- Thin round punch which requires toughness
- Thin or complex shape blanking punch which requires toughness
- Die and mold for cold forging
- Mandrel for flow-forming process

Heat treatment conditions

Recommended heat treatment conditions

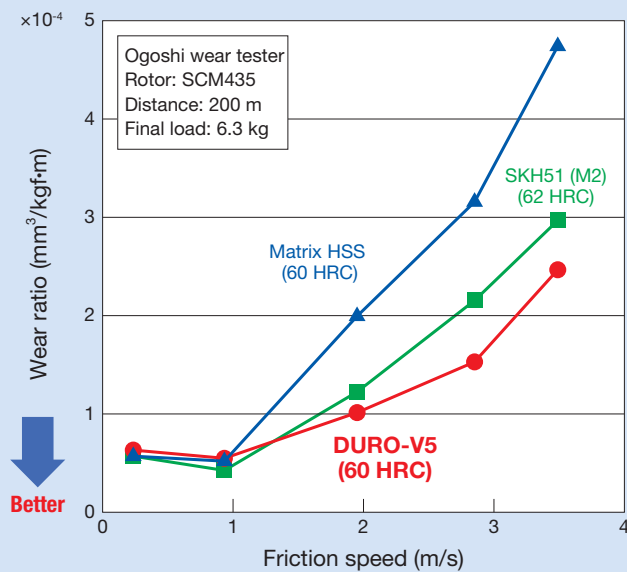
Quenching (°C)	Tempering (°C)	Hardness (HRC)
[For toughness] 1140	580 × 2 times	60.0
[Standard] 1160	560 × 2 times	62.0

Hardness chart

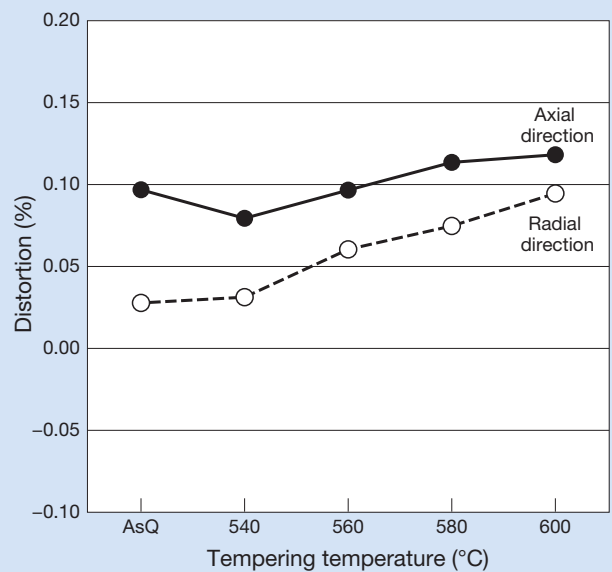


Mechanical properties

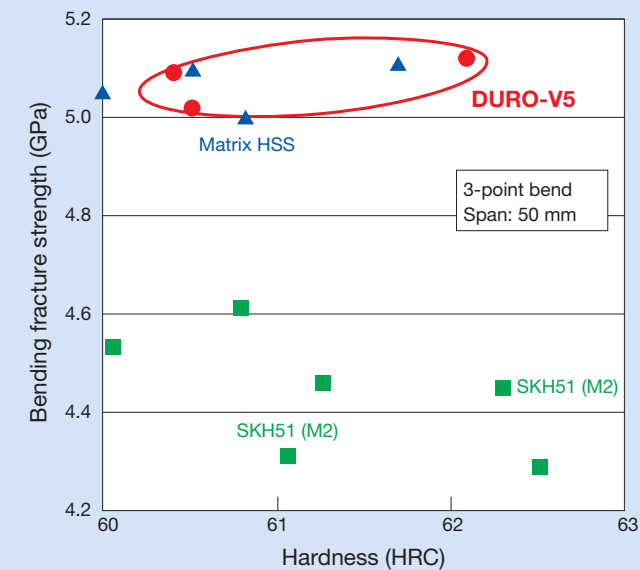
Wear resistance



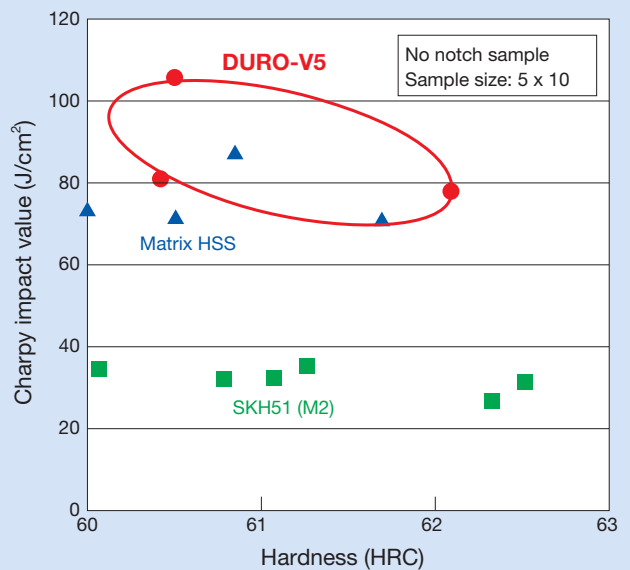
Dimensional change after heat treatment



Bending fracture strength



Impact value



Production Range

Round Bar Max 240 mm dia.
Square Bar/Flat Bar Max 200 × 200 mm

* Detail information about size will be suggested by Nachi sales staffs.

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