P

Very unstable working conditions

Unstable working conditions

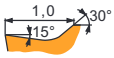
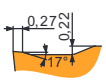
Stable working conditions

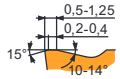
Thin -walled and slim workpieces

1st choice

Possible use

	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

UR		Designed for fine to finish machining, steels and cast irons and potentially stainless steel, continuous and interrupted cuts
FM		Designed for finish to semi-rough machining, steels and stainless steels, potentially cast irons and non ferrous materials, continuous and moderately interrupted cuts
RM		Designed for semi-rough machining, steels, stainless steels and cast irons, potentially super alloys and hardened materials, continuous and interrupted cuts

OR		Designed for rough and heavy rough machining, steels, stainless steels and cast irons, potentially super alloys. continuous and interrupted cuts

M

Very unstable working conditions

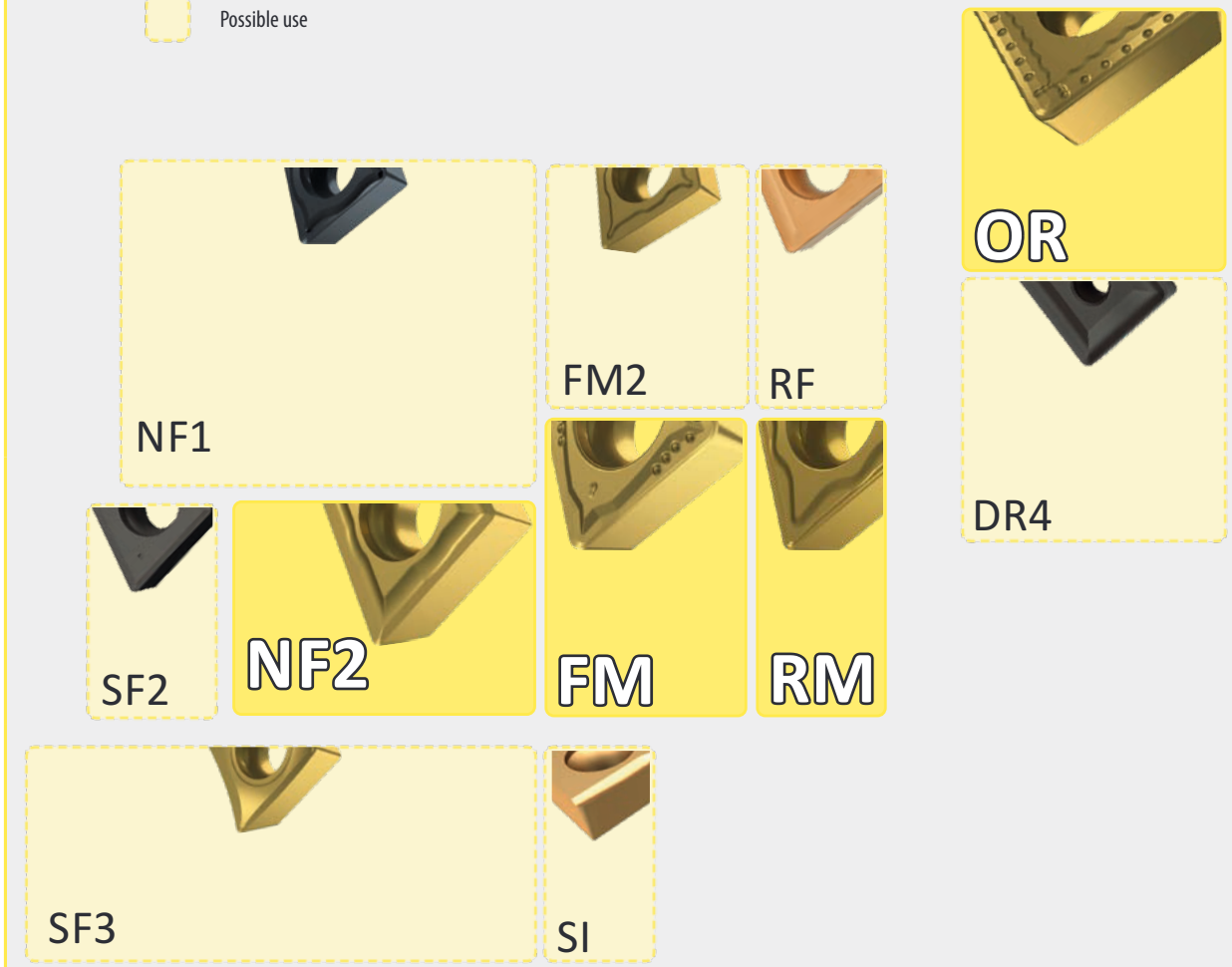
Unstable working conditions

Stable working conditions

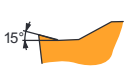
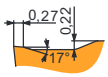
Thin -walled and slim workpieces

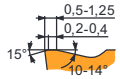
1st choice

Possible use



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

NF2		Positive design for fine-finish to semi rough machining, stainless steels and super alloys, continuous cuts
FM		Designed for finish to semi-rough machining, steels and stainless steels, potentially cast irons and non ferrous materials, continuous and moderately interrupted cuts
RM		Designed for semi-rough machining, steels, stainless steels and cast irons, potentially super alloys and hardened materials, continuous and interrupted cuts

OR		Designed for rough and heavy rough machining, steels, stainless steels and cast irons, potentially super alloys. continuous and interrupted cuts

K

1st choice

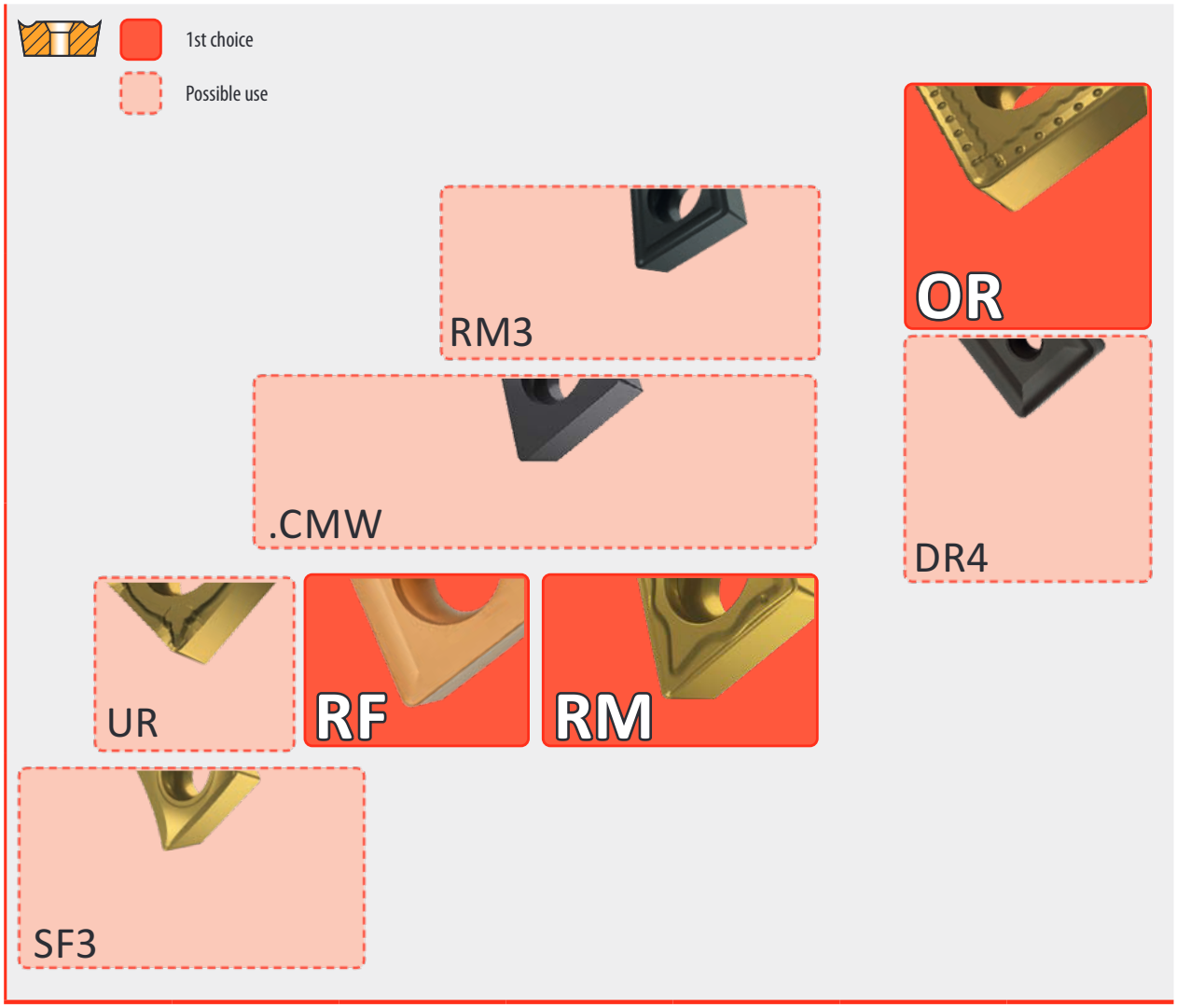
Possible use

Very unstable working conditions

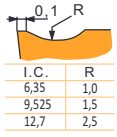
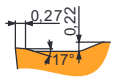
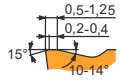
Unstable working conditions

Stable working conditions

Thin -walled and slim workpieces



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

RF	 I.C. / R: 6,35 / 1,0; 9,525 / 1,5; 12,7 / 2,5	Designed for rough machining, cast irons, potentially steels, stainless steels and hard materials, continuous and interrupted cuts
RM		Designed for semi-rough machining, steels, stainless steels and cast irons, potentially super alloys and hardened materials, continuous and interrupted cuts
OR		Designed for rough and heavy rough machining, steels, stainless steels and cast irons, potentially super alloys. continuous and interrupted cuts

N

Very unstable working conditions

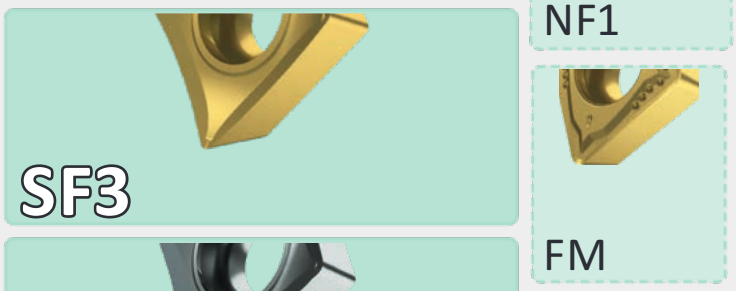
Unstable working conditions

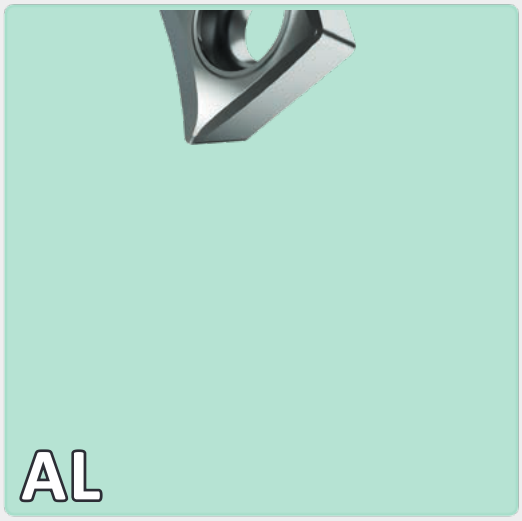
Stable working conditions

Thin -walled and slim workpieces

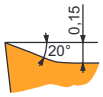
1st choice

Possible use





	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF3		Very positive design for fine and finish machining, super alloys, stainless steels and non ferrous materials, potentially steel, cast irons and hard materials, continuous cuts
AL		Highly positive design for fine finish to rough machining, aluminium, aluminium alloys and other non ferrous materials, potentially super alloys, continuous cuts

S

1st choice

Possible use

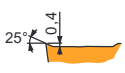
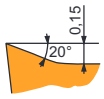
Very unstable working conditions

Unstable working conditions

Stable working conditions

Thin -walled and slim workpieces

	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF2		Very positive design for fine and finish machining, super alloys, potentially stainless steels, steels and non ferrous materials, continuous cuts
SF3		Very positive design for fine and finish machining, super alloys, stainless steels and non ferrous materials, potentially steel, cast irons and hard materials, continuous cuts
NF2		Positive design for fine-finish to semi rough machining, stainless steels and super alloys, continuous cuts

H

1st choice

Possible use

Very unstable working conditions

Unstable working conditions

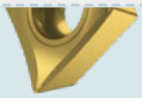
Stable working conditions

Thin -walled and slim workpieces

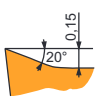
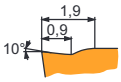
RM3

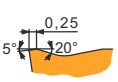
NF1

.CMW


SF3

	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF3		Very positive design for fine and finish machining, super alloys,stainless steels and non ferrous materials, potentially steel, cast irons and hard materials, continuous cuts
NF1		Positive design for fine-finish to medium machining, stainless steels and super alloys, potentially steels, non ferrous and hard materials, continuous cuts
.CMW		Designed for fine finish to semi rough machining, cast irons, potentially hard materials, continuous and slightly interrupted cuts

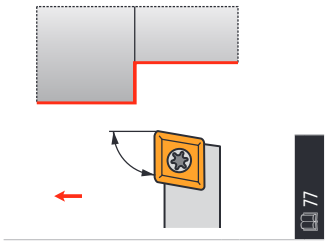
RM3		Designed for rough machining, cast irons, potentially steels, stainless steels and hard materials, continuous and interrupted cuts

CC

ISO TURNING – EXTERNAL – NAVIGATOR

SCAC(RL) EXT 90°

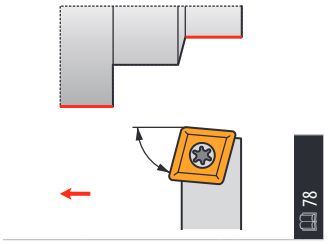
CC..



77

SCBC(RL) EXT 75°

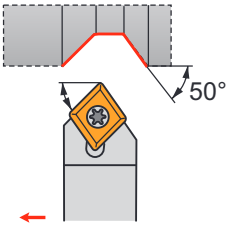
CC..



78

SCDCR EXT 45°

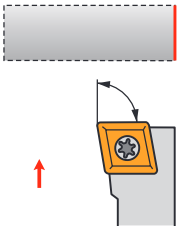
CC..



79

SCFC(RL) EXT 90°

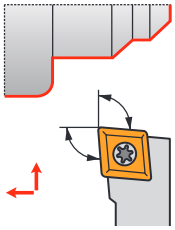
CC..



80

SCLC(RL) EXT 95°

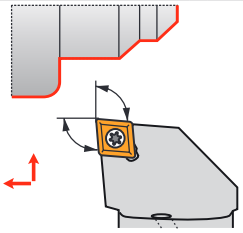
CC..



81

C.-SCLC(RL) EXT 95°

CC..



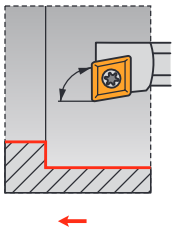
83

CC

ISO TURNING – INTERNAL – NAVIGATOR

SCFC(RL) INT 90°

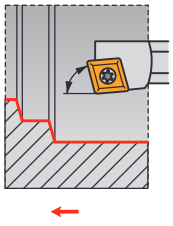
CC..



84

SCKC(RL) INT 75°

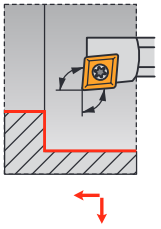
CC..



85

SCLC(RL) INT 45°

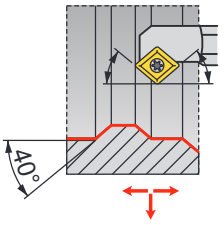
CC..



86

SCXC(RL) INT 90°

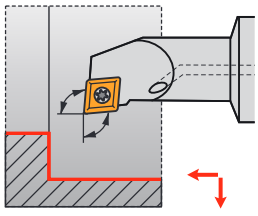
CC..



88

C.-SCLC(RL) INT 95°

CC..



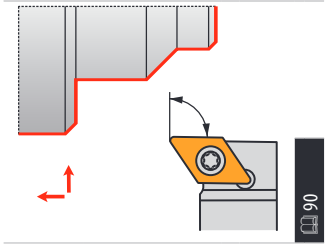
89

DC

ISO TURNING – EXTERNAL – NAVIGATOR

SDFC(RL) EXT 91°

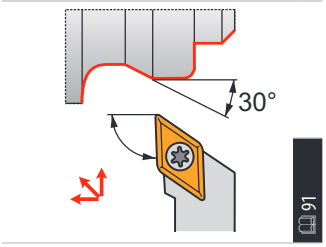
DC..



90

SDJC(RL) EXT 93°

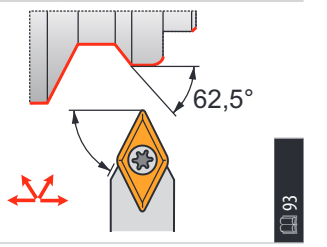
DC..



91

SDNCN EXT 62°30´

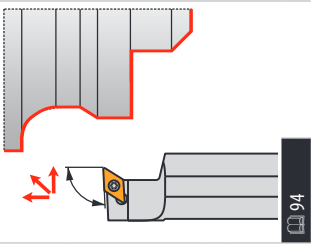
DC..



93

SDUCL EXT 93°

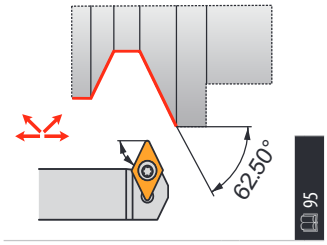
DC..



94

SDXC(RL) EXT 62°30´

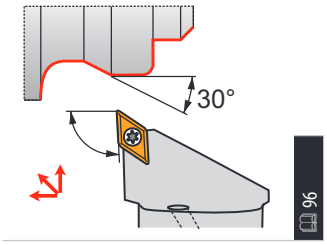
DC..



95

C.-SDJC(RL) EXT 93°

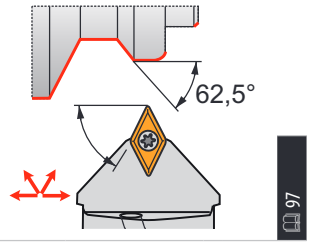
DC..



96

C.-SDNCN EXT 62°30´

DC..



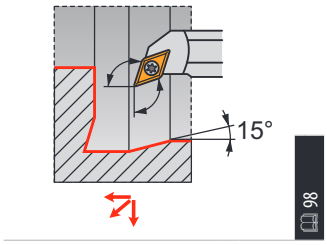
97

DC

ISO TURNING – INTERNAL – NAVIGATOR

SDQC(RL) INT 95°

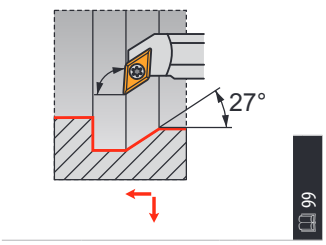
DC..



98

SDUC(RL) INT 93°

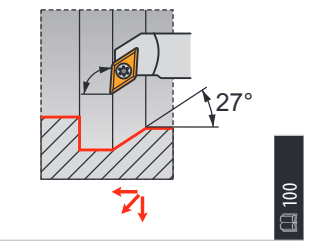
DC..



99

SDUC(RL)-E INT 62°30´

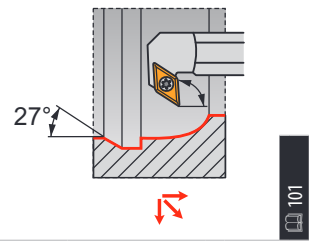
DC..



100

SDZC(RL) INT 90°

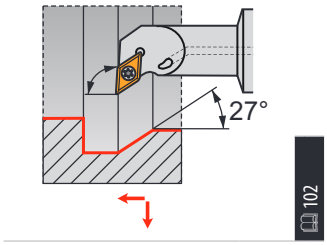
DC..



101

C.-SDUC(RL) INT 93°

DC..



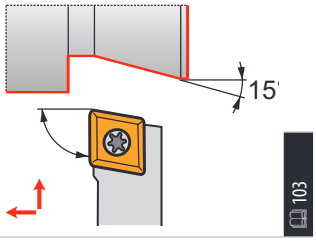
102

EC

ISO TURNING – EXTERNAL – NAVIGATOR

SEGC(RL) EXT 90°

EC..

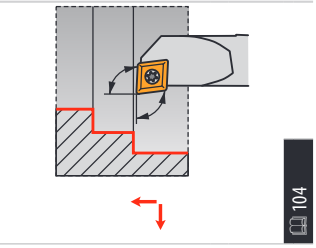


EC

ISO TURNING – INTERNAL – NAVIGATOR

SEUC(RL) INT 93°

EC..

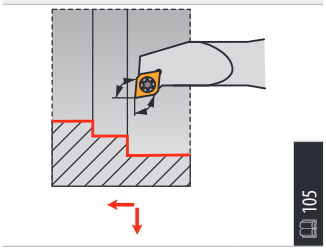


EP

ISO TURNING – INTERNAL – NAVIGATOR

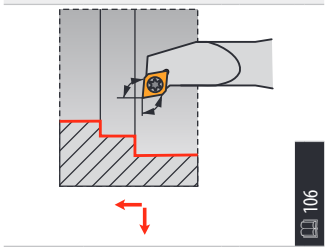
SELP(RL) INT 95°

EP..



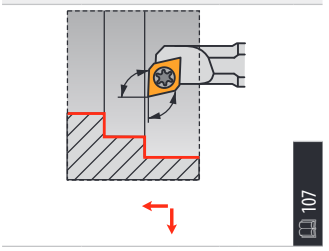
SELP(RL)-E INT 95°

EP..



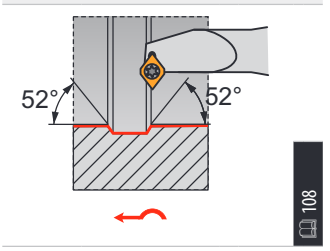
SEUP(RL) INT 93°

EP..



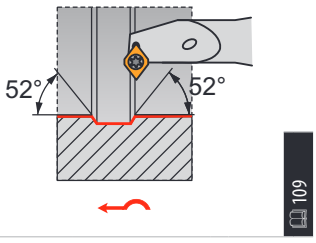
SEXP(RL) INT 52°30´

EP..



SEXP(RL)-E INT 52°30´

EP..

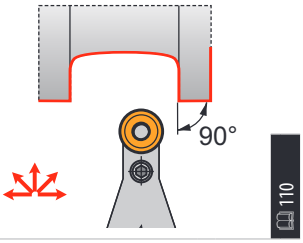


RC

ISO TURNING – EXTERNAL – NAVIGATOR

PRDCN EXT

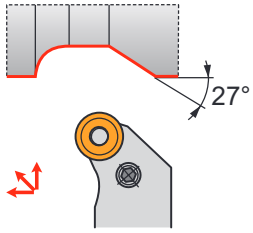
RC..



110

PRSC(RL) EXT

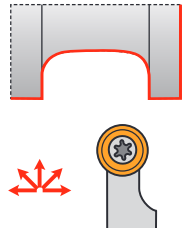
RC..



111

SRDC(RL) EXT

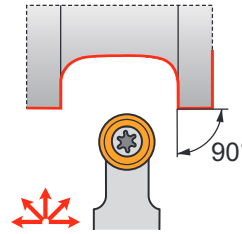
RC..



112

SRDCN EXT

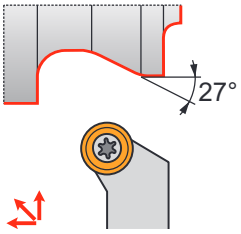
RC..



113

SRCS(RL) EXT

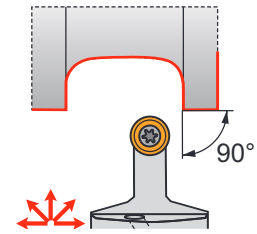
RC..



114

C.-SRDCN EXT

RC..



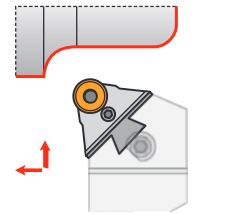
116

RC

ISO TURNING – HEAVY ROUGHING – NAVIGATOR

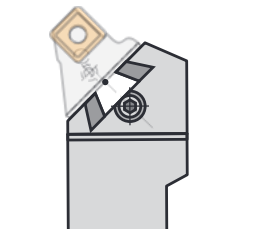
KHP-RSCR/L

RC..



117

DKH(RL)



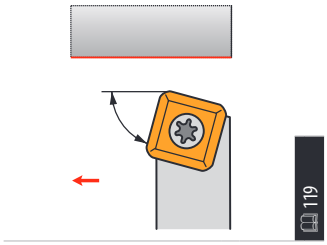
118

SC

ISO TURNING – EXTERNAL – NAVIGATOR

SSBC(RL) EXT 75°

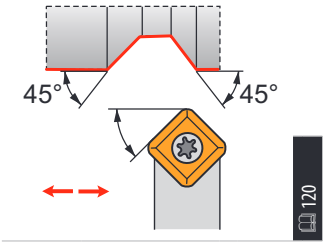
SC..



119

SSDCN EXT 45°

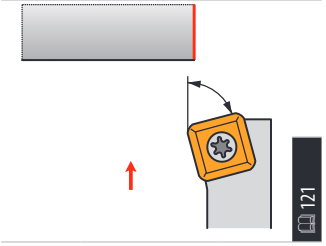
SC..



120

SSKC(RL) EXT 75°

SC..



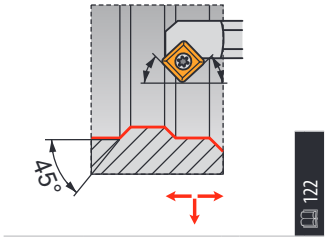
121

SC

ISO TURNING – INTERNAL – NAVIGATOR

SSSC(RL) INT 45°

SC..



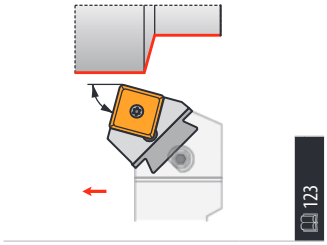
122

SC

ISO TURNING – HEAVY ROUGHING – NAVIGATOR

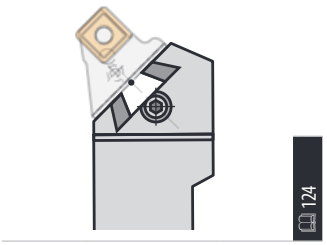
KHS-SBCR 75°

SC..



123

DKH(RL)



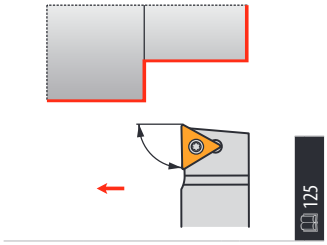
124

TC

ISO TURNING – EXTERNAL – NAVIGATOR

STAC(RL) EXT 90°

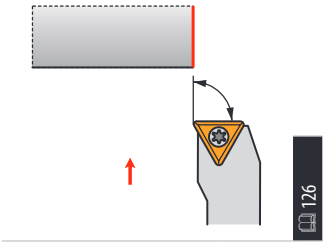
TC..



125

STFC(RL) EXT 90°

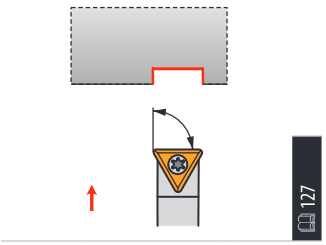
TC..



126

STFC(RL)-A EXT 90°

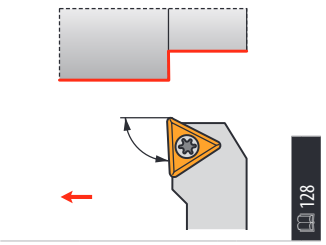
TC..



127

STJC(RL) EXT 93°

TC..



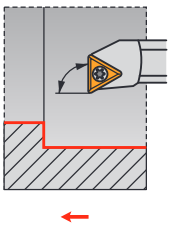
128

TC

ISO TURNING – INTERNAL – NAVIGATOR

STFC(RL) INT 90°

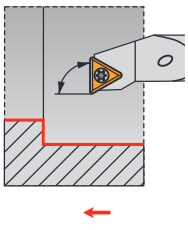
TC..



129

STFC(RL)-E INT 90°

TC..



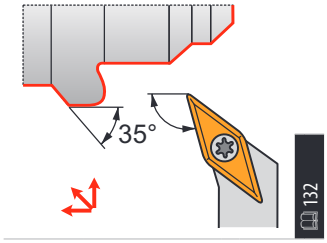
131

VB

ISO TURNING – EXTERNAL – NAVIGATOR

SVHB(C)(RL) EXT 107°30´

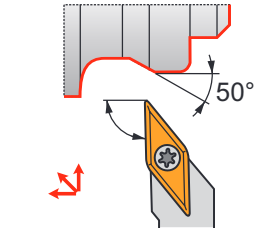
VB, VC..



132

SVJB(C)(RL) EXT 93°

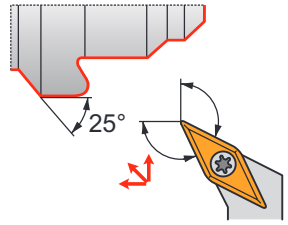
VB, VC..



133

SVPB(C)(RL) EXT 117°30´

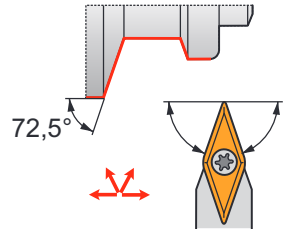
VB, VC..



135

SVVB(C)N EXT 72°30´

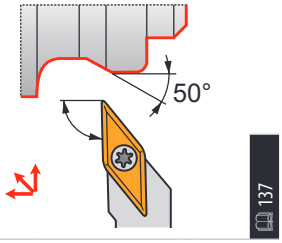
VB, VC..



136

SVXB(C)(RL) EXT 98°

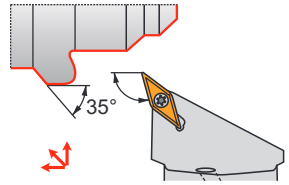
VB, VC..



137

C.-SVHB(RL) EXT 107°30´

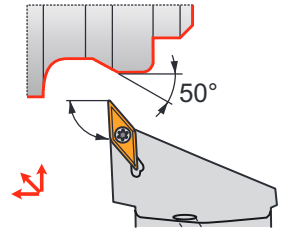
VB, VC..



138

C.-SVJB(RL) EXT 93°

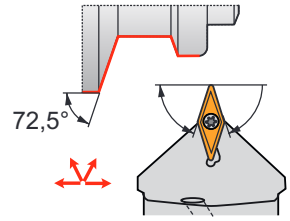
VB, VC..



139

C.-SVVBN EXT 72°30´

VB, VC..



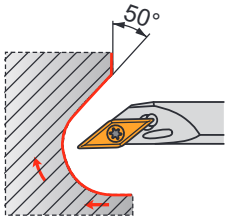
140

VB

ISO TURNING – INTERNAL – NAVIGATOR

SVJB(RL) INT 93°

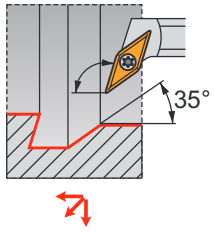
VB, VC..



141

SVQB(C)(RL) INT 107°30´

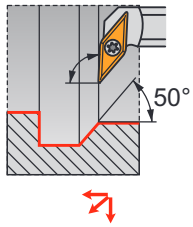
VB, VC..



142

SVUB(C)(RL) INT 93°

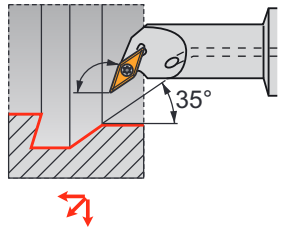
VB, VC..



143

C.-SVQB(C)(RL) INT 108°

VB, VC..



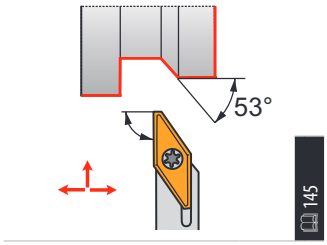
144

VC

ISO TURNING – EXTERNAL – NAVIGATOR

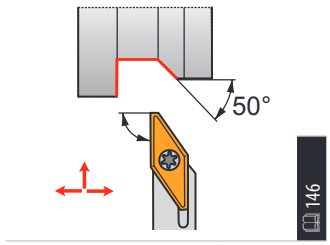
SVAC(RL)-DC EXT 90°

VC..



SVJC(RL)-DC EXT 93°

VC..

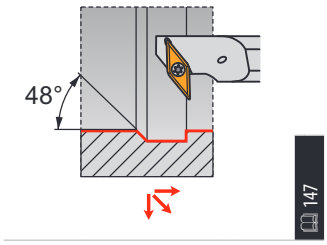


VC

ISO TURNING – INTERNAL – NAVIGATOR

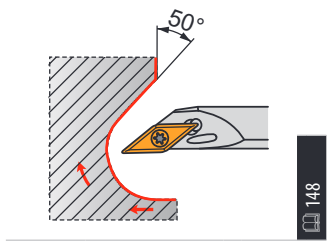
SVLC(RL) INT 95°

VC..



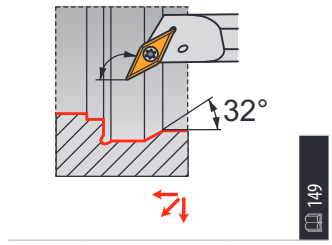
SVJB(RL) INT 93°

VB, VC..



SVXC(RL)-E INT 113°

VC..

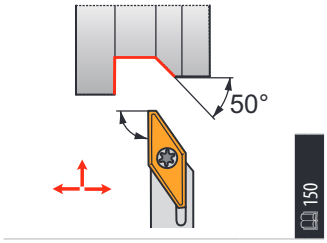


WC

ISO TURNING – EXTERNAL – NAVIGATOR

SWLC(RL) EXT 95°

WC..

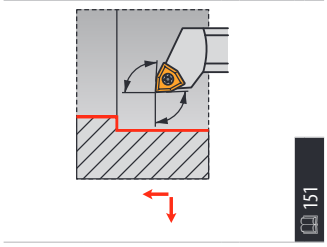


WC

ISO TURNING – INTERNAL – NAVIGATOR

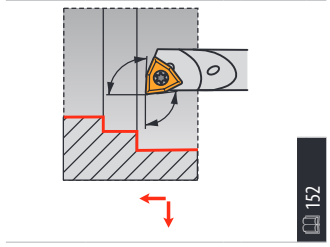
SWLC(RL) INT 95°

WC..



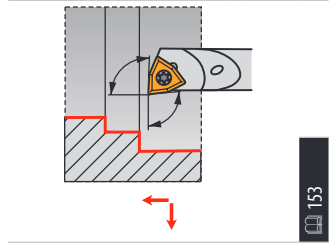
SWUC(RL) INT 93°

WC..

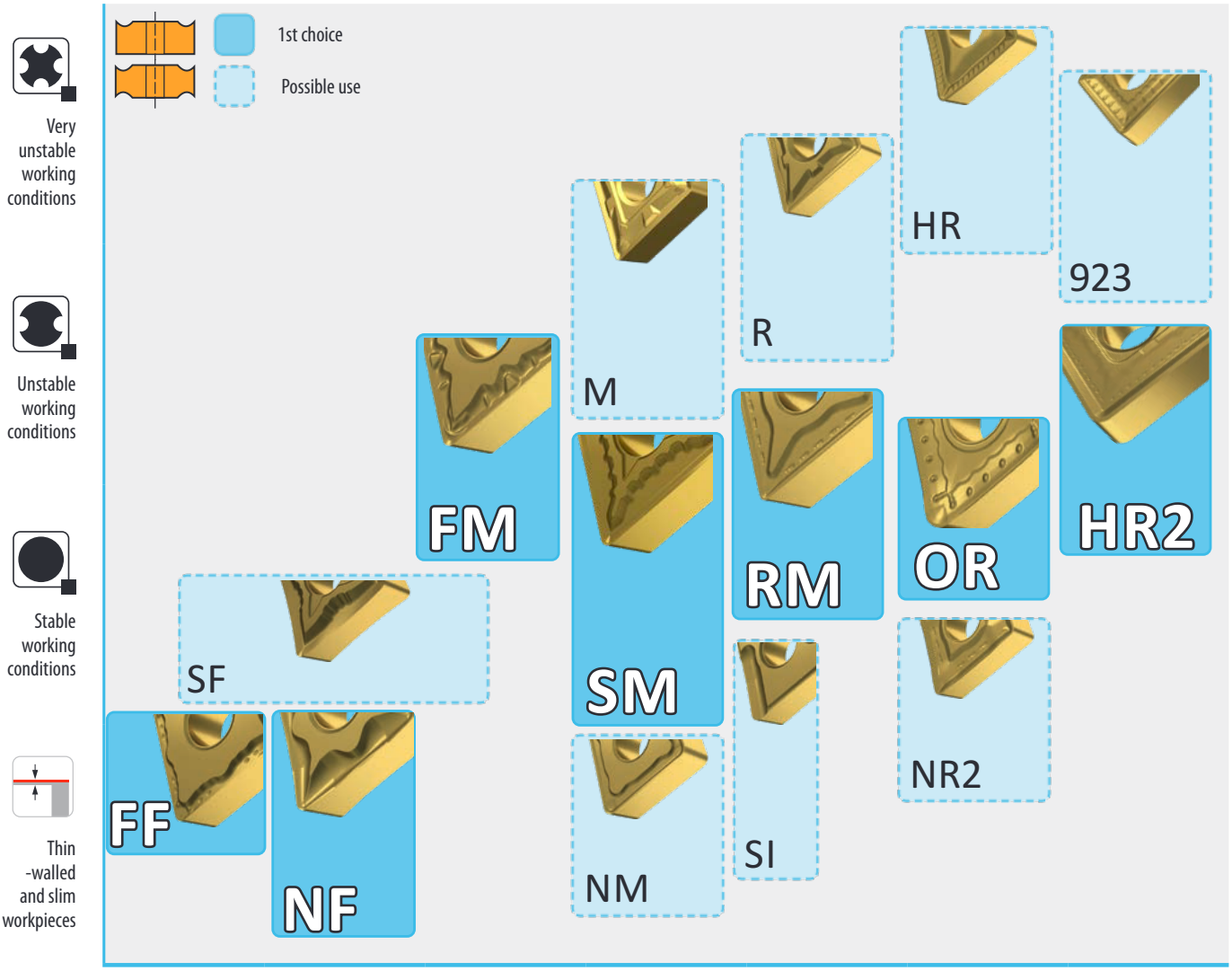


SWUC(RL)-E INT 93°

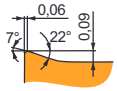
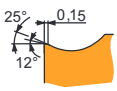
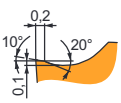
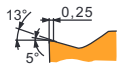
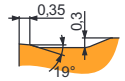
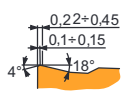
WC..



P



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

FF		Highly positive geometry designed for fine finish machining, stainless steel and steel, potentially cast irons, continuous cuts
NF		Highly positive design for fine finish and medium machining, stainless steels. steel, potentially cast irons, non ferrous materials and super alloys, continuous cuts
FM		Positive geometry designed for finish to semi-rough machining, steel and cast irons, potentially and super alloys, continuous and moderately interrupted cuts
SM		Positive geometry designed for medium machining, stainless steels, super alloys, steels and cast irons, potentially non ferrous and hard materials and for machining thin walls, continuous and interrupted cuts
RM		Designed for semi-rough and rough machining, steels, stainless steels and cast irons, potentaillly super alloys, continuous and interrupted cuts
OR		Designed for finish to heavy rough machining, steels and cast irons, potentially stainless steel and super alloys, continuous and interrupted cuts

M

1st choice

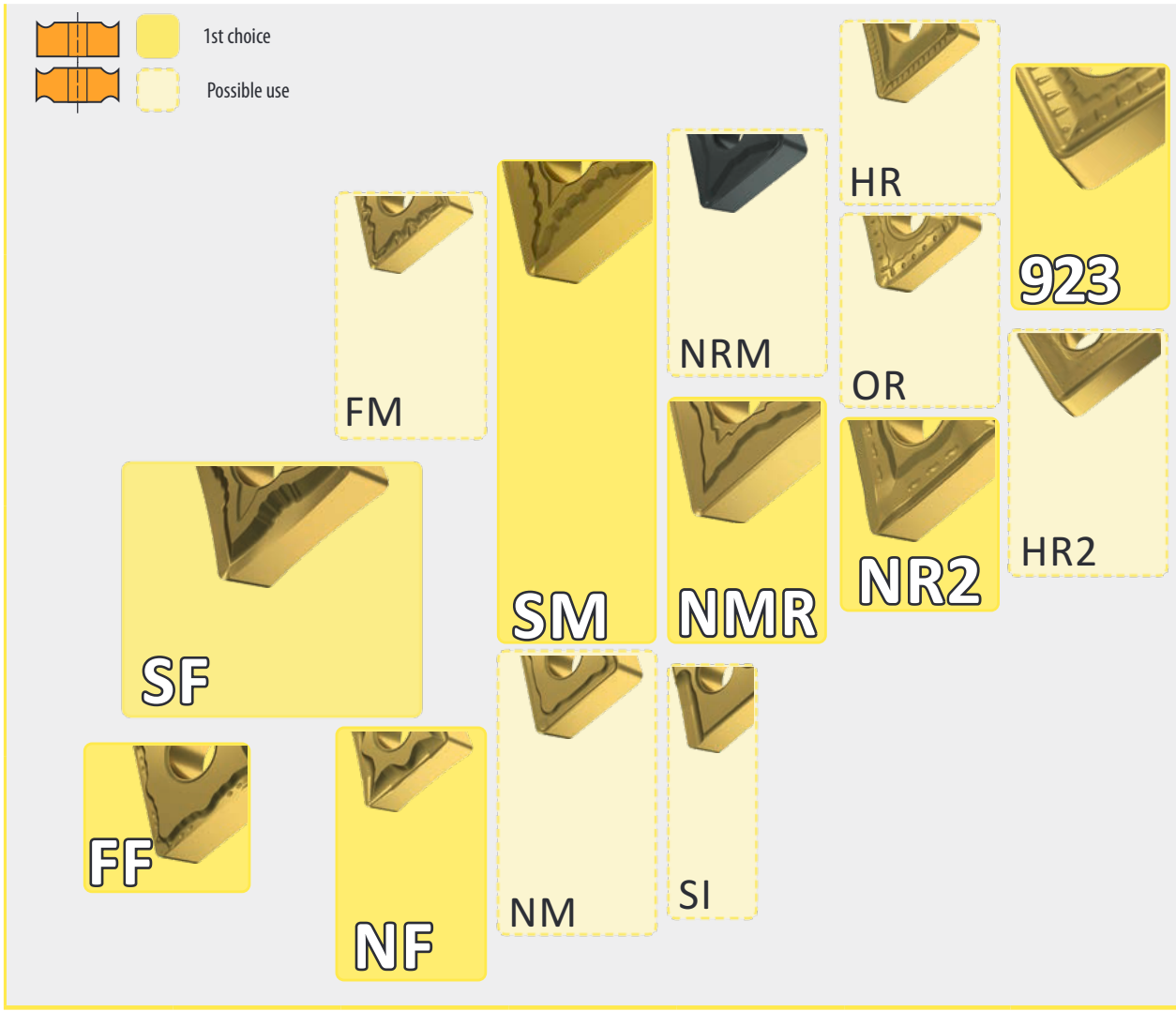
Possible use

Very unstable working conditions

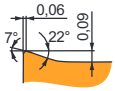
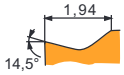
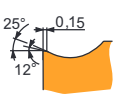
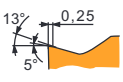
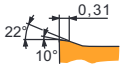
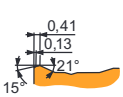
Unstable working conditions

Stable working conditions

Thin -walled and slim workpieces



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

FF		Highly positive geometry designed for fine finish machining, stainless steel and steel, potentially cast irons, continuous cuts
SF		Versatile positive geometry designed for fine finish machining, steels, stainless steels, cast irons and super alloys and hard materials, potentially non ferous materials and for machining thin walls, with continuous cuts
NF		Highly positive design for fine finish and medium machining, stainless steels. steel, potentially cast irons, non ferrous materials and super alloys, continuous cuts
SM		Positive geometry designed for medium machining, stainless steels, super alloys, steels and cast irons, potentially non ferrous and hard materials and for machining thin walls, continuous and interrupted cuts
NMR		Positive design for medium to rough machining, stainless steels as well as soft steels and super alloys, continuous cuts
NR2		Designed for finish to rough machining, stainless steels and steels, potentially cast irons and super alloys, continuous and interrupted cuts

K

Very unstable working conditions

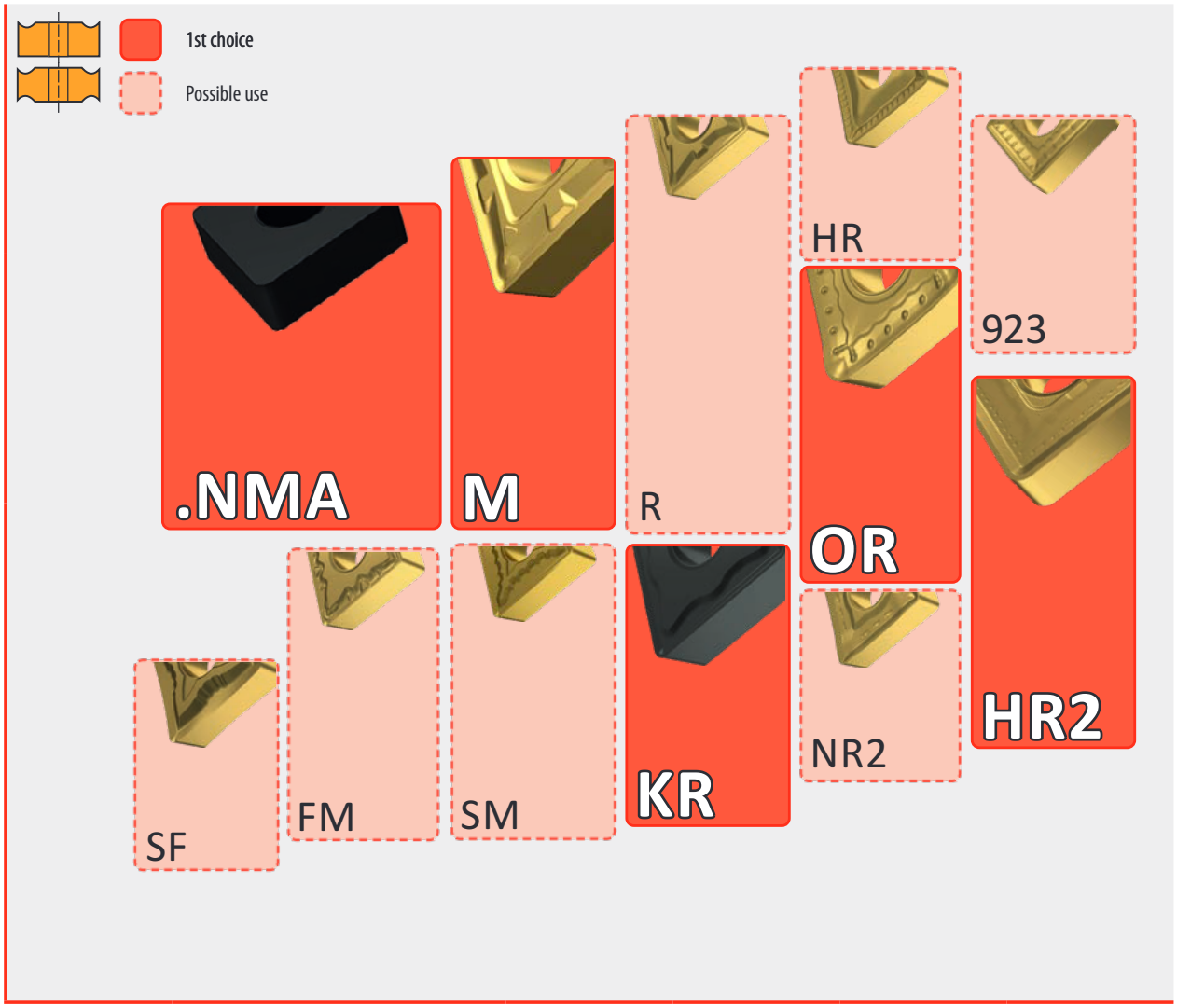
Unstable working conditions

Stable working conditions

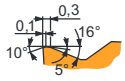
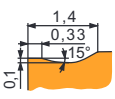
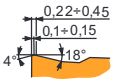
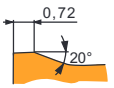
Thin -walled and slim workpieces

1st choice

Possible use



	FF	F	M	R	HR
f ⇨	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

.NMA		Designed for fine finish to semi rough machining, cast irons, potentially hard materials, continuous and slightly interrupted cuts
M		Designed for finish and semi-rough machining, cast irons, potentially steels and hard materials, continuous and interrupted cuts
KR		Designed for semi-rough and rough machining, cast irons, potentially steel and hard materials, continuous and interrupted cuts
OR		Designed for finish to heavy rough machining, steels and cast irons, potentially stainless steel and super alloys, continuous and interrupted cuts
HR2		Designed for rough to heavy rough machining with high feeds, steels and cast irons, potentially stainless steels, continuous and interrupted cuts

N

Very unstable working conditions

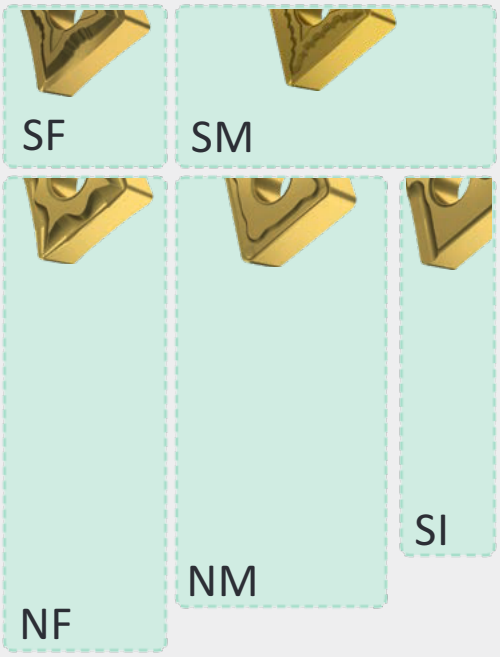
Unstable working conditions

Stable working conditions

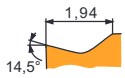
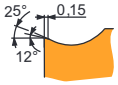
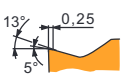
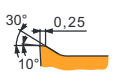
Thin -walled and slim workpieces

1st choice

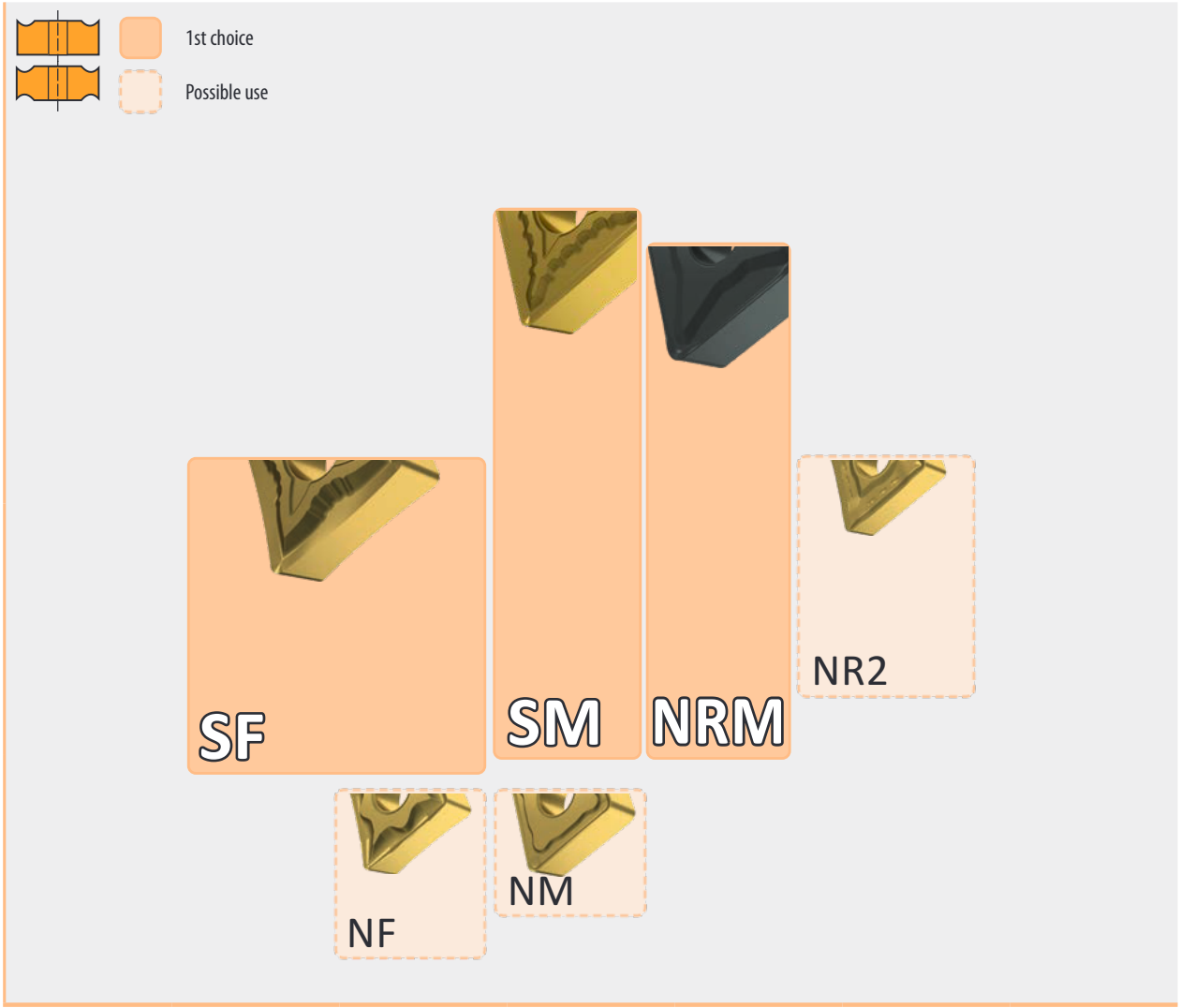
Possible use



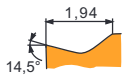
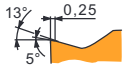
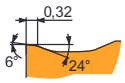
	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF		Versatile positive geometry designed for fine finish machining, steels, stainless steels, cast irons and super alloys and hard materials, potentially non ferous materials and for machining thin walls, with continuous cuts
NF		Highly positive design for fine finish and medium machining, stainless steels. steel, potentially cast irons, non ferrous materials and super alloys, continuous cuts
SM		Positive geometry designed for medium machining, stainless steels, super alloys, steels and cast irons, potentially non ferrous and hard materials and for machining thin walls, continuous and interrupted cuts
NM		Highly positive design for fine finish, medium and rough machining, stainless steels, steels, potentially non ferrrous materials and super alloys, continuous cuts
SI		Positive geometry for fine finish to semi-rough machining, steels, stainless steels and cast irons and potentially non ferrous materials, continuous cuts

S



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF		Versatile positive geometry designed for fine finish machining, steels, stainless steels, cast irons and super alloys and hard materials, potentially non ferous materials and for machining thin walls, with continuous cuts
SM		Positive geometry designed for medium machining, stainless steels, super alloys, steels and cast irons, potentially non ferrous and hard materials and for machining thin walls, continuous and interrupted cuts
NRM		Positive design for semi-rough and rough machining, stainless steel, soft steels and super alloys, continuous cuts

H

1st choice

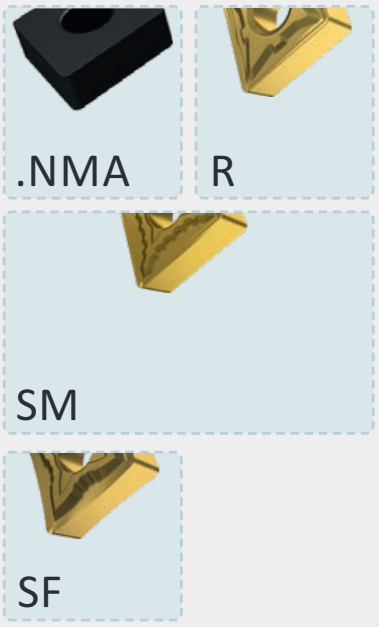
Possible use

Very unstable working conditions

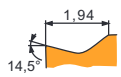
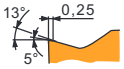
Unstable working conditions

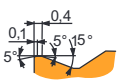
Stable working conditions

Thin -walled and slim workpieces



	FF	F	M	R	HR
f	0.05 – 0.2 mm/rev	0.05 – 0.2 mm/rev	0.2 – 0.4 mm/rev	0.4 – 1.0 mm/rev	> 1.0 mm/rev
a_p	0.05 – 2 mm	0.05 – 2 mm	2 – 4 mm	4 – 10 mm	> 10 mm

SF		Versatile positive geometry designed for fine finish machining, steels, stainless steels, cast irons and super alloys and hard materials, potentially non ferous materials and for machining thin walls, with continuous cuts
SM		Positive geometry designed for medium machining, stainless steels, super alloys, steels and cast irons, potentially non ferrous and hard materials and for machining thin walls, continuous and interrupted cuts
.NMA		Designed for fine finish to semi rough machining, cast irons, potentially hard materials, continuous and slightly interrupted cuts

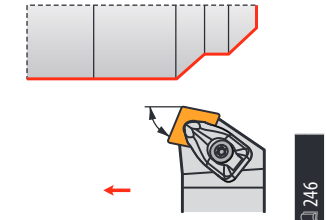
R		Designed for semi-rough and rough machining, cast irons, potentially steel and hard materials, continuous and interrupted cuts

CN

ISO TURNING – EXTERNAL – NAVIGATOR

DCBN(RL) EXT 75°

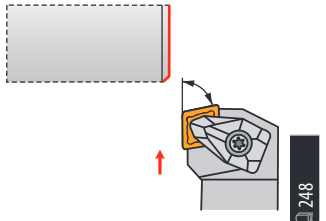
CN..



246

DCKN(RL) EXT 75°

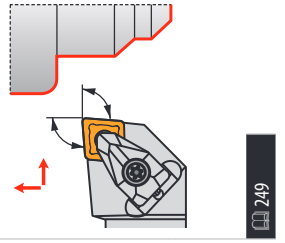
CN..



248

DCLN(RL) EXT 95°

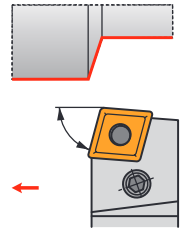
CN..



249

PCBN(RL) EXT 75°

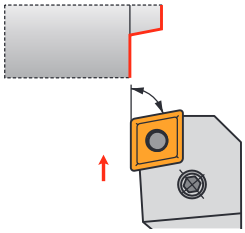
CN..



251

PCKN(RL) EXT 75°

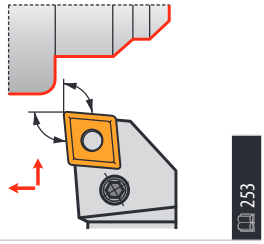
CN..



252

PCLN(RL) EXT 95°

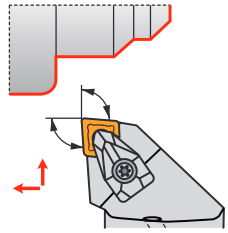
CN..



253

C.-DCLN(RL) EXT 95°

CN..



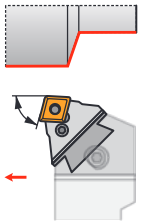
254

CN

ISO TURNING – HEAVY ROUGHING – NAVIGATOR

KHP-CBNR 75°

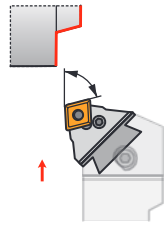
CN..



256

KHP-CBNL 75°

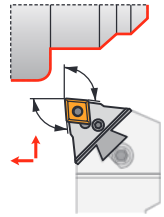
CN..



257

KHP-CLNR 95°

CN..



257

DKH(RL)

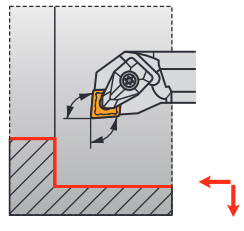
258

CN

ISO TURNING – INTERNAL – NAVIGATOR

DCLN(RL) INT 95°

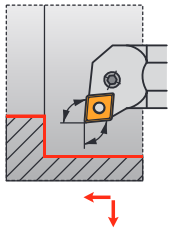
CN..



259

PCLN(RL) INT 95°

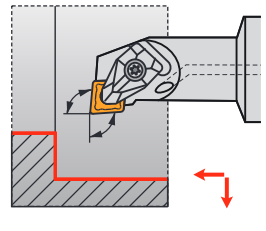
CN..



260

C.-DCLN(RL) INT 95°

CN..



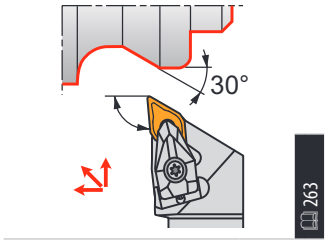
262

DN

ISO TURNING – EXTERNAL – NAVIGATOR

DDJN(RL) EXT 93°

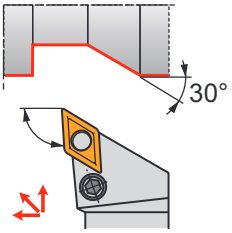
DN..



263

PDJN(RL) EXT 93°

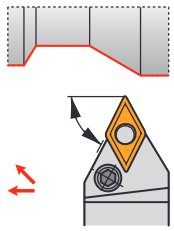
DN..



264

PDNN(RL) EXT 62°30´

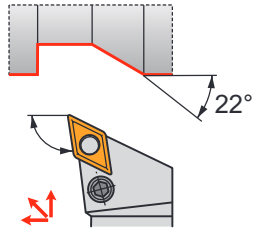
DN..



265

PDXN(RL) EXT 98°

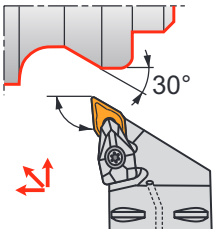
DN..



266

C.-DDJN(RL) EXT 93°

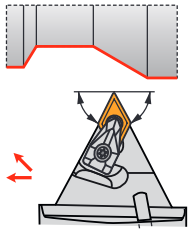
DN..



267

C.-DDNNN EXT 62.5°

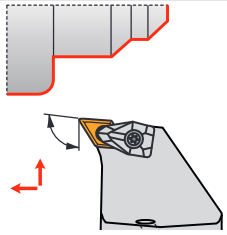
DN..



268

C.-DDUN(RL) EXT 93°

DN..



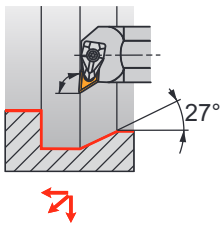
269

DN

ISO TURNING – INTERNAL – NAVIGATOR

DDUN(RL) INT 93°

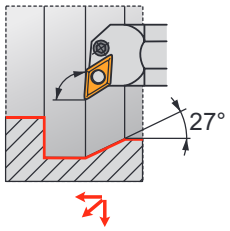
DN..



270

PDUN(RL) INT 93°

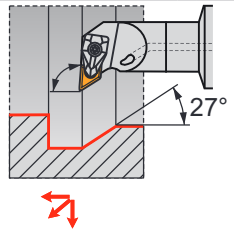
DN..



271

C.-DDUN(RL) INT 93°

DN..



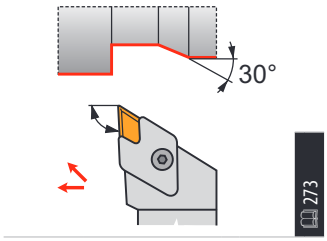
272

KN

ISO TURNING – EXTERNAL – NAVIGATOR

CKJN(RL) EXT 93°

KN..

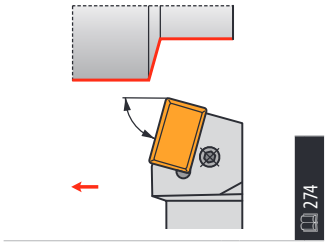


LN

ISO TURNING – EXTERNAL – NAVIGATOR

PLBN(RL) EXT 75°

LN..

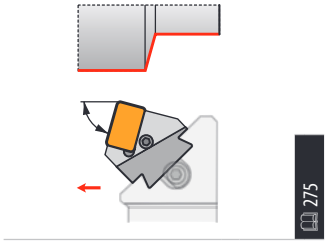


LN

ISO TURNING – HEAVY ROUGHING – NAVIGATOR

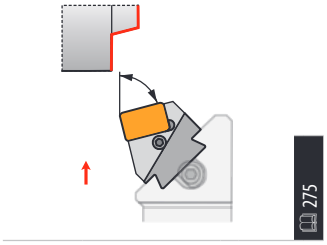
KHP-LBNR 75°

LN..

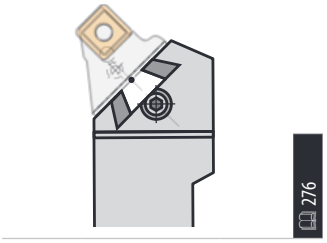


KHP-LBNL 75°

LN..



DKH(RL)

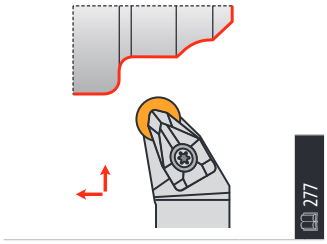


RN

ISO TURNING – EXTERNAL – NAVIGATOR

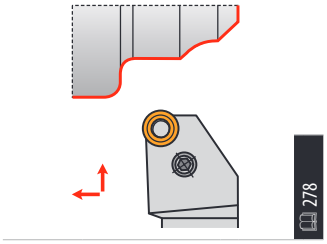
DRSN(RL) EXT

RN..



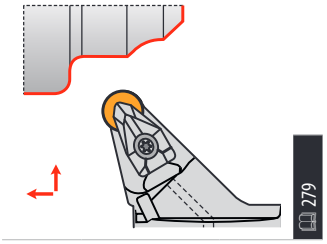
PRSN(RL) EXT

RN..



C.-DRSN(RL) EXT

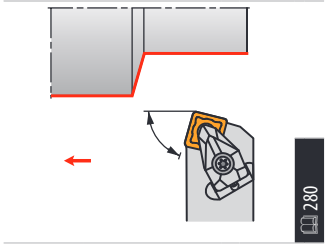
RN..



SN

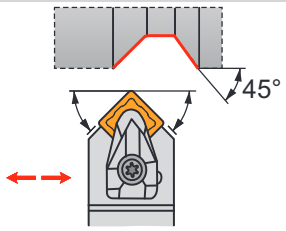
ISO TURNING – EXTERNAL – NAVIGATOR

DSBN(RL) EXT 45°
SN..



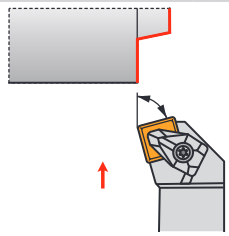
280

DSDNN EXT 45°
SN..



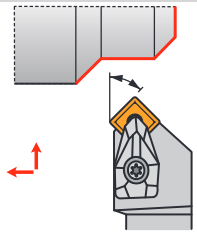
281

DSKN(RL) EXT 75°
SN..



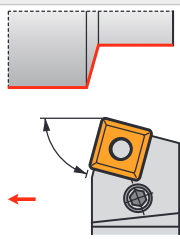
282

DSSN(RL) EXT 45°
SN..



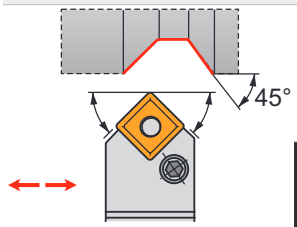
283

PSBN(RL) EXT 75°
SN..



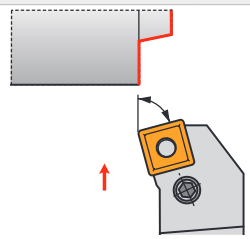
285

PSDNN EXT 45°
SN..



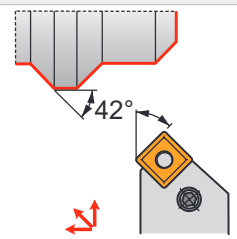
287

PSKN(RL) EXT 75°
SN..



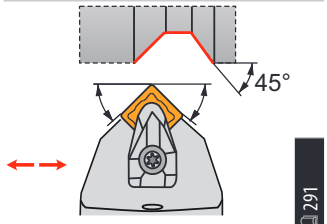
288

PSSN(RL) EXT 45°
SN..



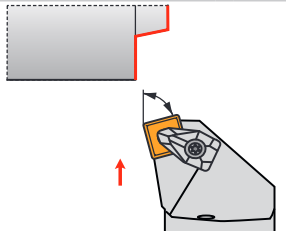
290

C.-DSDNN EXT 45°
SN..



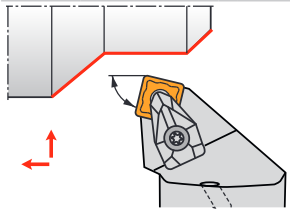
291

C.-DSKN(RL) EXT 75°
SN..



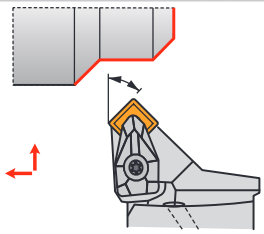
292

C.-DSRN(RL) EXT 75°
SN..



293

C.-DSSN(RL) EXT 45°
SN..

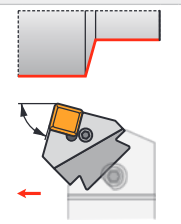


294

SN

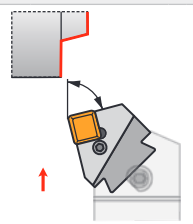
ISO TURNING – HEAVY ROUGHING – NAVIGATOR

KHP-SBNR 75°
SN..



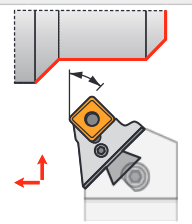
295

KHP-SBNL 75°
SN..



295

KHP-SSNR/L 45°
SN..



296

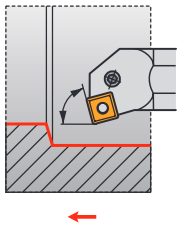
DKH(RL)

297

SN

ISO TURNING – INTERNAL – NAVIGATOR

PSKN(RL) INT 75°
SN..



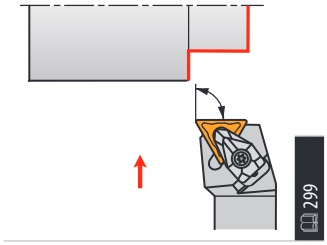
298

TN

ISO TURNING – EXTERNAL – NAVIGATOR

DTFN(RL) EXT 90°

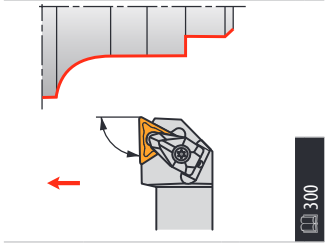
TN..



299

DTGN(RL) EXT 90°

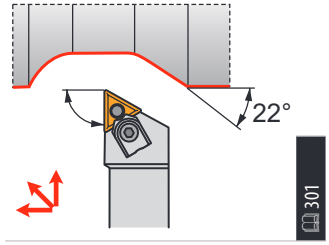
TN..



300

MTJN(RL) EXT 93°

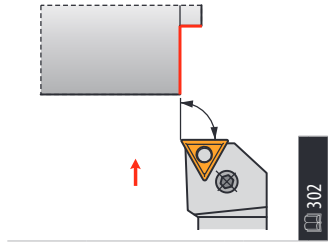
TN..



301

PTFN(RL) EXT 90°

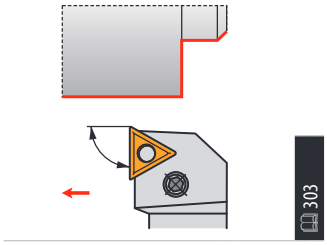
TN..



302

PTGN(RL) EXT 90°

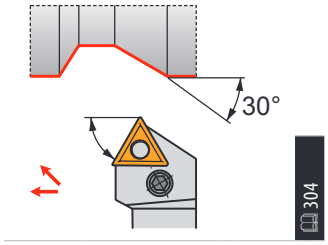
TN..



303

PTTN(RL) EXT 60°

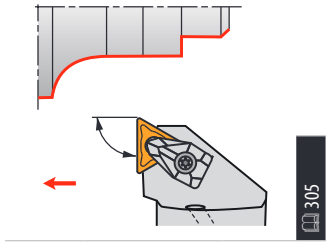
TN..



304

C.-DTJN(RL) EXT 93°

TN..



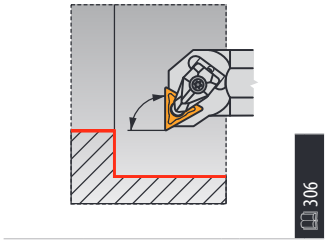
305

TN

ISO TURNING – INTERNAL – NAVIGATOR

DTFN(RL) INT 90°

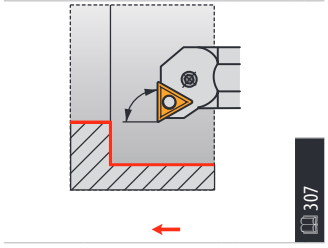
TN..



306

PTFN(RL) INT 90°

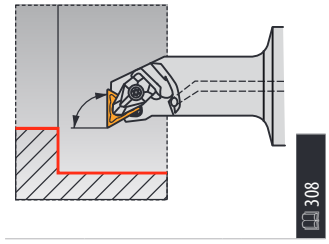
TN..



307

C.-DTFN(RL) INT 91°

TN..



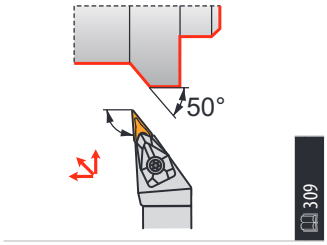
308

VN

ISO TURNING – EXTERNAL – NAVIGATOR

DVJN(RL) EXT 93°

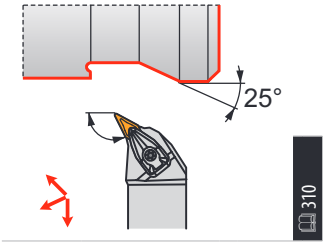
VN..



309

DVPN(RL) EXT 62°30´

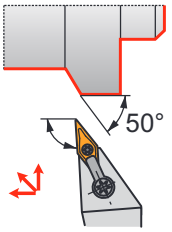
VN..



310

MVJN(RL) EXT 93°

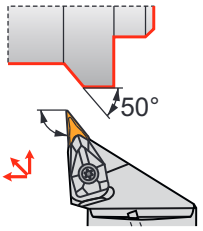
VN..



311

C.-DVJN(RL) EXT 93°

VN..



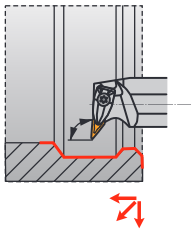
312

VN

ISO TURNING – INTERNAL – NAVIGATOR

DVUN(RL) INT

VN..



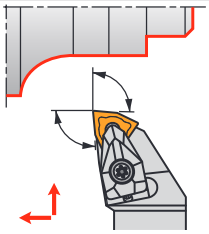
313

WN

ISO TURNING – EXTERNAL – NAVIGATOR

DWLN(RL) EXT 95°

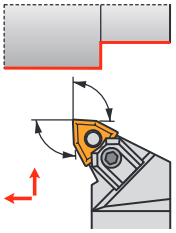
WN..



314

MWLN(RL) EXT 95°

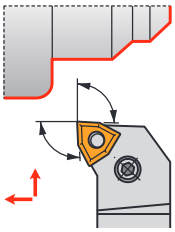
WN..



316

PWLN(RL) EXT 95°

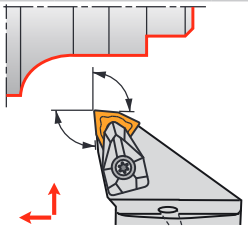
WN..



317

C.-DWLN(RL) EXT 95°

WN..



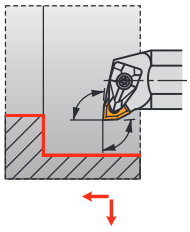
318

WN

ISO TURNING – INTERNAL – NAVIGATOR

DWLN(RL) INT 95°

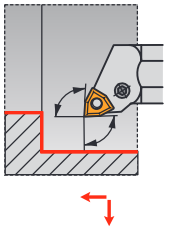
WN..



319

PWLN(RL) INT 95°

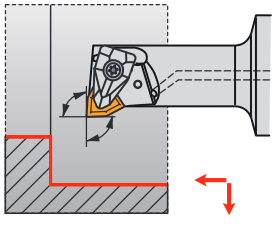
WN..



320

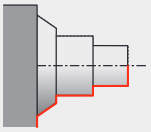
C.-DWLN(RL) INT 95°

WN..

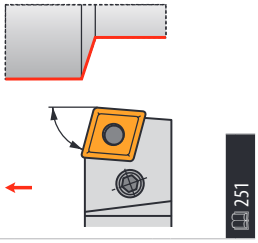


321

ISO TURNING – EXTERNAL
SHORT AND STABLE COMPONENTS (negative inserts)

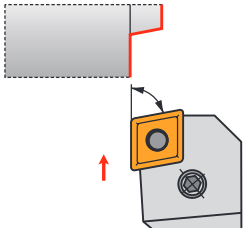


PCBN(RL) EXT 75°
CN..



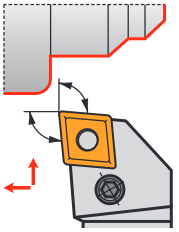
251

PCKN(RL) EXT 75°
CN..



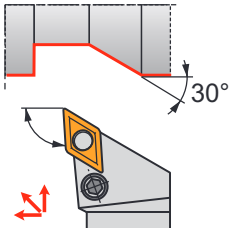
252

PCLN(RL) EXT 95°
CN..



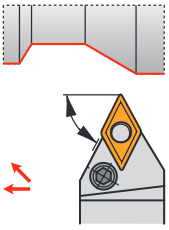
253

PDJN(RL) EXT 93°
DN..



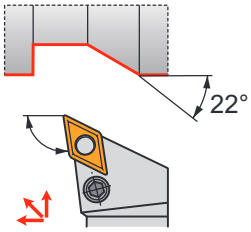
264

PDNN(RL) EXT 62°30´
DN..



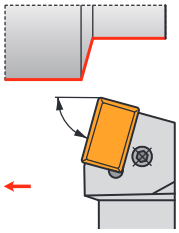
265

PDXN(RL) EXT 98°
DN..



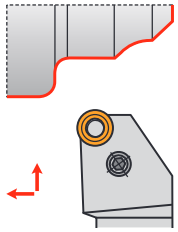
266

PLBN(RL) EXT 75°
LN..



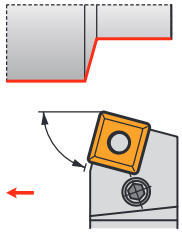
274

PRSN(RL) EXT
RN..



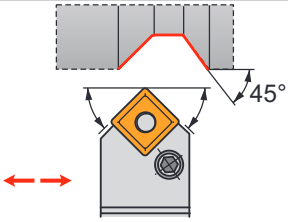
278

PSBN(RL) EXT 75°
SN..



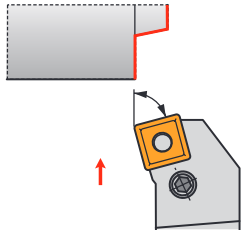
285

PSDNN EXT 45°
SN..



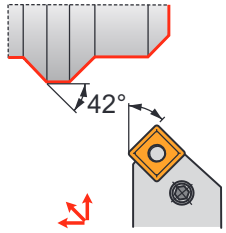
287

PSKN(RL) EXT 75°
SN..



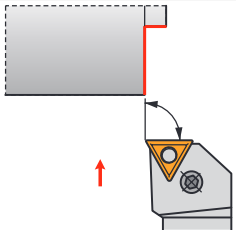
288

PSSN(RL) EXT 45°
SN..



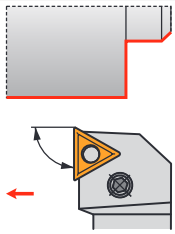
290

PTFN(RL) EXT 90°
TN..



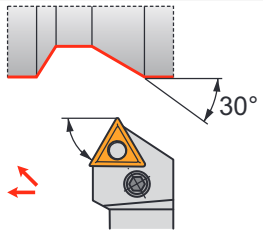
302

PTGN(RL) EXT 90°
TN..



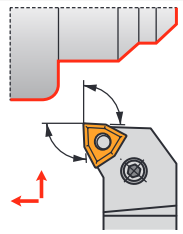
303

PTTN(RL) EXT 60°
TN..



304

PWLN(RL) EXT 95°
WN..

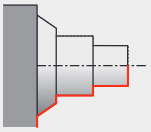


317

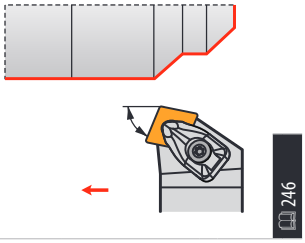
D CLAMPING DESIGNATION

ISO TURNING – EXTERNAL

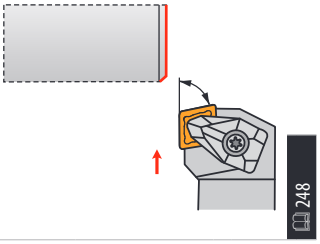
SHORT AND STABLE COMPONENTS (negative inserts)



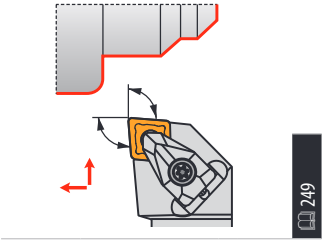
DCBN(RL) EXT 75°
CN..



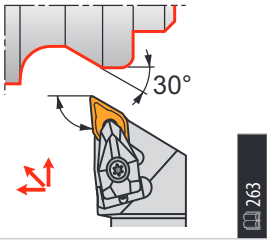
DCKN(RL) EXT 75°
CN..



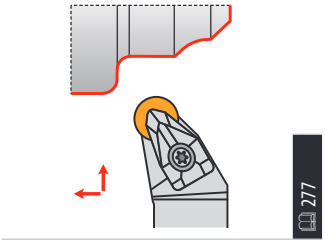
DCLN(RL) EXT 95°
CN..



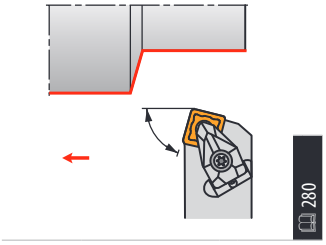
DDJN(RL) EXT 93°
DN..



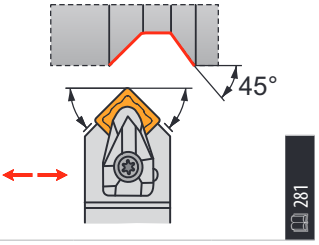
DRSN(RL) EXT
RN..



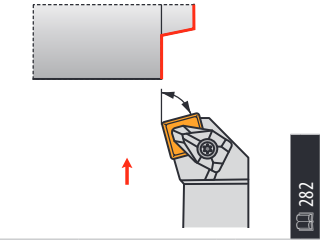
DSBN(RL) EXT 45°
SN..



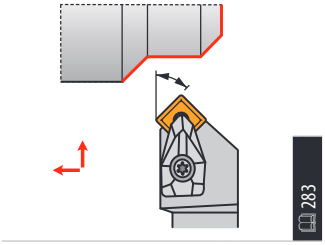
DSDNN EXT 45°
SN..



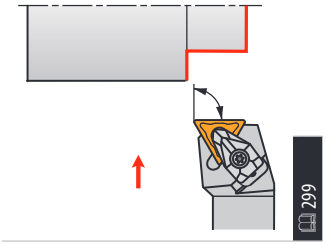
DSKN(RL) EXT 75°
SN..



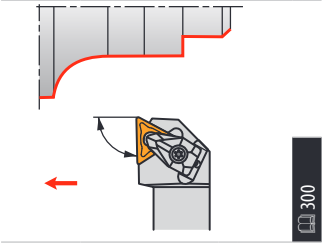
DSSN(RL) EXT 45°
SN..



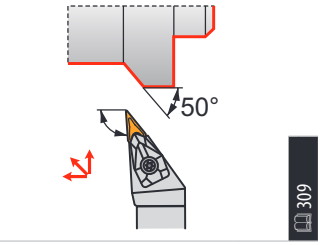
DTFN(RL) EXT 90°
TN..



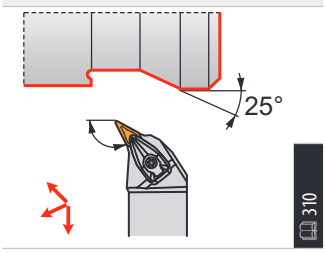
DTGN(RL) EXT 90°
TN..



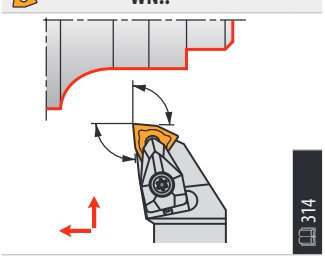
DVJN(RL) EXT 93°
VN..



DVPN(RL) EXT 62°30´
VN..

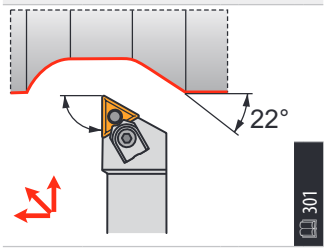


DWLN(RL) EXT 95°
WN..

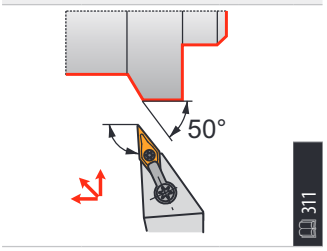


M CLAMPING DESIGNATION

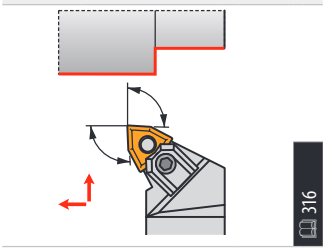
MTJN(RL) EXT 93°
TN..



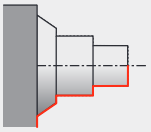
MVJN(RL) EXT 93°
VN..



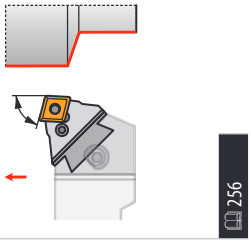
MWLN(RL) EXT 95°
WN..



ISO TURNING – HEAVY ROUGHING – EXTERNAL
HEAD (KH)

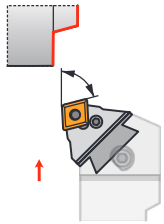


KHP-CBNR 75°
CN..



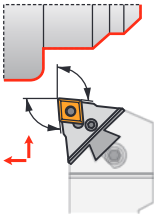
256

KHP-CBNL 75°
CN..



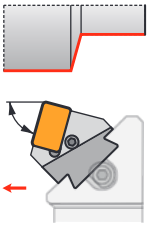
256

KHP-CLNR/L 95°
CN..



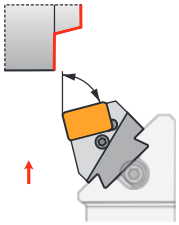
257

KHP-LBNR 75°
LN..



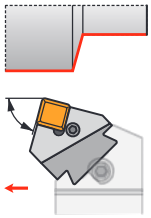
275

KHP-LBNL 75°
LN..



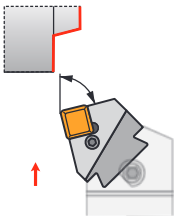
275

KHP-SBNR 75°
SN..



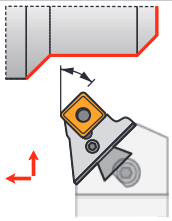
295

KHP-SBNL 75°
SN..



295

KHP-SSNR/L 45°
SN..



296

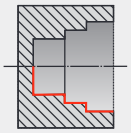
DKH(RL)

258, 276, 297

P CLAMPING DESIGNATION

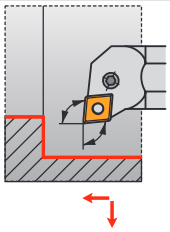
ISO TURNING – INTERNAL

SHORT AND STABLE COMPONENTS (negative inserts)



PCLN(RL) INT 95°

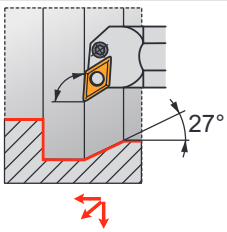
CN..



260

PDUN(RL) INT 93°

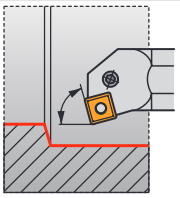
DN..



271

PSKN(RL) INT 93°

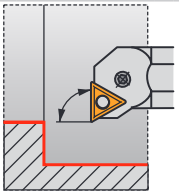
SN..



298

PTFN(RL) INT 90°

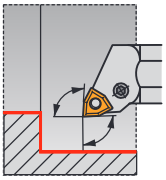
TN..



307

PWLN(RL) INT 95°

WN..

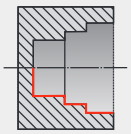


320

D CLAMPING DESIGNATION

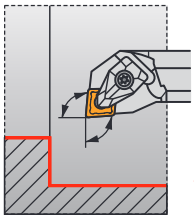
ISO TURNING – INTERNAL

SHORT AND STABLE COMPONENTS (negative inserts)



DCLN(RL) INT 95°

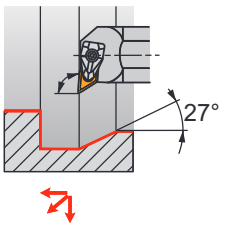
CN..



259

DDUN(RL) INT 93°

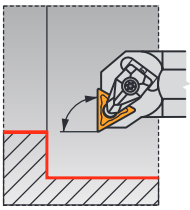
DN..



270

DTFN(RL) INT 90°

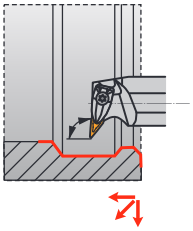
TN..



306

DVUN(RL) INT

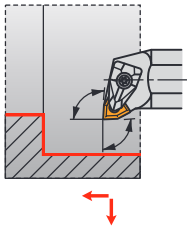
VN..



313

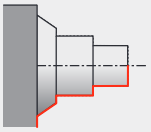
DWLN(RL) INT 95°

WN..

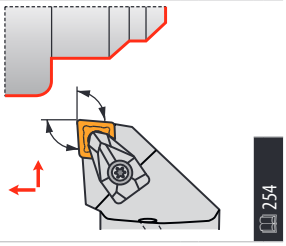


319

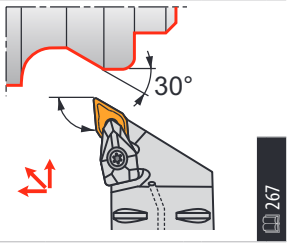
ISO TURNING – EXTERNAL PSC
SHORT AND STABLE COMPONENTS (negative inserts)



C.-DCLN(RL) EXT 95°
CN..

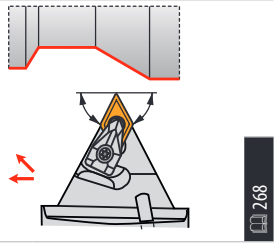

254

C.-DDJN(RL) EXT 93°
DN..

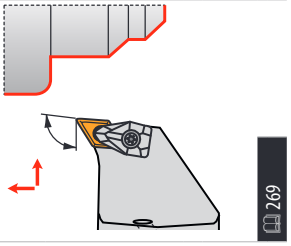


267

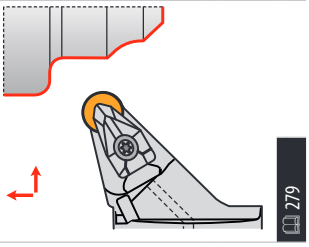
C.-DDNNN EXT 62.5°
DN..


268

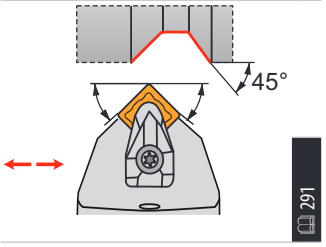
C.-DDUN(RL) EXT 93°
DN..


269

C.-DRSN(RL) EXT
RN..

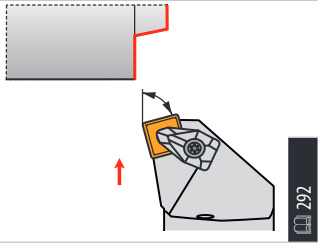

279

C.-DSDNN EXT 45°
SN..

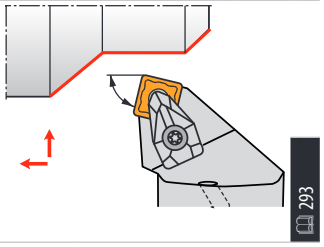


291

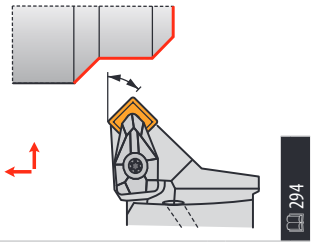
C.-DSKN(RL) EXT 75°
SN..


292

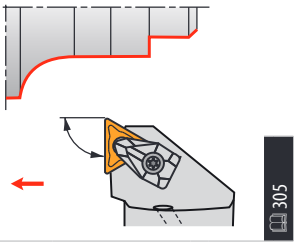
C.-DSRN(RL) EXT 75°
SN..


293

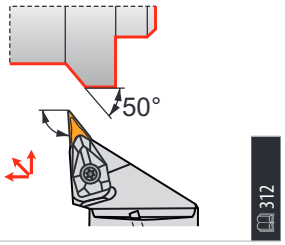
C.-DSSN(RL) EXT 45°
SN..


294

C.-DTJN(RL) EXT 93°
TN..

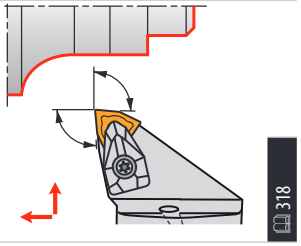

305

C.-DVJN(RL) EXT 93°
VN..

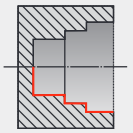


312

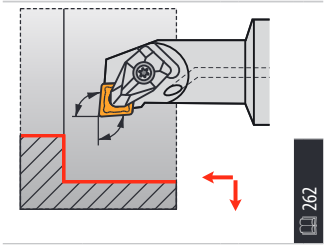
C.-DWLN(RL) EXT 95°
WN..


318

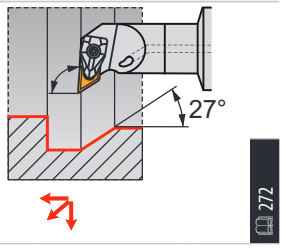
ISO TURNING – INTERNAL PSC
SHORT AND STABLE COMPONENTS (negative inserts)



C.-DCLN(RL) INT 95°
CN..

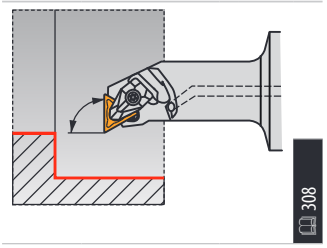

262

C.-DDUN(RL) INT 93°
DN..

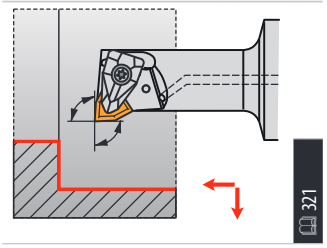


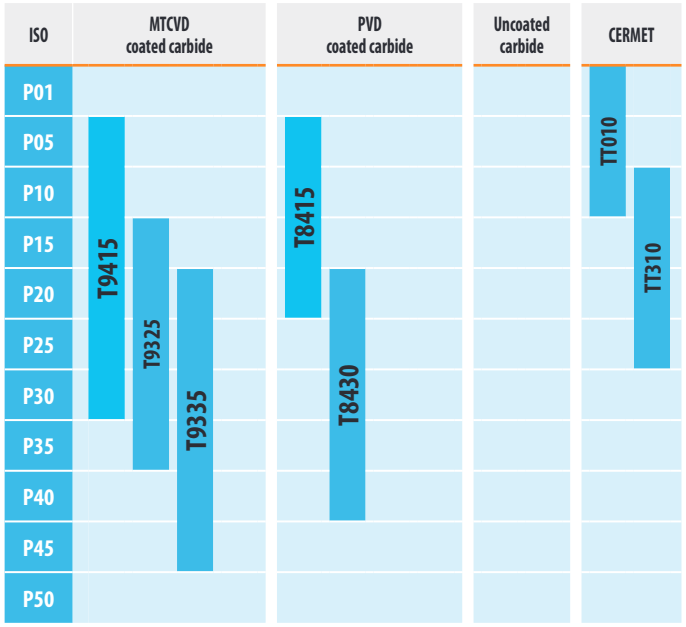
272

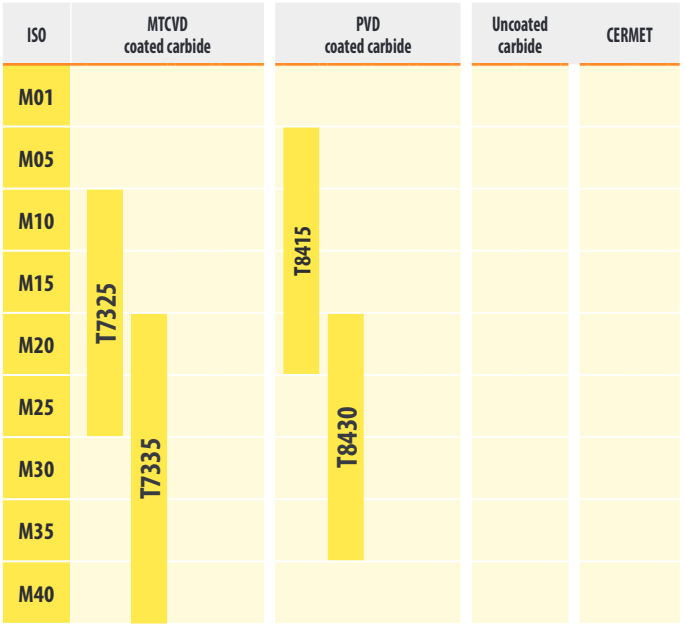
C.-DTFN(RL) INT 91°
TN..

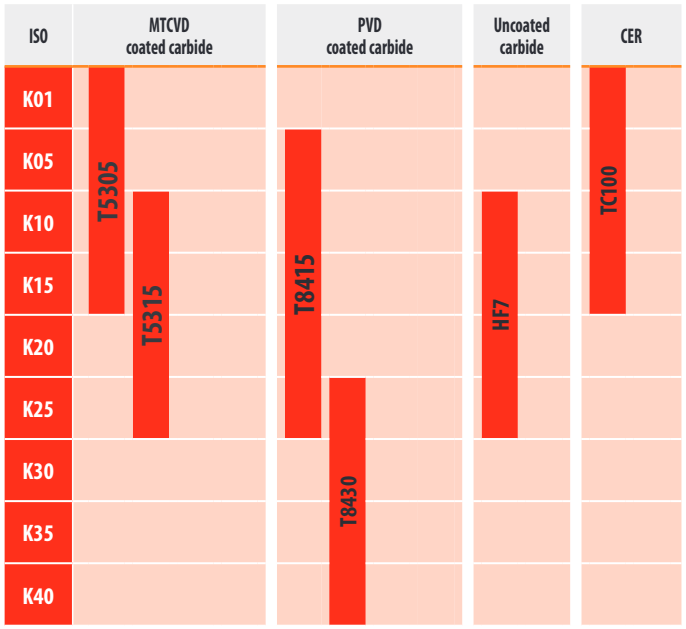

308

C.-DWLN(RL) INT 95°
WN..


321


ISO
MTCVD coated carbide
PVD coated carbide
Uncoated carbide
CERMET
P01
P05
P10
P15
P20
P25
P30
P35
P40
P45
P50
T9415
T9325
T9335
T8415
T8430
TT010
TT310


ISO
MTCVD coated carbide
PVD coated carbide
Uncoated carbide
CERMET
M01
M05
M10
M15
M20
M25
M30
M35
M40
T7325
T7335
T8415
T8430


ISO
MTCVD coated carbide
PVD coated carbide
Uncoated carbide
CER
K01
K05
K10
K15
K20
K25
K30
K35
K40
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T5315
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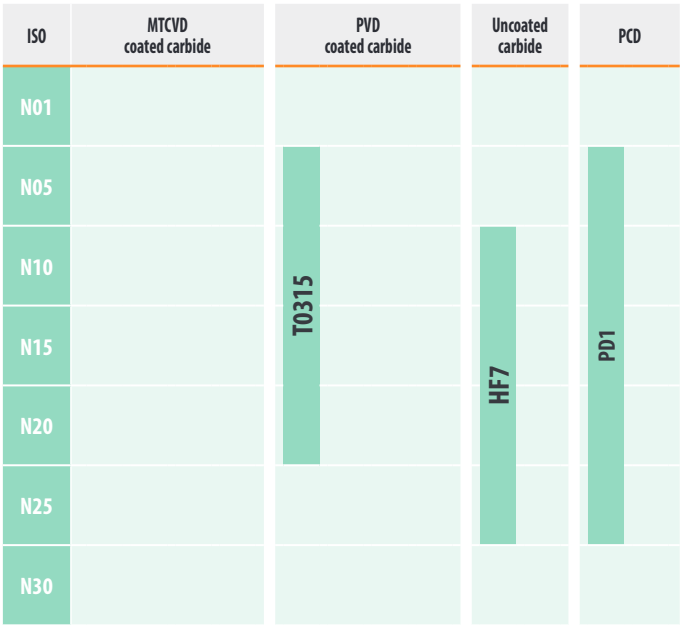
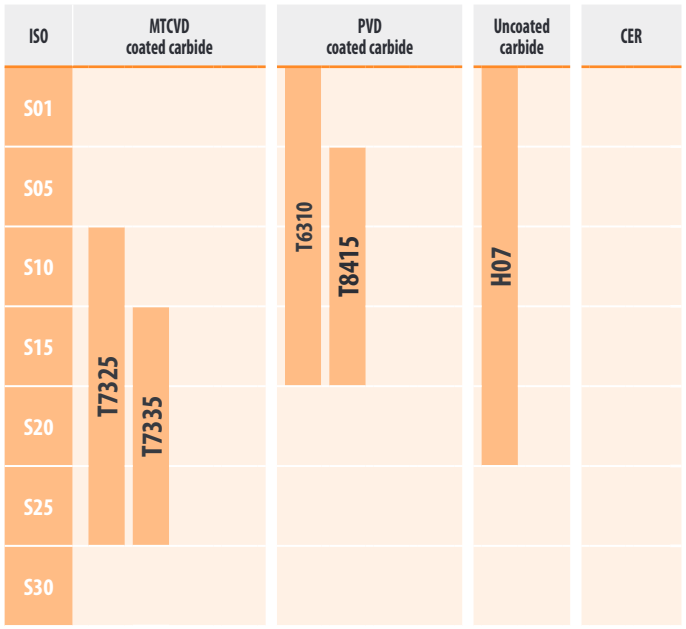
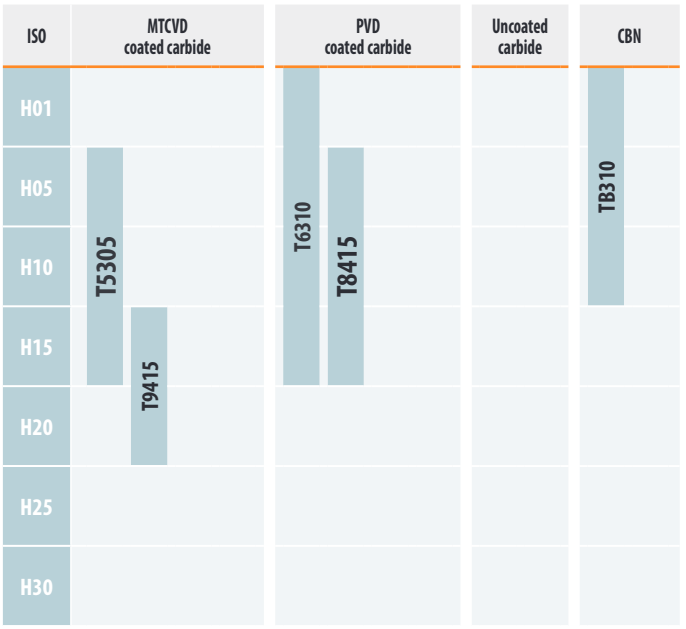
T8430
HF7
TC100


ISO
MTCVD coated carbide
PVD coated carbide
Uncoated carbide
PCD
N01
N05
N10
N15
N20
N25
N30
T0315
HF7
PD1


ISO
MTCVD coated carbide
PVD coated carbide
Uncoated carbide
CER
S01
S05
S10
S15
S20
S25
S30
T7325
T7335
T6310
T8415
H07


ISO
MTCVD coated carbide
PVD coated carbide
Uncoated carbide
CBN
H01
H05
H10
H15
H20
H25
H30
T5305
T9415
T6310
T8415
TB310

CVD TURNING GRADES

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T9415 NEW	P05 - P30	■				MT-CVD		FGM	+ +	Highly wear-resistant material designed primarily for finish turning of common carbon and alloy steels. Despite its high abrasion resistance, it is also suitable for interrupted cutting operations. We recommend this material as the first choice for most turning operations, especially in high production applications.
	K05 - K25	◪								
	H10 - H20	◪								
T9310	P01 - P15	■				MT-CVD		FGM	+ +	Grade with high abrasion resistance which can be used for slightly interrupted cutting. It will be used for finishing or semi-roughing operations. This material can also be used for roughing operations provided the machine-tool-workpiece configuration is sufficiently rigid.
	K05 - K20	◪								
	H10 - H20	◪								
T9315	P05 - P25	■				MT-CVD		FGM	+ +	A versatile grade with excellent wear resistance properties even under intense cutting conditions. It can also be used for operations with interrupted cuts.
	K05 - K25	◪								
	H10 - H20	◪								
T9325	P15 - P35	■				MT-CVD		FGM	+ +	From a technological perspective this is an extremely versatile grade with high resistance to mechanical damage in adverse cutting conditions and retains excellent wear resistance. The correct application of this material requires high cutting speeds.
	M10 - M30	■								
	K15 - K35	◪								
	S10 - S20	◪								
T9335	P20 - P45	■				MT-CVD		FGM	+ + +	One of the toughest grades which is especially suitable for adverse cutting conditions at medium to high feed rates and medium cutting speeds. Compared to its predecessors, M15 – M40 it is not only tougher, but also more abrasion resistant which will be useful when using intensive cutting conditions.
	M15 - M40	■								
	S15 - S25	◪								
T9226	P15 - P35	■				MT-CVD		FGM	+ + +	Grade designed for heave roughing applications. A versatile grade with high resistance to mechanical damage and retains very good wear resistance. Usable at lower cutting speeds.
	M10 - M30	■								
	K15 - K35	◪								
	S15 - S25	□								
T7325	P15 - P35	◪				MT-CVD		FGM	+ + +	One of the most universal turning grades. Especially designed for stainless steel machining. Optimal balance between wear resistance and performance reliability. Suitable for broad variety of application in turning operations.
	M10 - M25	■								
	S10 - S25	■								
T7335	P20 - P40	◪				MT-CVD		FGM	+ + +	Grade with functionally graded substrate, featuring very high operational reliability and very good wear-resistance. It is best suited to use in the machining of very tough M20 – M40 materials.
	M20 - M40	■								
	S15 - S25	■								
T5305	P05 - P15	◪				MT-CVD		H	+	Grade with very high resistance to chemical wear; suitable for finishing operations using high cutting speeds. With its high abrasion resistance, it is also suitable for productive K01 – K15, machining of hardened and treated materials.
	K01 - K15	■								
	H05 - H15	◪								
T5315	P10 - P25	◪				MT-CVD		H	+	Grade intended primarily for productive machining which has high abrasion resistance and good operational reliability. Due to its properties, this material is particularly suitable for roughing and finishing operations for good or slightly adverse cutting conditions.
	K10 - K25	■								
	H15 - H25	◪								
6640	P20 - P40	■				MT-CVD		H	+ + +	One of the toughest turning materials which can be used especially in roughing operations, or where operational reliability under adverse cutting conditions is a priority. Another ideal choice for machines working with low to medium cutting speeds and medium to high feed rates.
	M20 - M35	■								
	K25 - K40	■								

PVD TURNING GRADES

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
T8415 NEW	P05 - P20 M05 - M20 K05 - K25 N05 - N25 S05 - S15 H05 - H15	■ ■ ■ ◪ ■ ■				PVD		submicron H	+ +	A versatile, high performance turning grade primarily intended for steel machining, but well suitable for stainless steels and heat resistant super alloys (HRSA) too, possibly applicable for hardened steels. It is suitable for machining at wide range of cutting speeds, light to medium feeds and under good cutting conditions, preferably with coolant.
T8315	P05 - P20 M05 - M20 K05 - K25 N05 - N25 S05 - S15 H05 - H15	◪ ■ ■ ■ ◪ ■				PVD		submicron H	+ +	Grade featuring excellent abrasion resistance while maintaining above average operational reliability, it is suitable for machining at medium to high cutting speeds in short chipping harder materials.
T8430	P20 - P40 M20 - M35 K25 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ◪ ◪ ◪ ◪				PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
T8345	P30 - P50 M20 - M40 K30 - K40 S20 - S30	■ ◪ ◪ ◪			+	PVD		submicron H	+ + +	This is the toughest turning grade, which is intended mainly for machining under the worst cutting conditions and in applications with the highest requirements for operating reliability. Because of these properties, this material is recommended for lower cutting speeds.
T6310	P01 - P15 M01 - M15 K05 - K20 N05 - N20 S01 - S15 H01 - H15	■ ■ ■ ■ ■ ■				PVD		ultra submicron H	+ + +	High wear resistant turning grade with top PVD coating. Suitable for finishing operation and applications, where sharp cutting edge together with high flank wear resistance is of high importance
T0315	N05 - N20	■				PVD		submicron H	+ +	Submicron grade for turning non-ferrous metals and their alloys with a balance of wear resistance and toughness. It is provided with a unique coating with excellent friction properties.
G8330	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25	■ ■ ■ ◪ ◪				PVD		submicron H	+ + +	Universal cutting grade for grooving and parting-off applications. This grade is characterized by its exceptional reliability and versatility. Developed to fit machining conditions for most workpiece materials.
T8330	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25 H15 - H25	■ ■ ■ ◪ ◪ ◪				PVD		submicron H	+ + +	Undoubtedly the most versatile cutting material, this is useful for machining of all types of machined materials and is practically applicable in almost all types of turning operations. Its main benefits are its high operational reliability and very good frictional properties; it is therefore suitable for applications at medium and lower cutting speeds.
T8010	P05 - P15 M05 - M15 K10 - K20 S10 - S15	■ ■ ■ ◪				PVD		submicron H	+ + +	This grade is suitable for continuous high precision thread turning of steels, stainless steel, cast iron and super alloys. Offering excellent wear resistance while ensuring operational reliability
T8030	P25 - P40 M20 - M35 K20 - K40 N15 - N30 S15 - S25	■ ■ ■ ◪ ◪				PVD		submicron H	+ + +	Undoubtedly the most versatile grade it is suitable for machining all types of materials and can be applied in almost all turning operations. It's main benefits are high operational reliability and excellent frictional properties; it is therefore suited to applications at medium to low cutting speeds.

OTHER TURNING GRADES

Grade Identification	Area of Application	Application	Feed	Cutting speed	Resistance to adverse Working Conditions	Coating	Colour	Substrate	Coolant benefit	Grade description
HF7	M10 - M20 K10 - K25 N10 - N25	◪ ■ ■				×		submicron H	+ +	Uncoated grade which is primarily designed for machining non-ferrous metals; but can also be used for other machined materials (except steel). This material can be used in turning, milling, and even boring.
H07	M05 - M15 K10 - K25 N10 - N30 S01 - S20	◪ ■ ■ ■				×		submicron H	+ +	Uncoated turning grade suitable for machining applications where oxidation resistance is not dominating criterion of tool life. Designed for machining of Ti-based alloys. Grade exhibits high strength of cutting edge together with good wear resistance.
TT310	P10 - P25 M15 - M25	■ ◪				PVD		cermet	+ / -	Coated cermet used for fine and finish turning of carbon and alloy steels (including stainless). Its excellent friction properties are further improved by the coating applied using the PVD technique.
TT010	P01 - P10 M01 - M10	■ ◪				×		cermet	+ / -	Uncoated cermet, which is suitable for fine machining of all types of steel (including stainless) at very low feed rates. Its main advantage is the minimal radius of the cutting edge and its high resistance to physical and chemical wear mechanisms.
TC100	K01 - K15	■				×		ceramics	- -	Ceramic grade for cast iron machining. Suitable for machining with high cutting speed at stable conditions.
TB310	K01 - K10 S05 - S10 H01 - H10	■ ◪ ◪				×		CBN	- -	CBN grade for machining of hardened materials. Suitable for machining with high cutting speed and small feeds at stable conditions.
PD1	N05 - N25	■				×		PCD	-	PKD grade for turning non-ferrous materials. Ideal choice for working with high cutting speed and small feeds at stable conditions.
333TN	P45 - P50 M35 - M40 K35 - K40	■ ◪ ◪				PVD		HSS	+ + +	Special grade composed of HSS substrate and thin hard PVD coating. The most tough cutting grade in the portfolio. Inserts with this grade are one and only used for slotting of key groove.

Substrat	
H	WC-Co based substrate
submicron H	WC-Co based substrate fine grained (< 1 µm)
ultra submicron H	WC-Co based substrate very fine grained (< 0,5 µm)
FGM	Functionally graded substrate
Cermet	Cemented carbide without WC
ceramics	Cutting ceramics
PCD	Polycrystalline Diamond
CBN	Cubic Boron Nitride
HSS	High speed steel

Coating	
MT-CVD	Medium-temperature chemical method of coating
PVD	Low-temperature physical method of coating
×	Uncoated grade

Benefits of cutting fluid	
+ + +	Use of coolant is essential
+ +	Highly recommended
+	Recommended
+ / –	Optional
– -	Do not use coolant
–	Coolant not recommended