

| Grade                                   |   | Brand name | Equivalent standard |  |   | Characteristics  | Main applications  |             |              |              |              |
|---|---|------------|---------------------|--|---|--|--|-------------|--------------|--------------|--------------|
|   |   |            | JIS                 | AISI   | Wnr.  |  | Hot-Forming  | Die-Casting | Hot Stamping | Cold-Forming | Plastic mold |
| Hot Work Tool Steel                     | Type H13 & Modified (5Cr) Single melted | DHA1       | SKD61               | H13 eq.  | 1.2344 eq.  | • General-purpose hot work die steel   | ●  | ●           | ●            |              | ●            |
|   |   | DHA-WORLD  | SKD61 mod.          | H13 mod.                                       | 1.2344 mod.   | • High hardenability & toughness   | ●  | ●           | ●            |              |              |
|   |   | DHA-GIGA   | SKD61 mod.          | H13 mod.                                       | 1.2344 mod.   | • Extra-large die-casting die steel  |  | ●           |              |              |              |
|   |   | DH2F       | SKD61 mod.          | H13 mod.                                       | 1.2344 mod.   | • 40HRC Pre-hardened steel<br>• Easy machining   |  | ●           |              |              | ●            |
|   | Type H13 & 2367 modified (5Cr) Remelted | DHA1-A     | SKD61               | H13 eq.  | 1.2344 eq.  | • Remelted steel of DHA1   |  | ●           |              |              |              |
|   |   | DH31-EX    | -                   | -  | 1.2367 mod.   | • High hardenability & toughness<br>• High strength at elevated temp.                            | ●  | ●           | ●            |              |              |
|   | Type SKD7 (3Cr-3Mo)                     | DH71       | SKD7 mod.           | -  | -   | • High softening resistance  | ●  |             |              |              |              |
|   |   | DH32       | SKD7 mod.           | -  | -   | • High strength at elevated temp.  | ●  |             |              |              |              |
|   | Hot-Forging Die Steel                   | GFA        | SKT4 mod.           | L6 mod.  | 1.2714 mod.   | • Especially for hammer forging  | ●  |             |              |              |              |
|   |   | GF78       | -                   | -  | -   | • 40HRC Pre-hardened steel<br>• High strength at elevated temp.                                  | ●  |             |              |              |              |
|   | High Thermal Conductivity Steel         | DHA-Thermo | -                   | -  | -   | • High thermal conductivity  |  | ●           |              |              |              |
|   | Hot Stamping Die Steel                  |            | DHA-HS1             | -  | -   | -  | • High thermal conductivity & High softening resistance<br>• Dedicated steel for hot stamping dies |             |              | ●            |              |
| Cold Work Tool Steel                    | Type D2 & Original Cold Work Die Steel  | DC11       | SKD11               | D2 eq.   | 1.2379 eq.  | • General-purpose cold work die steel  |  |             |              | ●            |              |
|   |   | DC53       | -                   | -  | -   | • 8Cr-2Mo type<br>• High hardness & toughness  |  |             |              | ●            | ●            |
|   |   | DCMX       | -                   | -  | -   | • Matrix type cold work die steel<br>• High toughness, easy machining & small dimensional change |  |             |              | ●            |              |
|   | Alloy Tool Steel                        | YK30       | SKS93               | W5 mod.  | -   | • Oil hardening steel  |  |             |              | ●            |              |
|   |   | GOA        | SKS3 mod.           | 1.2510 mod.                                    | O1 mod.   | • Oil hardening steel  |  |             |              | ●            |              |
|   |   | GO4        | -                   | -  | -   | • Air hardening Steel  |  |             |              | ●            |              |
|   |   | GO5        | -                   | -  | -   | • Flame hardening Steel  |  |             |              | ●            |              |
| GO40F                                   | -                                       | -          | -                   | • 40HRC Pre-hardened steel<br>• Easy machining |   |  |  | ●           |              |              |              |
| Plastic Mold Steel                      | Type P20 modified                       | PX4, PX5   | -                   | P20 mod.                                       | 1.2330 mod.   | • 30HRC Pre-hardened steel   |  |             |              |              | ●            |
|   |   | PAC5000    | -                   | P20 mod.                                       | 1.2311 mod.   | • 40HRC Pre-hardened steel<br>• High hardness  |  |             |              |              | ●            |
|   | NAK series                              | NAK55      | -                   | P21 mod.                                       | -   | • 40HRC Precipitation hardening steel<br>• Easy machining  |  |             |              |              | ●            |
|   |   | NAK80      | -                   | P21 mod.                                       | -   | • 40HRC Precipitation hardening steel<br>• High mirror-finish                                    |  |             |              |              | ●            |
|   |   | NAK86K     | -                   | -  | -   | • 38HRC Pre-hardened steel<br>• High mirror-finish<br>• Excellent corrosion resistance           |  |             |              |              | ●            |
|   |   | NAK101     | SUS630 mod.         | 630 mod.                                       | 1.4542 mod.   | • 33HRC Pre-hardened steel<br>• High corrosion resistance  |  |             |              |              | ●            |
|   | Hardened & Tempered type                | PD613      | -                   | -  | -   | • High hardness & wear resistance<br>• High mirror-finish  |  |             |              |              | ●            |
|   | Stainless Steel                         | G-STAR     | SUS420F mod.        | 420F mod.                                      | 1.4029 mod.   | • Easy machining   |  |             |              |              | ●            |
|   |   | S-STAR     | SUS420J 2 mod.      | 420 mod.                                       | 1.4028 mod.   | • Remelted steel<br>• High mirror-finish   |  |             |              |              | ●            |
|   | Maraging Steel                          | MAS1C      | -                   | -  | 1.2709 mod.   | • High toughness & strength  |  |             |              |              | ●            |
| High Speed Tool Steel Matrix Type       | DRM1                                    | -          | -                   | -  | • High toughness<br>• Maximum hardness 58HRC            | ●  | ●  |             |              |              |              |
|   | DRM2                                    | -          | -                   | -  | • High hardness & toughness<br>• Maximum hardness 62HRC | ●  |  |             | ●            |              |              |
|   | DRM3                                    | -          | -                   | -  | • High hardenability<br>• Maximum hardness 66HRC        |  |  |             | ●            |              |              |
| Powder Metallurgy High Speed Tool Steel | DEX20                                   | -          | -                   | -  | • High toughness  |  |  |             | ●            |              |              |
|   | DEX40                                   | SKH40      | -                   | -  | • High toughness<br>• High strength at elevated temp.   |  |  |             | ●            |              |              |