

REIME

NORIS

UNSERE PRÄZISION IST IHR ERFOLG



# NORIS EIR + NORIS NES

EINZAHN-GEWINDEFÄHRER



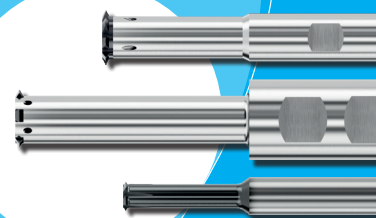
Quality   
Made in Germany  
ISO 9001 CERTIFIED



# NORIS EIR + NORIS NES

# NORIS EINZAHN-GEWINDEFRÄSER

- FLEXIBEL
  - UNIVERSELL
    - WIRTSCHAFTLICH



# NORIS EINZAHN-GEWINDEFÄSER

## NORIS EIR HR - GEWINDEFÄSER

Vollhartmetall-GewindefÄser für kleine Abmessungen

### VORTEILE

- Universelle Profil-Geometrie erlaubt durchmesser- und steigungsübergreifenden Einsatz
- Universelle Schneidengeometrie zur Bearbeitung fast aller gängigen Werkstoffe

### MATERIAL

- K20-K30 Ultra-Feinstkorn

## NORIS EIR HR 2xD - F500



### ABMESSUNGSBEREICH

M/MF  $\varnothing \geq 1$  mm  
UNC  $\varnothing \geq$  Nr. 1  
UNF  $\varnothing \geq$  Nr. 1

### ALTiN-BESCHICHTUNG

- PVD-Beschichtung
  - Schicht-Härte 3700 HV
- => Hohe Temperaturbeständigkeit  
=> Hohe Schneidkantenstabilität

## NORIS EIR HR 2xD - F50E



### ABMESSUNGSBEREICH

M  $\varnothing \geq 1$  mm  
UNC  $\varnothing \geq$  Nr. 2  
UNF  $\varnothing \geq$  Nr. 10

### ACR-BESCHICHTUNG

- Nanostrukturierte Multilayer-Beschichtung
  - Schicht-Härte 3800 HV
- => Hohe Schneidkantenstabilität  
=> Thermoschockbeständig

## NORIS EIR HR 3xD - F51E



## NORIS NES - GEWINDEFÄSSSYSTEM

Gewindefrässystem mit austauschbaren Hartmetall-Schneidplatten für große Abmessungen

### VORTEILE

- Universelle Profil-Geometrie erlaubt durchmesser- und steigungsübergreifenden Einsatz
- Universelle Schneidengeometrie zur Bearbeitung fast aller gängigen Werkstoffe
- Bis zu 3xD Nutzlänge zur Herstellung von tiefen oder tiefliegenden Gewinden

### WERKZEUGHALTER

- Stabile und vibrationsarme Konstruktion
- Innere Kühlmittelzufuhr für perfekte Kühlung und Spanabfuhr
- Verschiedene Längen und Schaftarten verfügbar

### SCHNEIDPLATTEN

- 60° und 55°-Gewindeprofile verfügbar
- Verschiedene Steigungen mit einer Platte

### ABMESSUNGSBEREICH

|           |        |
|-----------|--------|
| M/MF      | ≥ M20  |
| UN/NPT    | ≥ 7/8" |
| G/R/Rp/Rc | ≥ 1/2" |
| W         | ≥ 1"   |

### VORTEILE

- Jede Schneidplatte 2x oder 4x nutzbar
- => Niedrige Kosten pro Gewinde

### TIN-BESCHICHTUNG

- PVD-Beschichtung
- Schicht-Härte 2400 HV
- => Hoher Verschleißschutz
- => Universell einsetzbar

### TIALN-BESCHICHTUNG

- PVD-Beschichtung
- Schicht-Härte 3600 HV
- => Hitzebeständig
- => Bevorzugt für Stahl- und Gusswerkstoffe

### ABMESSUNGSBEREICH

|      |          |
|------|----------|
| M/MF | ≥ M24    |
| UNC  | ≥ 1 1/8" |
| UNF  | ≥ 1"     |
| G    | ≥ 5/8"   |

### VORTEILE

- Jede Schneidplatte 2x oder 4x nutzbar
- => Niedrige Kosten pro Gewinde
- => Kürzere Bearbeitungszeiten
- => Höhere Produktivität

### ABMESSUNGSBEREICH

|      |         |
|------|---------|
| M/MF | ≥ 12 mm |
| UNC  | ≥ 1/2"  |
| UNF  | ≥ 1/2"  |
| G    | ≥ 1/4"  |

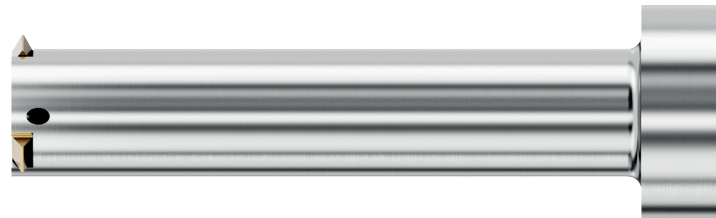
### VORTEILE

- Erhöhte Anzahl von Schneiden auf einer Schneidplatte
- => Kürzere Bearbeitungszeiten
- => Höhere Produktivität

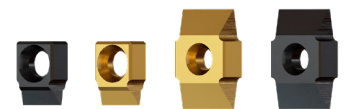
### ACR-BESCHICHTUNG

- Nanostrukturierte Multilayer-Beschichtung
- Schicht-Härte 3800 HV
- => Hohe Schneidkantenstabilität
- => Thermoschockbeständig

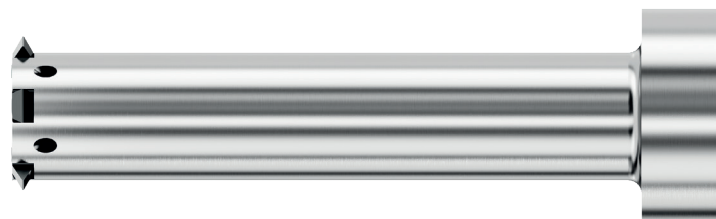
## NORIS NES - F501 | F505



## NORIS NES HM-WP



## NORIS NES-TS - F701



## NORIS NES-Z - F50Z



## NORIS NES-Z HM-SP





## AUSWAHLÜBERSICHT

DIE ANGEgebenEN SCHNITTWERTE SIND RICHTWERTE UND MÜSSEN DEN INDIVIDUELLEN ARBEITSBEDINGUNGEN ANGEPAST WERDEN.



## GUIDE DE SELECTION

LES VALEURS DE VITESSE DE COUPE INDIQUEES DANS LES COLONNES RESPECTIVES NE SONT QU'INDICATIVES ET DOIVENT ETRE ADAPTEES INDIVIDUELLEMENT AUX CONDITIONS D'USINAGE.



## SUMMARY OF ASSORTMENT

THE LISTED CUTTING DATA ARE STANDARD VALUES. THIS VALUES HAVE TO BE ADJUSTED TO INDIVIDUAL WORK CONDITIONS.



## SCelta DEGLI UTENSILI

I VALORI DI VELOCITÀ DI TAGLIO QUI ELENCATI SONO PURAMENTE INDICATIVI E DEVONO ESSERE ADATTATI ALLE CONDIZIONI D'IMPIEGO.



|   | STAHLWERKSTOFFE   | STEEL MATERIALS  | ACIERS   | ACCIAI  |
|---|---|--|--|---|
| P | Un-und niedriglegierte Stähle                                 | Unalloyed and low-alloy steels   | Aciers non et faiblement alliés  | Acciai non legati e basso legati  |
|   | Hochlegierte Stähle   | High alloy steels  | Aciers hautement alliés  | Acciai alto legati  |
| M | <b>ROSTFREI STÄHLE</b>  | <b>CORROSION AND ACID PROOF STEELS</b>   | <b>ACIERS INOX/RESIST. ACIDES</b>  | <b>ACCIAI INOX E RESISTENTI AGLI ACIDI</b>                                  |
|   | Rostfreie austenitische Stähle + DUPLEX Stähle                | Corrosion and acid proof steels + DUPLEX   | Aciers inoxydables austénitiques + Aciers DUPLEX   | Acciai inossidabili austenitici + Acciai DUPLEX                             |
| K | <b>GUSSWERKSTOFFE</b>   | <b>CAST MATERIALS</b>  | <b>FONTES</b>  | <b>GHISE</b>  |
|   | Grauguss, Kugelgraphitguss, Vermiculargraphitguss, Temperguss | Cast iron, nodular cast iron, Vermicular graphite cast iron, malleable cast iron | Fonte grise, fonte à graphite sphéroïdal, Fonte à graphite vermiculaire, Fonte malléable | Ghisa grigia, ghisa nodulare, Ghisa a grafite vermiculata, ghisa malleabile |
|   | Gusseisen ausferritisch (ADI) + Hartguss                      | Ausferritic cast iron (ADI) + Hard casting                                       | Fonte ausferritique (ADI) + Fontes trempées  | Ghisa ausferritica (ADI) + Ghise in conchiglia                              |
|   | <b>NICHTEISEN-WERKSTOFFE</b>                                  | <b>NON FERROUS MATERIALS</b>   | <b>MATÉRIAUX NON FERREUX</b>   | <b>MATERIALI NON FERROSI</b>  |
|   | Aluminium-Knetlegierungen                                     | Aluminium wrought alloys   | Alliages d'aluminium corroyés  | Leghe malleabili di alluminio   |
|   | Aluminium-Gusslegierungen                                     | Aluminium cast alloys  | Fontes d'alu   | Leghe fuse di alluminio   |
| N | Kupfer + Kupferlegierungen (langsp.)                          | Copper + Copper alloys (long-chip.)  | Cuivre + Alliages cuivre (cop. longs)  | Rame + Leghe rame (truciolo lungo)  |
|   | Kupferlegierungen (kurzsp.)                                   | Copper alloys (short-chip.)  | Alliages cuivre (cop. courts)  | Leghe rame (truciolo corto)   |
|   | Kupferlegierungen hochfest                                    | High-strength copper alloys  | Alliages cuivre haute résistance   | Leghe rame ad alta resistenza   |
|   | Zink-Legierungen  | Zinc alloys  | Alliages de zinc   | Leghe zinco   |
|   | Magnesium-Legierungen   | Magnesium wrought alloys   | Alliages de magnésium corroyés   | Leghe malleabili di magnesio  |
|   | Thermoplaste  | Thermoplastics   | Thermoplastiques   | Resine termoplastiche   |
|   | Faserverstärkte Kunststoffe + Duroplaste                      | Fibre-reinforced synthetics + Duroplastics                                       | Plastiques chargées en fibres + Thermodurcissables                                       | Resine epossidiche + Plastiche termoidurenti                                |
| S | <b>SPEZIALWERKSTOFFE</b>                                      | <b>SPECIAL MATERIALS</b>   | <b>MATÉRIAUX SPÉCIAUX</b>  | <b>MATERIALI SPECIALI</b>   |
|   | Ni-, Fe-oder Co-Basis-Superlegierungen                        | Ni-, Fe-or Co-base-Superalloys   | Base Ni, Fe ou Co-Superalliages  | A base Ni-, Fe-o Co-Superleghe  |
|   | Titan + Titanlegierungen                                      | Titanium + Titanium alloys   | Titane + Alliages de titane  | Titanio + Leghe di titanio  |
| H | <b>GEHÄRTETE WERKSTOFFE</b>                                   | <b>HARDENED STEELS</b>   | <b>ACIERS TRAITÉS</b>  | <b>ACCIAI TEMPRATI</b>  |
|   | Gehärtete Stähle  | Hardened steels  | Aciers traités   | Acciai temprati   |



2xD

2xD

3xD

2xD

2,5xD

NORIS EIR

NES-Z

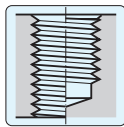
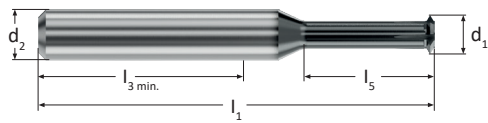
NES / NES-TS

|     |   |   |   |    |       |
|-----|---|---|---|----|-------|
| M   | 8 | 8 | 9 | 14 | 10/11 |
| MF  | 8 | 8 | 9 | 14 | 10/11 |
| UNC |   |   | 9 | 14 | 10/11 |
| UNF |   |   | 9 | 14 | 10/11 |
| G   |   |   |   | 14 | 10/11 |
| NPT |   |   |   | 14 | 10/11 |

| MAT.                     | NORIS EIR  |             |             | NES-Z      |             |               | NES / NES-TS   |                  |             |
|--------------------------|------------|-------------|-------------|------------|-------------|---------------|----------------|------------------|-------------|
|                          | Vc (m/min) | fz (mm) 2xD | fz (mm) 3xD | Vc (m/min) | fz (mm) 2xD | fz (mm) 2,5xD | Vc (m/min) TIN | Vc (m/min) TIALN | fz (mm)     |
| ≤ 800 N/mm <sup>2</sup>  | 100 - 200  | 0,045xP     | 0,040xP     | 100 - 200  | 0,060xP     | 0,055xP       | 200 - 350      | 250 - 400        | 0,15 - 0,30 |
| ≤ 1200 N/mm <sup>2</sup> | 60 - 140   | 0,035xP     | 0,030xP     | 60 - 140   | 0,045xP     | 0,040xP       | 150 - 250      | 200 - 300        | 0,10 - 0,25 |
| ≤ 1400 N/mm <sup>2</sup> | 40 - 80    | 0,030xP     | 0,025xP     | 40 - 80    | 0,035xP     | 0,030xP       | 100 - 150      | 150 - 200        | 0,06 - 0,12 |
| ≤ 1400 N/mm <sup>2</sup> | 40 - 140   | 0,030xP     | 0,025xP     | 40 - 140   | 0,035xP     | 0,030xP       | 80 - 160       | 100 - 180        | 0,08 - 0,12 |
| ≤ 800 N/mm <sup>2</sup>  | 60 - 120   | 0,030xP     | 0,025xP     | 60 - 120   | 0,035xP     | 0,030xP       | 80 - 120       | 80 - 120         | 0,06 - 0,12 |
| ≤ 1300 N/mm <sup>2</sup> | 30 - 80    | 0,020xP     | 0,015xP     | 30 - 80    | 0,030xP     | 0,020xP       | 50 - 100       | 50 - 100         | 0,04 - 0,10 |
| ≤ 800 N/mm <sup>2</sup>  | 100 - 200  | 0,050xP     | 0,050xP     | 100 - 200  | 0,060xP     | 0,060xP       | 200 - 350      | 250 - 400        | 0,15 - 0,30 |
| ≤ 1400 N/mm <sup>2</sup> | 60 - 140   | 0,035xP     | 0,030xP     | 60 - 140   | 0,045xP     | 0,040xP       | 100 - 250      | 150 - 300        | 0,08 - 0,12 |
| ≤ 12% Si                 | 200 - 400  | 0,060xP     | 0,060xP     | 200 - 400  | 0,080xP     | 0,080xP       | 300 - 500      | 300 - 500        | 0,15 - 0,30 |
| ≥ 12% Si                 | 150 - 300  | 0,060xP     | 0,060xP     | 150 - 300  | 0,080xP     | 0,080xP       | 250 - 350      | 300 - 450        | 0,15 - 0,25 |
|                          | 200 - 400  | 0,060xP     | 0,060xP     | 200 - 400  | 0,080xP     | 0,080xP       | 300 - 400      | 300 - 400        | 0,15 - 0,30 |
|                          | 200 - 400  | 0,060xP     | 0,060xP     | 200 - 400  | 0,080xP     | 0,080xP       | 300 - 400      | 300 - 400        | 0,15 - 0,30 |
| ≥ 800 N/mm <sup>2</sup>  | 40 - 120   | 0,030xP     | 0,025xP     | 40 - 120   | 0,045xP     | 0,040xP       | 100 - 250      | 150 - 300        | 0,08 - 0,12 |
|                          | 200 - 400  | 0,060xP     | 0,060xP     | 200 - 400  | 0,080xP     | 0,080xP       | 300 - 400      | 300 - 400        | 0,15 - 0,30 |
|                          | 200 - 400  | 0,060xP     | 0,060xP     | 200 - 400  | 0,080xP     | 0,080xP       | 300 - 400      | 300 - 400        | 0,15 - 0,30 |
|                          | 200 - 400  | 0,060xP     | 0,060xP     | 200 - 400  | 0,080xP     | 0,080xP       | 300 - 400      | 300 - 400        | 0,15 - 0,30 |
|                          | 200 - 400  | 0,060xP     | 0,060xP     | 200 - 400  | 0,080xP     | 0,080xP       | 300 - 400      | 300 - 400        | 0,15 - 0,30 |
|                          | 150 - 300  | 0,060xP     | 0,060xP     | 150 - 300  | 0,080xP     | 0,080xP       | 250 - 350      | 250 - 350        | 0,15 - 0,30 |
| ≤ 800 N/mm <sup>2</sup>  | 30 - 80    | 0,020xP     | 0,015xP     | 30 - 80    | 0,030xP     | 0,025xP       | 60 - 120       | 60 - 120         | 0,06 - 0,10 |
| ≤ 1600 N/mm <sup>2</sup> | 20 - 60    | 0,010xP     |             | 20 - 60    | 0,020xP     | 0,020xP       | 50 - 80        | 50 - 80          | 0,04 - 0,08 |
| ≤ 800 N/mm <sup>2</sup>  | 40 - 120   | 0,025xP     | 0,020xP     | 40 - 120   | 0,030xP     | 0,020xP       | 80 - 140       | 80 - 140         | 0,08 - 0,12 |
| ≤ 1300 N/mm <sup>2</sup> | 30 - 80    | 0,020xP     | 0,015xP     | 30 - 80    | 0,025xP     | 0,020xP       | 60 - 100       | 60 - 100         | 0,06 - 0,10 |
| ≤ 55 HRC                 | 30 - 60    | 0,015xP     |             | 30 - 60    | 0,02xP      |               | 30 - 60        | 30 - 60          | 0,04 - 0,08 |
| ≤ 63 HRC                 |            |             |             |            |             |               |                |                  |             |
| ≤ 65 HRC                 |            |             |             |            |             |               |                |                  |             |

2xD

2xD



DIN 6535- HA



DIN 6535- HA



DIN 6535- HB



mKB

OBERFLÄCHE / SURFACE  
SURFACE / SUPERFICIE

ALTIN

ACR

SCHNEIDSTOFF / MATERIAL  
MATIÈRE / MATERIALE

K30

K30

**M | MF** DIN 13

| $\varnothing D_{min}$<br>[mm] | P<br>[mm]   | $\varnothing d_1$ | $\varnothing d_2$ | $l_1$ | $l_{3 min}$ | $l_5$ | z |              |
|-------------------------------|-------------|-------------------|-------------------|-------|-------------|-------|---|--------------|
| ≥ M 1                         | 0,20 - 0,25 | 0,74              | 3                 | 32    | 28          | 3     | 4 | F500HAF00109 |
| ≥ M 1,2                       | 0,20 - 0,30 | 0,9               | 3                 | 32    | 28          | 3,5   | 4 | F500HAF00129 |
| ≥ M 1,4                       | 0,25 - 0,35 | 1                 | 3                 | 32    | 28          | 3,5   | 4 | F500HAF00149 |
| ≥ M 1,6                       | 0,35 - 0,40 | 1,2               | 3                 | 32    | 28          | 4     | 4 | F500HAF00169 |
| ≥ M 1,7                       | 0,35 - 0,40 | 1,2               | 3                 | 32    | 28          | 4     | 4 | F500HAF00169 |
| ≥ M 1,8                       | 0,35 - 0,45 | 1,35              | 3                 | 32    | 28          | 4     | 4 | F500HAF00189 |
| ≥ M 2                         | 0,35 - 0,45 | 1,5               | 3                 | 32    | 28          | 4     | 4 | F500HAF00209 |
| ≥ M 2,2                       | 0,35 - 0,45 | 1,5               | 3                 | 32    | 28          | 4     | 4 | F500HAF00209 |
| ≥ M 2,5                       | 0,40 - 0,50 | 1,9               | 3                 | 32    | 28          | 6     | 5 | F500HAF00259 |
| ≥ M 3                         | 0,50 - 0,60 | 2,4               | 3                 | 32    | 28          | 6     | 5 | F500HAF00309 |
| ≥ M 3,5                       | 0,50 - 0,70 | 2,8               | 3                 | 32    | 28          | 6     | 6 | F500HAF00359 |
| ≥ M 4                         | 0,60 - 0,80 | 3,2               | 5                 | 40    | 28          | 8     | 6 | F500HAF00409 |
| ≥ M 5                         | 0,70 - 0,80 | 4,1               | 5                 | 40    | 28          | 9     | 6 | F500HAF00509 |
| ≥ M 6                         | 0,80 - 1,00 | 4,9               | 5                 | 40    | 28          | 9     | 6 | F500HAF00609 |
| ≥ M 7                         | 0,80 - 1,00 | 4,9               | 5                 | 40    | 28          | 9     | 6 | F500HAF00609 |

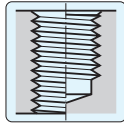
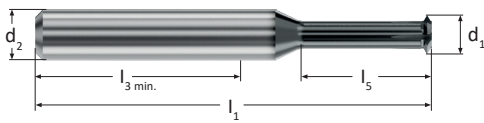
**M | MF** DIN 13

| $\varnothing D_{min}$<br>[mm] | P<br>[mm]   | $\varnothing d_1$ | $\varnothing d_2$ | $l_1$ | $l_{3 min}$ | $l_5$ | z |               |
|-------------------------------|-------------|-------------------|-------------------|-------|-------------|-------|---|---------------|
| ≥ M 1                         | 0,10 - 0,25 | 0,7               | 3                 | 39    | 28          | 2,8   | 1 | F50ES0522368  |
| ≥ M 1,2                       | 0,10 - 0,25 | 0,7               | 3                 | 39    | 28          | 2,8   | 1 | F50ES0522368  |
| ≥ M 1,4                       | 0,12 - 0,35 | 1,04              | 3                 | 39    | 28          | 3,5   | 2 | F50ES0522369  |
| ≥ M 1,6                       | 0,12 - 0,35 | 1,04              | 3                 | 39    | 28          | 3,5   | 2 | F50ES0522369  |
| ≥ M 1,7                       | 0,12 - 0,35 | 1,04              | 3                 | 39    | 28          | 3,5   | 2 | F50ES0522369  |
| ≥ M 1,8                       | 0,12 - 0,35 | 1,04              | 3                 | 39    | 28          | 3,5   | 2 | F50ES0522369  |
| ≥ M 2                         | 0,15 - 0,45 | 1,52              | 3                 | 39    | 28          | 4,8   | 3 | F50ES0522370  |
| ≥ M 2,2                       | 0,15 - 0,45 | 1,52              | 3                 | 39    | 28          | 4,8   | 3 | F50ES0522370  |
| ≥ M 2,5                       | 0,17 - 0,50 | 1,95              | 3                 | 39    | 28          | 6     | 3 | F50ES0522371  |
| ≥ M 3                         | 0,17 - 0,50 | 1,95              | 3                 | 39    | 28          | 6     | 3 | F50ES0522371  |
| ≥ M 3,5                       | 0,22 - 0,75 | 2,78              | 4                 | 42    | 28          | 9     | 3 | F50ES0522372  |
| ≥ M 4                         | 0,22 - 0,75 | 2,78              | 4                 | 42    | 28          | 9     | 3 | F50ES0522372  |
| ≥ M 5                         | 0,30 - 1,00 | 4                 | 6                 | 55    | 36          | 14    | 4 | F50EHB0000509 |
| ≥ M 6                         | 0,30 - 1,00 | 4                 | 6                 | 55    | 36          | 14    | 4 | F50EHB0000509 |
| ≥ M 7                         | 0,30 - 1,00 | 4                 | 6                 | 55    | 36          | 14    | 4 | F50EHB0000509 |
| ≥ M 8                         | 0,45 - 1,50 | 6,5               | 8                 | 62    | 36          | 19,8  | 5 | F50EHB0000809 |
| ≥ M 10                        | 0,45 - 1,50 | 6,5               | 8                 | 62    | 36          | 19,8  | 5 | F50EHB0000809 |
| ≥ M 12                        | 0,50 - 2,00 | 9,9               | 10                | 78    | 40          | 31,8  | 5 | F50EHB0001129 |
| ≥ M 14                        | 0,50 - 2,00 | 9,9               | 10                | 78    | 40          | 31,8  | 5 | F50EHB0001129 |
| ≥ M 16                        | 0,50 - 2,00 | 9,9               | 10                | 78    | 40          | 31,8  | 5 | F50EHB0001129 |



DIN 6535 - HA

DIN 6535 - HB



OBERFLÄCHE / SURFACE  
SURFACE / SUPERFICIE  
SCHNEIDSTOFF / MATERIAL  
MATIÈRE / MATERIALE

ACR

K30

**M | MF** DIN 13

| $\varnothing D_{min}$<br>[mm] | P<br>[mm]   | $\varnothing d_1$ | $\varnothing d_2$ | $l_1$ | $l_3 min.$ | $l_5$ | z |                |
|-------------------------------|-------------|-------------------|-------------------|-------|------------|-------|---|----------------|
| ≥ M 1                         | 0,10 - 0,25 | 0,7               | 3                 | 39    | 28         | 3,3   | 1 | F51EHAF00105   |
| ≥ M 1,6                       | 0,14 - 0,35 | 1,18              | 3                 | 39    | 28         | 5,2   | 2 | F51EHAF00165   |
| ≥ M 2                         | 0,15 - 0,40 | 1,52              | 3                 | 39    | 28         | 6,4   | 3 | F51EHAF00205   |
| ≥ M 2,5                       | 0,17 - 0,45 | 1,96              | 3                 | 39    | 28         | 8     | 3 | F51EHAF00255   |
| ≥ M 3                         | 0,18 - 0,50 | 2,4               | 3                 | 41    | 28         | 9,5   | 3 | F51EHAF00305   |
| ≥ M 4                         | 0,26 - 0,70 | 3,15              | 4                 | 44    | 28         | 12,7  | 3 | F51EHAF00405   |
| ≥ M 5                         | 0,28 - 0,80 | 4,04              | 6                 | 56    | 36         | 15,8  | 4 | F51EHBF000509* |
| ≥ M 6                         | 0,35 - 1,00 | 4,8               | 6                 | 59    | 36         | 19    | 4 | F51EHBF000609* |
| ≥ M 8                         | 0,43 - 1,25 | 6,5               | 8                 | 65    | 36         | 25,3  | 5 | F51EHBF000809  |
| ≥ M 10                        | 0,51 - 1,50 | 8,2               | 10                | 77    | 40         | 31,5  | 5 | F51EHBF001009  |
| ≥ M 12                        | 0,60 - 1,75 | 9,9               | 10                | 82    | 40         | 37,8  | 5 | F51EHBF001129  |
| ≥ M 14                        | 0,68 - 2,00 | 11,6              | 12                | 94    | 45         | 44    | 5 | F51EHBF001149  |
| ≥ M 16                        | 0,68 - 2,00 | 13,6              | 14                | 100   | 45         | 50    | 5 | F51EHBF001169  |

**UNC** ASME B1.1

| $\varnothing D_{min}$<br>[inch] | P<br>Gg/1" [tpi] | $\varnothing d_1$ | $\varnothing d_2$ | $l_1$ | $l_3 min.$ | $l_5$ | z |                |
|---------------------------------|------------------|-------------------|-------------------|-------|------------|-------|---|----------------|
| ≥ UNC Nr.2                      | 80 - 56          | 1,7               | 3                 | 39    | 28         | 7     | 3 | F51EHAF050019  |
| ≥ UNC Nr.4                      | 80 - 40          | 2,15              | 3                 | 40    | 28         | 9,2   | 3 | F51EHAF050039  |
| ≥ UNC Nr.6                      | 80 - 32          | 2,7               | 3                 | 42    | 28         | 11,3  | 3 | F51EHAF050059  |
| ≥ UNC Nr.10                     | 72 - 24          | 3,7               | 4                 | 46    | 28         | 15,5  | 3 | F51EHAF050079  |
| ≥ UNC 1/4                       | 56 - 20          | 4,95              | 6                 | 59    | 36         | 20,3  | 4 | F51EHBF050099* |
| ≥ UNC 5/16                      | 48 - 18          | 6,3               | 8                 | 65    | 36         | 25,2  | 4 | F51EHBF050109  |
| ≥ UNC 3/8                       | 48 - 16          | 7,7               | 8                 | 68    | 36         | 30,2  | 5 | F51EHBF050119  |

**UNF** ASME B1.1

| $\varnothing D_{min}$<br>[inch] | P<br>Gg/1" [tpi] | $\varnothing d_1$ | $\varnothing d_2$ | $l_1$ | $l_3 min.$ | $l_5$ | z |                |
|---------------------------------|------------------|-------------------|-------------------|-------|------------|-------|---|----------------|
| ≥ UNF Nr.10                     | 80 - 32          | 3,9               | 4                 | 46    | 28         | 15,3  | 4 | F51EHAF050419  |
| ≥ UNF 1/4                       | 80 - 28          | 5,25              | 6                 | 59    | 36         | 20    | 4 | F51EHBF050439* |
| ≥ UNF 5/16                      | 64 - 24          | 6,6               | 8                 | 65    | 36         | 24,9  | 5 | F51EHBF050449  |
| ≥ UNF 7/16                      | 56 - 20          | 9,55              | 10                | 77    | 40         | 34,6  | 5 | F51EHBF050469  |

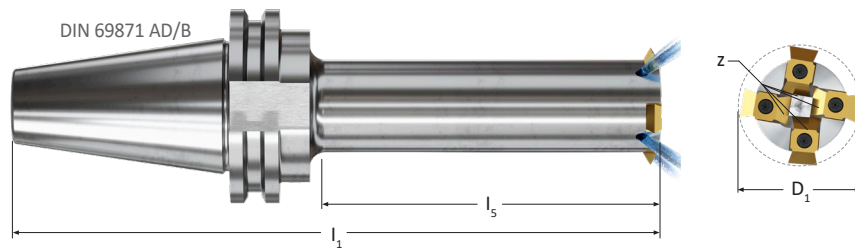
\* ohne Innenkühlung  
without internal coolant supply  
senza alimentazione interna del refrigerante  
sans système de refroidissement interne



| [mm]      | M / MF  | UN          | NPT         | G / W       | [mm] | D <sub>1</sub> | [mm]       | l <sub>5</sub> | ø d <sub>2</sub> | l <sub>1</sub> | z | Part Number |           |
|-----------|---------|-------------|-------------|-------------|------|----------------|------------|----------------|------------------|----------------|---|-------------|-----------|
|           | P [mm]  | Gg/1" [tpi] | Gg/1" [tpi] | Gg/1" [tpi] |      |                |            |                |                  |                |   | F521        | F522      |
| ≥ ø 17,50 | 1,5-3   | 16-9        | 14-11,5     | 28-9        | F521 | 16,5           | FK 16,5/18 | 45             | 20               | 100            | 2 | F501F0003   |           |
|           | 2,5-3,5 | 10-7        | -           | -           | F522 | 18             |            | 60             | 20               | 114            | 2 | F501F0005   |           |
| ≥ ø 20,00 | 1,5-3   | 16-9        | 14-11,5     | 28-9        | F521 | 20,5           | FK 20,5/22 | 50             | 16               | 100            | 3 | F501F0019   |           |
| ≥ ø 23,50 | 2,5-3,5 | 10-7        | -           | -           | F522 | 22             |            | 60             | 32               | 124            | 3 | F501AANAA   |           |
| ≥ ø 25,50 | 1,0-4,0 | 24-6        | 14-11,5     | 28-9        | F510 | 23,85          | FK 24      | 80             | 25               | 140            | 3 | F501F0011   |           |
|           |         |             |             |             |      |                |            | 90             | 32               | 144            | 3 | F501AARAA   |           |
|           |         |             |             |             |      |                |            | 90             | 32               | 154            | 3 | F501AA8AA   |           |
|           |         |             |             |             |      |                |            | 60             | 32               | 124            | 5 |             | F701F0015 |
| ≥ ø 29,00 | 2,5-4,0 | 10-6        | -           | -           | F710 | 23,85          | FK 24      | 60             | 32               | 124            | 5 |             | F701F0015 |
| ≥ ø 31,50 | 2,5-4,0 | 10-6        | -           | -           | F750 | 27             | FK 27      | 90             | 32               | 153            | 5 |             | F701F0003 |
| ≥ ø 31,50 | 1,0-4,0 | 24-6        | 14-11,5     | 28-9        | F510 | 29,27          | FK 29,5    | 95             | 32               | 159            | 3 | F501E0841   |           |
| ≥ ø 35,00 | 1,5-5,5 | 16-4,5      | 14-11,5     | 28-9        | F511 | 32,85          | FK 33      | 95             | 25               | 155            | 3 | F501F0012   |           |
|           |         |             |             |             |      |                |            | 115            | 32               | 179            | 3 | F501AAPAA   |           |
|           |         |             |             |             |      |                |            | 115            | 32               | 179            | 5 | F501F0007   |           |
| ≥ ø 43,00 | 2,5-5,5 | 10-4,5      | -           | -           | F711 | 32,85          | FK 33      | 110            | 32               | 173            | 4 |             | F701F0001 |
| ≥ ø 43,00 | 1,5-6   | 16-4        | 8           | 12-4,5      | F512 | 40,25          | FK 40,5    | 110            | 32               | 173            | 4 | F501F0013   |           |
|           |         |             |             |             |      |                |            | 145            | 32               | 208            | 4 | F501F0010   |           |

Lieferumfang: Werkzeughalter, Befestigungsschraube, Schraubendreher  
 Scope of delivery: Tool holder, mounting screw, screw driver  
 Contenu de la livraison: Porte d'outil, vis de fixation, tournevis  
 Volume di consegna: portautensili, vite di fissaggio, cacciavite

Bitte Wendepplatten separat bestellen  
 Please order inserts separately  
 Commandez la plaquette séparément  
 Ordina gli inserti separatamente


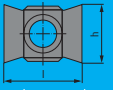


| [mm]       | M / MF<br>P [mm] | UN<br>Gg/1" [tpi] | NPT<br>Gg/1" [tpi] | G / W<br>Gg/1" [tpi] | [mm]      | D <sub>1</sub><br>[mm] | [mm]    | FK 40,5 | l <sub>5</sub> | ø d <sub>2</sub> | l <sub>1</sub> | z    |           |           |           |
|------------|------------------|-------------------|--------------------|----------------------|-----------|------------------------|---------|---------|----------------|------------------|----------------|------|-----------|-----------|-----------|
|            |                  |                   |                    |                      |           |                        |         |         |                |                  |                |      |           |           |           |
| ≥ ø 43,00  | 1,5-6            | 16-4              | 8                  | 12-4,5               | F512      | 40,25                  | FK 40,5 |         | 110            | BT40             | 217            | 4    | F505F0029 |           |           |
|            |                  |                   |                    |                      |           |                        |         |         |                | BT50             | 264            | 4    | F505AADAF |           |           |
|            |                  |                   |                    |                      |           |                        |         |         |                | SK40             | 212            | 4    | F505AADAA |           |           |
|            |                  |                   |                    |                      |           |                        |         |         |                | SK50             | 245            | 4    | F505AADAC |           |           |
|            |                  |                   |                    |                      |           |                        |         |         |                | 145              | BT40           | 252  | 4         | F505F0028 |           |
|            |                  |                   |                    |                      |           |                        |         |         |                |                  | BT50           | 299  | 4         | F505F0025 |           |
|            |                  |                   |                    |                      |           |                        |         |         |                |                  | SK40           | 247  | 4         | F505AAWAA |           |
|            |                  |                   |                    |                      |           |                        |         |         |                |                  | SK50           | 280  | 4         | F505AAWAB |           |
|            |                  |                   |                    |                      |           |                        |         |         |                |                  | 150            | BT50 | 305       | 4         | F505F0031 |
|            |                  |                   |                    |                      |           |                        |         |         |                |                  |                | SK40 | 253       | 4         | F505AAEAA |
|            |                  |                   |                    |                      |           |                        |         |         |                | SK50             |                | 286  | 4         | F505AAEAB |           |
|            |                  |                   |                    |                      |           |                        |         |         |                | ≥ ø 56,00        | 1,5-6          | 16-4 | 8         | 12-3,5    | F513      |
| SK50       | 331              | 4                 | F505F0007          |                      |           |                        |         |         |                |                  |                |      |           |           |           |
| 170        | BT50             | 327               | 7                  | F505F0042            |           |                        |         |         |                |                  |                |      |           |           |           |
|            | SK50             | 308               | 7                  | F505AACAA            |           |                        |         |         |                |                  |                |      |           |           |           |
|            | 260              | BT50              | 417                | 7                    | F505F0034 |                        |         |         |                |                  |                |      |           |           |           |
| SK50       |                  | 398               | 7                  | F505E5553            |           |                        |         |         |                |                  |                |      |           |           |           |
| ≥ ø 70,50  |                  | 1,5-6             | 16-4               | 8                    | 12-3,5    | F513                   | 66,55   | FK 67   |                | 204              | SK50           | 341  | 7         | F505AA2AA |           |
|            | 360              |                   |                    |                      |           |                        |         |         |                | SK50             | 497            | 7    | F505F0008 |           |           |
| ≥ ø 100,00 | 6-8              | 4                 | -                  | -                    | F514      | 92                     | FK 92   |         |                |                  |                |      |           |           |           |


Lieferumfang: Werkzeughalter, Befestigungsschraube, Schraubendreher  
 Scope of delivery: Tool holder, mounting screw, screw driver  
 Contenu de la livraison: Porte d'outil, vis de fixation, tournevis  
 Volume di consegna: portautensili, vite di fissaggio, cacciavite


Bitte Wendeplatten separat bestellen  
 Please order inserts separately  
 Commandez la plaquette séparément  
 Ordina gli inserti separatamente



| SCHNEIDSTOFF / MATERIAL<br>MATIÈRE / MATERIALE |   |                              |   |           |           |   |                   |  |                  | K20    | K20       |           |
|--|---|------------------------------|---|-----------|-----------|---|-------------------|--|------------------|--------|-----------|-----------|
| OBERFLÄCHE / SURFACE<br>SURFACE / SUPERFICIE   |   |                              |   |           |           |   |                   |  |                  | TIN    | TIALN     |           |
| ø D<br>[mm]                                    |  | ø D <sub>1 min</sub><br>[mm] |  |           |           |  |                   |  |                  |        |           |           |
|  |   |                              | l<br>[mm]   | h<br>[mm] | b<br>[mm] | M / MF<br>P [mm]  | UN<br>Gg/1" [tpi] | NPT<br>Gg/1" [tpi]   | G<br>Gg/1" [tpi] |        |           |           |
| FK 16,5/18                                     | F521  | 16,5                         | 7   | 5         | 3,18      | 1,5-3   | 16-9              | 14-11,5  |                  |        | F521F0002 | F521F0004 |
|  | F522  | 18                           | 7,8   | 5         | 3,18      | 2,5-3,5   | 10-7              |  |                  | 28-9   | F521F0005 | F521F0008 |
| FK 20,5/22                                     | F521  | 20,5                         | 7   | 5         | 3,18      | 1,5-3   | 16-9              |  |                  |        | F522F0001 | F522F0002 |
|  | F522  | 22                           | 7,8   | 5         | 3,18      | 2,5-3,5   | 10-7              |  |                  | 28-9   | F521F0002 | F521F0004 |
| FK 24  | F510  | 23,85                        | 9,52  | 6,35      | 3,3       | 1,0-2,5   | 24-10             | 14-11,5  |                  |        |           |           |
|  |   |                              |   |           |           | 1,5-2,5   | 16-10             | 14-11,5  |                  |        | 28-9      |           |
| FK 27  | F750  | 27                           | 9,52  | 5         | 3,3       | 2,5-4,0   | 10-6              |  |                  |        |           | F710F0001 |
|  |   |                              |   |           |           | 1,0-2,5   | 24-10             |  |                  |        |           |           |
| FK 29,5  | F510  | 29,27                        | 9,52  | 6,35      | 3,3       | 1,5-2,5   | 16-10             | 14-11,5  |                  |        |           |           |
|  |   |                              |   |           |           | 2,5-4,0   | 10-6              |  |                  | 28-9   |           |           |
| FK 33  | F511  | 32,85                        | 13,5  | 8,5       | 3,97      | 1,5-2,5   | 16-10             | 14-11,5  |                  |        |           |           |
|  |   |                              |   |           |           | 2,5-5,5   | 10-4,5            |  |                  | 28-9   |           |           |
| FK 40,5  | F512  | 40,25                        | 15,5  | 9,5       | 5         | 2,5-5,5   | 10-4,5            |  |                  |        |           |           |
|  |   |                              |   |           |           | 1,5-3,0   | 16-9              | 8  |                  |        |           | F711F0001 |
| FK 53  | F513  | 52,55                        | 19  | 12,5      | 6         | 3,0-6,0   | 9-4               |  |                  |        |           |           |
|  |   |                              |   |           |           | 1,5-3,0   | 16-9              |  |                  | 12-3,5 |           |           |
| FK 67  | F513  | 66,55                        | 19  | 12,5      | 6         | 3,0-6,0   | 9-4               |  |                  | 12-3,5 |           |           |
|  |   |                              |   |           |           | 1,5-3,0   | 16-9              |  |                  |        |           |           |
| FK 92  | F514  | 92                           | 28,58   | 14,3      | 9,5       | 6,0-8,0   | 4                 |  |                  |        |           |           |

Andere Gewindesysteme auf Anfrage, z.B.: | Other thread standards upon request, e.g.: | Autres standards de filetage sur demande, p.ex.: | Altri sistemi di filettatura su richiesta, p. es.:



Tr  Trapez-Gewinde, ACME-Gewinde  
Trapezoidal thread, ACME thread  
Filetage trapézoïdal, filetage ACME  
Filettatura trapezoidale, fil. ACME

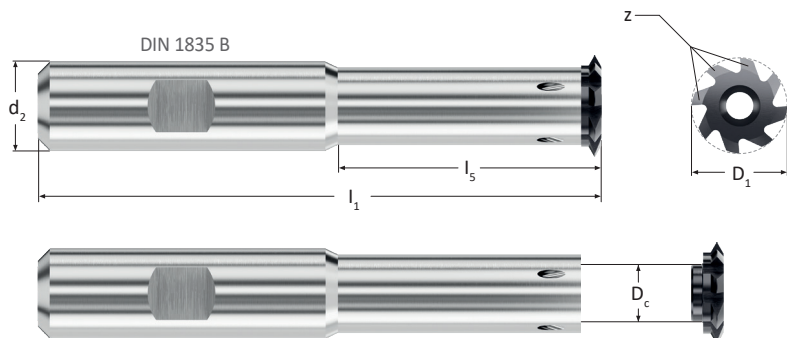
S  Säbengewinde  
Buttress thread  
Filetage pas d'artillerie  
Filettatura a dente di sega

RD  Rundgewinde  
Round thread  
Filetage rond  
Filettatura tonda

Sonderkonturen auf Anfrage | Special contours upon request | Profils spéciaux sur demande | Profili speciali su richiesta



| K20       |           |   |   |                      |           |  |           |  |
|-----------|-----------|---|---|----------------------|-----------|--|-----------|--|
| TIN       |           | TIALN   |   |                      |           |  |           |  |
|           |           |  |  | M <sub>1</sub><br>Nm |           |  |           |  |
|           |           | M2,5  | 7 IP  | 0,9                  | F550F0001 |  | 1033F0001 |  |
|           |           | M2,5  | 7 IP  | 0,9                  | F550F0001 |  | 1033F0001 |  |
| F510AAAA  | F510F0012 |   |   |                      |           |  |           |  |
| F510AACAA | F510F0003 |   |   |                      |           |  |           |  |
| F510AABAA | F510F0005 | M2,5  | 7 IP  | 0,9                  | F550F0001 |  | 1033F0001 |  |
|           | F510F0004 |   |   |                      |           |  |           |  |
|           | F750F0002 | M2,5  | 7 IP  | 0,9                  | F550F0001 |  | 1033F0001 |  |
|           | F510F0012 |   |   |                      |           |  |           |  |
| F510AAAA  | F510F0003 |   |   |                      |           |  |           |  |
| F510AACAA | F510F0005 | M2,5  | 7 IP  | 0,9                  | F550F0001 |  | 1033F0001 |  |
| F510AABAA | F510F0004 |   |   |                      |           |  |           |  |
| F511AAAA  | F511F0001 |   |   |                      |           |  |           |  |
| F511AACAA | F511F0003 | M3  | 9 IP  | 2,5                  | F550F0002 |  | 1033F0002 |  |
| F511AABAA | F511F0002 |   |   |                      |           |  |           |  |
| F512AAAA  | F512F0001 |   |   |                      |           |  |           |  |
| F512AACAA | F512F0003 | M4  | 15 IP   | 5,5                  | F550F0003 |  | 1033F0003 |  |
| F512AABAA | F512F0002 |   |   |                      |           |  |           |  |
| F513AAAA  | F513F0001 |   |   |                      |           |  |           |  |
| F513AACAA | F513F0003 | M5  | 20 IP   | 8                    | F550F0004 |  | 1033F0004 |  |
| F513AABAA | F513F0002 |   |   |                      |           |  |           |  |
| F513AAAA  | F513F0001 |   |   |                      |           |  |           |  |
| F513AACAA | F513F0003 | M5  | 20 IP   | 8                    | F550F0004 |  | 1033F0004 |  |
| F513AABAA | F513F0002 |   |   |                      |           |  |           |  |
| F514AAAA  | F514F0005 | M5  | 20 IP   | 8                    | F550F0005 |  | 1033F0004 |  |



| [mm]     | M / MF   | UN          | G            |             | D <sub>c</sub><br>[mm] | ø d <sub>2</sub><br>[mm] | z  | l <sub>1</sub><br>[mm] | l <sub>5</sub><br>[mm] | F50ZNES1010 | l <sub>1</sub><br>[mm] | l <sub>5</sub><br>[mm] | F50ZNES1017 |
|----------|----------|-------------|--------------|-------------|------------------------|--------------------------|----|------------------------|------------------------|-------------|------------------------|------------------------|-------------|
|          | P [mm]   | Gg/1" [tpi] | Gg/1" [tpi]  | Gg/1" [tpi] |                        |                          |    |                        |                        |             |                        |                        |             |
| ≥ ø 10,2 | 1- 1,75  | 24- 13      | G 1/4        | 19- 32      | ø 5,4                  | 10                       | 6  | 68                     | 24                     | F50ZNES1010 | 74                     | 30                     | F50ZNES1017 |
| ≥ ø 12,0 | 1- 2     | 24- 12      | G 3/8        | 16- 26      | ø 6,5                  | 10                       | 7  | 71,5                   | 28                     | F50ZNES1011 | 78,5                   | 35                     | F50ZNES1018 |
| ≥ ø 14,0 | 1- 2     | 24- 12      | G 3/8        | 16- 26      | ø 7,9                  | 12                       | 8  | 78                     | 32                     | F50ZNES1016 | 86                     | 40                     | F50ZNES1023 |
| ≥ ø 17,5 | 1,5- 2,5 | 16- 10      | G 1/2, G 5/8 | 14- 20      | ø 9,2                  | 14                       | 8  | 88                     | 40                     | F50ZNES1012 | 98                     | 50                     | F50ZNES1019 |
| ≥ ø 20,4 | 1,5- 3   | 16- 8       | > G 3/4      | 10- 14      | ø 11,4                 | 16                       | 8  | 99                     | 48                     | F50ZNES1013 | 111                    | 60                     | F50ZNES1020 |
| ≥ ø 26,5 | 2- 3,5   | 12- 7       | > G 7/8      | 8- 14       | ø 14,6                 | 20                       | 9  | 115                    | 60                     | F50ZNES1014 | 130                    | 75                     | F50ZNES1021 |
| ≥ ø 32,0 | 3- 4     | 8- 6        | G 1 1/8      | 7- 11       | ø 17,8                 | 25                       | 10 | 133                    | 72                     | F50ZNES1015 | 151                    | 90                     | F50ZNES1022 |

Lieferumfang: Werkzeughalter, Befestigungsschraube  
 Scope of delivery: Tool holder, mounting screw  
 Contenu de la livraison: Porte d'outil, vis de fixation  
 Volume di consegna: portautensili, vite di fissaggio

Bitte Schneidplatten separat bestellen  
 Please order inserts separately  
 Commandez la plaquette séparément  
 Ordina gli inserti separatamente

# NES-Z

NORIS NES-Z - HM-SP  
M / MF / UN

G



ACR



ACR

| D <sub>c</sub><br>[mm] | Ø D <sub>min.</sub><br>mm | l <sub>s</sub><br>mm | Ø d <sub>1</sub><br>mm | z  | M / MF<br>P [mm] | UN<br>Gg/1" [tpi] |              | G            |        |              |
|------------------------|---------------------------|----------------------|------------------------|----|------------------|-------------------|--------------|--------------|--------|--------------|
|                        |                           |                      |                        |    |                  |                   |              | Gg/1" [tpi]  |        |              |
| Ø 5,4                  | 12                        | 24                   | 9,9                    | 6  | 1- 1,75          | 24- 13            | F52ZNES10912 | G 1/4        | 19- 32 | F52ZNES10945 |
| Ø 6,5                  | 14                        | 28                   | 11,6                   | 7  | 1- 2             | 24- 12            | F52ZNES20912 | G 3/8        | 16- 26 | F52ZNES20945 |
| Ø 7,9                  | 16                        | 32                   | 13,6                   | 8  | 1- 2             | 24- 12            | F52ZNES70912 | G 3/8        | 16- 26 | F52ZNES70945 |
| Ø 9,2                  | 20                        | 40                   | 15,9                   | 8  | 1,5- 2,5         | 16- 10            | F52ZNES30914 | G 1/2, G 5/8 | 14- 20 | F52ZNES30948 |
| Ø 11,4                 | 24                        | 48                   | 19,9                   | 8  | 1,5- 3           | 16- 8             | F52ZNES40914 | > G 3/4      | 10- 14 | F52ZNES40950 |
| Ø 14,6                 | 30                        | 60                   | 24,9                   | 9  | 2- 3,5           | 12- 7             | F52ZNES50916 | > G 7/8      | 8- 14  | F52ZNES50950 |
| Ø 17,8                 | 36                        | 72                   | 29,9                   | 10 | 3- 4             | 8- 6              | F52ZNES60918 | G 1 1/8      | 7- 11  | F52ZNES60950 |

# NES-Z



M<sub>1</sub>  
Nm



| D <sub>c</sub><br>[mm] |            |       | M <sub>1</sub><br>Nm |           |           |
|------------------------|------------|-------|----------------------|-----------|-----------|
| Ø 5,4                  | M2,5 x 8,5 | 7 IP  | 0,9                  | F550F0001 | 1033F0001 |
| Ø 6,5                  | M3 x 11    | 9 IP  | 2,5                  | F550F0002 | 1033F0002 |
| Ø 7,9                  | M3 x 11    | 9 IP  | 2,5                  | F550F0002 | 1033F0002 |
| Ø 9,2                  | M4 x 13    | 15 IP | 5,5                  | F550F0003 | 1033F0003 |
| Ø 11,4                 | M5 x 15    | 20 IP | 8                    | F550F0004 | 1033F0004 |
| Ø 14,6                 | M5 x 15    | 20 IP | 8                    | F550F0004 | 1033F0004 |
| Ø 17,8                 | M5 x 15    | 20 IP | 8                    | F550F0004 | 1033F0004 |

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