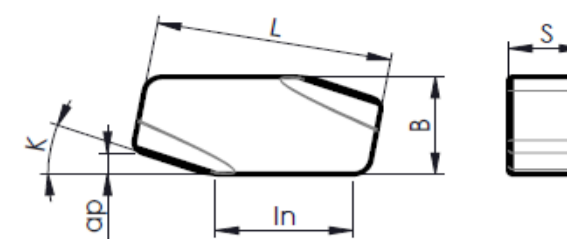


INGR



Inserts | Pastilhas | Plaquetas



Rectangular 90° Negative | Rectangular 90° Negativa | Rectangular 90° Negativa

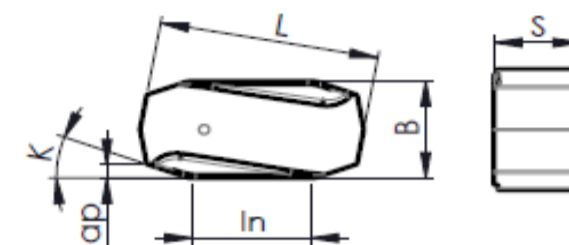
| Inserts Pastilhas Plaquetas | (1) Geometry Code | (2) Grade Code | | Grades | | | | | Dimensions (mm) | | | | | Cutting Conditions | | | | | | | |
|-----------------------------------|-------------------------|----------------|----------------|--------|----|----|----|----|-----------------|-------|-------|-------|-------|--------------------|---------|------|------|-----------|------|------|------|
| | | | | | | | | | Dimensions (mm) | | | | | Condições de corte | | | | | | | |
| | | | | L7 | L8 | L8 | P1 | L6 | L | In | B | S | ap | K° | ap (mm) | Min | Max | fn (mm/r) | Min | Max | |
| INGR | 1123828 | INGR 221240-MP | INGR 221240-MP | ● | ○ | ○ | ○ | ○ | ○ | 38,25 | 22,00 | 17,50 | 12,00 | 4,00 | 20,00 | 2,00 | 0,40 | 4,00 | 3,50 | 1,00 | 8,00 |



JNGF



Inserts | Pastilhas | Plaquetas



Rectangular 90° Negative | Rectangular 90° Negativa | Rectangular 90° Negativa

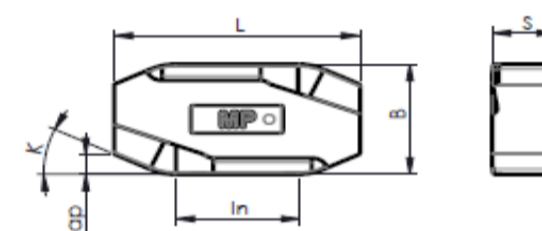
| Inserts Pastilhas Plaquetas | (1) Geometry Code | (2) Grade Code | | Grades | | | | | Dimensions (mm) | | | | | Cutting Conditions | | | | | | | |
|-----------------------------------|-------------------------|----------------|----------------|--------|----|----|----|----|-----------------|-------|-------|-------|-------|--------------------|---------|------|------|-----------|------|------|------|
| | | | | | | | | | Dimensions (mm) | | | | | Condições de corte | | | | | | | |
| | | | | L7 | L8 | L8 | P1 | L6 | L | In | B | S | ap | K° | ap (mm) | Min | Max | fn (mm/r) | Min | Max | |
| JNGF | 1123830 | JNGF 201220-MP | JNGF 201220-MP | ○ | ● | ● | ○ | ○ | ○ | 36,90 | 20,00 | 18,00 | 12,00 | 2,00 | 20,00 | 1,50 | 1,00 | 2,00 | 3,50 | 1,50 | 6,00 |



LNGF



Inserts | Pastilhas | Plaquetas



Rectangular 90° Negative | Rectangular 90° Negativa | Rectangular 90° Negativa

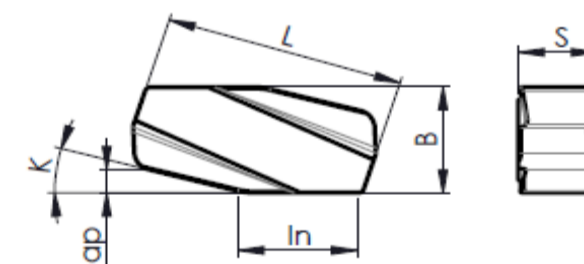
| Inserts Pastilhas Plaquetas | (1) Geometry Code | (2) Grade Code | | Grades | | | | | Dimensions (mm) | | | | | Cutting Conditions | | | | | | | |
|-----------------------------------|-------------------------|----------------|----------------|--------|----|----|----|----|-----------------|-------|-------|-------|-------|--------------------|---------|------|------|-----------|------|------|------|
| | | | | | | | | | Dimensions (mm) | | | | | Condições de corte | | | | | | | |
| | | | | L7 | L8 | L8 | P1 | L6 | L | In | B | S | ap | K° | ap (mm) | Min | Max | fn (mm/r) | Min | Max | |
| LNGF | 1123826 | LNGF 201035-MP | LNGF 201035-MP | ● | ○ | ○ | ○ | ○ | ○ | 40,00 | 20,00 | 20,00 | 10,00 | 3,50 | 25,00 | 2,00 | 0,80 | 3,50 | 2,50 | 1,00 | 6,50 |
| | 1123827 | LNGF 201235-MP | LNGF 201235-MP | ● | ○ | ○ | ○ | ○ | ○ | 40,00 | 20,00 | 20,00 | 12,00 | 3,50 | 25,00 | 2,00 | 0,80 | 3,50 | 2,50 | 1,00 | 6,50 |



UNGF



Inserts | Pastilhas | Plaquetas



Rectangular 90° Negative | Rectangular 90° Negativa | Rectangular 90° Negativa

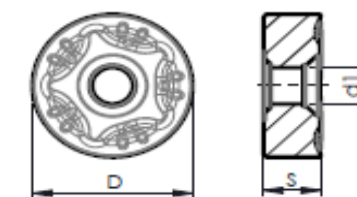
| Inserts Pastilhas Plaquetas | (1) Geometry Code | (2) Grade Code | | Grades | | | | | Dimensions (mm) | | | | | Cutting Conditions | | | | | | | |
|-----------------------------------|-------------------------|----------------|----------------|--------|----|----|----|----|-----------------|-------|-------|-------|-------|--------------------|---------|------|------|-----------|------|------|------|
| | | | | | | | | | Dimensions (mm) | | | | | Condições de corte | | | | | | | |
| | | | | L7 | L8 | L8 | P1 | L6 | L | In | B | S | ap | K° | ap (mm) | Min | Max | fn (mm/r) | Min | Max | |
| UNGF | 1123829 | UNGF 171240-MP | UNGF 171240-MP | ○ | ● | ● | ○ | ○ | ○ | 36,50 | 17,00 | 18,00 | 12,00 | 4,00 | 15,00 | 1,50 | 0,35 | 4,00 | 2,00 | 1,00 | 5,00 |



● Stock Items / Itens de Stock ○ Available Under Request / Disponibilidade Sob Consulta / Disponible Bajo Consulta
 Insert Order Code= (1) geometry Code + (2) Grade Code

RNMX

Inserts | Pastilhas | Plaquetas



Round R° Negative | Redonda R° Negativa | Redonda R° Negativa

| Inserts Pastilhas Plaquetas | (1) Geometry Code | (2) Grade Code | | Grades | | | | | Dimensions (mm) Dimensions (mm) Dimensiones (mm) | | | | | Cutting Conditions Condições de corte Condiciones de Corte | | | | | | |
|-----------------------------------|-------------------------|----------------|----------------|--------|----|----|----|----|--|----|-------|-------|----|--|------------|------|-------|--------------|------|-------|
| | | | | P M K | | | | | D | In | d1 | S | ap | K° | ap (mm) | Min | Max | fn (mm/r) | Min | Max |
| | | | | L7 | L8 | L8 | P1 | L6 | | | | | | | | | | | | |
| | 1123831 | RNMX 381200-MP | RNMX 381200-MP | ○ | ○ | ○ | ● | ○ | 38,10 | - | 13,00 | 12,70 | - | - | 4,00 | 2,00 | 8,00 | 2,00 | 1,00 | 4,00 |
| | 1123832 | RNMX 5018M0-MP | RNMX 5018M0-MP | ○ | ○ | ○ | ● | ○ | 50,00 | - | 12,70 | 18,00 | - | - | 6,00 | 2,00 | 12,00 | 3,50 | 2,50 | 6,50 |
| | 1123833 | RNMX 5018M0-RP | RNMX 5018M0-RP | ○ | ○ | ○ | ● | ○ | 50,00 | - | 12,70 | 18,00 | - | - | 6,00 | 2,00 | 12,00 | 6,00 | 4,00 | 10,50 |

RNMG

Inserts | Pastilhas | Plaquetas

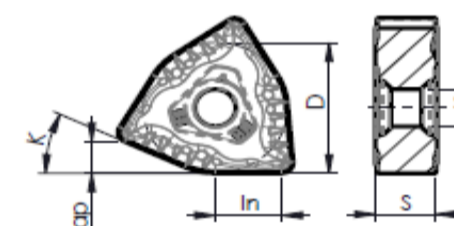


Round R° Negative | Redonda R° Negativa | Redonda R° Negativa

| Inserts Pastilhas Plaquetas | (1) Geometry Code | (2) Grade Code | | Grades | | | | | Dimensions (mm) Dimensions (mm) Dimensiones (mm) | | | | | Cutting Conditions Condições de corte Condiciones de Corte | | | | | | |
|-----------------------------------|-------------------------|----------------|-------------|--------|----|----|----|----|--|----|------|------|----|--|------------|------|-------|--------------|------|------|
| | | | | P M K | | | | | D | In | d1 | S | ap | K° | ap (mm) | Min | Max | fn (mm/r) | Min | Max |
| | | | | L7 | L8 | L8 | P1 | L6 | | | | | | | | | | | | |
| | 1120443 | RNMG 250900-ST | RNMG 860-ST | ○ | ○ | ○ | ○ | ● | 25,40 | - | 9,12 | 9,52 | - | - | 5,00 | 2,50 | 10,00 | 1,00 | 0,25 | 2,50 |

XNMJ

Inserts | Pastilhas | Plaquetas

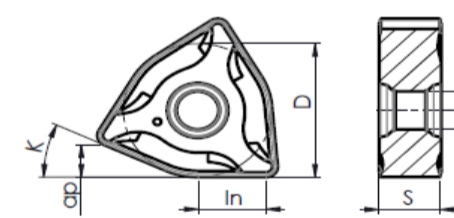


Especial 85° Negative | Special 85° Negativa | Especial 85° Negativa

| Inserts Pastilhas Plaquetas | (1) Geometry Code | (2) Grade Code | | Grades | | | | | Dimensions (mm) Dimensions (mm) Dimensiones (mm) | | | | | Cutting Conditions Condições de corte Condiciones de Corte | | | | | | |
|-----------------------------------|-------------------------|----------------|----------------|--------|----|----|----|----|--|-------|-------|------|------|--|------------|------|------|--------------|------|-------|
| | | | | P M K | | | | | D | In | S | d1 | ap | K° | ap (mm) | Min | Max | fn (mm/r) | Min | Max |
| | | | | L7 | L8 | L8 | P1 | L6 | | | | | | | | | | | | |
| | 1123835 | XNMJ 151380-MP | XNMJ 151380-MP | ○ | ● | ○ | ○ | ○ | 31,75 | 15,00 | 13,00 | 9,00 | 8,00 | 25,00 | 3,00 | 1,00 | 6,50 | 6,00 | 4,00 | 12,00 |
| | 1123836 | XNMJ 151380-MH | XNMJ 151380-MH | ○ | ○ | ○ | ○ | ○ | 31,75 | 15,00 | 13,00 | 9,00 | 8,00 | 25,00 | 3,00 | 1,00 | 6,50 | 6,00 | 4,00 | 12,00 |

XNGJ

Inserts | Pastilhas | Plaquetas



Especial 85° Negative | Special 85° Negativa | Especial 85° Negativa

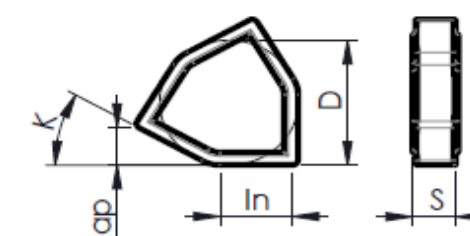
| Inserts Pastilhas Plaquetas | (1) Geometry Code | (2) Grade Code | | Grades | | | | | Dimensions (mm) Dimensions (mm) Dimensiones (mm) | | | | | Cutting Conditions Condições de corte Condiciones de Corte | | | | | | |
|-----------------------------------|-------------------------|----------------|----------------|--------|----|----|----|----|--|-------|-------|------|------|--|------------|------|------|--------------|------|-------|
| | | | | P M K | | | | | D | In | S | d1 | ap | K° | ap (mm) | Min | Max | fn (mm/r) | Min | Max |
| | | | | L7 | L8 | L8 | P1 | L6 | | | | | | | | | | | | |
| | 1123834 | XNGJ 151380-RP | XNGJ 151380-RP | ○ | ○ | ○ | ○ | ○ | 31,75 | 15,00 | 13,00 | 9,00 | 8,00 | 25,00 | 3,00 | 1,00 | 6,50 | 6,00 | 4,00 | 12,00 |

● Stock Items / Itens de Stock ○ Available Under Request / Disponibilidade Sob Consulta / Disponible Bajo Consulta
Insert Order Code= (1) geometry Code + (2) Grade Code

XNGF



Inserts | Pastilhas | Plaquetas



Especial 90° Negative | Special 90° Negativa | Especial 90° Negativa

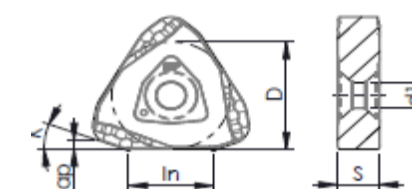
| Inserts Pastilhas Plaquetas | (1) Geometry Code | Grades | | | | | Dimensions (mm) Dimensiones (mm) | | | | | Cutting Conditions Condições de corte Condiciones de Corte | | | | | | | | |
|-----------------------------------|-------------------------|----------------|----------------|--------|--------|--------|-------------------------------------|----|-------|-------|------|--|------------|-------|------|--------------|------|------|--------|--------|
| | | (2) Grade Code | | | | | D | In | S | d1 | ap | K° | ap (mm) | Min | Max | fn (mm/r) | Min | Max | | |
| | | ISO Ref. | ANSI Ref. | PH5115 | PH5125 | PH5125 | | | | | | | | | | | | | PH5228 | PH5320 |
| XNGF | 1123837 | XNGF 150980-FP | XNGF 150980-FP | ○ | ○ | ○ | ● | ○ | 28,58 | 15,00 | 8,88 | - | 8,00 | 30,00 | 3,00 | 1,00 | 4,50 | 6,00 | 4,00 | 12,00 |



TNMJ

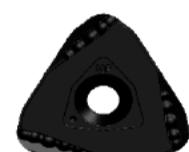


Inserts | Pastilhas | Plaquetas



Triangular 60° Negative | Triangular 60° Negativa | Triangular 60° Negativa

| Inserts Pastilhas Plaquetas | (1) Geometry Code | Grades | | | | | Dimensions (mm) Dimensiones (mm) | | | | | Cutting Conditions Condições de corte Condiciones de Corte | | | | | | | | |
|-----------------------------------|-------------------------|----------------|----------------|--------|--------|--------|-------------------------------------|----|-------|-------|-------|--|------------|-------|------|--------------|------|------|--------|--------|
| | | (2) Grade Code | | | | | D | In | S | d1 | ap | K° | ap (mm) | Min | Max | fn (mm/r) | Min | Max | | |
| | | ISO Ref. | ANSI Ref. | PH5115 | PH5125 | PH5125 | | | | | | | | | | | | | PH5228 | PH5320 |
| TNMJ | 1123838 | TNMJ 201025-MP | TNMJ 201025-MP | ○ | ● | ● | ○ | ○ | 28,60 | 20,00 | 10,00 | 7,00 | 2,50 | 20,00 | 1,00 | 0,70 | 2,50 | 3,00 | 1,00 | 5,50 |
| | 1123843 | TNMJ 201425-MP | TNMJ 201425-MP | ○ | ● | ● | ○ | ○ | 28,60 | 20,00 | 14,00 | 7,00 | 2,50 | 20,00 | 1,00 | 0,70 | 2,50 | 3,00 | 1,00 | 5,50 |



● Stock Items / Itens de Stock ○ Available Under Request / Disponibilidade Sob Consulta / Disponible Bajo Consulta
 Insert Order Code= (1) geometry Code + (2) Grade Code