



318.02

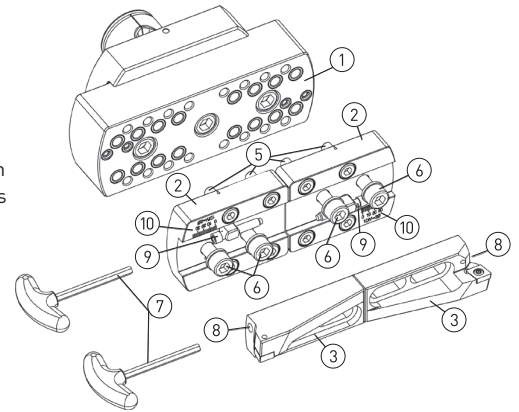
Operating instruction Rough boring, Series 318

Assembly and adjustment of the rough boring tool

- Mount the clamp base ② on to the extension slide ① at a fixed position according to the table and fasten socket screws ⑤ with 20Nm
- Remove screws with washers ④ from the clamp bases ② and mount the selected insert holders ③, (Type CC, SC or WC) on to the clamp bases ②. Screw in screws with washers ④ but do not fasten them
- A small hole ⑧ on the insert holder allows access for an Allen wrench ⑦ to the adjust

screw ⑤. Adjust the desired diameter according to the scale by means of the Allen wrench ⑦. The corresponding scale value is calculated according to the table

- Fasten screws ⑤ with 30Nm

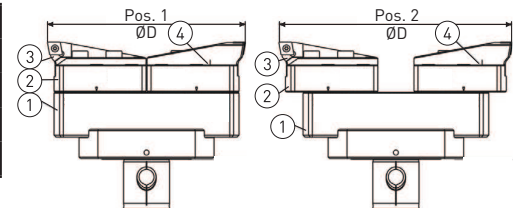


The table determines the components such as extension slide ①, clamp bases ② and insert holders ③ for each diameter range and shows in which position the clamp bases ② have to be mounted on the extension slide ①.

Further, this table also serves for the coarse diameter setting of the cutting edges by means of the scale on the clamp base ② and the marking ④ on the insert holder ③. The required scale value is calculated by the difference between bore diameter and correction α . The insert holder has to be adjusted to the scale value. See example.

Example \emptyset setting

$\emptyset D$:	$\emptyset 335$
Extension slide:	318.223
Position:	2
Correction value:	305
Scale:	$D - \alpha = 335 - 305 = 30$



Range $\emptyset D$	Extension slide	Fixed position / Range		Clamping bases	Insert holder	Correction α		
		Pos.1 / $\emptyset D$	Pos.2 / $\emptyset D$			Pos. 1	Pos. 2	
200 - 270	318.205N	199 - 236	234 - 271	318.240	637.940 [CC12] 637.941 [CC16] 637.942 [SC12] 637.943 [WC08]	200		
	318.222						235	
270 - 340	318.206N	269 - 306	304 - 341				270	
	318.223						305	
340 - 410	318.224	339 - 376	374 - 411				340	375
410 - 480	318.225	409 - 446	444 - 481				410	445
480 - 550	318.226	479 - 516	514 - 551				480	515
550 - 620	318.227	549 - 586	584 - 621				550	585

Full profile rough boring (VPS)

Full profile Rough boring permits boring with large stock allowance (up to 60mm in diameter) in a single operation with relatively low drive power.

Set cutting edge ① to the final bore diameter, and cutting edge ② according to the machining allowance, as listed in the table below.

Double offset rough boring (DVS)

Diameter and length offset cutters allow the removal of twice the stock (up to 30mm in diameter) with half the feed rate but excellent chip control. For double offset rough boring DVS, (cutting edge ②), a long insert holder must be used. The long insert holders are coloured black and are sold individually.

Set cutting edge ① to the final diameter and cutting edge ② to half the stock allowance.

Symmetrical rough boring (RSS)

Symmetrical cutting is the most common arrangement used for twin cutter heads. Especially suitable for small to medium stock removal (up to 20mm in diameter) with high feed rates.

Stock allowance VPS [mm \emptyset]	Cutting edge ① [mm \emptyset]	Cutting edge ② [mm \emptyset]
24 - 29.9	D	D - 2
30 - 35.9		D - 6
36 - 41.9		D - 12
42 - 47.9		D - 18
48 - 53.9		D - 24
54 - 60		D - 30

Cutting data VPS	
v_c [m / min]	f_n [mm / rev]
100 - 180	0.1 - 0.2

