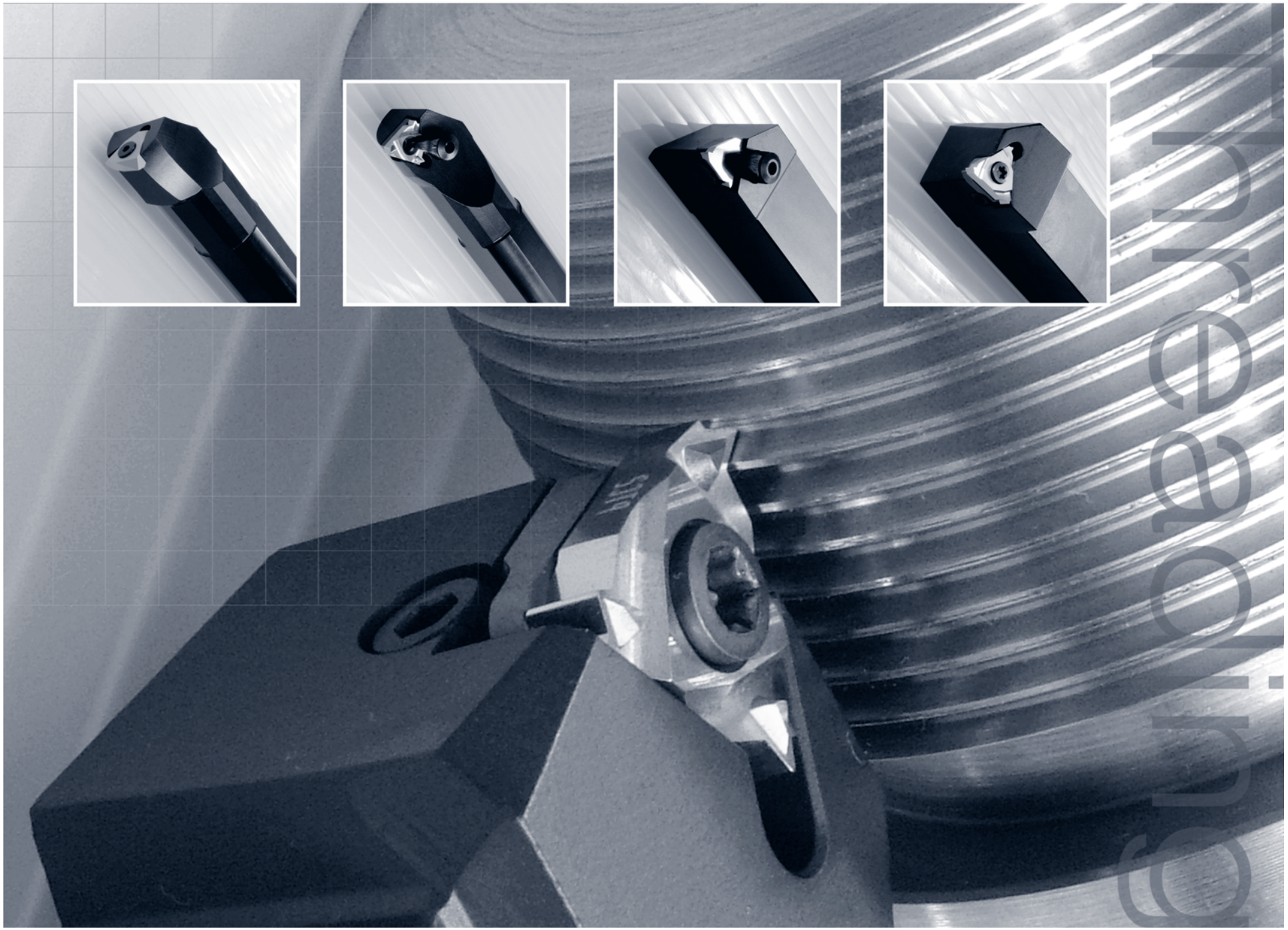
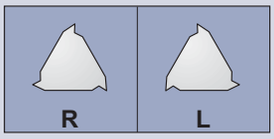


Threading

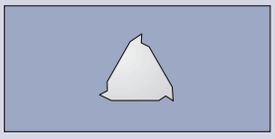
Threading

L	166	G	-	3	B	A	075
1	2	3		4	5	6	7

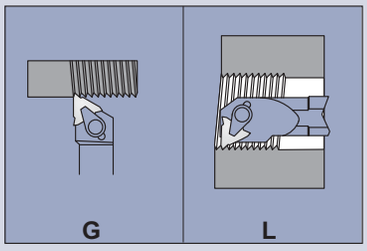
1



2



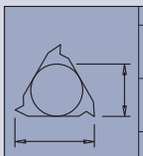
3



6

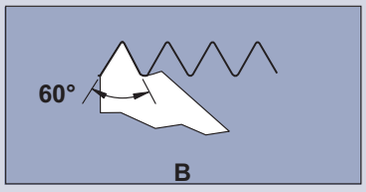
A	ISO mm.
C	SI
L	ISO Inch
K	Whitworth

4

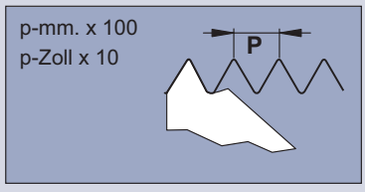


	IC=Inch	D=mm.	
2	1/4	6,35	11
3	3/8	9,52	16
4	1/2	12,70	22

5

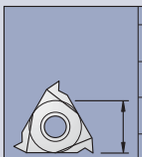


7



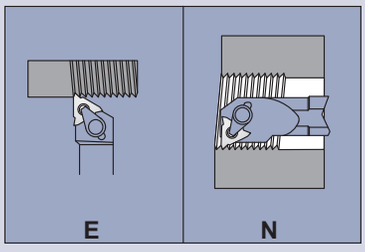
16	E	L	-	AG	55
1	2	3		4	5

1

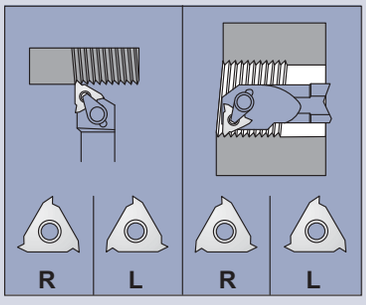


	IC=Polegada	d=mm.
06	5/32	3,96
08	3/16	4,76
11	1/4	6,35
16	3/8	9,52
22	1/2	12,70
27	5/8	15,87

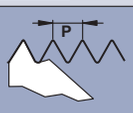
2



3



4



p=mm. x 100
p=Inch x 10

	mm.	TPI
A	0,5-1,5	48-16
AG	0,5-3,0	48-8
G	1,75-3,0	14-8
N	3,5-5,0	7-5

5

55	Partial profile 55°
60	Partial profile 60º
ISO	ISO metric
UN	American, UN
W	Whitworth, BSW
LG	Groove type LG

60° - 55° (non topping)

ER-60°/55°

Triangular
Negative
Page H.04
0°

EL-60°/55°

Triangular
Negative
Page H.04
0°

ER-60°/55° TD

Triangular
Negative
Page H.04
0°

NR-60°/55°

Triangular
Negative
Page H.05
0°

NL-60°/55°

Triangular
Negative
Page H.05
0°

NR-60°/55° TD

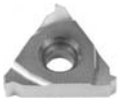
Triangular
Negative
Page H.05
0°

ISO (full form) BS36

ER-ISO

Triangular
Negative
Page H.06
0°

EL-ISO



Triangular
Negative
Page H.06
0°

ER-ISO TD

Triangular
Negative
Page H.06
0°

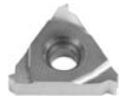
EL-ISO TD

Triangular
Negative
Page H.06
0°

NR-ISO

Triangular
Negative
Page H.07
0°

NL-ISO



Triangular
Negative
Page H.07
0°

NR-ISO TD

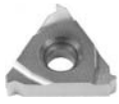
Triangular
Negative
Page H.07
0°

UNIFIED (full form) ASME / ANSI B1.1

ER-UN

Triangular
Negative
Page H.08
0°

NR-UN



Triangular
Negative
Page H.08
0°

WHITWORTH (full form) BS84

ER-W

Triangular
Negative
Page H.08
0°

EL-W

Triangular
Negative
Page H.08
0°

ER-W TD

Triangular
Negative
Page H.08
0°

NR-W

Triangular
Negative
Page H.09
0°

NL-W

Triangular
Negative
Page H.09
0°

NR-W TD

Triangular
Negative
Page H.09
0°

Lock ring groove inserts type LG

ER-LG

Triangular
Negative
Page H.10
0°

EL-LG

Triangular
Negative
Page H.10
0°

Others

TNMC

Triangular
Negative
Page H.10
0°

TPMC

Triangular
Negative
Page H.10
0°

ISO

L166G-ISO

Triangular
Positive
Page H.11
7°

R166G-ISO

Triangular
Positive
Page H.11
7°

R166G-B

Triangular
Positive
Page H.11
7°

L166L-ISO

Triangular
Positive
Page H.11
7°

R166L-ISO

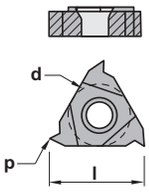
Triangular
Positive
Page H.11
7°

Partial profile thread forms - External inserts
60° - 55° (non topping)

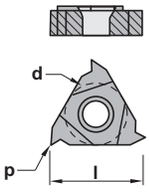
Normally available for immediate delivery ●
Only available in a limited quantity ○

ER

ER TD



ER



EL

ER-60°

	l	d	p	KM15	PM25	TIN25	TL20
11ER-A60	11,00	6,35	60°			○	
16ER-A60	16,00	9,52	60°			○	
16ER-AG60	16,00	9,52	60°		●	●	○
16ER-G60	16,00	9,52	60°			●	○
22ER-N60	22,00	12,70	60°			●	○
27ER-S60	27,00	15,87	60°			○	

EL-60°

	l	d	p	KM15	PM25	TIN25	TL20
11EL-A60	11,00	6,35	60°			○	
16EL-A60	16,00	9,52	60°			○	
16EL-AG60	16,00	9,52	60°			○	
16EL-G60	16,00	9,52	60°			○	
22EL-N60	22,00	12,70	60°			○	
27EL-S60	27,00	15,87	60°			○	

ER-55°

	l	d	p	KM15	PM25	TIN25	TL20
11ER-A55	11,00	6,35	55°			○	
16ER-A55	16,00	9,52	55°			○	
16ER-AG55	16,00	9,52	55°		●	●	○
16ER-G55	16,00	9,52	55°			○	
22ER-N55	22,00	12,70	55°			○	
27ER-S55	27,00	15,87	55°			○	

EL-55°

	l	d	p	KM15	PM25	TIN25	TL20
11EL-A55	11,00	6,35	55°			○	
16EL-A55	16,00	9,52	55°			○	
16EL-AG55	16,00	9,52	55°			○	
16EL-G55	16,00	9,52	55°			○	
22EL-N55	22,00	12,70	55°			○	
27EL-S55	27,00	15,87	55°			○	

ER-60° TD

	l	d	p	KM15	PM25	TIN25	TL20
16ER-A60 TD	16,00	9,52	60°			○	
16ER-AG60 TD	16,00	9,52	60°			●	○
16ER-G60 TD	16,00	9,52	60°			○	

ER-55° TD

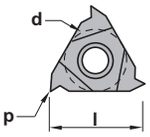
	l	d	p	KM15	PM25	TIN25	TL20
16ER-A55TD	16,00	9,52	55°			○	
16ER-AG55 TD	16,00	9,52	55°			●	○
16ER-G55 TD	16,00	9,52	55°			○	

Partial profile thread forms - Internal inserts
60° - 55° (non topping)

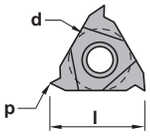
Normally available for immediate delivery ●
Only available in a limited quantity ○

NR

NR TD



NR



NL

NR-60°

	l	d	p	KM15	PM25	TIN25	TL20
06NR-A60	6,00	3,96	60°			○	
08NR-A60	8,00	4,76	60°			○	
11NR-A60	11,00	6,35	60°			●	○
16NR-A60	16,00	9,52	60°			○	
16NR-AG60	16,00	9,52	60°		●	●	○
16NR-G60	16,00	9,52	60°			○	
22NR-N60	22,00	12,70	60°			●	○
27NR-S60	27,00	15,87	60°			○	

NL-60°

	l	d	p	KM15	PM25	TIN25	TL20
06NL-A60	6,00	3,96	60°			○	
08NL-A60	8,00	4,76	60°			○	
11NL-A60	11,00	6,35	60°			○	
16NL-A60	16,00	9,52	60°			○	
16NL-AG60	16,00	9,52	60°			○	
16NL-G60	16,00	9,52	60°			○	
22NL-N60	22,00	12,70	60°			○	
27NL-S60	27,00	15,87	60°			○	

NR-55°

	l	d	p	KM15	PM25	TIN25	TL20
06NR-A55	6,00	3,96	55°			○	
08NR-A55	8,00	4,76	55°			○	
11NR-A55	11,00	6,35	55°			○	
16NR-A55	16,00	9,52	55°			○	
16NR-AG55	16,00	9,52	55°			●	○
16NR-G55	16,00	9,52	55°			●	
22NR-N55	22,00	12,70	55°			○	
27NR-S55	27,00	15,87	55°			○	

NL-55°

	l	d	p	KM15	PM25	TIN25	TL20
06NL-A55	6,00	3,96	55°				
08NL-A55	8,00	4,76	55°				
11NL-A55	11,00	6,35	55°			○	
16NL-A55	16,00	9,52	55°			○	
16NL-AG55	16,00	9,52	55°			○	
16NL-G55	16,00	9,52	55°			○	
22NL-N55	22,00	12,70	55°			○	
27NL-S55	27,00	15,87	55°				

NR-60° TD

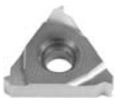
	l	d	p	KM15	PM25	TIN25	TL20
16NR-A60 TD	16,00	9,52	60°			○	
16NR-AG60 TD	16,00	9,52	60°			●	○
16NR-G60 TD	16,00	9,52	60°			○	

NR-55° TD

	l	d	p	KM15	PM25	TIN25	TL20
16NR-A55TD	16,00	9,52	55°			○	
16NR-AG55 TD	16,00	9,52	55°			●	○
16NR-G55 TD	16,00	9,52	55°			○	

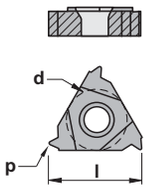
Mechanical thread forms - External inserts
ISO (full form) BS36

Normally available for immediate delivery ●
Only available in a limited quantity ○

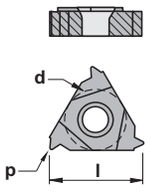


ER ISO

ER ISO TD



ER



EL

ER-ISO

	l	d	p	KM15	PM25	TIN25	TL20
11ER-030ISO	11,00	6,35	0,30			○	
11ER-040ISO	11,00	6,35	0,40			○	
11ER-045ISO	11,00	6,35	0,45			○	
11ER-050ISO	11,00	6,35	0,50			○	
11ER-060ISO	11,00	6,35	0,60			○	
11ER-070ISO	11,00	6,35	0,70			○	
11ER-075ISO	11,00	6,35	0,75			○	
11ER-080ISO	11,00	6,35	0,80			○	
11ER-100ISO	11,00	6,35	1,00			○	
11ER-125ISO	11,00	6,35	1,25			○	
11ER-150ISO	11,00	6,35	1,50			○	
11ER-175ISO	11,00	6,35	1,75			○	
16ER-075ISO	16,00	9,52	0,75			○	
16ER-100ISO	16,00	9,52	1,00			○	
16ER-125ISO	16,00	9,52	1,25			○	
16ER-150ISO	16,00	9,52	1,50			○	
16ER-175ISO	16,00	9,52	1,75			○	
16ER-200ISO	16,00	9,52	2,00			○	
16ER-250ISO	16,00	9,52	2,50			○	
16ER-300ISO	16,00	9,52	3,00			○	
22ER-350ISO	22,00	12,70	3,50			○	
22ER-400ISO	22,00	12,70	4,00			○	
22ER-450ISO	22,00	12,70	4,50			○	
22ER-500ISO	22,00	12,70	5,00			○	
27ER-500ISO	27,00	15,87	5,00			○	
27ER-550ISO	27,00	15,87	5,50			○	
27ER-600ISO	27,00	15,87	6,00			○	
27ER-800ISO	27,00	15,87	8,00			○	

EL-ISO

	l	d	p	KM15	PM25	TIN25	TL20
16EL-100ISO	16,00	9,52	1,00			○	
16EL-125ISO	16,00	9,52	1,25			○	
16EL-150ISO	16,00	9,52	1,50			○	
16EL-175ISO	16,00	9,52	1,75			○	
16EL-200ISO	16,00	9,52	2,00			○	
16EL-250ISO	16,00	9,52	2,50			○	
16EL-300ISO	16,00	9,52	3,00			○	
22EL-400ISO	22,00	12,70	4,00			○	

ER-ISO TD

	l	d	p	KM15	PM25	TIN25	TL20
16ER-100ISO TD	16,50	9,52	1,00			○	
16ER-125ISO TD	16,50	9,52	1,25			○	
16ER-150ISO TD	16,50	9,52	1,50			○	
16ER-175ISO TD	16,50	9,52	1,75			○	
16ER-200ISO TD	16,50	9,52	2,00			○	
16ER-250ISO TD	16,50	9,52	2,50			○	
16ER-300ISO TD	16,50	9,52	3,00			○	

EL-ISO TD

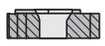
	l	d	p	KM15	PM25	TIN25	TL20
16EL-100ISO TD	16,50	9,52	1,00			○	
16EL-125ISO TD	16,50	9,52	1,25			○	
16EL-150ISO TD	16,50	9,52	1,50			○	
16EL-175ISO TD	16,50	9,52	1,75			○	
16EL-200ISO TD	16,50	9,52	2,00			○	
16EL-250ISO TD	16,50	9,52	2,50			○	
16EL-300ISO TD	16,50	9,52	3,00			○	

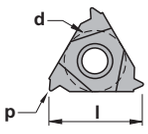
Mechanical thread forms - Internal inserts
ISO (full form) BS36

Normally available for immediate delivery ●
Only available in a limited quantity ○

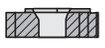
NR ISO

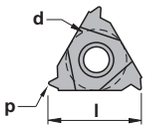
NR ISO TD





NR





NL

NR-ISO

	l	d	p	KM15	PM25	TIN25	TL20
06NR-050ISO	6,00	3,96	0,50			○	
06NR-075ISO	6,00	3,96	0,75			○	
06NR-100ISO	6,00	3,96	1,00			○	
06NR-125ISO	6,00	3,96	1,25			○	
08NR-050ISO	8,00	4,76	0,50			○	
08NR-075ISO	8,00	4,76	0,75			○	
08NR-100ISO	8,00	4,76	1,00			○	
08NR-125ISO	8,00	4,76	1,25			○	
08NR-150ISO	8,00	4,76	1,50			○	
08NR-175ISO	8,00	4,76	1,75			○	
11NR-035ISO	11,00	6,35	0,35			○	
11NR-040ISO	11,00	6,35	0,40			○	
11NR-045ISO	11,00	6,35	0,45			○	
11NR-050ISO	11,00	6,35	0,50			○	
11NR-060ISO	11,00	6,35	0,60			○	
11NR-070ISO	11,00	6,35	0,70			○	
11NR-075ISO	11,00	6,35	0,75			○	
11NR-080ISO	11,00	6,35	0,80			○	
11NR-100ISO	11,00	6,35	1,00			○	
11NR-125ISO	11,00	6,35	1,25			○	
11NR-150ISO	11,00	6,35	1,50			○	
11NR-175ISO	11,00	6,35	1,75			○	
11NR-200ISO	11,00	6,35	2,00			○	
11NR-250ISO	11,00	6,35	2,50			○	
16NR-075ISO	16,00	9,52	0,75			○	
16NR-100ISO	16,00	9,52	1,00			○	
16NR-125ISO	16,00	9,52	1,25			○	
16NR-150ISO	16,00	9,52	1,50			○	
16NR-175ISO	16,00	9,52	1,75			○	
16NR-200ISO	16,00	9,52	2,00			○	
16NR-250ISO	16,00	9,52	2,50			○	
16NR-300ISO	16,00	9,52	3,00			○	
22NR-350ISO	22,00	12,70	3,50			○	
22NR-400ISO	22,00	12,70	4,00			○	
22NR-450ISO	22,00	12,70	4,50			○	
22NR-500ISO	22,00	12,70	5,00			○	
27NR-500ISO	27,00	15,87	5,00			○	
27NR-550ISO	27,00	15,87	5,50			○	
27NR-600ISO	27,00	15,87	6,00			○	
27NR-800ISO	27,00	15,87	8,00			○	

NL-ISO

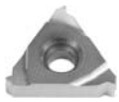
	l	d	p	KM15	PM25	TIN25	TL20
06NL-050ISO	6,00	3,96	0,50			○	
06NL-075ISO	6,00	3,96	0,75			○	
06NL-100ISO	6,00	3,96	1,00			○	
06NL-125ISO	6,00	3,96	1,25			○	
08NL-050ISO	8,00	4,76	0,50			○	
08NL-075ISO	8,00	4,76	0,75			○	
08NL-100ISO	8,00	4,76	1,00			○	
08NL-125ISO	8,00	4,76	1,25			○	
08NL-150ISO	8,00	4,76	1,50			○	
08NL-175ISO	8,00	4,76	1,75			○	
11NL-100ISO	11,00	6,35	1,00			○	
11NL-150ISO	11,00	6,35	1,50			○	
16NL-100ISO	16,00	9,52	1,00			○	
16NL-125ISO	16,00	9,52	1,25			○	
16NL-150ISO	16,00	9,52	1,50			○	
16NL-175ISO	16,00	9,52	1,75			○	
16NL-200ISO	16,00	9,52	2,00			○	
16NL-250ISO	16,00	9,52	2,50			○	
16NL-300ISO	16,00	9,52	3,00			○	
22NL-400ISO	22,00	12,70	4,00			○	

NR-ISO TD

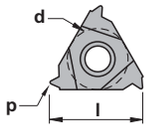
	l	d	p	KM15	PM25	TIN25	TL20
16NR-100ISO TD	16,50	9,52	1,00			●	
16NR-125ISO TD	16,50	9,52	1,25			●	
16NR-150ISO TD	16,50	9,52	1,50			●	
16NR-175ISO TD	16,50	9,52	1,75			●	
16NR-200ISO TD	16,50	9,52	2,00			●	
16NR-250ISO TD	16,50	9,52	2,50			●	
16NR-300ISO TD	16,50	9,52	3,00			●	

Mechanical thread forms - External and internal inserts
UNIFIED (full form) ASME/ANSI B1.1

Normally available for immediate delivery ●
Only available in a limited quantity ○



ER UN



ER

ER-UN

	l	d	p	KM15	PM25	TIN25	TL20
16ER-11UN	16,00	9,52	11,0			○	
16ER-14UN	16,00	9,52	14,0			○	
16ER-18UN	16,00	9,52	18,0			○	

NR-UN

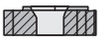
	l	d	p	KM15	PM25	TIN25	TL20
16NR-20UN	16,00	9,52	20,0			○	
16NR-24UN	16,00	9,52	24,0			○	

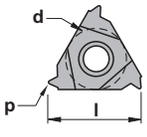
Mechanical thread forms - External and internal inserts
WHITWORTH (full form) BS84

Normally available for immediate delivery ●
Only available in a limited quantity ○

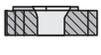
ER-W

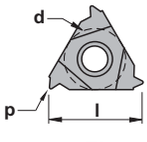
ER-W TD





ER





EL

ER-W

	l	d	p	KM15	PM25	TIN25	TL20
11ER-14W	11,00	6,35	14,0			○	
11ER-16W	11,00	6,35	16,0			○	
11ER-18W	11,00	6,35	18,0			○	
11ER-19W	11,00	6,35	19,0			○	
11ER-22W	11,00	6,35	22,0			○	
11ER-24W	11,00	6,35	24,0			○	
11ER-26W	11,00	6,35	26,0			○	
11ER-28W	11,00	6,35	28,0			○	
11ER-40W	11,00	6,35	40,0			○	
11ER-50W	11,00	6,35	50,0			○	
11ER-56W	11,00	6,35	56,0			○	
16ER-8W	16,00	9,52	8,0			○	
16ER-9W	16,00	9,52	9,0			○	
16ER-10W	16,00	9,52	10,0			○	
16ER-11W	16,00	9,52	11,0			○	
16ER-12W	16,00	9,52	12,0			○	
16ER-14W	16,00	9,52	14,0			○	
16ER-16W	16,00	9,52	16,0			○	
16ER-18W	16,00	9,52	18,0			○	
16ER-19W	16,00	9,52	19,0			○	
16ER-20W	16,00	9,52	20,0			○	
16ER-22W	16,00	9,52	22,0			○	
16ER-24W	16,00	9,52	24,0			○	
16ER-26W	16,00	9,52	26,0			○	
16ER-28W	16,00	9,52	28,0			○	
22ER-4W	22,00	12,70	4,0			○	
22ER-4.5W	22,00	12,70	4,5			○	
22ER-5W	22,00	12,70	5,0			○	
22ER-6W	22,00	12,70	6,0			○	
22ER-7W	22,00	12,70	7,0			○	
22ER-8W	22,00	12,70	8,0			○	
27ER-4W	27,00	15,87	4,0			○	
27ER-4.5W	27,00	15,87	4,5			○	

EL-W

	l	d	p	KM15	PM25	TIN25	TL20
16EL-11W	16,00	9,52	11,0			○	
16EL-14W	16,00	9,52	14,0			○	
16EL-20W	16,00	9,52	20,0			○	

ER-W TD

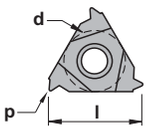
	l	d	p	KM15	PM25	TIN25	TL20
16ER-11W TD	16,50	9,52	11,0			○	
16ER-14W TD	16,50	9,52	14,0			○	
16ER-16W TD	16,50	9,52	16,0			○	

Mechanical thread forms - Internal inserts
WHITWORTH (full form) BS84

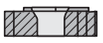
Normally available for immediate delivery ●
Only available in a limited quantity ○

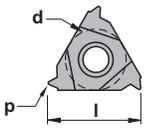
NR-W

NR-W TD



NR





NL

NR-W

	l	d	p	KM15	PM25	TIN25	TL20
06NR-18W	6,00	3,96	18,0			○	
06NR-19W	6,00	3,96	19,0			○	
06NR-20W	6,00	3,96	20,0			○	
06NR-22W	6,00	3,96	22,0			○	
06NR-26W	6,00	3,96	26,0			○	
08NR-16W	8,00	4,76	16,0			○	
08NR-18W	8,00	4,76	18,0			○	
08NR-19W	8,00	4,76	19,0			○	
08NR-20W	8,00	4,76	20,0			○	
08NR-24W	8,00	4,76	24,0			○	
08NR-28W	8,00	4,76	28,0			○	
11NR-11W	11,00	6,35	11,0			○	
11NR-12W	11,00	6,35	12,0			○	
11NR-14W	11,00	6,35	14,0			○	
11NR-16W	11,00	6,35	16,0			○	
11NR-18W	11,00	6,35	18,0			○	
11NR-19W	11,00	6,35	19,0			○	
11NR-20W	11,00	6,35	20,0			○	
11NR-22W	11,00	6,35	22,0			○	
11NR-24W	11,00	6,35	24,0			○	
11NR-26W	11,00	6,35	26,0			○	
11NR-28W	11,00	6,35	28,0			○	
11NR-32W	11,00	6,35	32,0			○	
11NR-36W	11,00	6,35	36,0			○	
11NR-40W	11,00	6,35	40,0			○	
11NR-48W	11,00	6,35	48,0			○	
16NR-8W	16,00	9,52	8,0			○	
16NR-9W	16,00	9,52	9,0			○	
16NR-10W	16,00	9,52	10,0			○	
16NR-11W	16,00	9,52	11,0			○	
16NR-12W	16,00	9,52	12,0			○	
16NR-14W	16,00	9,52	14,0			○	
16NR-16W	16,00	9,52	16,0			○	
16NR-18W	16,00	9,52	18,0			○	
16NR-19W	16,00	9,52	19,0			○	
16NR-20W	16,00	9,52	20,0			○	
16NR-22W	16,00	9,52	22,0			○	
16NR-24W	16,00	9,52	24,0			○	
16NR-26W	16,00	9,52	26,0			○	
16NR-28W	16,00	9,52	28,0			○	
22NR-4W	22,00	12,70	4,0			○	
22NR-4.5W	22,00	12,70	4,5			○	
22NR-5W	22,00	12,70	5,0			○	
22NR-6W	22,00	12,70	6,0			○	
22NR-7W	22,00	12,70	7,0			○	

NL-W

	l	d	p	KM15	PM25	TIN25	TL20
06NL-18W	6,00	3,96	18,0			○	
06NL-20W	6,00	3,96	20,0			○	
06NL-22W	6,00	3,96	22,0			○	
06NL-26W	6,00	3,96	26,0			○	
08NL-16W	8,00	4,76	16,0			○	
08NL-18W	8,00	4,76	18,0			○	
08NL-19W	8,00	4,76	19,0			○	
08NL-20W	8,00	4,76	20,0			○	
08NL-24W	8,00	4,76	24,0			○	
08NL-28W	8,00	4,76	28,0			○	
16NL-11W	16,00	9,52	11,0			○	
16NL-14W	16,00	9,52	14,0			○	
16NL-16W	16,00	9,52	16,0			○	
16NL-20W	16,00	9,52	20,0			○	

NR-W TD

	l	d	p	KM15	PM25	TIN25	TL20
16NR-8W TD	16,50	9,52	8,0			○	
16NR-9W TD	16,50	9,52	9,0			○	
16NR-10W TD	16,50	9,52	10,0			○	
16NR-11W TD	16,50	9,52	11,0			●	○
16NR-12W TD	16,50	9,52	12,0			○	
16NR-14W TD	16,50	9,52	14,0			●	○
16NR-16W TD	16,50	9,52	16,0			○	
16NR-18W TD	16,50	9,52	18,0			○	
16NR-19W TD	16,50	9,52	19,0			○	

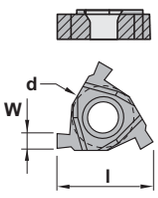
Grooving - External inserts
Lock ring groove inserts type LG

Normally available for immediate delivery ●
Only available in a limited quantity ○

ER-LG

ER-LG

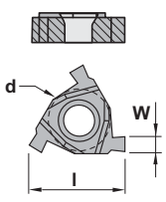
	l	d	W	KM15	PM25	TIN25	TL20
16ER-100LG	16,00	9,52	1,15				●
16ER-120LG	16,00	9,52	1,35				●
16ER-150LG	16,00	9,52	1,65				●
16ER-175LG	16,00	9,52	1,90				●
16ER-200LG	16,00	9,52	2,15				●
16ER-250LG	16,00	9,52	2,65				●



ER

EL-LG

	l	d	W	KM15	PM25	TIN25	TL20
16EL-100LG	16,00	9,52	1,15				●
16EL-120LG	16,00	9,52	1,35				●
16EL-150LG	16,00	9,52	1,65				●
16EL-175LG	16,00	9,52	1,90				●
16EL-200LG	16,00	9,52	2,15				●



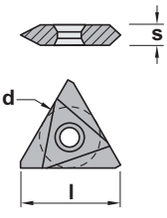
EL

Negative triangular insert for threading.

Normally available for immediate delivery ●
Only available in a limited quantity ○

TNMC

	l	s	d	KM15	PM25	TIN16	TL20
TNMC 1603XX	16,50	3,18	9,52		○	○	
TNMC 2204XX	22,00	4,76	12,70		●	○	

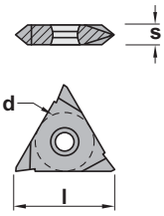


Negative triangular insert for threading.

Normally available for immediate delivery ●
Only available in a limited quantity ○

TPMC

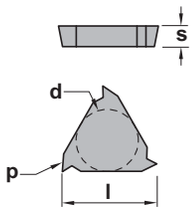
	l	s	d	KM15	PM25	TIN16	TL20
TPMC 1603XX	16,50	3,18	9,52		○	○	
TPMC 2204XX	22,00	4,76	12,70		○	○	



Positive 7° clearance - Triangular insert for threading.

Normally available for immediate delivery ●
Only available in a limited quantity ○

L166G-ISO

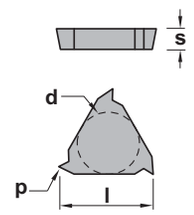


	l	s	d	p	KM15	PM25	TIN25	TL20
L166G-3BA075	16,50	3,18	9,52	0,75		○		
L166G-3BA100	16,50	3,18	9,52	1,00		○		
L166G-3BA125	16,50	3,18	9,52	1,25		○		
L166G-3BA150	16,50	3,18	9,52	1,50		○		
L166G-3BA175	16,50	3,18	9,52	1,75		○		
L166G-3BA200	16,50	3,18	9,52	2,00		○		
L166G-3BA250	16,50	3,18	9,52	2,50		○		
L166G-3BA300	16,50	3,18	9,52	3,00		○		

Positive 7° clearance - Triangular insert for threading.

Normally available for immediate delivery ●
Only available in a limited quantity ○

R166G-ISO

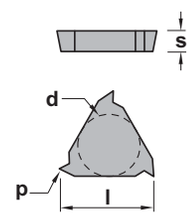


	l	s	d	p	KM15	PM25	TIN25	TL20
R166G-3BA075	16,50	3,18	9,52	0,75		○		
R166G-3BA100	16,50	3,18	9,52	1,00		○		
R166G-3BA125	16,50	3,18	9,52	1,25		○		
R166G-3BA150	16,50	3,18	9,52	1,50		○		
R166G-3BA175	16,50	3,18	9,52	1,75		○		
R166G-3BA200	16,50	3,18	9,52	2,00		○		
R166G-3BA250	16,50	3,18	9,52	2,50		○		
R166G-3BA300	16,50	3,18	9,52	3,00		○		

Positive 7° clearance - Triangular insert for threading.

Normally available for immediate delivery ●
Only available in a limited quantity ○

R166G-B

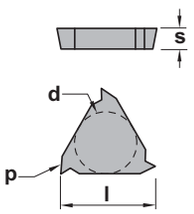


	l	s	d	p	KM15	PM25	TIN25	TL20
R166G-3BK080	16,50	3,18	9,52	08		○		
R166G-3BK160	16,50	3,18	9,52	16		○		
R166G-3BL110	16,50	3,18	9,52	11		○		
R166G-3BL160	16,50	3,18	9,52	16		○		

Positive 7° clearance - Triangular insert for threading.

Normally available for immediate delivery ●
Only available in a limited quantity ○

L166L-ISO

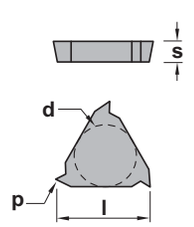


	l	s	d	p	KM15	PM25	TIN25	TL20
L166L-3BA150	16,50	3,18	9,52	1,50		○		
L166L-3BA175	16,50	3,18	9,52	1,75		○		
L166L-3BA200	16,50	3,18	9,52	2,00		○		
L166L-3BA250	16,50	3,18	9,52	2,50		○		
L166L-3BA300	16,50	3,18	9,52	3,00		○		

Positive 7° clearance - Triangular insert for threading.

Normally available for immediate delivery ●
Only available in a limited quantity ○

R166L-ISO



	l	s	d	p	KM15	PM25	TIN25	TL20
R166L-2BA100	11,00	3,18	6,35	1,00		○		
R166L-2BA150	11,00	3,18	6,35	1,50		○		
R166L-3BA150	16,50	3,18	9,52	1,50		○		
R166L-3BA175	16,50	3,18	9,52	1,75		○		
R166L-3BA200	16,50	3,18	9,52	2,00		○		
R166L-3BA250	16,50	3,18	9,52	2,50		○		
R166L-3BA300	16,50	3,18	9,52	3,00		○		
R166L-3BK080	16,50	3,18	9,52	08		○		

External threading

SXAN 90°

08 ER/L..
11 ER/L..
16 ER/L..
22 ER/L..

Page H.13

STAN 90°

16 ER/L..
22 ER/L..
27 ER/L..

Page H.14

CTAN 90°

16 ER/L..
22 ER/L..
27 ER/L..

Page H.15

SXGN 90°

R/L 166G-3..
R/L 166G-4..

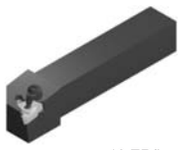
Page H.16

STXN 90°

16 ER/L..
22 ER/L..
27 ER/L..

Page H.17

CTXN 90°



16 ER/L..
22 ER/L..
27 ER/L..

Page H.18

STCN 90°

TNMC 1603..
TPMC 1603..
TNMC 2204..
TPMC 2204..

Page H.19

CXAP 90°

R/L 166-3..
R/L 166-4..

Page H.20

Internal threading

SXFN 90°

11 NR/L..
22 NR/L..

Page H.21

STXN 90°

11 NR/L.
16 NR/L...
22 NR/L..
27 NR/L..

Page H.23

CTXN 90°

16 NR/L..
22 NR/L..
27 NR/L..

Page H.24

STGN 90°

TNMC 1603..
TNMC 2204..

Page H.25

STGP 90°

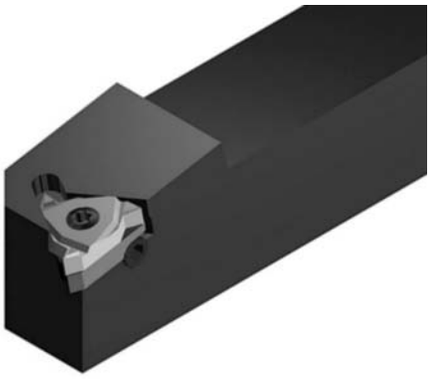
TPMC 1603..
TPMC 2204..

Page H.26

CXFP 90°

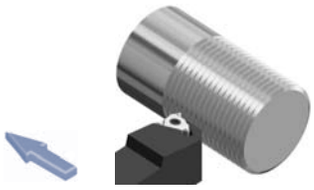
R/L 166-2..
R/L 166-3..
R/L 166-4..

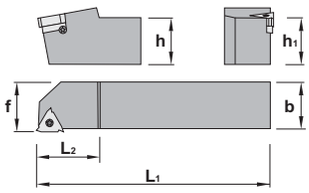
Page H.27



Characteristics:
Threading toolholder for negative lay down inserts.
The screw clamping ensures a good stiffness and evacuation of chips.
The insert is positioned a -10º cutting angle, and a -1º clearance angle.
Applications:
Multipurpose threading toolholders.

Metric screws

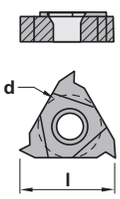




SXAN 90°

Ref.		h=h1	b	L1	L2	f	Insert size	Kg
	SXAN R/L 0808 M08	8	8	150	20	8	08 ER/L..	0,070
	SXAN R/L 1010 M08	10	10	150	20	10	08 ER/L..	0,100
	SXAN R/L 1212 M11	12	12	150	20	12	11 ER/L..	0,140
	SXAN R/L 1616 H16	16	16	100	22	16	16 ER/L..	0,200
	SXAN R/L 1616 M16	16	16	150	22	16	16 ER/L..	0,270
	SXAN R/L 2020 K16	20	20	125	28	20	16 ER/L..	0,400
	SXAN R/L 2525 M16	25	25	150	28	25	16 ER/L..	0,700
	SXAN R/L 3232 P16	32	32	170	28	32	16 ER/L..	1,300
	SXAN R/L 2525 M22	25	25	150	34	25	22 ER/L..	0,700
	SXAN R/L 3232 P22	32	32	170	34	32	22 ER/L..	1,300

Ref.				 R	 L	
	SXAN R/L 0808 M08	1225	5507	-	-	-
	SXAN R/L 1010 M08	1225	5507	-	-	-
	SXAN R/L 1212 M11	1225	5507	-	-	-
	SXAN R/L 1616 H16	1335	5515	3424	3425	1093
	SXAN R/L 1616 M16	1335	5515	3424	3425	1093
	SXAN R/L 2020 K16	1335	5515	3424	3425	1093
	SXAN R/L 2525 M16	1335	5515	3424	3425	1093
	SXAN R/L 3232 P16	1335	5515	3424	3425	1093
	SXAN R/L 2525 M22	1340	5515	3430	3431	1094
	SXAN R/L 3232 P22	1340	5515	3430	3431	1094

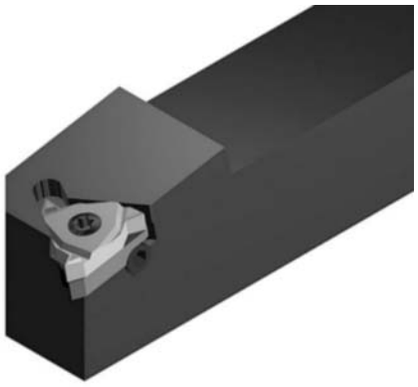


Ref.	E R/L	l	d
	08 ER/L	8,00	4,76
	11 ER/L	11,00	6,35
	16 ER/L..	16,00	9,52
	22 ER/L..	22,00	12,70

Negative triangular inserts for external threading

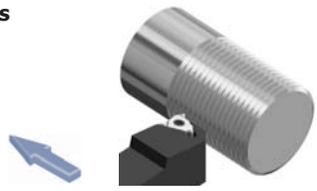
For more information see page: H.04

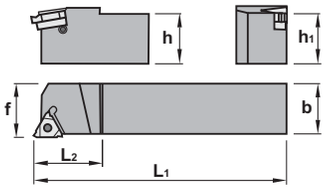
ER/L	ER/L TD					
						



Characteristics:
Threading toolholder for negative lay down inserts.
The screw clamping ensures a good stiffness and evacuation of chips.
The insert is positioned a -10º cutting angle, and a -1º clearance angle.
Applications:
Multipurpose threading toolholders.

Whitworth screws

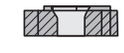


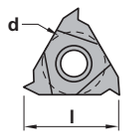


STAN 90º

		h=h1	b	L1	L2	f	Insert size	Kg
Ref.	**STAN R/L 1616 H16**	16	16	100	20,5	16	16 ER/L..	0,200
	STAN R/L 2020 K16	20	20	125	30,0	20	16 ER/L..	0,400
	STAN R/L 2525 M16	25	25	150	30,0	25	16 ER/L..	0,700
	STAN R/L 3232 P16	32	32	170	30,0	32	16 ER/L..	1,300
	STAN R/L 2525 M22	25	25	150	36,0	25	22 ER/L..	0,700
	STAN R/L 3232 P22	32	32	175	36,0	32	22 ER/L..	1,300
	STAN R/L 4040 R22	40	40	200	36,0	40	22 ER/L..	3,000
	STAN R/L 3232 P27	32	32	170	40,0	32	27 ER/L..	1,300
	STAN R/L 4040 R27	40	40	200	40,0	40	27 ER/L..	3,000
	STAN R/L 5050 S27	50	50	250	40,0	50	27 ER/L..	5,800

				R	L	
Ref.	**STAN R/L 1616 H16**	SA3	5510	YE3	YI3	SY3
	STAN R/L 2020 K16	SA3	5510	YE3	YI3	SY3
	STAN R/L 2525 M16	SA3	5510	YE3	YI3	SY3
	STAN R/L 3232 P16	SA3	5510	YE3	YI3	SY3
	STAN R/L 2525 M22	SA4	5520	YE4	YI4	SY4
	STAN R/L 3232 P22	SA4	5520	YE4	YI4	SY4
	STAN R/L 4040 R22	SA4	5520	YE4	YI4	SY4
	STAN R/L 3232 P27	SA5	5525	YE5	YI5	SY5
	STAN R/L 4040 R27	SA5	5525	YE5	YI5	SY5
	STAN R/L 5050 S27	SA5	5525	YE5	YI5	SY5





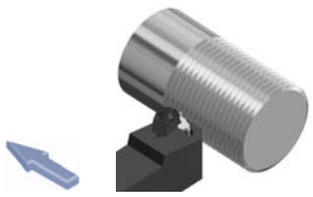
	E R/L	l	d
Ref.	**16 ER/L..**	16,00	9,52
	22 ER/L..	22,00	12,70
	27 ER/L..	27,50	15,88

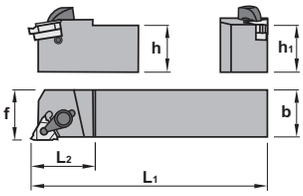
Negative triangular inserts for external threading

For more information see page: H.04

ER/L	ER/L TD					
						

Characteristics:
Top clamp threading toolholder for negative lay down inserts.
The insert is positioned a -10º cutting angle, and a -1º clearance angle.
Applications:
Multipurpose threading toolholders.

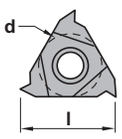




CTAN 90º

		h=h1	b	L1	L2	f	Insert size	Kg
Ref.	CTAN R/L 2020 K16	20	20	128,6	30	20	16 ER/L..	0,400
	CTAN R/L 2525 M16	25	25	153,6	30	25	16 ER/L..	0,700
	CTAN R/L 3232 P16	32	32	173,6	30	32	16 ER/L..	1,050
	CTAN R/L 2525 M22	25	25	155,7	36	25	22 ER/L..	0,700
	CTAN R/L 3232 P22	32	32	175,7	36	32	22 ER/L..	1,300
	CTAN R/L 4040 R22	40	40	205,7	36	40	22 ER/L..	3,000
	CTAN R/L 3232 P27	32	32	176,7	40	32	27 ER/L..	1,300
	CTAN R/L 4040 R27	40	40	206,6	40	40	27 ER/L..	3,000
	CTAN R/L 5050 S27	50	50	256,6	40	50	27 ER/L..	5,800

				R	L		
Ref.	CTAN R/L 2020 K16	2516	5515	YE3	YI3	SY3	SA3
	CTAN R/L 2525 M16	2516	5515	YE3	YI3	SY3	SA3
	CTAN R/L 3232 P16	2516	5515	YE3	YI3	SY3	SA3
	CTAN R/L 2525 M22	2522	5515	YE4	YI4	SY4	SA4
	CTAN R/L 3232 P22	2522	5515	YE4	YI4	SY4	SA4
	CTAN R/L 4040 R22	2522	5515	YE4	YI4	SY4	SA4
	CTAN R/L 3232 P27	2527	5525	YE5	YI5	SY5	SA5
	CTAN R/L 4040 R27	2527	5525	YE5	YI5	SY5	SA5
	CTAN R/L 5050 S27	2527	5525	YE5	YI5	SY5	SA5
							Optional

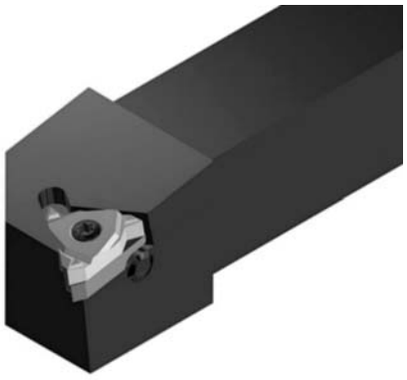


	E R/L	l	d
Ref.	16 ER/L..	16,00	9,52
	22 ER/L..	22,00	12,70
	27 ER/L..	27,50	15,88

Negative triangular inserts for external threading

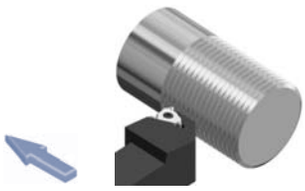
For more information see page: H.04

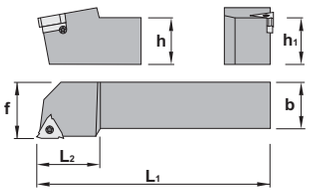
ER/L	ER/L TD					
						



Characteristics:
Threading toolholder for negative lay down inserts.
The screw clamping ensures good stiffness and evacuation of chips.
The insert is positioned a -10º cutting angle, and a -1º clearance angle.
Applications:
Multipurpose threading toolholders.

Metric screws

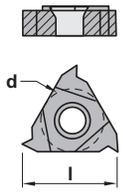




SXGN 90°

		h=h1	b	L1	L2	f	Insert size	Kg
Ref.	**SXGN R/L 1212 F16**	12	12	80	22	16	16 ER/L..	0,100
	SXGN R/L 1616 H16	16	16	100	22	20	16 ER/L..	0,200
	SXGN R/L 2020 K16	20	20	125	28	25	16 ER/L..	0,400
	SXGN R/L 2525 M16	25	25	150	28	32	16 ER/L..	0,700
	SXGN R/L 3232 P16	32	32	170	28	40	16 ER/L..	1,050
	SXGN R/L 2525 M22	25	25	150	34	32	22 ER/L..	0,700
	SXGN R/L 3232 P22	32	32	170	34	40	22 ER/L..	1,050

				R	L	
Ref.	**SXGN R/L 1212 F16**	1335	5515	3424	3425	1093
	SXGN R/L 1616 H16	1335	5515	3424	3425	1093
	SXGN R/L 2020 K16	1335	5515	3424	3425	1093
	SXGN R/L 2525 M16	1335	5515	3424	3425	1093
	SXGN R/L 3232 P16	1335	5515	3424	3425	1093
	SXGN R/L 2525 M22	1340	5515	3430	3431	1094
	SXGN R/L 3232 P22	1340	5515	3430	3431	1094

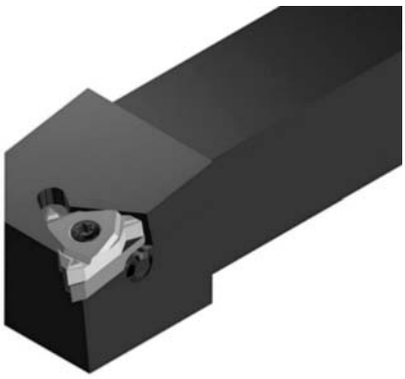


	E R/L	l	d
Ref.	**16 ER/L..**	16,00	9,52
	22 ER/L..	22,00	12,70

Negative triangular inserts for external threading

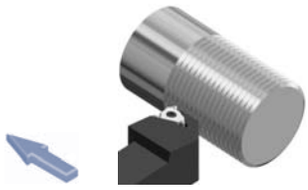
For more information see page: H.04

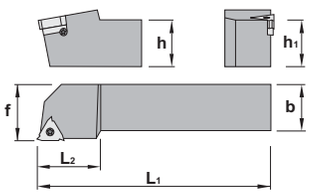
ER/L	ER/L TD					
						



Characteristics:
Threading toolholder for negative lay down inserts.
The screw clamping ensures a good stiffness and evacuation of chips.
The insert is positioned a -10º cutting angle, and a -1º clearance angle.
Applications:
Multipurpose threading toolholders.

Whitworth screws

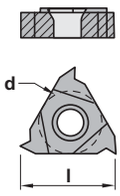




STXN 90º

Ref.		h=h1	b	L1	L2	f	Insert size	Kg
	STXN R/L 1212 F16	12	12	80	22,0	16	16 ER/L..	0,100
	STXN R/L 1616 H16	16	16	100	20,5	20	16 ER/L..	0,200
	STXN R/L 2020 K16	20	20	125	30,0	25	16 ER/L..	0,400
	STXN R/L 2525 M16	25	25	150	30,0	32	16 ER/L..	0,700
	STXN R/L 3232 P16	32	32	170	30,0	40	16 ER/L..	1,050
	STXN R/L 2525 M22	25	25	150	36,0	32	22 ER/L..	0,700
	STXN R/L 3232 P22	32	32	170	36,0	40	22 ER/L..	1,300
	STXN R/L 4040 R22	40	40	200	36,0	50	22 ER/L..	3,000
	STXN R/L 2525 M27	25	25	150	35,0	32	27 ER/L..	0,700
	STXN R/L 3232 P27	32	32	170	40,0	40	27 ER/L..	1,300
	STXN R/L 4040 R27	40	40	200	40,0	50	27 ER/L..	3,000
	STXN R/L 5050 S27	50	50	250	40,0	60	27 ER/L..	5,800

Ref.				R	L	
	STXN R/L 1212 F16	SA3	5510	YE3	YI3	SY3
	STXN R/L 1616 H16	SA3	5510	YE3	YI3	SY3
	STXN R/L 2020 K16	SA3	5510	YE3	YI3	SY3
	STXN R/L 2525 M16	SA3	5510	YE3	YI3	SY3
	STXN R/L 3232 P16	SA3	5510	YE3	YI3	SY3
	STXN R/L 2525 M22	SA4	5520	YE4	YI4	SY4
	STXN R/L 3232 P22	SA4	5520	YE4	YI4	SY4
	STXN R/L 4040 R22	SA4	5520	YE4	YI4	SY4
	STXN R/L 2525 M27	SA5	5525	YE5	YI5	SY5
	STXN R/L 3232 P27	SA5	5525	YE5	YI5	SY5
	STXN R/L 4040 R27	SA5	5525	YE5	YI5	SY5
	STXN R/L 5050 S27	SA5	5525	YE5	YI5	SY5



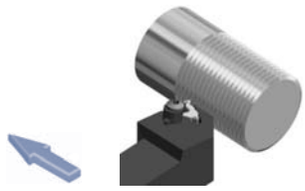
Ref.	E R/L	l	d
	16 ER/L..	16,00	9,52
	22 ER/L..	22,00	12,70
	27 ER/L..	27,50	15,88

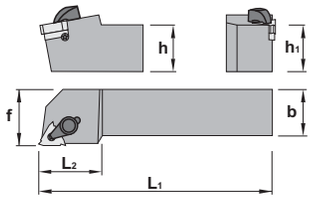
Negative triangular inserts for external threading

For more information see page: H.04

ER/L	ER/L TD					
						

Characteristics:
Top clamp threading toolholder for negative lay down inserts.
The insert is positioned a -10º cutting angle, and a -1º clearance angle.
Applications:
Multipurpose threading toolholders.

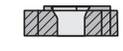


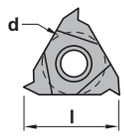


CTXN 90º

Ref.		h=h1	b	L1	L2	f	Insert size	Kg
	CTXN R/L 1212 F16	12	12	83,2	22,0	16	16 ER/L..	0,100
	CTXN R/L 1616 H16	16	16	100,0	20,5	20	16 ER/L..	0,200
	CTXN R/L 2020 K16	20	20	128,6	30,0	25	16 ER/L..	0,400
	CTXN R/L 2525 M16	25	25	153,6	30,0	32	16 ER/L..	0,700
	CTXN R/L 3232 P16	32	32	173,6	30,0	40	16 ER/L..	1,050
	CTXN R/L 2525 M22	25	25	155,7	36,0	32	22 ER/L..	0,700
	CTXN R/L 3232 P22	32	32	175,7	36,0	40	22 ER/L..	1,300
	CTXN R/L 4040 R22	40	40	205,7	36,0	50	22 ER/L..	3,000
	CTXN R/L 2525 M27	25	25	151,6	35,0	32	27 ER/L..	0,700
	CTXN R/L 3232 P27	32	32	176,7	40,0	40	27 ER/L..	1,300
	CTXN R/L 4040 R27	40	40	206,6	40,0	50	27 ER/L..	3,000
	CTXN R/L 5050 S27	50	50	256,6	40,0	60	27 ER/L..	5,800

Ref.				 R	 L		
	CTXN R/L 1212 F16	2516	5515	YE3	YI3	SY3	SA3
	CTXN R/L 1616 H16	2516	5515	YE3	YI3	SY3	SA3
	CTXN R/L 2020 K16	2516	5515	YE3	YI3	SY3	SA3
	CTXN R/L 2525 M16	2516	5515	YE3	YI3	SY3	SA3
	CTXN R/L 3232 P16	2516	5515	YE3	YI3	SY3	SA3
	CTXN R/L 2525 M22	2522	5515	YE4	YI4	SY4	SA4
	CTXN R/L 3232 P22	2522	5515	YE4	YI4	SY4	SA4
	CTXN R/L 4040 R22	2522	5515	YE4	YI4	SY4	SA4
	CTXN R/L 2525 M27	2527	5525	YE5	YI5	SY5	SA5
	CTXN R/L 3232 P27	2527	5525	YE5	YI5	SY5	SA5
	CTXN R/L 4040 R27	2527	5525	YE5	YI5	SY5	SA5
	CTXN R/L 5050 S27	2527	5525	YE5	YI5	SY5	SA5
							Optional





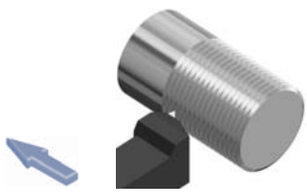
Ref.	E R/L	l	d
	16 ER/L..	16,00	9,52
	22 ER/L..	22,00	12,70
	27 ER/L..	27,50	15,88

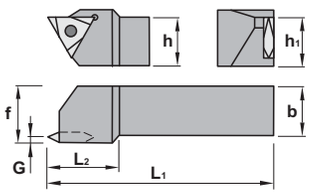
Negative triangular inserts for external threading

For more information see page: H.04

ER/L	ER/L TD					
						

Characteristics:
Vertical on edge threading toolholder.
The insert is positioned with a 0º cutting angle, and a 0º clearance angle.
Applications:
Toolholders for threading.

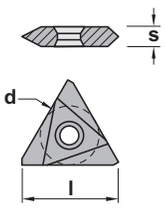




STCN 90°

		h=h1	b	L1	L2	f	G	Insert size	Kg
Ref.	**STCN R/L 1212 F16**	12	12	80	23	16	1,59	TNMC/TPMC 1603..	0,100
	STCN R/L 1616 H16	16	16	100	23	19	1,59	TNMC/TPMC 1603..	0,200
	STCN R/L 2020 K16	20	20	125	23	22	1,59	TNMC/TPMC 1603..	0,400
	STCN R/L 2525 M16	25	25	150	23	32	1,59	TNMC/TPMC 1603..	0,700
	STCN R/L 3232 P16	32	32	170	23	38	1,59	TNMC/TPMC 1603..	1,050
	STCN R/L 2020 K22	20	20	125	32	22	2,38	TNMC/TPMC 2204..	0,400
	STCN R/L 2525 M22	25	25	150	32	32	2,38	TNMC/TPMC 2204..	0,700
	STCN R/L 3225 P22	32	25	170	32	32	2,38	TNMC/TPMC 2204..	1,025
	STCN R/L 3232 P22	32	32	170	32	38	2,38	TNMC/TPMC 2204..	1,050
	STCN R/L 2525 M27	25	25	150	32	32	2,38	TNMC/TPMC 2704..	0,700
	STCN R/L 3232 P27	32	32	170	32	38	2,38	TNMC/TPMC 2704..	1,050

			
Ref.	**STCN R/L 1212 F16**	1935	5002
	STCN R/L 1616 H16	1935	5002
	STCN R/L 2020 K16	1935	5002
	STCN R/L 2525 M16	1935	5002
	STCN R/L 3232 P16	1935	5002
	STCN R/L 2020 K22	1950	5025
	STCN R/L 2525 M22	1950	5025
	STCN R/L 3225 P22	1950	5025
	STCN R/L 3232 P22	1950	5025
	STCN R/L 2525 M27	1955	5003
	STCN R/L 3232 P27	1955	5003



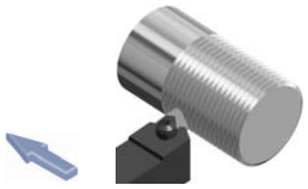
	TNMC/TPMC	l	s	d
Ref.	**T..MC 1603..**	16,50	3,18	9,52
	T..MC 2204..	22,00	4,76	12,70
	T..MC 2704..	27,00	4,76	15,88

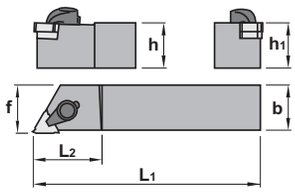
Negative triangular inserts for threading

For more information see page: H.10

TNMC	TPMC					
						

Characteristics:
Toolholder for flat positive inserts.
The insert is positioned with a 0º cutting angle, and a 0º clearance angle.
Applications:
Threading toolholder.

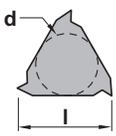




CXAP 90°

		h=h1	b	L1	L2	f	Insert size	Kg
Ref.	**CXAP R/L 2016 K16**	20	16	125	22	17	R/L 166-3..	0,300
	CXAP R/L 2020 K16	20	20	125	28	21	R/L 166-3..	0,400
	CXAP R/L 2525 M16	25	25	150	28	26	R/L 166-3..	0,700
	CXAP R/L 3225 P16	32	25	170	28	26	R/L 166-3..	1,050
	CXAP R/L 3232 P16	32	32	170	28	33	R/L 166-3..	1,300
	CXAP R/L 2525 M22	25	25	150	34	26	R/L 166-4..	0,700
	CXAP R/L 3225 P22	32	25	170	34	26	R/L 166-4..	1,050
	CXAP R/L 3232 P22	32	32	170	34	33	R/L 166-4..	1,300

Ref.	**CXAP R/L 2016 K16**	2209	5003	3126 R/L	4012	2409	9216 - 9316
	CXAP R/L 2020 K16	2209	5003	3126 R/L	4012	2409	9216 - 9316
	CXAP R/L 2525 M16	2209	5003	3126 R/L	4012	2409	9216 - 9316
	CXAP R/L 3225 P16	2209	5003	3126 R/L	4012	2409	9216 - 9316
	CXAP R/L 3232 P16	2209	5003	3126 R/L	4012	2409	9216 - 9316
	CXAP R/L 2525 M22	2211	5004	3132 R/L	4012	2411	9222 - 9322
	CXAP R/L 3225 P22	2211	5004	3132 R/L	4012	2411	9222 - 9322
	CXAP R/L 3232 P22	2211	5004	3132 R/L	4012	2411	9222 - 9322
						Supplementary accessories	



	R/L 166	l	s	d
Ref.	**R/L 166-3..**	16,50	3,18	9,52
	R/L 166-4..	22,00	4,76	12,70

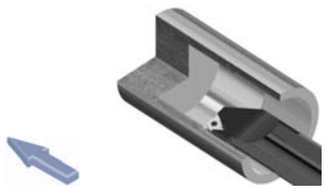
Positive triangular inserts for threading

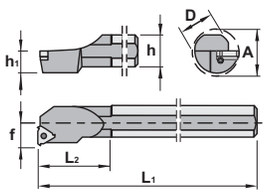
For more information see page: H.11

R/L 166						
						

Characteristics:
Threading toolholder for negative lay down inserts.
The center screw ensures a good stiffness and evacuation of chips.
The insert is positioned with a -10º cutting angle, and a -1º clearance angle.
Applications:
Multipurpose threading boring bars.

Metric screws

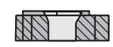


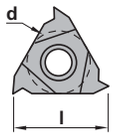


SXFN 90°

Ref.		D	h	h1	L1	L2	f	A	Insert size	Kg
	S10K SXFN R/L 11	10	9	4,5	125	16	7,3	13	11 NR/L..	0,070
	S16M SXFN R/L 11	16	15	7,5	150	25	8,9	16	11 NR/L..	0,200
	S16M SXFN R/L 16	16	15	7,5	150	25	11,5	20	16 NR/L..	0,200
	S20Q SXFN R/L 16	20	18	9,0	180	25	13,4	24	16 NR/L..	0,400
	S25S SXFN R/L 16	25	23	11,5	250	35	16,3	29	16 NR/L..	0,900
	S32T SXFN R/L 16	32	30	15,0	300	40	19,6	36	16 NR/L..	1,750
	S40T SXFN R/L 16	40	37	18,5	300	40	23,8	44	16 NR/L..	2,700
	S20Q SXFN R/L 22	20	18	9,0	180	25	15,6	27	22 NR/L..	0,400
	S25S SXFN R/L 22	25	23	11,5	250	35	17,2	32	22 NR/L..	0,900
	S32T SXFN R/L 22	32	30	15,0	300	40	21,5	39	22 NR/L..	1,750
	S40T SXFN R/L 22	40	37	18,5	300	40	25,8	47	22 NR/L..	2,700

Ref.				 R	 L	
	S10K SXFN R/L 11	1225	5507	-	-	-
	S16M SXFN R/L 11	1225	5507	-	-	-
	S16M SXFN R/L 16	1635	5510	-	-	-
	S20Q SXFN R/L 16	1334	5515	3425	3424	1093
	S25S SXFN R/L 16	1335	5515	3425	3424	1093
	S32T SXFN R/L 16	1335	5515	3425	3424	1093
	S40T SXFN R/L 16	1335	5515	3425	3424	1093
	S20Q SXFN R/L 22	1640	5515	-	-	-
	S25S SXFN R/L 22	1340	5515	3431	3430	1094
	S32T SXFN R/L 22	1340	5515	3431	3430	1094
	S40T SXFN R/L 22	1340	5515	3431	3430	1094





Ref.	N R/L	l	d
	11 NR/L..	11,00	6,35
	16 NR/L..	16,00	9,52
	22 NR/L..	22,00	12,70

Negative triangular inserts for internal threading

For more information see page: H.05

NR/L	NR/L TD					
						

Characteristics:
Boring bars with anti-vibration shank.

H-SXFN 90°

		D	h	h1	L1	L2	f	A	Insert size	Kg
Ref.	**H10K SXFN R/L 11**	10	9	4,5	125	16	7,3	13	11 NR/L..	0,130
	H16M SXFN R/L 11	16	15	7,5	150	25	8,9	16	11 NR/L..	0,400
	H16M SXFN R/L 16	16	15	7,5	150	25	11,5	20	16 NR/L..	0,400

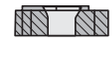
Ref.	**H10K SXFN R/L 11**	1225	5507
	H16M SXFN R/L 11	1225	5507
	H16M SXFN R/L 16	1635	5510

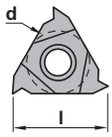
Characteristics:
Boring bars with internal coolant and anti-vibration shank.

J-SXFN 90°

		D	h	h1	L1	L2	f	A	Insert size	Kg
Ref.	**J10K SXFN R/L 11**	10	9	4,5	125	16	7,3	13	11 NR/L..	0,150
	J16M SXFN R/L 11	16	15	7,5	150	25	8,9	16	11 NR/L..	0,450
	J16M SXFN R/L 16	16	15	7,5	150	25	11,5	20	16 NR/L..	0,450

Ref.	**J10K SXFN R/L 11**	1225	5507
	J16M SXFN R/L 11	1225	5507
	J16M SXFN R/L 16	1635	5510





	N R/L	l	d
Ref.	**11 NR/L..**	11,00	6,35
	16 NR/L..	16,00	9,52

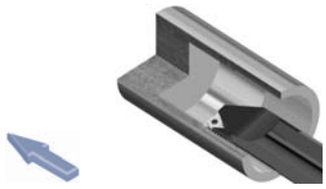
Negative triangular inserts for internal threading

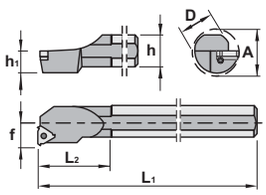
For more information see page: H.05

NR/L	NR/L TD					
						

Characteristics:
Threading toolholder for negative lay down inserts.
The center screw ensures a good stiffness and evacuation of chips.
The insert is positioned with a -10º cutting angle, and a -1º clearance angle.
Applications:
Multipurpose threading boring bars.

Whitworth screws

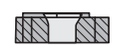


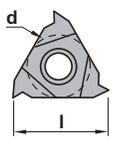


STXN 90º

		D	h	h1	L1	L2	f	A	Insert size	Kg
Ref.	**S16M STXN R/L 16**	16	15	7,5	150	32	11,5	15,2	16 NR/L..	0,200
	S20Q STXN R/L 16	20	18	9,0	180	40	13,4	18,0	16 NR/L..	0,400
	S25R STXN R/L 16	25	23	11,5	200	45	16,3	22,6	16 NR/L..	0,700
	S32S STXN R/L 16	32	30	15,0	250	60	19,6	29,0	16 NR/L..	1,500
	S40T STXN R/L 16	40	37	18,5	300	60	23,8	36,0	16 NR/L..	2,850
	S20Q STXN R/L 22	20	18	9,0	180	50	15,6	18,0	22 NR/L..	0,400
	S25R STXN R/L 22	25	23	11,5	200	60	17,2	22,6	22 NR/L..	0,700
	S32S STXN R/L 22	32	30	15,0	250	60	21,5	29,0	22 NR/L..	1,500
	S40T STXN R/L 22	40	37	18,5	300	60	25,8	36,0	22 NR/L..	2,850
	S32S STXN R/L 27	32	30	15,0	250	60	22,4	40,0	27 NR/L..	1,500
	S40T STXN R/L 27	40	37	18,5	300	60	26,4	48,0	27 NR/L..	2,850
	S50U STXN R/L 27	50	47	23,5	350	75	31,4	58,0	27 NR/L..	5,200
	S60V STXN R/L 27	60	57	28,5	400	75	36,4	69,0	27 NR/L..	8,550

				 R	 L	
Ref.	**S16M STXN R/L 16**	SN3	5510	-	-	-
	S20Q STXN R/L 16	SN3	5510	YI3	YE3	SY3
	S25R STXN R/L 16	SA3	5510	YI3	YE3	SY3
	S32S STXN R/L 16	SA3	5510	YI3	YE3	SY3
	S40T STXN R/L 16	SA3	5510	YI3	YE3	SY3
	S20Q STXN R/L 22	SN4	5520	-	-	-
	S25R STXN R/L 22	SA4	5520	YI4	YE4	SY4
	S32S STXN R/L 22	SA4	5520	YI4	YE4	SY4
	S40T STXN R/L 22	SA4	5520	YI4	YE4	SY4
	S32S STXN R/L 27	SA5	5525	YI5	YE5	SY5
	S40T STXN R/L 27	SA5	5525	YI5	YE5	SY5
	S50U STXN R/L 27	SA5	5525	YI5	YE5	SY5
	S60V STXN R/L 27	SA5	5525	YI5	YE5	SY5





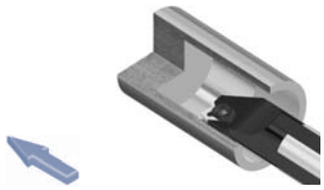
	N R/L	l	d
Ref.	**16 NR/L..**	16,00	9,52
	22 NR/L..	22,00	12,70
	27 NR/L..	27,00	15,87

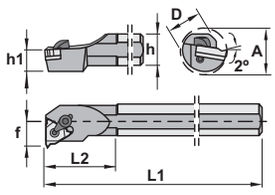
Negative triangular inserts for internal threading

For more information see page: H.05

NR/L	NR/L TD					
						

Characteristics:
Top clamp threading toolholder for negative lay down inserts.
The top clamp ensures a good stiffness and evacuation of chips.
The insert is positioned with a -10º cutting angle, and a -1º clearance angle.
Applications:
Multipurpose threading boring bars.

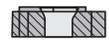


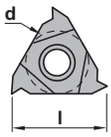


CTXN 90º

		D	h	h_1	L_1	L_2	f	A	Insert size	Kg
Ref.	**S20Q CTXN R/L 16**	20	18	9,0	180	50	13,0	18,0	16 NR/L..	0,400
	S25R CTXN R/L 16	25	23	11,5	200	45	17,0	22,6	16 NR/L..	0,700
	S32S CTXN R/L 16	32	30	15,0	250	60	22,0	29,0	16 NR/L..	1,500
	S40T CTXN R/L 16	40	37	18,5	300	60	27,0	36,0	16 NR/L..	2,850
	S25R CTXN R/L 22	25	23	11,5	200	45	17,0	22,6	22 NR/L..	0,700
	S32S CTXN R/L 22	32	30	15,0	250	60	22,0	29,0	22 NR/L..	1,500
	S40T CTXN R/L 22	40	37	18,5	300	60	27,0	36,0	22 NR/L..	2,850
	S32S CTXN R/L 27	32	30	15,0	250	60	22,4	29,0	27 NR/L..	1,500
	S40T CTXN R/L 27	40	37	18,5	300	60	26,4	36,0	27 NR/L..	2,850
	S50U CTXN R/L 27	50	47	23,5	350	75	31,4	45,0	27 NR/L..	5,200
	S60V CTXN R/L 27	60	58	29,0	400	75	36,4	54,0	27 NR/L..	8,550

				 R	 L		
Ref.	**S20Q CTXN R/L 16**	2516	5515	YI3	YE3	SY3	SN3
	S25R CTXN R/L 16	2516	5515	YI3	YE3	SY3	SA3
	S32S CTXN R/L 16	2516	5515	YI3	YE3	SY3	SA3
	S40T CTXN R/L 16	2516	5515	YI3	YE3	SY3	SA3
	S25R CTXN R/L 22	2522	5515	YI4	YE4	SY4	SA4
	S32S CTXN R/L 22	2522	5515	YI4	YE4	SY4	SA4
	S40T CTXN R/L 22	2522	5515	YI4	YE4	SY4	SA4
	S32S CTXN R/L 27	2527	5525	YI5	YE5	SY5	SA5
	S40T CTXN R/L 27	2527	5525	YI5	YE5	SY5	SA5
	S50U CTXN R/L 27	2527	5525	YI5	YE5	SY5	SA5
	S60V CTXN R/L 27	2527	5525	YI5	YE5	SY5	SA5
							Optional





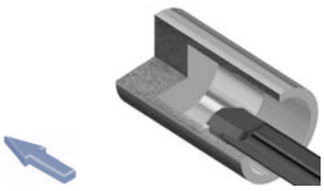
	N R/L	l	d
Ref.	**16 NR/L..**	16,00	9,52
	22 NR/L..	22,00	12,70
	27 NR/L..	27,00	15,87

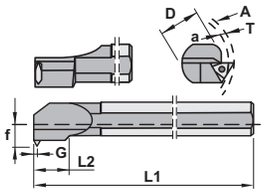
Negative triangular inserts for internal threading

For more information see page: H.05

NR/L	NR/L TD					
						

Characteristics:
Vertical on edge threading toolholder.
The insert is positioned with a 0º cutting angle, and a 0º clearance angle.
Applications:
Threading boring bar.

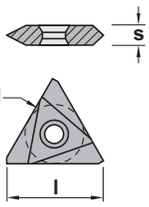




STGN 90°

		D	L1	L2	f	A	a	T	G	Insert size	Kg
Ref.	**S32U STGN R/L 16**	32	350	19	21,0	50,4	45	2,7	1,59	TNMC 1603..	2,100
	S40V STGN R/L 16	40	400	19	25,0	60,4	55	2,7	1,59	TNMC 1603..	3,650
	S32U STGN R/L 22	32	350	28	21,0	50,4	45	4,1	2,38	TNMC 2204..	2,100
	S40V STGN R/L 22	40	400	28	25,0	60,4	55	4,1	2,38	TNMC 2204..	3,650
	S50W STGN R/L 22	50	450	28	36,5	78,2	70	4,1	2,38	TNMC 2204..	6,700
	S40V STGN R/L 27	40	400	28	25,0	60,4	55	6,0	3,18	TNMC 2704..	3,650
	S50W STGN R/L 27	50	450	28	36,5	78,2	70	6,0	3,18	TNMC 2704..	6,700

			
Ref.	**S32U STGN R/L 16**	1935	5002
	S40V STGN R/L 16	1935	5002
	S32U STGN R/L 22	1950	5025
	S40V STGN R/L 22	1950	5025
	S50W STGN R/L 22	1950	5025
	S40V STGN R/L 27	1955	5003
	S50W STGN R/L 27	1955	5003



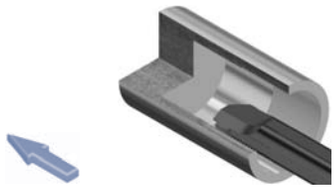
	TNMC	l	s	d
Ref.	**TNMC 1603..**	16,50	3,18	9,52
	TNMC 2204..	22,00	4,76	12,70
	TNMC 2704..	27,00	4,76	15,88

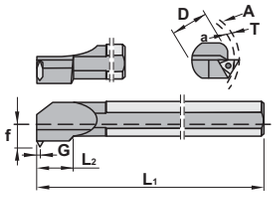
Triangular inserts for threading.

For more information see page: H.10

TNMC						
						

Characteristics:
Vertical on edge threading toolholder.
The insert is positioned with a 0º cutting angle, and a 0º clearance angle.
Applications:
Threading boring bar.

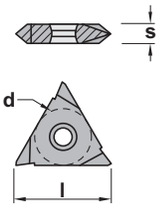




STGP 90°

		D	L_1	L_2	f	A	a	T	G	Insert size	Kg
Ref.	**S25T STGP R/L 16**	25	300	19	17,5	50,4	45	2,7	1,59	TPMC 1603..	1,100
	S32U STGP R/L 16	32	350	19	20,5	50,4	45	2,7	1,59	TPMC 1603..	2,100
	S40V STGP R/L 22	40	400	28	25,0	78,2	70	4,1	2,38	TPMC 2204..	3,650
	S50W STGP R/L 22	50	450	28	36,5	78,2	70	4,1	2,38	TPMC 2204..	6,700

			
Ref.	**S25T STGP R/L 16**	1935	5002
	S32U STGP R/L 16	1935	5002
	S40V STGP R/L 22	1950	5025
	S50W STGP R/L 22	1950	5025



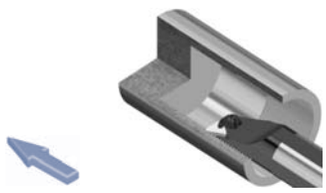
	TPMC	l	s	d
Ref.	**TPMC 1603..**	16,50	3,18	9,52
	TPMC 2204..	22,00	4,76	12,70

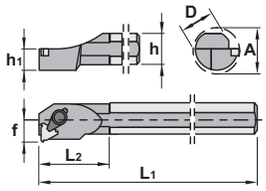
Triangular inserts for threading.

For more information see page: H.10

TNMC						
						

Characteristics:
Threading toolholder for flat positive inserts.
The insert is positioned with a 0º cutting angle, and a 0º clearance angle.
Applications:
Threading boring bar.

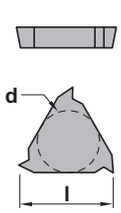




CXFP 90°

		D	h	h1	L1	L2	f	A	Insert size	Kg
Ref.	**S16R CXFP R/L 11**	16	15	7,5	200	30	11	20	R/L 166-2..	0,300
	S20S CXFP R/L 11	20	18	9,0	250	35	13	24	R/L 166-2..	0,550
	S20S CXFP R/L 16	20	18	9,0	250	35	13	24	R/L 166-3..	0,550
	S25T CXFP R/L 16	25	23	11,5	300	40	17	31	R/L 166-3..	1,050
	S32U CXFP R/L 16	32	30	15,0	350	50	22	39	R/L 166-3..	2,050
	S40V CXFP R/L 22	40	37	18,5	400	60	27	48	R/L 166-4..	3,650

			
Ref.	**S16R CXFP R/L 11**	2107	5025
	S20S CXFP R/L 11	2107	5025
	S20S CXFP R/L 16	2109	5003
	S25T CXFP R/L 16	2109	5003
	S32U CXFP R/L 16	2209	5003
	S40V CXFP R/L 22	2211	5004



	R/L 166	l	s	d
Ref.	**R/L 166-2..**	11,00	3,18	6,35
	R/L 166-3..	16,50	3,18	9,52
	R/L 166-4..	22,00	4,76	12,70

Positive triangular inserts for threading

For more information see page: H.11

R/L 166						
						

Cutting data

	Cutting speed m/min. (Ft/min) Tool grade		
Material	**PM25**	**KM15**	**TIN25**
Low and medium carbon steel	120-80 (390-260)		250-210 (820-690)
High carbon steel	110-70 (360-230)		210-150 (690-490)
Alloyed tool steel and heat-treatment steels	100-70 (360-230)		180-140 (590-460)
Stainless steels	100-70 (360-230)	90-70 (295-230)	140-110 (460-360)
Cast-iron HB 180-250		90-70 (295-230)	
Non-Ferrous metals		180-120 (590-390)	

Nº of passes		
P mm	**TPI**	**Nº of passes**
0,50	48,0	4 - 6
0,75	32,0	4 - 7
1,00	24,0	4 - 8
1,25	20,0	5 - 9
1,50	16,0	6 - 10
1,75	14,0	7 - 12
2,00	12,0	7 - 12
2,50	10,0	8 - 14
3,00	8,0	10 - 18
3,50	7,0	11 - 18
4,00	6,0	11 - 18
4,50	5,5	11 - 19
5,00	5,0	12 - 20
5,50	4,5	12 - 20
6,00	4,0	12 - 20
8,00	3,0	15 - 24

General recommendations :

- Threading speeds should normally be a minimum of 80% to 90% of turning speeds being used to machine the same component. (Assuming grades are compatible).
- Check helix angle and number of passes shown in charts before starting.
- Ensure centre height is correct.
- When there is a problem consult the following recommendations and change only one variable at time. This will help to be sure of the original problem.
- Do not use flank infeed on work hardening materials.

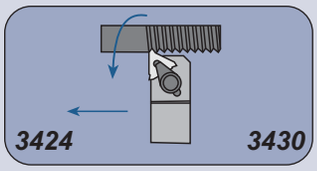
Component problems

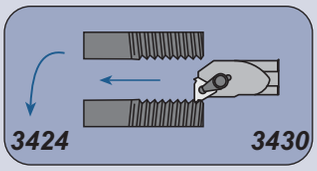
	Problem	*Cause and remedy*
Pitch error (on CNC machines)	★ Starting too close to workpiece ★ Saddle speed towards chuck is excessive	☆ Start cycle further back from workpiece. ☆ Reduce speed by 10% until correct.
Thread torn on one side only	★ Incorrect helix angle in toolholder.	☆ Check helix chart. ☆ Reassemble with correct anvil. ☆ Check centre height.
Thread torn on both sides	★ Running too slow. ★ Built up edge.	☆ Increase cutting speed. ☆ Check center height. ☆ Use coated grade. ☆ Compare thread speed with turning speed.
Long dangerous swarf	★ Incorrect chipbreaker geometry. ★ Incorrect method of infeed.	☆ Use Canela (TD) chipbreaker. ☆ Use different infeed method.
Vibration chatter marks on both flanks	★ Poor stability. ★ Excessive overhang.	☆ Renew anvil to support insert. ☆ Check tool clamping. ☆ Check rigidity of setup.
Shallow threads Problem with gauging	★ Insert not cresting. ★ Incorrect effective diameter.	☆ Check machined diameters. ☆ Excessive tool wear or chipped on nose see remedies above.

Helix chart

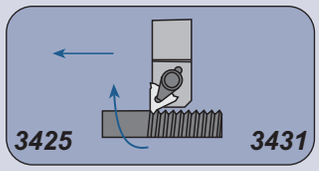
Feed direction towards the chuck

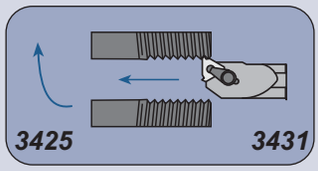
RH Thread - RH Tool





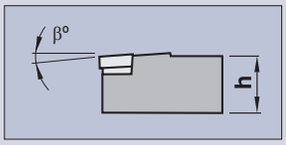
LH Thread - LH Tool

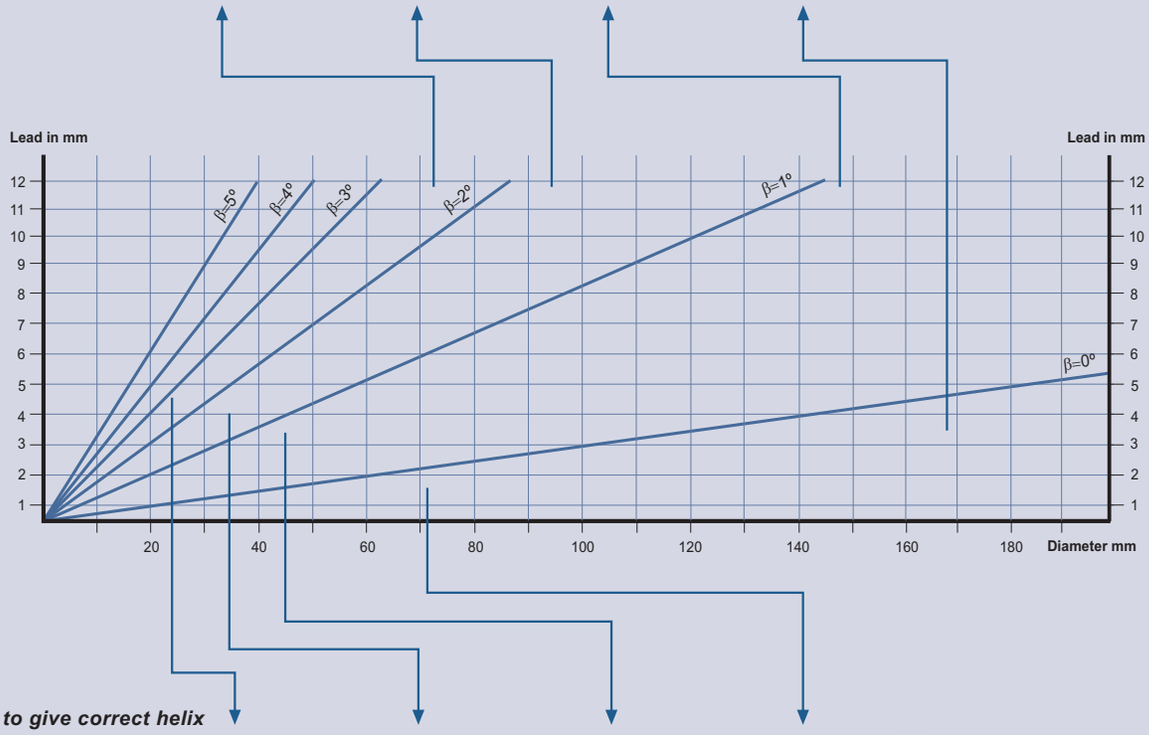




Anvil to give correct helix

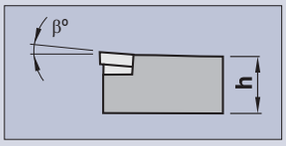
Insert size	+3º	+2º	+1º	+0º
16R	3424+3	3424+2	3424+1	3424
16L	3425+3	3425+2	3425+1	3425
22R	3430+3	3430+2	3430+1	3430
22L	3431+3	3431+2	3431+1	3431





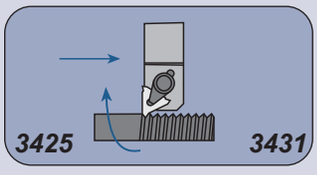
Anvil to give correct helix

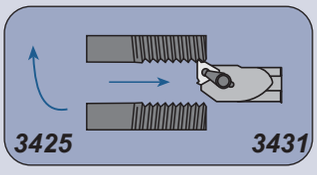
Medida da pastilha	-3º	-2º	-1º	0º
16R	3424-3	3424-2	3424-1	3424
16L	3425-3	3425-2	3425-1	3425
22R	3430-3	3430-2	3430-1	3430
22L	3431-3	3431-2	3431-1	3431



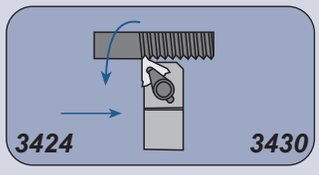
Feed direction away from the chuck

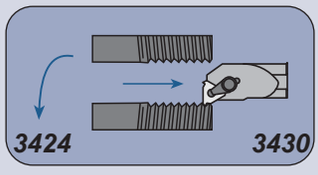
RH Thread - RH chuck



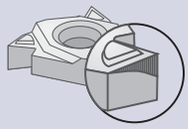
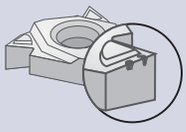
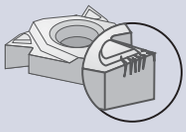
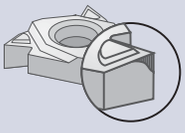
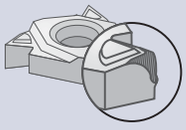
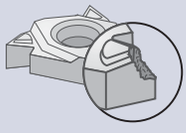


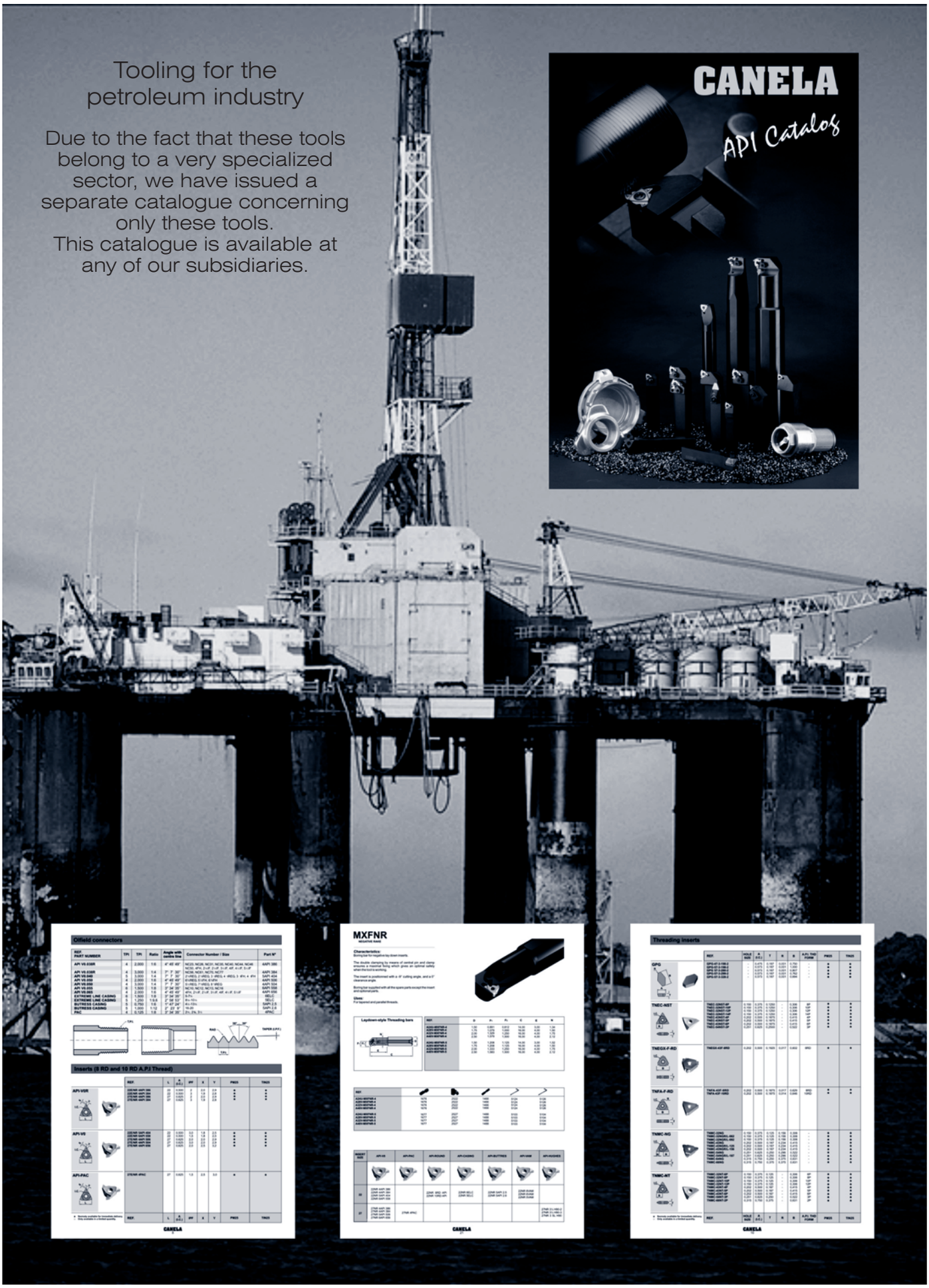
LH Thread - LH Tool





Threading insert wear and tool life

	Problem	*Cause and Remedy*
Rapid flank wear 	★ Cutting speed too high. ★ Lack of coolant. ★ Infeed per pass too small - too many passes ★ Incorrect grade.	☆ Reduce the cutting speed. ☆ Increase the coolant supply. ☆ Increase the depth of infeed for the smallest infeed depths - reduce the number of passes. ☆ Select a more wear resistant grade.
Edge frittering 	★ Instability of workholding and/or tool set-up.	☆ Check rigidity of operation. ☆ Select a tougher grade.
Edge spalling 	★ Intermittent coolant supply.	☆ Position coolant flow and/or increase coolant supply.
Uneven flank wear 	★ Incorrect method of infeed. ★ Incorrect angle of inclination.	☆ In case of flank infeed use modified flank infeed. Decrease infeed angle 3-5°. ☆ Correct the angle on inclination according to the diagram.
Excessive plastic deformation 	★ Infeed per pass too big - too few passes. ★ Lack of coolant. ★ Cutting speed too high. ★ Incorrect grade. ★ Excessive stock removal from crest.	☆ Decrease the depth of infeed for the biggest depths. - Increase the number of passes. ☆ Increase coolant supply. ☆ Reduce the cutting speed. ☆ Select a harder grade. ☆ Check the volume of the material above the crest.
Insert breakage 	★ Instability. ★ Lack of chip control. ★ Excessive plastic deformation. ★ Intermittent or inadequate coolant supply ★ Incorrect preparation of the operation	☆ Check rigidity of operation. ☆ Select a tougher grade. Select modified flank infeed. ☆ Machine with same infeed per pass. ☆ Direct coolant flow and/or increase coolant supply. ☆ Check dimension of blank.
Shallow thread profile	★ Wrong centre height. ★ Insert not cresting. ★ Excessive tool wear.	☆ Adjust cutting edge height. ☆ Check dimension of blank. ☆ Change insert earlier.
Incorrect thread profile	★ Incorrect tool setting.	☆ Correct tool setting.
Lack of chip control	★ Incorrect depth of infeed per pass ★ Radial infeed.	☆ Adjust cutting edge height. ☆ Check dimension of blank. ☆ Change insert earlier.
Bad surface finish	★ Cutting speed too low. ★ Incorrect angle of inclination. ★ Flank infeed.	☆ Increase the cutting speed. ☆ Correct the angle of inclination according to diagram. ☆ Use modified flank infeed or radial infeed.


Tooling for the
petroleum industry
Due to the fact that these tools belong to a very specialized sector, we have issued a separate catalogue concerning only these tools.
This catalogue is available at any of our subsidiaries.
CANELA
API Catalog
Oilfield connectors
Inserts (8 RD and 10 RD A.P.I Thread)
MXFNR
Laydown-style Threading bars
Threading inserts