



# EDALMATIC ROTOCOUPE





# EDALCO SA

As an import-export company, EDALCO SA was founded in 1946 in Geneva Switzerland. Taken over by the current direction, transferred EDALCO SA 1970 of the today's line and completely modified in its activity. Today our high-modernized production enterprise, which attaches very great importance to quality and fast supply of our stocks, is particularly specialized in thread cutting engineering. But our entire pallet continues to extend also into the turning technology and still, up to special tools.

To our products belong, how you will see later also still in this folder:

- Tapping apparatuses with torque adjustment
- Tapping apparatuses for processing centers
- Tapping spindles for processing centers and CNC centre lathes
- Tapping chuck for synchronous running CNC machines
- Edaltour universal threading attachment for internal and external threads
- VHS-R 61 - speed-up head
- Tool holder and radii turning tips
- Rotocoupe chip breaker attachment for turning and drilling work.

From the development to the final product, our devices are monitored continuously by the most modern measuring methods and the human eyes.

## **SWISS QUALITY, ALWAYS APPRECIATED, WILL CONSTANTLY ATTEND OUR PRODUCTS!**

The investments into the development were worthwhile themselves, because the EDALCO products are world wide well known and have taken a world market prominent position.

## **WE CONTINUE TO INVEST!**

In over 40 countries, in completely Europe and also overseas, EDALCO SA is represented by our very well trained partners and agents. These have, like the head office in Geneva also, large stocks, so that we can deliver you as fast as possible. For questions, consultation, technical support and formation, at anytime we stay to your disposal.



# EDALMATIC TAPPING APPARATUSES ADVANTAGES



The different Edalmatic tapping apparatus types guarantees an adapted function for each case. Each thread can be cut easily and with highest accuracy.

The shockproof Edalmatic ball and special fitted springs releasing systems ensures a regular thread depth in all conditions of work and independently of

the technical characteristics of the machines and start conditions.

All releasable apparatuses guarantee a repetition accuracy of the thread depth of  $\pm 0,1\text{mm}$  in all cases, with correct retention time.

They permit a constant cutting speed. That means: Ideal chip flow, perfect surface of the thread flanks and minimum tap wear.

The apparatuses with rotation reversal and releasing ensure:

- A continuous high speed
- Shorter operating time. 2 machine spindle reversals are saved
- By it also smaller wear of your expensive CNC machines
- In most cases, more than 25% lifetime of the tap
- Constant cutting speed
- Exact thread depth.

The releasable tapping spindles grant the same. The machine must be switched on.

In addition the MT-S (IK) tapping chuck for absorbed synchronous cuts (soft rigid tapping) with small compensation, increase the tap-life up to 50% and

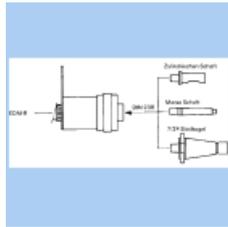
avoid breakage of the tap. This small compensation permits a perfect cutting in hard material, often impossible with tapping the rigid tapping.



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for use of EDALMATIC tapping apparatuses and accessories.



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## Edaltour

Universal threading attachment, for internal and external threads.



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Important recommendations in general



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## Quickchange adapters CR with tables of dimensions.

Standard, with security clutch, with Rubber-Flex collets and for die holder. Compatible with other brand adapters on the market.



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## EDM-R

### Suitable for the application on conventional machines.

Reversible tapping apparatus with finely adjustable slip clutch. Depth adjustment and automatic stroke. Releasable / for through and blind holes.



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## VHS-R 61

### Speed-up head



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## BT-NR / CR

### for the application on NC-machines, with or without automatic tool change.

Tapping spindle with axial compensation in traction and compression. For through holes.



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## Accessories

In general



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## BT-NRD(-S) / CR

### for the application on NC-machines, with or without automatic tool change.

Tapping spindle with axial compensation in traction and compression. Are releasably and particularly suitable for blind holes.



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## Rotocoupe

### Chips breaker attachment



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## BT-NRD 054-S

### for the application on NC-machines, with or without automatic tool change.

Tapping spindle with axial compensation in traction and compression. BT-NRD(-S) are releasably and particularly suitable for short blind holes.



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## Radius turning tool

Tool with interchangeable tips for machining convex radii



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## CNC-RS / CR

### for CNC machines

Reversible tapping apparatus 1:1, with axial compensation in traction and compression. Releasable / for through and blind holes.



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## TAP2000

### Electronic tapping machine



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## MT-S / MT-S-IK

### for synchronous running CNC machines.

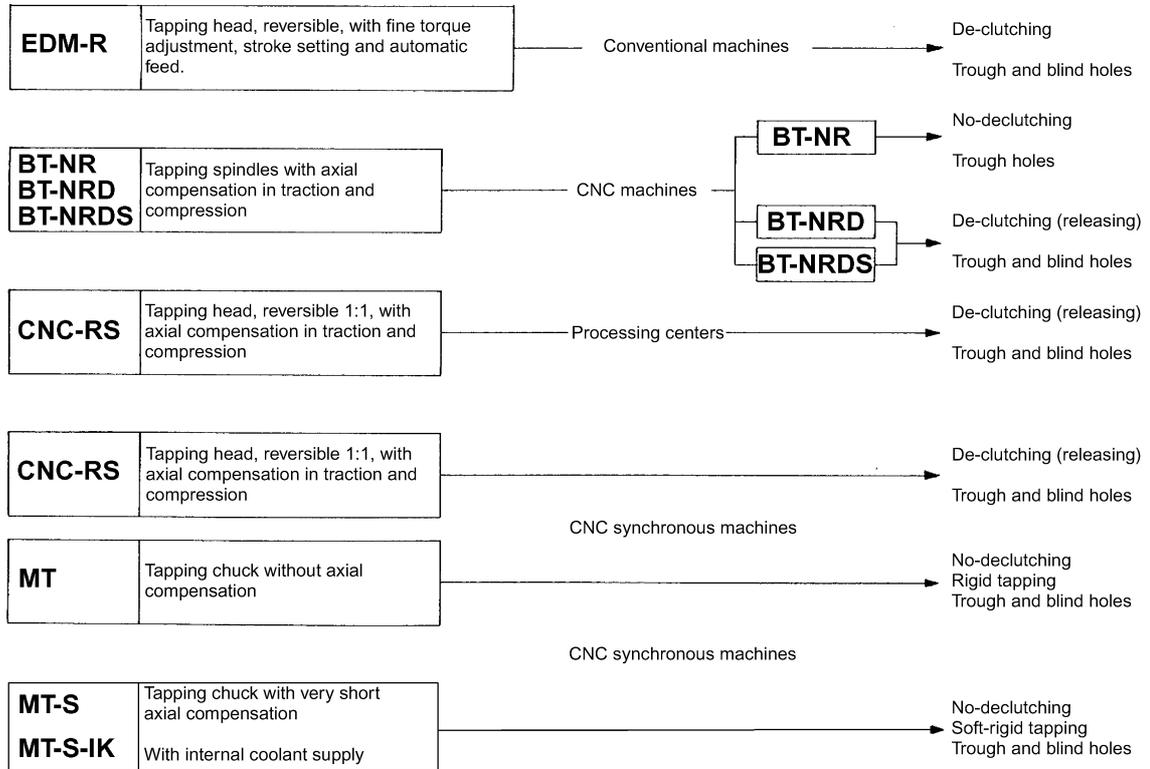
Tapping chuck, with very small compensation. Not releasable / for through and blind holes. Soft rigid synchronous tapping.



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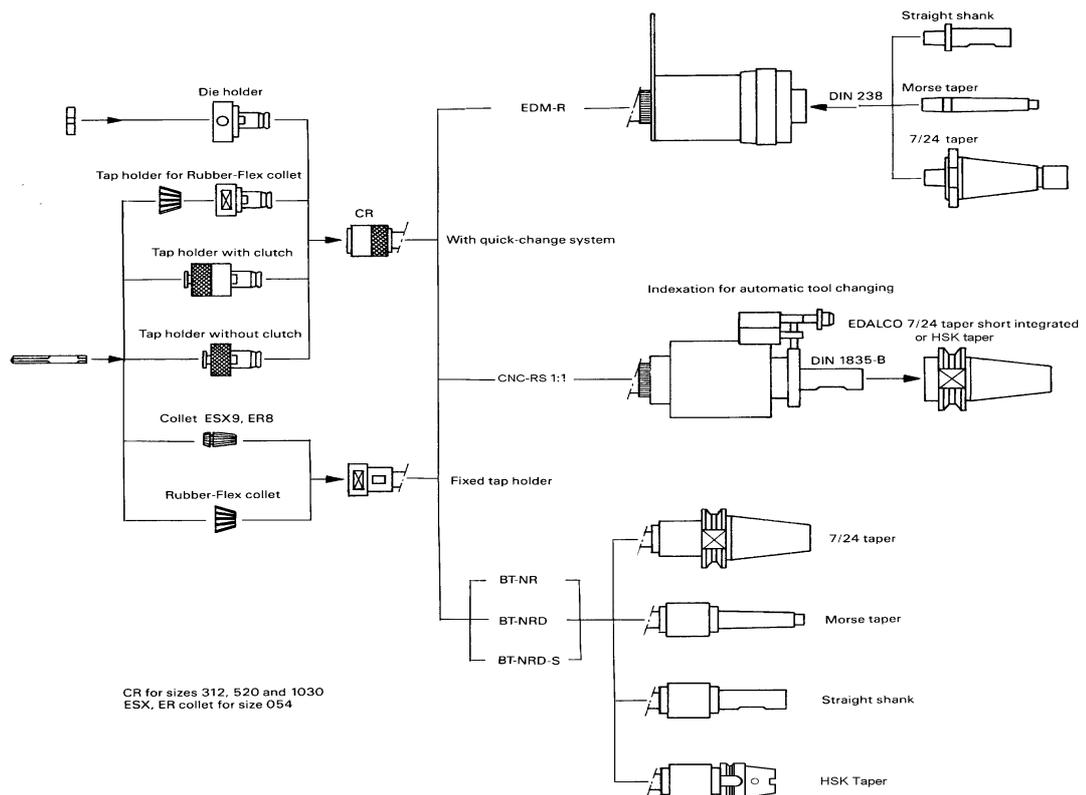
# USING TABLES FOR EDALMATIC TAPPING APPARATUSES AND CHUCKS

## APPARATUSES



Remark: The tapping spindles BT-NR, BT-NRD and BT-NRD-S can also be used with succes on synchronus machines.

## ACCESSORIES





# NOTES

This catalog is a summary of our products range. For more information ask the special leaflets.

All apparatuses are completely with two standard Rubber-Flex collets, which cover the capacity of the apparatus. The steel collets ER8 and ESX9 for apparatuses of the capacity M0,5 to M4 are supplied against surcharge on demand.

The tap holder for quick change system, suitably for Rubber-Flex collets, are supplied with the appropriate special and fork wrench, however without collets.

Morse tapers with thread and screwed tenon, are available on demand, with a surcharge.

With roll taps the indicated capacity must be reduced, by 25 to 30 %.

EDALMATIC tapping spindle for lathes. Exterior cooling agent supply by the flange. See tables pages 7 and 8.



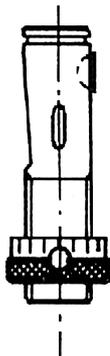
HSK tapers see tables pages 7, 8 and 9.



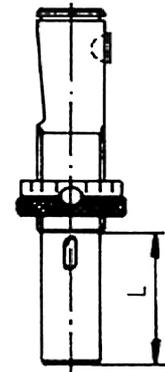
ADJUSTING SLEEVE ACCORDING TO DIN 6327

For spindles with Morse taper, with screwed tenon (on demand). All combinations with adjusting sleeves according to DIN 6327 are possible with MT2 and MT3. Other sleeve dimensions, on demand.

The adjusting sleeves are supplied with simple clamping nut. Nuts for very fast fixing on demand.



Short			Long			
Typ	Morse taper	thread	Dimensions in mm			
			L			
28x2	2	38x2	25	50	75	100
32x2		32x2				
36x2	3	36x2	30	60	90	120
36x3		48x2	40	80	120	160
48x3						



Order example: Adjusting sleeve according to DIN 6327 type 36x3

For long sleeve, please indicate the dimension. Example: Adjusting sleeve according to DIN 6327 type 36x3x90

# EDM-R / CR

## Tapping apparatuses with return and finely adjustable slip clutch and automatic feed

### Application:

For the application on conventional machines such as column-type drilling machines. Or also machines with pneumatic or hydraulic feed.

### Function:

Switching the apparatus spindle, is done via a planetary gear, which is supported by a finely adjustable multiple disk clutch, and which ensures the complete protection from tap break. With the short axial compensation in compression C and those in traction T up to shock less releasing, the thread depth is always ensured. The additional axial compensation in traction N, simplifies the return with multiplied rate, 1,6:1. All drive - releasing items are stored on springs.

Also left-hand threads cut possible, without modification.

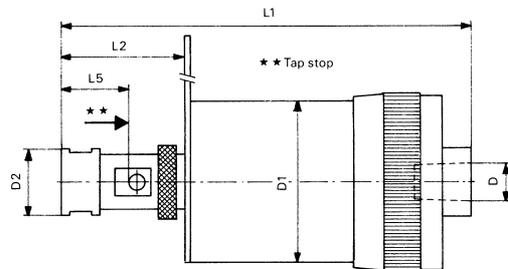
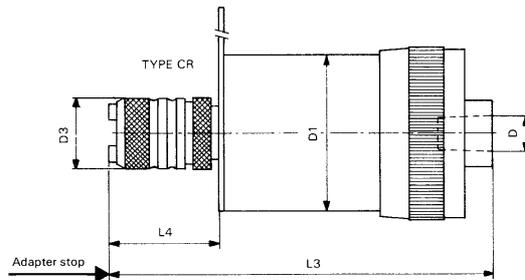
Two clamping versions of the tap are available:

1. Spans with Rubber-Flex collets (2 rubber collets are provided) and tap square with vice.
2. With quick-change adapters (type CR), compatibility with different label applications.

The quick-change adapters are likewise, on demand, available with security clutch. The apparatus size 312, is also available with EDALTOUR quick-change adapter.

Type	Capacity	mini Capacity	Rubber-Flex collets		Adapter CR	Extension T	Compression C	Return N
			Standard	***				
EDM-R 147	M1,4 - M7	M1	J116 2,5 - 4,5 J117 4,5 - 6,5	J115 1 - 2,5	—	0 to 10	2	10
EDM-R 312 EDM-R 312-CR	M3 - M12	M1,4	J421 3,5 - 6,5 J422 6,5 - 10	J423 2 - 4,5 J420 4,5 - 8	312-1/S/P/F	0 to 15	2,5	15
EDM-R 520 EDM-R 520-CR	M5 - M20	M3	J441 4,5 - 10 J445 10 - 16	J443 2,8 - 7 J440 7 - 13	520-2/S/P/F	3 to 22	3	20
EDM-R 1030	M10 - M30	M10	J461 9 - 16 J462 16 - 23	— —	—	5 to 30	4	30

\*\*\* Additional collets on request



Size	Shank	Max. Speed r.p.m.		Order code		Dimensions in mm									
		EDM-R	EDM-R-CR	EDM-R	EDM-R-CR	D	D1	D2	D3	L	L1	L2	L3	L4	L5
147	DIN 238 - B 12	1400	1400	3121 - 2512	—	12,06	52	21	—	—	131	34	—	—	18
312	DIN 238 - B 16	1100	900	3131 - 2516	3132 - 2516	15,73	70	29	32	—	176	59	167	50	31
520	DIN 238 - B 22	750	600	3141 - 2522	3142 - 2522	17,78	85	39	50	—	244	80	236	72	44
1030	DIN 238 - B 24	350	350	3151 - 2524	—	21,8	108	55	—	—	303	97	—	—	51



# BT-NR / CR

## Tapping spindle - Non releasing - Reversing by machine spindle

### Application:

For the application on NC and CNC machines, with or without automatic tool change. On lathes and processing centers.

### Function:

The adjustable axial compensation in compression C, can be reinforced up to complete blocking with the initial cutting pressure spring. This ensures the adjustment to the different tap types and to the material which has to be machined, without influencing the thread depth. The axial compensation in traction T, permits a large feed modification between machine spindle and tap pitch, which permits a high quality given by the tool accuracy. The ball guide and ball driver, lead to the easy and exact use, also with high torque.

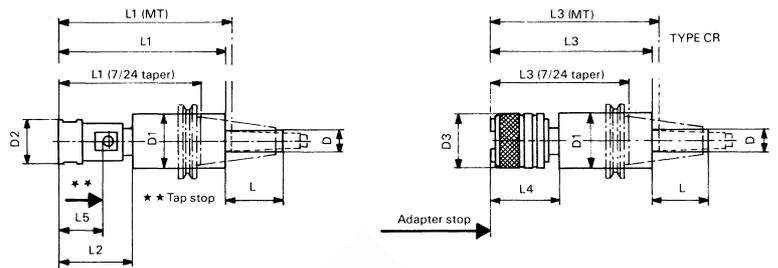
Also left-hand threads cut possible, without modification.

Two clamping versions of the tap are available:

1. Spans with Rubber Flex collets (2 rubber collets are provided) and tap square with vice.
2. With quick change adapters (type CR), compatibility with different label applications.

The quick change adapters are likewise, on demand, available with security clutch.

Size	Shank	Order code		Dimensions in mm										
		BT-NR	BT-NR-CR	D	D1	D2	D3	L	L1	L2	L3	L4	L5	
312	Ø20 DIN 1835-B	1231-0120	1232-0120	20	28	29	32	50	98	47	92	41	31	
	MK2	1231-0202	1232-0202	—	28	29	32	—	103	47	97	41	31	
	Ø30-VDI 3425	1231-2030	1232-2030	30	28	29	32	55	103	47	97	41	31	
	Ø40-VDI 3425	1231-2040	1232-2040	40	28	29	32	63	103	47	97	41	31	
	ISO 40 DIN 2080	1231-0340	1232-0340	—	—	29	32	—	62	47	56	41	31	
	ISO 50 DIN 2080	1231-0350	1232-0350	—	—	29	32	—	63	47	56	41	31	
	ISO 40 7388/1	1231-0540	1232-0540	—	—	44,7	29	32	—	85	47	79	41	31
	ISO 50 7388/1	1231-0550	1232-0550	—	—	70	29	32	—	83	47	76	41	31
	BT 40	1231-0740	1232-0740	—	—	63	29	32	—	85	47	79	41	31
	BT 50	1231-0750	1232-0750	—	—	28	29	32	—	85	47	78	41	31
	HSK 40	1231-0840	1232-0840	—	—	42	29	32	—	159	47	153	41	31
	HSK 50	1231-0850	1232-0850	On Demand										
HSK 63	1231-0863	1232-0863	—	—	55	29	32	—	146	47	140	41	31	
HSK 80	1231-0880	1232-0880	—	—	55	29	32	—	146	47	140	41	31	
HSK 100	1231-0810	1232-0810	—	—	55	29	32	—	149	47	143	41	31	
520	Ø20 DIN 1835-B	1241-0120	1242-0120	20	36	39	50	50	132	64	124	58	42	
	Ø25 DIN 1835-B	1241-0125	1242-0125	25	36	39	50	55	132	64	124	58	42	
	MK2	1241-0202	1242-0202	—	36	39	50	—	132	64	124	58	42	
	MK3	1241-0203	1242-0203	—	36	39	50	—	132	64	124	58	42	
	Ø30-VDI 3425	1241-2030	1242-2030	30	36	39	50	55	142	64	134	58	42	
	Ø40-VDI 3425	1241-2040	1242-2040	30	36	39	50	63	137	64	129	58	42	
	ISO 40 DIN 2080	1241-0340	1242-0340	—	—	36	39	50	—	97	64	89	58	42
	ISO 50 DIN 2080	1241-0350	1242-0350	—	—	36	39	50	—	100	64	74	58	42
	ISO 40 7388/1	1241-0540	1242-0540	—	—	44,7	39	50	—	114	64	106	58	42
	ISO 50 7388/1	1241-0550	1242-0550	—	—	70	39	50	—	120	64	94	58	42
	BT 40	1241-0740	1242-0740	—	—	36	39	50	—	119	64	111	58	42
	BT 50	1241-0750	1242-0750	—	—	36	39	50	—	122	64	96	58	42
HSK 50	1241-0850	1242-0850	On Demand											
HSK 63	1241-0863	1242-0863	—	—	55	39	50	—	163	64	157	58	42	
HSK 80	1241-0880	1242-0880	—	—	55	39	50	—	163	64	157	58	42	
HSK 100	1241-0810	1242-0810	—	—	55	39	50	—	166	64	160	58	42	
1030	Ø25 DIN 1835-B	1251-0125	1252-0125	25	48	55	71	56	168	86	176	94	51	
	Ø32 DIN 1835-B	1251-0132	1252-0132	32	48	55	71	60	168	86	176	94	51	
	MT3	1251-0203	1252-0203	—	48	55	71	—	168	86	176	94	51	
	Ø30-VDI 3425	1251-2030	1252-2030	30	48	55	71	55	188	86	196	94	51	
	Ø40-VDI 3425	1251-2040	1252-2040	40	48	55	71	63	178	86	186	94	51	
	ISO 40 DIN 2080	1251-0340	1252-0340	—	—	48	55	71	—	153	86	161	94	51
	ISO 50 DIN 2080	1251-0350	1252-0350	—	—	48	55	71	—	152	86	160	94	51
	ISO 40 7388/1	1251-0540	1252-0540	—	—	48	55	71	—	156	86	164	94	51
	ISO 50 7388/1	1251-0550	1252-0550	—	—	48	55	71	—	176	86	184	94	51
	BT 40	1251-0740	1252-0740	—	—	48	55	71	—	156	86	164	94	51
	BT 50	1251-0750	1252-0750	—	—	48	55	71	—	176	86	184	94	51
	HSK 63	1251-0863	1252-0863											
HSK 80	1251-0880	1252-0880												
HSK 100	1251-0810	1252-0810												



Type	Capacity	mini Capacity	Rubber-Flex collets		Adapters CR	Extension T	Compression C
			Standard	***			
BT-NR 312	M3 - M12	M1,4	J421 3,5 - 6,5	J423 2 - 4,5	312-1/S/P/F	14	0 - 7
BT-NR 312 CR			J422 6,5 - 10	J420 4,5 - 8			
BT-NR 520	M5 - M20	M3	J441 4,5 - 10	J443 2,8 - 7	520-2/S/P/F	16	0 - 8
BT-NR 520 CR			J445 10 - 16	J440 7 - 13			
BT-NR 1030	M10 - M30	M10	J461 9 - 16		1030-3/S/P/F	20	0 - 10
BT-NR 1030 CR			J462 16 - 23				

\*\*\* Additional collets on request

# BT-NRD / CR — BT-NRD-S / CR

## Tapping spindle - Releasing - Reversing by machine spindle.

### Application:

For the application on NC and CNC machines, with or without automatic tool change. On lathes and processing centers.

### Function:

The adjustable axial compensation in compression C, can be reinforced up to complete blocking with the initial cutting pressure spring. This ensures the adjustment to the different tap types and to the material that has to be machined, without influencing the thread depth. The axial compensation in traction T up to the dead point (releasing point), enables with a small dwell time, a keeping exact depths,  $\pm 0.1$ mm, this independent to the conditions of work. After releasing, the models BT-NRD/CR and BT-NRD-S/CR possess a safety axial compensation S permitting to absorb the differences of the machine. At the time of reversing the machine spindle, the apparatus spindle automatically engages again.

By a small change, also cutting of left-hand threads are possible.

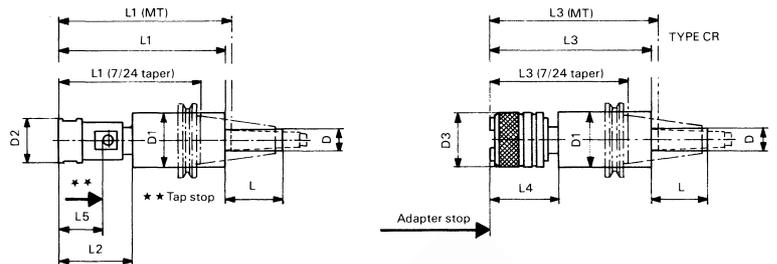
Guarantees a constant cutting speed.

Two clamping versions of the tap are available:

1. With Rubber Flex collets (2 rubber collets are provided) and tap square with vice.
2. With quick-change adapters (type CR), compatibility with different label applications.

The quick-change adapters are likewise, on demand, available with security clutch.

Size	Shank	Order code		Dimensions in mm										
		BT-NRD	BT-NRD-CR	D	D1	D2	D3	L	L1	L2	L3	L4	L5	
312-V	Ø20 DIN 1835-B	1931-0120	1932-0120	20	45	29	32	50	96	44	90	37	31	
	MK2	1931-0202	1932-0202	—	45	29	32	—	96	44	90	37	31	
	Ø30-VDI 3425	1931-2030	1932-2030	30	45	29	32	55	96	44	90	37	31	
	Ø40-VDI 3425	1931-2040	1932-2040	40	45	29	32	63	96	44	90	37	31	
	ISO 40 DIN 2080	1931-0340	1932-0340	—	44	29	32	—	75	44	69	37	31	
	ISO 50 DIN 2080	1931-0350	1932-0350	—	45	29	32	—	59	44	49	37	31	
	ISO 40 7388/1	1931-0540	1932-0540	—	44,7	29	32	—	82	44	76	37	31	
	ISO 50 7388/1	1931-0550	1932-0550	—	70	29	32	—	79	44	69	37	31	
	BT 40	1931-0740	1932-0740	—	44	29	32	—	92	44	86	37	31	
	BT 50	1931-0750	1932-0750	—	45	29	32	—	81	44	71	37	31	
	HSK 40	1931-0840	1932-0840	—	42	29	32	—	156	44	149	37	31	
HSK 50	1931-0850	1932-0850	On Demand											
HSK 63	1931-0863	1932-0863	—	55	29	32	—	143	44	136	37	31		
HSK 80	1931-0880	1932-0880	—	55	29	32	—	143	44	136	37	31		
HSK 100	1931-0810	1932-0810	—	55	29	32	—	146	44	139	37	31		
520-V	Ø20 DIN 1835-B	1941-0120	1942-0120	20	55	39	50	50	144	70	136	63	42	
	Ø25 DIN 1835-B	1941-0125	1942-0125	25	55	39	50	56	135	70	127	63	42	
	MK2	1941-0202	1942-0202	—	55	39	50	—	144	70	136	63	42	
	MK3	1941-0203	1942-0203	—	55	39	50	—	135	70	127	63	42	
	Ø30-VDI 3425	1941-2030	1942-2030	30	55	39	50	55	142	70	134	63	42	
	Ø40-VDI 3425	1941-2040	1942-2040	40	55	39	50	63	134	70	126	63	42	
	ISO 40 DIN 2080	1941-0340	1942-0340	—	55	39	50	—	136	70	128	63	42	
	ISO 50 DIN 2080	1941-0350	1942-0350	—	55	39	50	—	85	70	99	63	42	
	ISO 40 7388/1	1941-0540	1942-0540	—	55	39	50	—	142	70	134	63	42	
	ISO 50 7388/1	1941-0550	1942-0550	—	70	39	50	—	105	70	119	63	42	
	BT 40	1941-0740	1942-0740	—	55	39	50	—	136	70	128	63	42	
BT 50	1941-0750	1942-0750	—	55	39	50	—	107	70	121	63	42		
HSK 50	1941-0850	1942-0850	On Demand											
HSK 63	1941-0863	1942-0863	—	55	39	50	—	169	70	162	63	42		
HSK 80	1941-0880	1942-0880	—	55	39	50	—	169	70	162	63	42		
HSK 100	1941-0810	1942-0810	—	55	39	50	—	172	70	165	63	42		
1030-S	Ø25 DIN 1835-B	1451-0125	1452-0125	25	75	55	71	56	163	70	196	103	51	
	Ø32 DIN 1835-B	1451-0132	1452-0132	32	75	55	71	60	163	70	196	103	51	
	MT3	1451-0203	1452-0203	—	75	55	71	—	163	70	196	103	51	
	Ø30-VDI 3425	1451-2030	1452-2030	30	75	55	71	55	168	70	201	103	51	
	Ø40-VDI 3425	1451-2040	1452-2040	40	75	55	71	63	165	70	198	103	51	
	ISO 40 DIN 2080	1451-0340	1452-0340	—	75	55	71	—	161	70	194	103	51	
	ISO 50 DIN 2080	1451-0350	1452-0350	—	75	55	71	—	171	70	204	103	51	
	ISO 40 7388/1	1451-0540	1452-0540	—	75	55	71	—	177	70	210	103	51	
	ISO 50 7388/1	1451-0550	1452-0550	—	75	55	71	—	191	70	224	103	51	
	BT 40	1451-0740	1452-0740	—	75	55	71	—	178	70	211	103	51	
	BT 50	1451-0750	1452-0750	—	75	55	71	—	194	70	227	103	51	
HSK 63	1451-0863	1452-0863												
HSK 80	1451-0880	1452-0880												
HSK 100	1451-0810	1452-0810												



Type	Capacity	mini Capacity	Rubber-Flex collets		Adapters CR	Extension T	Compression C	Security S
			Standard	***				
BT-NRD-V 312	M3 - M12	M1,4	J421 3,5 - 6,5	J423 2 - 4,5	312-1/S/P/F	3	0 - 4	5
BT-NRD-V 312-CR			J422 6,5 - 10	J420 4,5 - 8				
BT-NRD-V 520	M5 - M20	M3	J441 4,5 - 10	J443 2,8 - 7	520-2/S/P/F	4	0 - 7	6
BT-NRD-V 520-CR			J445 10 - 16	J440 7 - 13				
BT-NRD 1030-S	M10 - M30	M10	J461 9 - 16	—	—	8	0 - 8	12
BT-NRD 1030-S-CR			J462 16 - 23	—				

\*\*\* Additional collets on request



# BT-NRD 054-S

## Tapping spindle - Releasing - Reversing by machine spindle.

### Application:

For the application on NC and CNC machines, with or without automatic tool change. On lathes and processing centers.

### Function:

After the axial compensation in compression C, follows the axial compensation in traction T, up to the soft releasing (switches off), whereby the automatic spindle stroke (releasing way) is adjustable arbitrary, from zero up to the maximum (5mm), in order to be able to adapt to all thread depths (for ex. short blind holes). The BT-NRD 054-S possesses, after releasing, a safety axial compensation S. After reversing the machine spindle, engages the apparatus spindle automatically again and turns back. The soft de-clutching is guaranteed by a patented ball system. With the selection of a small dwell, the thread depth  $\pm 0,1\text{mm}$  is guaranteed in all working conditions.

By a small change, also cutting of left-hand threads are possible.

Guarantees a constant cutting speed.

The BT-NRD 054-S is protected from penetration of the cooling agent.

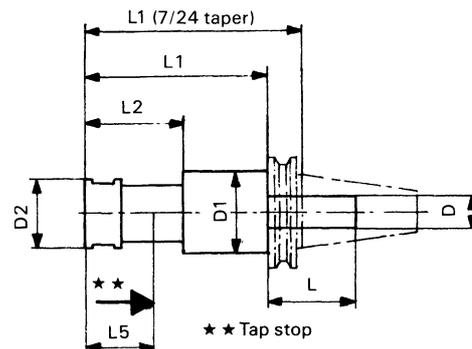
Clamping the tap with ESX9 or ER8 steel collets (see table).

Type	Capacity	mini Capacity	Collets ESX9 / ER8 ***	Extension T	Compression C	Security S
BT-NRD 054-S	M0,5 - M4	M0,5	1,5 - 2,5 - 3 - 3,5	0 to 5	3	1,5 for T=5 6,5 for T=0
*** Collets on request						



Size	Shank	Order code	Dimensions in mm						
			D	D1	D2	L	L1	L2	L5
054	Ø 16-DIN 1835-B	14.. - 0116	16	32	13,5	35	65	27	19,5
	Ø 20-DIN 1835-B	14.. - 0120	20	32	13,5	38	65	27	19,5
	ISO 25 ATC	14.. - 0925	-	32	13,5	-	61	27	19,5
	HSK 40 A+E	14.. - 0840	-	32	13,5	-	97	27	19,5
1414-.... for ER8 collets with their corresponding nuts									
1415-.... for ESX9 collets, with their corresponding nuts									

Other shanks on demand



# CNC-RS / CRS 1:1

## Tapping apparatus with automatic return

### Application:

For the application on CNC machines with rotary machine spindle, with or without automatic tool change.

### Function:

The CNC-RS tapping apparatus is provided with automatic switching. The apparatus spindle switches automatically, during return of the machine spindle. The thread cutting mode is restarted automatically, if the spindle freed itself after the thread cutting. The exact thread depth is secured by releasing of the apparatus spindle in the dead point. A short dwell time permits to achieve the thread to the selected and exact depth and this independently of the condition of work. ( $\pm 0,1\text{mm}$ )

- length compensation in compression C, short one T in traction and safety compensation S after releasing
- cooling agent supply by the indexing pin
- also right and left-hand threads cut without modification
- height and axes distance of the indexing pin are adjustable
- a constant cutting speed guarantees
- large time gained in production
- large energy saving
- feed and return programming of 100%.
- progressive adjustment of the initial cutting pressure.

Three clamping versions of the tap are available:

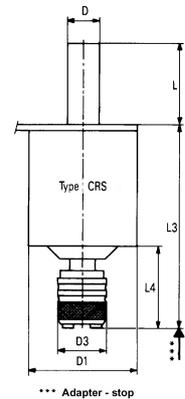
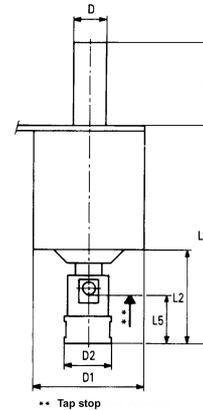
1. With Rubber-Flex collets (2 rubber collets are provided) and tap square with vice.
2. Execution of CNC-RS 054 with steel collets to order ER8 and ESX9 separately.
3. With quick-change adapters (type CR), compatibility with different label applications.

The quick-change adapters are likewise, on demand, available with security clutch.

	CNC-RS 054		CNC-RS 147		CNC-RS 312	
	ER 8	ESX 9	Rubber-Flex	CRS	Rubber-Flex	CRS
Ø16	5514 - 0116	5515 - 0116	5521 - 0116*	5527 - 0116*	-	-
Ø20	-	-	5521 - 0120	5527 - 0120	5531 - 0120	5537 - 0120
Ø25	-	-	-	-	5531 - 0125*	5537 - 0125*

\* On request

Type	Dimensions in mm										
	D	D1	D2	D3	L	L1	L2	L3	L4	L5	
CNC-RS 054	16	47	12	-	48	87,5	26,5	-	-	19	
CNC-RS 147	16	55	21	-	50	101	36	-	-	31	
CNC-RS 147-CRS	16	55	21	24	50	99	33	104	39	28	
CNC-RS 312	20	67	29	-	50	134	58	-	-	31	
CNC-RS 312-CRS	20	67	29	33	50	133	57	121	45	31	



TECHNICAL DATA			
Type	CNC-RS 054	CNC-RS 147 /-CRS	CNC-RS 312 /-CRS
Standard capacity	M0,5 - M4	M1,4 - M7	M3 - M12
Minimum capacity	M0,5	M1	M1,4
Maximum speed in r.m.p.	3000	2000	1000
Axial float			
Compression	C mm	3	4
Traction	T mm	2	2,5
Reverse	N mm	4,5	5
Safety distance	S mm	7	8
Mounting shank	DIN 1835-B	Ø16	Ø20
		-	Ø16*
		Ø20	Ø25*
Collets	ER8 / ESX9	Rubber-Flex	Rubber-Flex
Standard	1,5 - 2 - 2,5 - 3 - 3,5*	J116 2,5 - 4,5 J117 4,5 - 6,5	J421 3,5 - 6,5 J422 6,5 - 10
Additional	1 - 4 - 4,5 - 5*	J115* 1 - 2,5	J423* 2 - 4,5 J420* 4,5 - 8
Quick-change system	CR	-	Size 1
Tap holders simple	-	Size 0 147-0	312-1
Tap holders with safety clutch	-	147-0S	312-1S
Tap holders with collets	-	147-0P	312-1P
Die holders	-	147-0F	312-1F

\* On request





# MT-S & MT-S-IK

## Soft-Synchro Tapping

### Application:

For an application on CNC machines, with synchronous feed, with or without automatic tool change.

### Function:

The MT-S and MT-S-IK tapping chuck, with very short length compensation, can eliminate developing forces that take up after switching the synchronously running machine spindle. MT-S-IK is still provided with internal coolant supply!

The spindles MT-S 312/520 permit a **progressive setting** of the initial cutting pressure and ALSO A **CENTRAL COOLANT**.

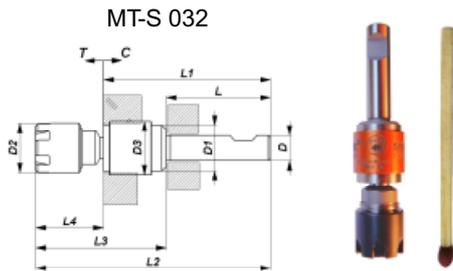
*Possibility of easy modification of the initial cutting pressure on the MT-S 054 spindles!*

Also right and left-hand cut without modification possible. The taps are tightened by quick-change adapters. Compatible with different brands adapters. The MT-S & MT-S-IK chuck can be used favourably and rationally with EDALCO integrated ISO-taper. (See page 16)

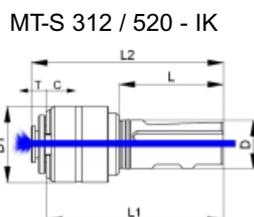
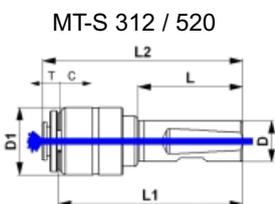
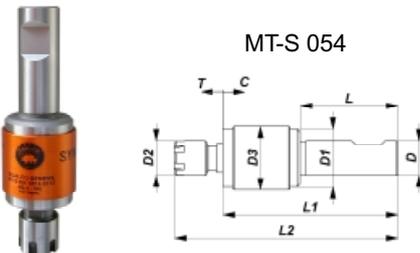
### Remark:

The generations of modern CNC machines enable synchronous or rigid thread cutting. Although the machines operate synchronously, an important problem exists after switching the direction of rotation. This reversal produces forces on the flanks of the tap, which can increase the wear of the tool up to 50% (for ex. cold welding or breakage of the tap.). The not constant cutting speed by acceleration, deceleration and stop of the machine spindle affects also still negatively.

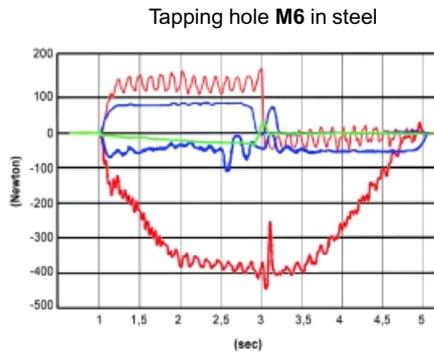
To ensure perfect thread cutting conditions, our CNC-RS reversal leads or BT-NRD-V de-clutching tapping spindles are to your disposal. They permit an optional work. (See pages 8,9 and 10)



*Possibility of very short clamping, by tightening directly on D1, by removing the pressed ring D3.*



**Around 4x smaller axial force on the tap flanks with the MT-S & MT-S-IK-spindles, than in comparison with rigid-synchro tapping!**



Torque MT-S & MT-S-IK  
 Torque RIGID  
 Axial force MT-S & MT-S-IK (103N)  
 Axial force RIGID (450N)  
 Axial force CNC-RS / BT-NRD-V-spindle (35N)

Type	Capacity	D	D1	D2	D3	L	L1	L2	L3	L4	T	C	Adapters
MT-S 032 6864-0106	M0,3 - M2	Ø 6 DIN 1835 B	11	12	13	25	40	56	31	16	0,4	0,4	Steel collets ER7
MT-S 054 6814-0112	M0,5 - M4	Ø12 DIN 1835 B	20	22	12	30	56	73	43	17	0,5	0,5	Steel collets ER8
MT-S 312 6832-0120	M3 - M12	Ø20 DIN 1835 B+E	33			50	88	99			0,6	0,6	Quick-change adapters-CR 312-1/F/P
MT-S 520 6842-0125	M5 - M20	Ø25 DIN 1835 B+E	48			56	105	116			0,6	0,6	Quick-change adapters-CR 520-2/F/P
MT-S 312-IK 6839-0125	M3 - M12	Ø25 DIN 1835 B+E	39			53	90	97,5			0,5	0,5	Quick-change adapters-CR 312-1/F/P
MT-S 520-IK 6849-0125	M5 - M20	Ø25 DIN 1835 B+E	56			53	110	122			0,5	0,5	Quick-change adapters-CR 520-2/F/P

# EDALTOUR (OFT 114)



## Universal threading attachment for internal and external threads.

### Application:

The knurled handgrip is composed of a spindle turning freely on its axle. The handgrip manually driven ensures a large security and excludes practically each tool breakage.

### Function:

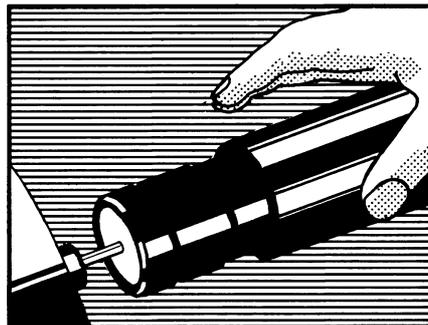
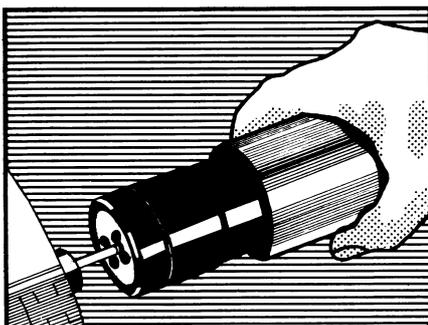
This attachment can be mounted on the tailstock of a turning lathe. The spindle nose of this attachment allows the fixation of quick-change adapters for tap and die holders, also a drill chuck for clamping center drills and twist drills. This universal threading attachment is quite particularly suitable for smaller and middle series, where adjustment of machines is not worthwhile. Also for repair works very estimated.

### Capacity: (in 400 N/mm<sup>2</sup> Steel)

Die:	M1 to M10	} See remark below
Tap:	M1 to M10	
Centering and twist drill:	Ø1,5mm to Ø10mm max.	
Spindle stroke:	66mm	

	Ø × H	M	MF	UNC	UNF	UNEF	W	G
DIE HOLDER DIN 223	16 × 5	1,4-1,6-1,8-2 2,2-2,5	2-2,2-2,3 2,5-2,6	1-2-3-4	0-1-2-3-4	—	1/16"×3/32"	—
	20 × 5	3-3,5-4	3-3,5-4-4,5-5 5,5-6	5-6-8	5-6-8	—	1/8"×5/32"	—
	20 × 7	4,5-5-5,5-6	5-6	10-12-1/4"	10-12-1/4"	12-1/4"	3/16"×7/32" 1/4"	—
	25 × 9	7-8-9	7-8-9	5/16"	5/16"	5/16"	5/16"	—
	30 × 11	10-11	10-11	3/8"×7/16"	3/8"×7/16"	3/8"×7/16"	3/8"×7/16"	1/8"
	38 × 10	—	12-13-14-15	—	1/2"×9/16"	1/2"×9/16"	—	1/4"
	38 × 14	12-14	—	1/2"×9/16"	—	—	1/2"×9/16"	—
EDALCO TAP HOLDER FOR COLLETS RUBBER-FLEX	Collet J 423 Cap. 2-4,5	1,4,1,6,1,8-2,2,2,2,5 2,5-3-3,5-4-4,5	1,8-2-2,2-2,5 3-3,5-4-4,5	1-2-3-4-5-6-8	0-1-2-3-4-5 6-8	—	3/32"×1/8" 5/32"	—
		2-2,2-2,5-3 3,5-4-4,5-5 5,5-6	4-4,5-5-6	—	—	—	—	—
	Collet J 421 Cap. 3,5-6,5	3-3,5-4-4,5 5-5,5-6	3-3,5-4-4,5 5-5,5-6	4-5-6-8-10 12-1/4"	4-5-6-8-10 12-1/4"	12-1/4"	1/8"×5/32" 3/16"×7/32" 1/4"	—
		4,5-5-5,5-6-7-8	4,5-5-6-7-8	5/16"	5/16"	—	5/16"	1/16"
Collet J 422 Cap. 6,5-10	7-8-9-10-12	7-8-9-10	1/4"×5/16" 3/8"	1/4"×5/16" 3/8"	5/16"×3/8"	1/4"×5/16" 3/8"	—	
	9-10-11-12	9-10-11-12-13	3/8"×7/16" 1/2"	3/8"×7/16" 1/2"	7/16"×1/2"	3/8"×7/16" 1/2"	1/8"	
DRILL CHUCK Ø 1,5-10	1,1,4-1,6-1,8-2 2,2-2,5-3-3,5 4-4,5-5-5,5-6 7-8-9-10-12	1,8-2-2,2-2,5 3-3,5-4-4,5-5 5,5-6-7-8-9-10	1-2-3-4-5-6-8 10-12-1/4" 5/16"×3/8"	0-1-2-3-4-5-6 8-10-12-1/4" 5/16"×3/8"	12-1/4"×5/16" 3/8"	3/32"×1/8" 5/32"×3/16" 7/32"×1/4" 5/16"×3/8"	—	
	2-2,2-2,5-3-3,5-4-4,5 5-5,5-6-7-8-9-10-11-12	4-4,5-5-6-7-8-9 10-11-12-13	5/16"×3/8" 7/16"×1/2"	5/16"×3/8" 7/16"×1/2"	7/16"×1/2"	5/16"×3/8" 7/16"×1/2"	1/16"×1/8"	

Thick letters = reinforced shank



### Remark:

Only the capacity of the tool M1 to M10 is warranted. Under certain conditions it is possible to use the maximum values of the table. During the job the tool holder is held by hand. By releasing the holder, the attachment turns freely on its axle and the processing is interrupted or terminated.



# QUICK-CHANGE ADAPTERS

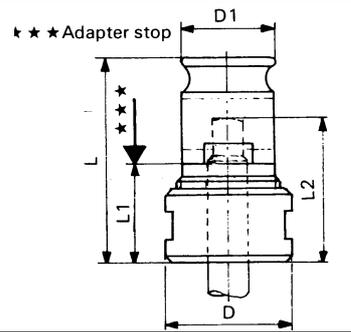
with or without safety clutch

## Tap holder for Rubber-Flex collets

These tap holders offer large versatility and a very large clamping range per unit.

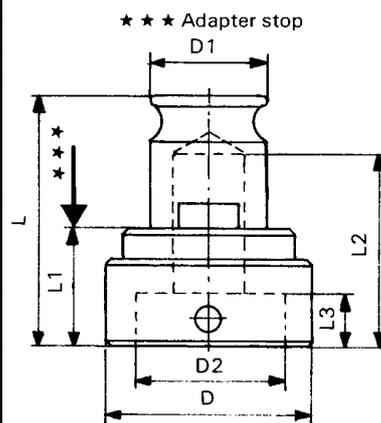
**Remark:** By using of quick-change adapters for Rubber-Flex collets, the whole capacity of our tapping heads or tapping spindles are covered by the 2 Standard collets.

Type	Capacity	Rubber-Flex collets				Dimensions				
		Standard		By choice		D	D1	L	L1	L2
147-0P	to M7	J116	2,5 - 4,5	J115	1 - 2,5	18,6	13	39,5	18,6	21
		J117	4,5 - 6,5							
312-1P	M12	J421	3,5 - 6,5	J423	2 - 4,5	27,5	19	40	18,5	27
		J422	6,5 - 10	J420	4,5 - 8					
520-2P	M20	J441	4,5 - 10	J443	2,8 - 7	37,5	31	59,5	24,5	38
		J445	10 - 16	J440	7 - 13					
1030-3P	M30	J461	9 - 16	-		54	48	87,5	32	51
		J462	16 - 23							



## Die holders for quick-change system

Die holder	Die holder dimensions															
	Typ: 312-1F					Typ: 520-2F					Typ: 1030-3F					
D2	L3	D	D1	L	L1	L2	D	D1	L	L1	L2	D	D1	L	L1	L2
16 X 5		25	19	35,5	14	28										
20 X 5		30	19	35,5	14	28	30	31	55	20	55					
20 X 7		30	19	37,5	16	30	30	31	56,5	21,5	56,5					
25 X 9		35	19	40,5	19	33	35	31	55,5	20,5	55,5					
30 X 11		40	19	42,5	21	35	40	31	57	22	57	60	48	85,5	30	85,5
38 X 10		48	19	41,5	20	34	48	31	56	21	56	60	48	83,5	28	83,5
38 X 14		48	19	45,5	24	38	48	31	60	25	60	60	48	87,5	32	87,5
45 X 14							57	31	60	25	60	60	48	87,5	32	87,5
45 X 18							57	31	64	29	64	60	48	91,5	36	91,5
55 X 16												72	48	85,5	30	85,5
55 X 22												72	48	90,5	35	90,5
65 X 18												82	48	87,5	32	87,5
65 X 25												82	48	93,5	38	93,5



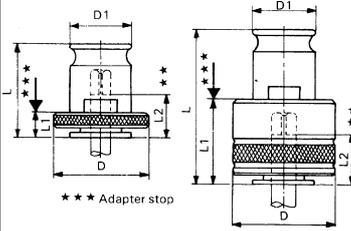
## Quick-change tap holder (adapters) with and without security clutch

Compatible with the standard holders existing on the market.

### Characteristics:

These adapters enable a very practical and easy clamping of the tap. They need however a tap holder adapted to each shank diameter and square of the tap.

Type	Capacity	Tap square	Dimensions in mm				
			D	D1	L	L1	L2
147-0	M1 - M10	2,5 - 8	22	13	26,5	7	15
147-0S			23		40,5		
312-1	M3 - M14	3,5 - 11,3	30	19	28,5	7	17
312-1S			32		46,5		
520-2	M4,5 - M24	7 - 18	48	31	46	11	30
520-2S			50		69		
1030-3	M14 - M36	11 - 28	70	48	69,5	14	44
1030-3S			72		100,5		



## TABLE OF DIMENSIONS FOR TAPS AND QUICK-CHANGE TOOL HOLDERS

**Note:**  
In order to be able to use apparatus size 1030 starting downwards from M14, the adapters type 520-2 or 520-2S with reduction 1030-3/2 must be used.

**Important:**  
For order of adapters, the shank diameter and the square of the tap must be absolutely indicated.

some examples for the order of tap-holders

Tap		Quick-change adapters CR			
		147-0	312-1	520-2	1030-3
M	MF	shank-Ø x tap	shank-Ø x tap	shank-Ø x tap	shank-Ø x tap
1		2,5 x 2,1	2,5 x 2,1		
2	2	2,5 x 2	2,5 x 2		
2		2,8 x 2,1	2,8 x 2,1		
3	3	3,15 x 2,5	3,15 x 2,5		
3	3	3,5 x 2,7	3,5 x 2,7		
4	4	4 x 3,15	4 x 3,15		
4	4	4,5 x 3,4	4,5 x 3,4		
5	5	5 x 4	5 x 4	5 x 4	
5	5	6 x 4,9	6 x 4,9	6 x 4,9	
6		4,5 x 3,55	4,5 x 3,55	4,5 x 3,55	
6	6	6,3 x 5	6,3 x 5	6,3 x 5	
7	7	5,5 x 4,3	5,5 x 4,3	5,5 x 4,3	
7	7	7,1 x 5,6	7,1 x 5,6	7,1 x 5,6	
8	8	8 x 6,2	8 x 6,2	8 x 6,2	
8	8	8 x 6,3	8 x 6,3	8 x 6,3	
9		9 x 7	9 x 7	9 x 7	
9	9	9 x 7,1	9 x 7,1	9 x 7,1	
10			8 x 6,3	8 x 6,3	
10	10		10 x 8	10 x 8	
11	11		8 x 6,3	8 x 6,3	
12	12		9 x 7,1	9 x 7,1	
12			10 x 8	10 x 8	
13				11 x 9	11 x 9
14	14			11,2 x 9	11,2 x 9
	15			12 x 9	12 x 9
16	16			12,5 x 10	12,5 x 10
	17			12,5 x 10	12,5 x 10
18	18			14 x 11	14 x 11
	19			14 x 11,2	14 x 11,2
20	20			16 x 12	16 x 12
22	22			16 x 12,5	16 x 12,5
24	24				18 x 14
	25				18 x 14,5
	26				18 x 14
27	27				20 x 16
	28				20 x 16
30	30				22 x 18

Other sizes on request!

**Concerning all quick-change adapters:  
ONLY THE APPARATUS CAPACITY IS GUARANTEED**



# SPEED-UP HEAD VHS-R 61

## Application:

Adjustment on conventional or CNC milling and drilling machines, processing centers with or without automatic tool change. The indexing system ATC-R, an automatic positioning and interlock mechanism, which let the cooling agent through, permits the application on machines with automatic tool change.

## Function:

Production increase and maximum output of the tools, and prevention of the premature wear of the machines. High spindle revolution: 20000r.p.m. with housing cooling by coolant flow.

The compact mono block execution guarantees a large stiffness and a perfect concentricity of the spindle.

The speed ratio of 6:1 (5+1) and the very high speed is achieved with the help of a planetary gear with hardened and ground gear wheels. The spindle produces only a minimum heating up, because it is provided with highly exact and paired high precision spindle bearings, these results in a large reliability.

Unwanted and harmful oscillations are avoided and thus receive one a perfect surface quality, despite high numbers of revolutions.

The spindle is maintenance-free.

All these specifications always refer to the prerequisite that the service instructions are respected.

Cutting tool accommodation with ESX/ER steel collets.

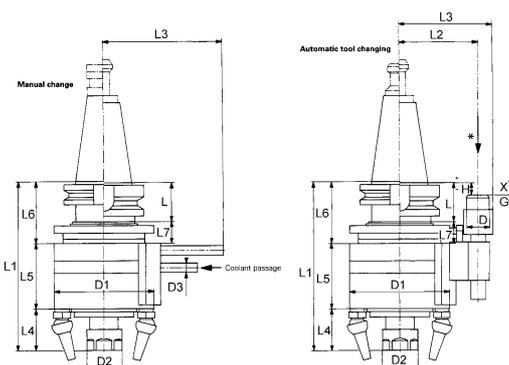
Execution 1: Standard one-piece with ISO 40 7388/1 (69871/A) or BT 40 complete with 2 fork wrenches, nut and hand locking system AS-R for coolant passage. Collets as well as pull stud (drive bolts), additionally with additional price.

Execution 2: Two-piece, like however above with shank after selection.

ATC-R INDEXATION SYSTEM for automatic tool change, on demand with additional price. For size to ISO 40 or for ISO 45 and 50.

## Technical Data:

Speed ratio:		6:1 (5+1)
Max. speed:	(without cooling)	15'000 rpm.
	(with cooling)	20'000 rpm.
Capacity in steel St 37:	bore	Ø6,5 mm maxi.
	mill	Ø8 mm maxi.
Work temperature after 20 min.:	(without cooling)	40 to 48°C
	(with cooling)	25 to 35°C
Clamping collets by choice with additional price:	ESX12 / ER11	Ø1 to 7 mm
	ESX16 / ER16	Ø1 to 10 mm
Power transmission:	with 15'000 rpm.	2.5 KW
Concentricity:	Spindle shank	0.005 mm
Spindle concentricity:		0.002 mm
ISO cone quality:		AT3



Shank	Dimensions in mm															Weight in kg					
	D	D1	D2		D3	L	L1		L2	L3	L4		L5	L6	L7	G	H	X	without ATC-R	with ATC-R	
			ER11	ER16			ER11	ER16			ER11	ER16									
ISO 40 - DIN 2080						34	138	141						51						3,1	
ISO 45 - DIN 2080						50	154	157						67						4,4	
ISO 50 - DIN 2080						27	131	134						44						4,9	
ISO 30 - 6987/A	18	79,5	19	28	8	34	138	141	65	77,5	34	37	53	51	17	6	-11+4	15	2,8	3,0	
* ISO 40 - 7388/1						34	138	141	65	77,5				51			-11+4		3,1	3,3	
ISO 45 - 7388/1						27	131	134	80	92,5				44			-4+11		3,9	4,3	
ISO 50 - 7388/1						27	131	134	80	92,5				44			-4+11		4,9	5,3	
MAS / BT 30						34	138	141	65	77,5				51			-11+4		2,8	3,0	
* MAS / BT 40						34	138	141	65	77,5				51			-11+4		3,1	3,3	
MAS / BT 45						50	154	157	80	92,5				67			-27-12		4,5	4,9	
MAS / BT 50						40	144	147	80	92,5				57			-27-12		5,5	5,9	
Without shnak																				2,3	

\* Spindle in one part // ISO 7388/1 = DIN 69871/A // H = +25mm with long indexing bolt

# ZUBEHÖR



## EDALCO Short integrated taper shank

For totally integrated cylindrical shanks DIN 1835-B:  
Simple and short adjustment for our tapping apparatuses,  
on each machine.

Short integrated taper shanks in Ø20 from stock.		
DIN 2080	30 - 40 - 45 - 50	} For NC-machines
BT	35 - 40 - 45 - 50	
ISO 7388/1	40 - 45 - 50	
ISO 7388/3	30	



## Morse taper or cylindrical shank, with DIN 238 adjustment

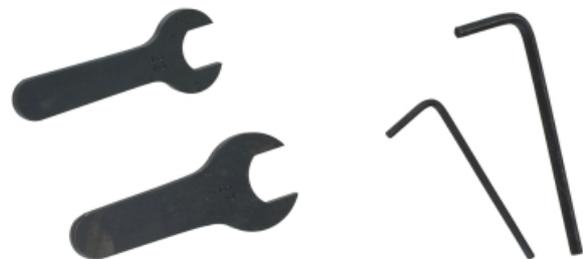
Apparatus size	DIN 238 shank	Morse taper or cylindrical shank
147	B 12	on request from stock
312	B 16	
520	B 22	
1030	B 24	



## Wrenches and allen keys for tap holder which are in the apparatus spindle integrated.

Size	054		147		312		520		1030	
	S	d	S	d	S	d	S	d	S	d
BT-NR					22-27	3	27-36	4	41-50	5
BT-NRD					22-27	3	27-36	4		
BT-NRD-S	8-12	6							41-50	5
CNC-RS 1:1	8-12				22-27	2-3				
EDM-R			14-19	2	22-27	2-3	27-36	2,5-4	41-50	3-5
MT-S	8									

S = Wrench key      d = Allen key      S, d = mm



## Rubber-Flex collets, steel collets ER and ESX

See in the tables of each apparatus!



## Pull stud for 7/24 ISO taper (on demand)

Type of machine, type of cone and cone size have to be mentioned. With additional price.





# ROTOCOUPE

## Chips breaker

### ROTOCOUPE the answer to the problem of long shavings!

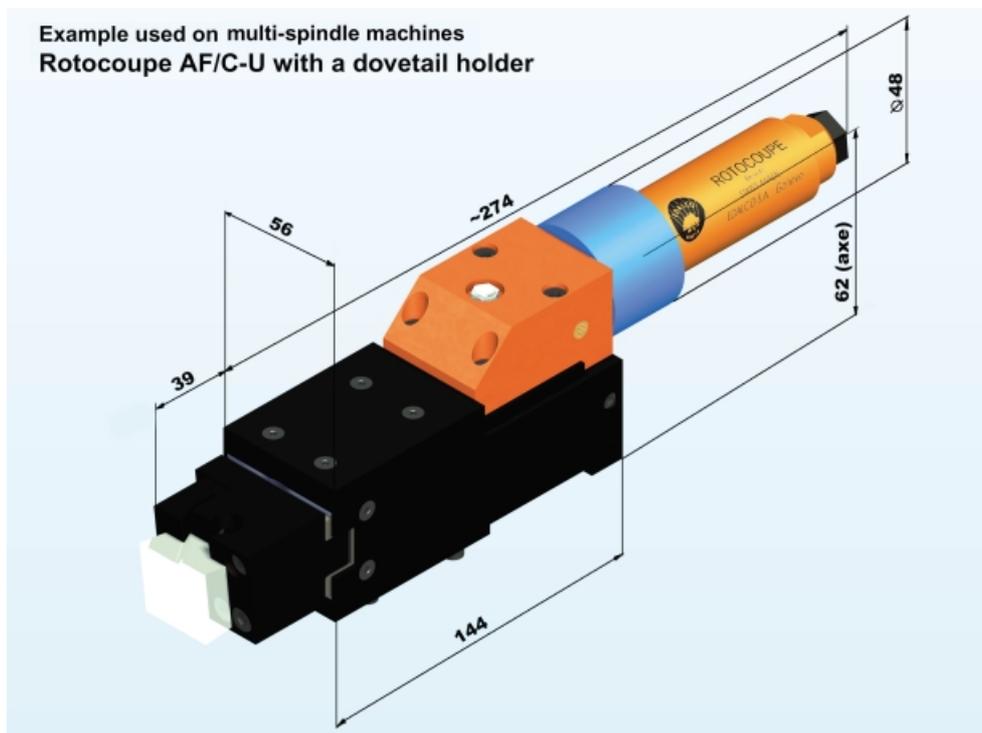
To work long shaving materials, remains a fundamental problem, which can be solved, if it concerns increasing of production. The revolutionary and rational solution is called ROTOUCOPE. With the Rotocoupe apparatuses you will eliminate all the problems due to the formation, removal and handling of long shavings.

#### Advantages:

1. A short and regular chip, which will not stick around the cutting tool.
2. Shavings that can be easily removed from the machine and from the factory and thus be easily treated.
3. Rational result eliminating shaving handling tools.
4. An increase in productivity by reduced down times.
5. An increase in profitability due to the reduction of personnel in charge of shavings clearance on the machine. These persons evade tho this, often dangerous work and free themselves for other occupations.
6. In certain cases, increased tool life by diminishing the welding action on the cutting edge of the tools.
7. Elimination of tool breakages due to chip curling.
8. Despite what one can suppose, respect of the tolerance and an unchanged surface finish.
9. Elimination of accidents due to shaving handling. 35% of accidents due to shavings!
10. Can be used with conventional HSS, brazed or clamped carbide tipped tooling.

#### Applications:

ROTOCOUPE is a range of attachments, which allow the breakage of the long chips everywhere where machining requires chips removal by turning or drilling. It fits particularly on automatic lathes, multi-spindle machines. Many different configurations are available. They adapt to the function, the available space and the different machine stations.



# RADII - TURNING TOOLS

## TURNING TOOL WITH REMOVABLE INSERTS FOR THE HANDLING OF CONVEX RADII.

### Conception:

This tools facilitate the turning of convex radii at outside or inside diameters. It consists of a toolholder and inserts, which can be changed rapidly and easily. The toolholder is available in five dimensions for the inserts from R1 to R12.

### Application:

On conventional lathes, capstan lathes, turret lathes, automatic lathes, boring machines, jig-boring machines, machining centers, shaping machines...

### General informations:

- The interchangeable tip fixed to the holder has 4 equal cutting edges.
- Top rakes: 5° or 12°
- Tip radii: R1 to R12mm (0.039" to 0.472") in steps of 0,5mm. Minimum bore Ø20mm (0.78"). Tips with intermediate or larger radii or special cutting rakes available on request.
- The tips are manufactured from top grade high speed steel with cobalt and are ground all over thus ensuring ideal cutting performance around the full radius.

This new system of radius throw-away tips has all the well known advantages of conventional throw-away tips of various shapes. Experience has shown that the manufacture and servicing of radius turning tools is very expensive and that they are frequently not available and must first be manufactured.

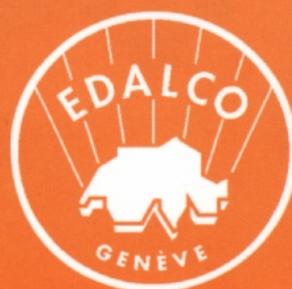
**An attempt with these radii inserts will be worthwhile!**



# ROBO TAP ELEC 2000



MACHINE À TARAUDER ÉLECTRONIQUE GÉRÉE PAR MINI-ORDINATEUR  
ELEKTRONISCHE GEWINDESCHNEIDMASCHINE, DURCH MINI-COMPUTER GESTEUERT  
ELECTRONIC TAPPING MACHINE, COMPUTER CONTROLLED



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