

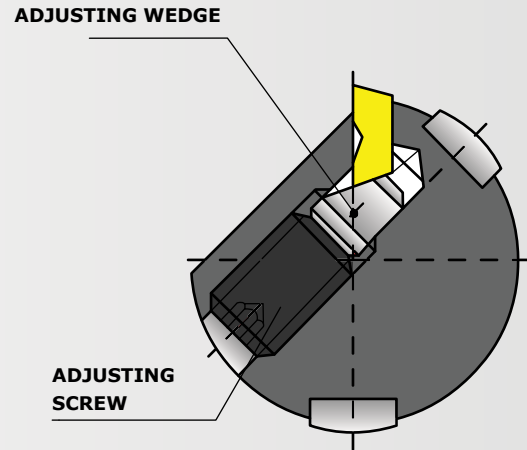
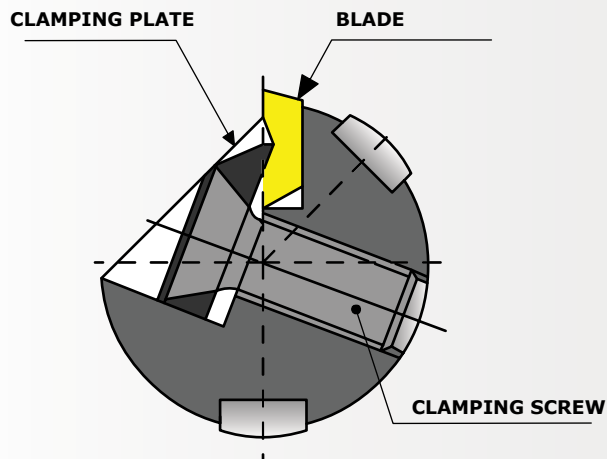
BLADE FIX



**Single blade indexable
and adjustable reamers**

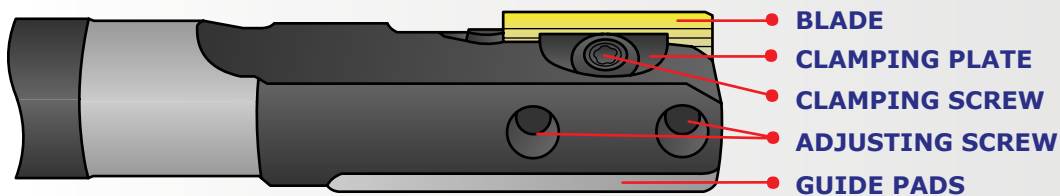
BLADE FIX MAIN CHARACTERISTICS

Blade fix single-bladed reamers allow perfect bore geometry and surface finishes. The cutting of the material and the guiding of the reamer in the bore is performed by the blades by means of precision grinding and guide pads located at the best geometric positions. The perfectly aligned adjustment and clamping system for the blade guarantees optimum, play-free seating for the blade and, as result, long tool life.



ADJUSTABLE AND INDEXABLE BLADE

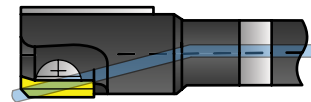
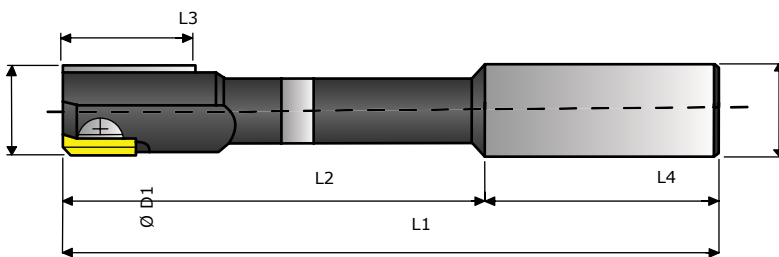
- Turn the adjusting screw $\frac{1}{2}$ turn anti clock-wise
- Turn clamping screw anti-clockwise from the top and clockwise from the bottom
- Remove blade
- Clean blade and blade seat . Turn the blade 60° or insert new blade in cartridge
- Fit blade and press into pocket
- Turn clamping screw clockwise from the top and anti-clockwise from the bottom. One key need to be used to open. The clamping tape will be tightened
- For rough adjustment, turn the adjusting screw clockwise again $\frac{1}{4}$ turn
- For measurement and precision setting we recommend a precision micrometer
- Set the required setting dimensions by turning the adjusting screw clockwise



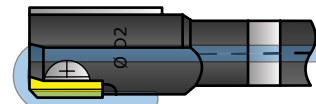
BLADE FIX REAMERS SHORT LENGHT

Diameter	Type BFSN Reamers Dimensions					Accessories					
	ØD1	L1	L2	L3	L4	ØD2	Blade	Clamping tape	Clamping screw	Adjusting wedge	Adjusting screw
6 ÷ 6,90	100	60	20	40	10		B10	ST10	V1	CR10	GR1
6,91 ÷ 7,79	110	70	20	40	10		B10	ST10	V1	CR10	GR1
7,80 ÷ 8,79	123	75	25	48	16		B20	ST20	V2	CR20	GR2
8,80 ÷ 9,79	123	75	25	48	16		B20	ST20	V2	CR20	GR3
9,80 ÷ 11,79	123	75	27	48	16		B30	ST30	V3	CR30	GR3
11,80 ÷ 12,29	123	75	27	48	16		B40	ST40	V3	CR40	GR4
12,30 ÷ 14,29	123	75	27	48	16		B40	ST40	V3	CR40	GR4
14,30 ÷ 15,29	125	75	30	50	20		B40	ST40	V3	CR40	GR5
15,30 ÷ 19,29	125	75	30	50	20		B40	ST40	V4	CR40	GR6
19,30 ÷ 20,29	145	95	30	50	20		B40	ST40	V4	CR40	GR7
20,30 ÷ 23,29	145	95	32	50	20		B40	ST40	V4	CR40	GR7
23,30 ÷ 26,29	145	95	32	50	20		B40	ST40	V4	CR40	GR7
26,30 ÷ 35,29	151	95	32	56	25		B40	ST40	V4	CR40	GR8
35,30 ÷ 40,29	151	95	32	56	25		B40	ST40	V4	CR40	GR9
40,30 ÷	171	115	35	56	25		B50	ST50	V5	CR50	GR10

**BY REQUEST WE PRODUCE REAMERS WITH SUPERIOR DIAMETER
OR WITH MORE DIAMETERS ON THE SAME LINES**



TYPE RI
internal coolant
supply for blind holes



TYPE RI
internal coolant supply
for through holes
from $\varnothing > 12$

BLADE FIX REAMERS FOR LONG LENGHT

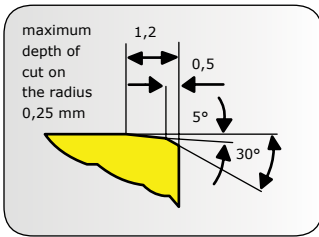
Diameter	Type BFSL Reamers Dimensions					Accessories					
	ØD1	L1	L2	L3	L4	ØD2	Blade	Clamping tape	Clamping screw	Adjusting wedge	Adjusting screw
7,80 ÷ 8,79	133	85	25	48	16		B20	ST20	V2	CR20	GR2
8,80 ÷ 9,79	133	85	25	48	16		B20	ST20	V2	CR20	GR3
9,80 ÷ 11,79	133	85	27	48	16		B30	ST30	V3	CR30	GR3
11,80 ÷ 12,29	168	120	27	48	16		B40	ST40	V3	CR40	GR4
12,30 ÷ 14,29	168	120	27	48	16		B40	ST40	V3	CR40	GR4
14,30 ÷ 15,29	170	120	30	50	20		B40	ST40	V3	CR40	GR5
15,30 ÷ 19,29	170	120	30	50	20		B40	ST40	V4	CR40	GR6
19,30 ÷ 20,29	170	120	30	50	20		B40	ST40	V4	CR40	GR7
20,30 ÷ 23,29	170	120	32	50	20		B40	ST40	V4	CR40	GR7
23,30 ÷ 26,29	170	120	32	50	20		B40	ST40	V4	CR40	GR7
26,30 ÷ 35,29	176	120	32	56	25		B40	ST40	V4	CR40	GR8
35,30 ÷ 40,29	176	120	32	56	25		B40	ST40	V4	CR40	GR9
40,30 ÷	176	120	35	56	25		B50	ST50	V5	CR50	GR10

**BY REQUEST WE PRODUCE REAMERS WITH SUPERIOR DIAMETER
OR WITH MORE DIAMETERS ON THE SAME LINES**

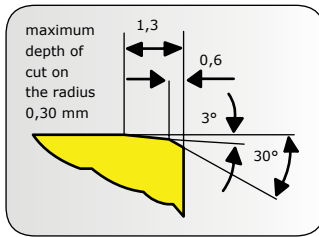
STANDARD ENTRANCE TYPE P = THROUGH HOLES

C = BLINDE HOLES

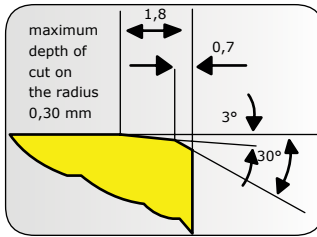
**BLADE: B10
ENTRANCE TYPE P**



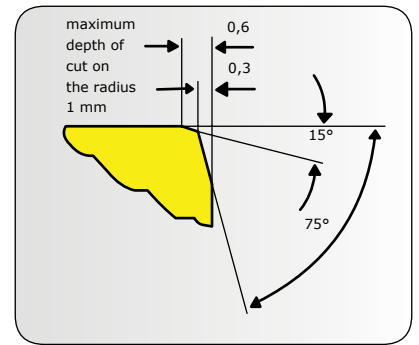
**BLADE: B20
ENTRANCE TYPE P**



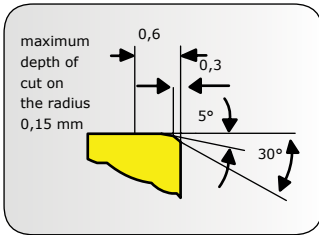
**BLADE: B30-B40-B50
ENTRANCE TYPE P**



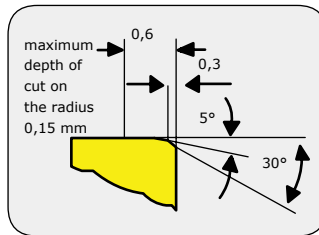
**ENTRANCE TYPE "CDZ" FOR BIG REMOVAL
PERFORMING ON BLADES B20-B30-B40-B50**



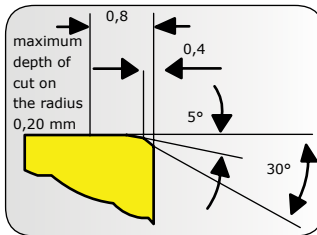
**BLADE: B10
ENTRANCE TYPE C**






**BLADE: B20
ENTRANCE TYPE C**



**BLADE: B30-B40-B50
ENTRANCE TYPE C**



Reamers diameter	Blade dimension			
		Rake Angle	Rake Angle	Rake Angle
6 ÷ 7,79	B10	For all the materials with short chip cast iron GG- GGG, Brass, Steel 900 N/mm	For steel 700<900 N/mm , cast irons GG- GGG alloy with Cr	For steel <700 N/mm and Aluminium
7,80 ÷ 9,79	B20			
9,80 ÷ 11,79	B30			
11,80 ÷ 40,29	B40			
40,30 ÷ more	B50			

OPERATING DATA FOR REAMERS WITHOUT COATING

Material	Serie with external coolant			Serie with internal coolant					
	Form of entrance P-C Depth of cut on radius 0,005-0,30 mm			Form of entrance P Depth of cut on radius 0,005-0,30 mm			Form of entrance C Depth of cut on radius 0,005-0,20 mm		
	Cutting speed (n/min)	Feed S* (mm/rev)	Rake angle 0° 6° 12°	Cutting speed (n/min)	Feed S* (mm/rev)	Rake angle 0° 6° 12°	Cutting speed (n/min)	Feed S* (mm/rev)	Rake angle 0° 6° 12°
Steel <400 N/mm ²	12-30	0,1 - 0,4	○ ●	35-80	0,1 - 0,4	○ ●	35-100	0,1 - 0,3	○ ●
Steel <400 N/mm ²	12-30	0,1 - 0,4	○ ●	35-80	0,1 - 0,4	○ ●	35-100	0,1 - 0,3	○ ●
Steel <400 N/mm ²	12-30	0,1 - 0,4	○ ●	35-60	0,1 - 0,4	○ ●	35-80	0,1 - 0,3	○ ●
Chrome-nickel Steel	8-25	0,1 - 0,4	○ ●	30-40	0,1 - 0,3	○ ●	30-60	0,1 - 0,3	○ ●
Stainless steels	5-27	0,1 - 0,3	○ ●	18-40	0,1 - 0,3	○ ●	20-40	0,1 - 0,2	○ ●
Grey cast iron GG18-22	12-35	0,2 - 0,4	●	30-60	0,1 - 0,4	● ○	30-60	0,1 - 0,4	● ○
GG26 and similar	12-35	0,2 - 0,4	●	30-80	0,1 - 0,4	● ○	30-80	0,1 - 0,4	● ○
GGG 42 and similar	12-35	0,2 - 0,4	○ ●	30-60	0,1 - 0,4	● ○	30-80	0,1 - 0,4	● ○
Chilled cast iron	12-25	0,1 - 0,3	○ ●	30-60	0,1 - 0,3	○ ●	35-70	0,1 - 0,3	○ ●
Aluminium under AISI 5	12-25	0,1 - 0,3	● ●				50-120	0,1 - 0,3	● ●
Aluminium over AISI 5	12-35	0,1 - 0,3	● ○ ●				40-160	0,06 - 0,3	○ ○ ●
Die-cast zinc	12-25	0,1 - 0,3	●				60-110	0,06 - 0,3	○ ●
Duraluminium	12-35	0,1 - 0,3	●	40-80	0,1 - 0,4	●	50-160	0,06 - 0,3	●
soft copper	12-25	0,1 - 0,3	●	30-60	0,1 - 0,3	●	30-60	0,1 - 0,3	●
hard copper	12-35	0,1 - 0,4	●	30-60	0,1 - 0,4	●	30-80	0,06 - 0,4	●
Brass with short chip	10-35	0,1 - 0,4	●	30-80	0,06 - 0,4	●	40-90	0,06 - 0,4	●
Brass with lang chip	7-30	0,1 - 0,3	○ ●	30-50	0,1 - 0,4	○ ●	20-50	0,1 - 0,3	○ ●
phosphor bronze	12-30	0,1 - 0,4	○ ●	30-80	0,06 - 0,4	●	40-90	0,06 - 0,4	●
hard plastic	12-30	0,1 - 0,4	●	30-80	0,1 - 0,4	●	90-160	0,1 - 0,4	●

● preferred rake Angle

○ rake angle recommended in special cases

* with high cutting speed and big cutting depth small feed (mm/rev) should be chosen

- Coolant Emulsion 1: 9 or cutting oil, never dry

- Pre-drilled 0.15 mm on the radius

DATA AVERAGE INCREASE WITH COATING: TIN= 50% TICN= 100%

KEY TO CODES - REAMERS

Unless otherwise specified, all reamers are produced to achieve a diameter in the middle of the required tolerance

Reaming Type

BFSN short length
BFSL long length

BFSN

Diameter and tolerance of the hole to ream

16,60 H7

Shank Type

C= straight shank
W= Weldon shank
WN= Whistle Notch shank

C

RI

Coolant:

RE= external coolant
RI= internal coolant

P

Inlet geometry:

P= through holes
C= blinde holes



LAME KEY TO CODES - REAMERS

Important!! Blade and reamer must have the same inlet geometry

Blade dimension:

B10 - B20 - B30 - B40 - B50

B40

Cut angle:

0° - 6° - 12°

6°

P

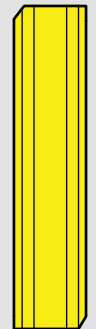
Inlet geometry

P= Through Holes
C= Blinde Holes

T

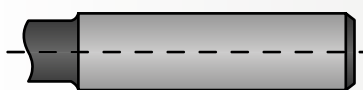
Coating blade

T= TiN
TC=TiCN
TA=TiALN



STANDARD SCHANKT REIBAHLE FIX SN -SL

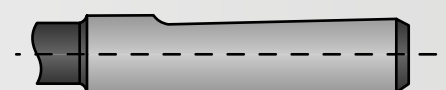
STRAIGHT SHANK



WELDON SHANK



WESTLE NOTCH SHANK



ON REQUEST WE PRODUCE REAMERS WITH ANY TYPE OF SHANK

