

Operation guide

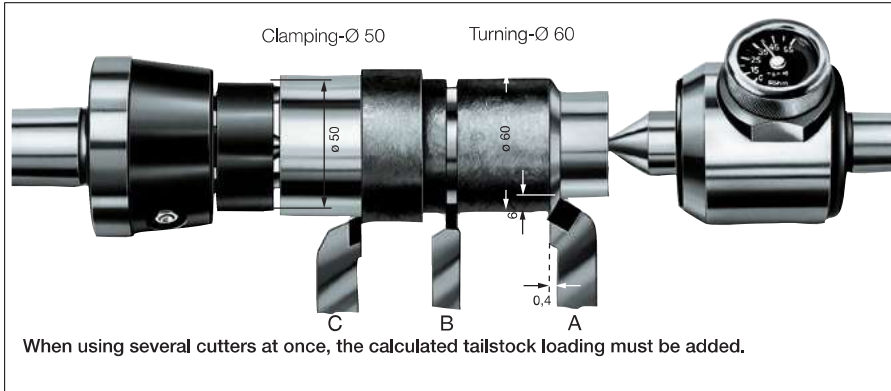


TYPE	CoAE	CoK-AE
Machining	Turning and milling in one set-up Patented compensating driving disc, radially backlash-free For the rational turning and milling of workpieces on its entire length without reclamping with maximum precision.	Turning on automatic machining equipment Radially backlash-free For machining workpieces which are highly unbalanced, very heavy, for high chip removal or for irregular cutting.
Concentricity deviation max.	Up to 0.015 mm measured at the center point	Up to 0.01 mm measured at the center point
Actuation	not power-operated	power-operated
Pressure compensation	hydraulic / mechanical	mechanical
Workpiece weight	up to 100 kg	up to 350 kg
Centre point	resilient	fixed
Clamping-Ø	8 - 80 mm	8 - 80 mm
Adapter	with morse taper / with morse taper and draw-off nut / with cylindrical shank for clamping in lathe chucks / with short taper / in flange type	with centring mount for adapter plate
Page	2040	2050

TYPE	CoM	CoB
Machining	Turning For clamping large and heavy workpieces, as well as workpieces with extremely uneven faces	Turning For clamping large and heavy workpieces, as well as workpieces with extremely uneven faces
Concentricity deviation max.	0.015 mm	0.015 mm
Actuation	not power-operated	not power-operated
Pressure compensation	mechanical	hydraulic
Workpiece weight	up to 500 kg	up to 500 kg / 1.000 kg
Centre point	resilient, axially adjustable	resilient, axially adjustable
Clamping-Ø	50 - 250 mm	63 - 160 mm
Adapter	with morse taper / with short taper	with morse taper / with short taper
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Clamping power diagramm

Clamping power diagramm

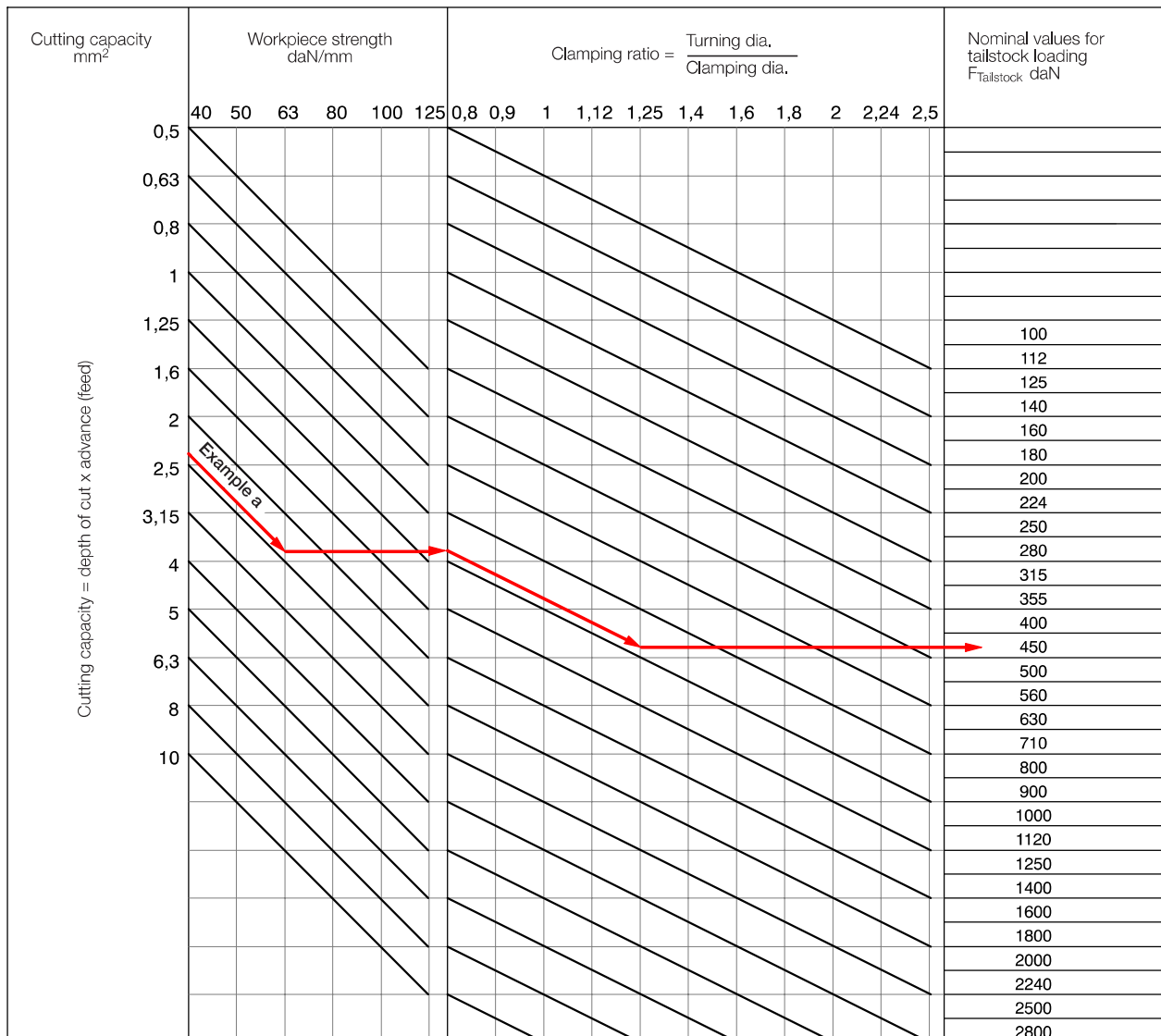


Example

- A** Turning against the headstock
1. Cutting capacity: $6 \times 0,4 = 2,4 \text{ mm}^2$
 2. Workpiece strength: $= 63 \text{ daN/mm}^2$
 3. Clamping ratio: $60 : 50 = 1,2$
 4. Tailstock loading from graph: $F_{\text{Tailstock}} = 450 \text{ daN}$
- * Conversation factor for:
- B** Radial grooving $F_{\text{Tailstock}} \times 1,5$
- C** Turning against tailstock $F_{\text{Tailstock}} \times 2$

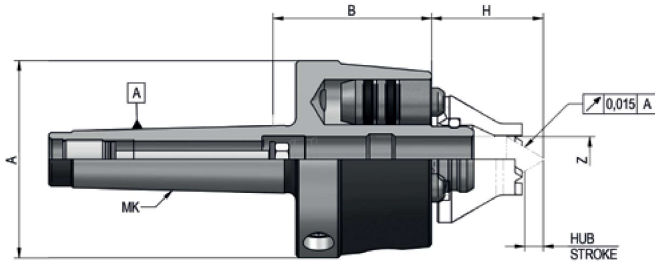
Workpiece strength daN/mm ²	40	50	63	80	100	125
Material	St 34-37	St 42	St 50	St 60-70	20 MnCr 5	18CrNi 8
	9-15 S 20	C 10	C 15-22	C 35-45	C 60	30 CrMoV 9
	GG 14-35	GG 40	22 S 20	16 MnCr 5	15 CrNi 6	50 CrMo 4
	GGG-38	GGG-42	GGG-50	GGG-60	GGG-80	105 WCr 6

The RÖHM slide rule, **Item No. 88230** may also be used for easy calculation of the axial clamping power.



CoAE - turning and milling

Constant face driver
CoAE



APPLICATION

For the rational **turning and milling** of workpieces on its entire length without reclamping with maximum precision. Can be used in clockwise and counterclockwise rotation.

TYPE

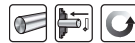
Basic body with morse taper and hydraulic pressure compensation. Clamping circuit Ø 8-80 mm. Workpiece weight max. 100 kg.

CUSTOMER BENEFITS

- ⊕ For **turning and milling** in one set-up
- ⊕ Compensating driving disc, radially backlash-free
- ⊕ Maximum concentricity deviation of 0,015 mm for maximum precision
- ⊕ Stable and constant workpiece length stop on the front side thanks to resilient centre point
- ⊕ Maximum flexibility thanks to universal exchange of driving disc and centre point

TECHNICAL FEATURES

- Guide value for axially permissible total load on 3 support pistons: 20.000 N



A14

Basic body with morse taper (basic body without driving disc and center), hydraulic

Item no.	MT	A mm	B mm	H mm	Z mm	Centres stroke mm	Weight approx. g
1340429	3	70	54,5	max. 45 min. 26	16	10	1600
1340430	4	70	56,5	max. 45 min. 26	16	15	1800
1340431	5	70	56,5	max. 45 min. 26	16	15	2800
1340432	6	70	56,5	max. 45 min. 26	16	15	4400

APPLICATION

For the rational **turning and milling** of workpieces on its entire length without reclamping with maximum precision. Can be used in clockwise and counterclockwise rotation.

TYPE

Basic body with morse taper, draw-off nut and hydraulic pressure compensation. Clamping circuit Ø 8-80 mm. Workpiece weight max. 100 kg.

CUSTOMER BENEFITS

- ⊕ For **turning and milling** in one set-up
- ⊕ Compensating driving disc, radially backlash-free
- ⊕ Maximum concentricity deviation of 0,015 mm for maximum precision
- ⊕ Stable and constant workpiece length stop on the front side thanks to resilient centre point
- ⊕ Maximum flexibility thanks to universal exchange of driving disc and centre point

TECHNICAL FEATURES

- Guide value for axially permissible total load on 3 support pistons: 20.000 N

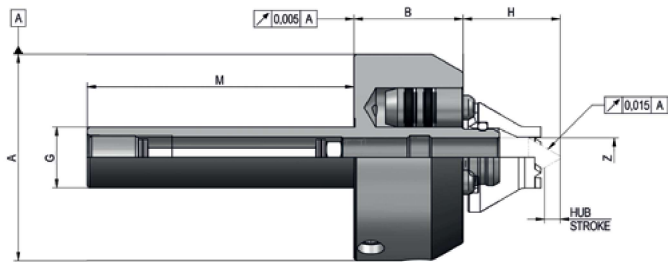


A14

Basic body with morse taper, with draw-off nut (basic body without driving disc and centre), hydraulic

Item no.	MT	A mm	B mm	H mm	Z mm	Centres stroke mm	Weight approx. g
1340433	3	82	54,5	max. 45 min. 26	16	10	1800
1340434	4	82	56,5	max. 45 min. 26	16	15	2200
1340435	5	82	56,5	max. 45 min. 26	16	15	3000
1340436	6	82	56,5	max. 45 min. 26	16	15	4600

CoAE - turning and milling



APPLICATION

For the rational **turning and milling** of workpieces on its entire length without reclamping with maximum precision. Can be used in clockwise and counterclockwise rotation.

TYPE

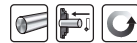
Basic body with cylindrical shank and hydraulic pressure compensation.. Clamping circuit Ø 8-80 mm. Workpiece weight max. 100 kg.

CUSTOMER BENEFITS

- ⊕ For **turning and milling** in one set-up
- ⊕ Compensating driving disc, radially backlash-free
- ⊕ Maximum concentricity deviation of 0,015 mm for maximum precision
- ⊕ Stable and constant workpiece length stop on the front side thanks to resilient centre point
- ⊕ Maximum flexibility thanks to universal exchange of driving disc and centre point

TECHNICAL FEATURES

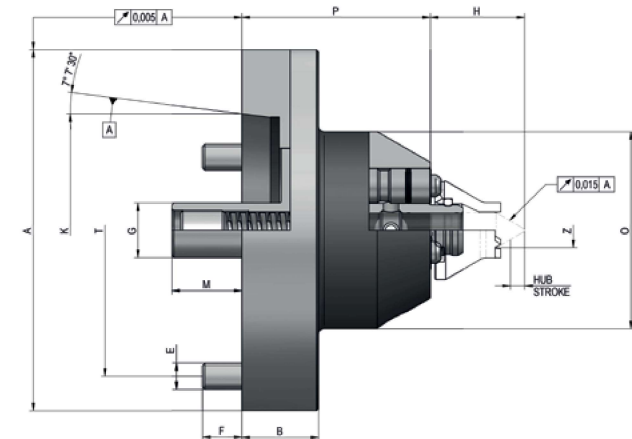
- Guide value for axially permissible total load on 3 support pistons: 20.000 N



A14
Basic body with cylindrical shank for clamping in lathe chucks, with spring package (basic body without driving disc and centre), hydraulic

Item no.	A mm	B mm	G mm	H mm	M mm	Z mm	Centres stroke mm	Weight approx. g
1341541	70	48	25**	max. 45 min. 26	87,5	16	10	1600
1341542	70	48	32**	max. 45 min. 26	111	16	15	1800
1340437	85*	45	25	max. 45 min. 26	110	16	15	2300

* Mounting diameter as shown in drawing
** Mounting diameter not shown



APPLICATION

For the rational **turning and milling** of workpieces on its entire length without reclamping with maximum precision. Can be used in clockwise and counterclockwise rotation.

TYPE

Basic body with short taper and mechanical pressure compensation. Clamping circuit Ø 8-80 mm. Workpiece weight max. 100 kg.

CUSTOMER BENEFITS

- ⊕ For **turning and milling** in one set-up
- ⊕ Compensating driving disc, radially backlash-free
- ⊕ Maximum concentricity deviation of 0,015 mm for maximum precision
- ⊕ Stable and constant workpiece length stop on the front side thanks to resilient centre point
- ⊕ Maximum flexibility thanks to universal exchange of driving disc and centre point

TECHNICAL FEATURES

- Guide value for axially permissible total load on 3 support pistons: 20.000 N

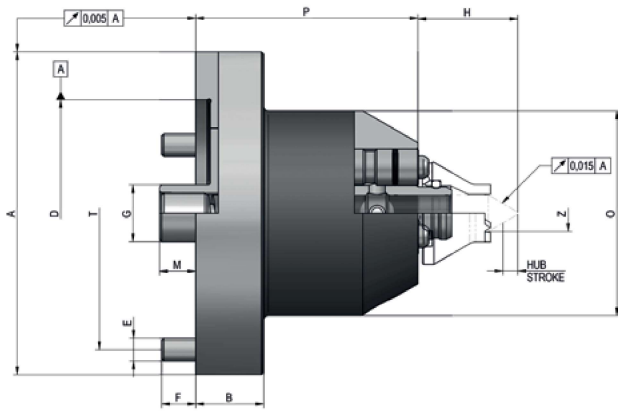


A14
Basic body with short taper ISO 702-1 (DIN 55026), with spring package (basic body without driving disc and center), mechanical

Item no.	Short-taper	A mm	B mm	E	F mm	G mm	H mm	K mm	M mm	O mm	P mm	T mm	Z mm	Centres stroke mm	Weight approx. g
1340439	5	133	24,5	M10	15	25	max. 45 min. 26	82,563	32	90	86	104,8	16	11	6500
1340440	6	165	35	M12	18	25	max. 45 min. 26	106,375	32	90	86	133,4	16	11	7000
1340441	8	210	40	M16	23	25	max. 45 min. 26	139,719	32	90	86	171,4	16	11	8100

CoAE - turning and milling

Constant face driver
CoAE



APPLICATION

For the rational **turning and milling** of workpieces on its entire length without reclamping with maximum precision. Can be used in clockwise and counterclockwise rotation.

TYPE

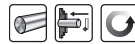
Basic body with centring mount and hydraulic pressure compensation..
Clamping circuit Ø 8-80 mm.
Workpiece weight max. 100 kg.

CUSTOMER BENEFITS

- ⊕ For **turning and milling** in one set-up
- ⊕ Compensating driving disc, radially backlash-free
- ⊕ Maximum concentricity deviation of 0.015 mm for maximum precision
- ⊕ Stable and constant workpiece length stop on the front side thanks to resilient centre point
- ⊕ Maximum flexibility thanks to universal exchange of driving disc and centre point

TECHNICAL FEATURES

- Guide value for axially permissible total load on 3 support pistons: 20.000 N



A14

Basic body flange type, with spring set (basic body without driving disc and center), hydraulic

Item no.	A mm	B mm	D mm	E	F mm	G mm	H mm	M mm	O mm	P mm	T mm	Z mm	Centres stroke mm	Weight approx. g
1340442	142	30	100	M10	15	25	max. 45 min. 26	61	90	98	120	16	15	7300

Adapter plate CoAE



A14

Adapter plate short taper

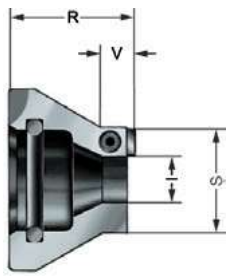
Item no.	Design	Taper	A mm	B mm	D mm	I mm	K mm	Weight approx. g
088485	ISO 702-1	5	140	30	100	38	82,563	3100
088486	ISO 702-1	6	167	35	100	38	106,39	4800
088487	ISO 702-1	8	216	40	100	38	139,735	8700
088488	ISO 702-1	11	280	45	100	38	196,885	17000
088480	ISO 702-3	5	140	30	100	38	82,563	3100
088481	ISO 702-3	6	167	35	100	38	106,39	4800
088482	ISO 702-3	8	216	40	100	38	139,735	8700
088483	ISO 702-3	11	280	45	100	38	196,885	17000
088495	ISO 702-2	5	140	30	100	38	82,563	3100
088496	ISO 702-2	6	167	35	100	38	106,39	4800
088497	ISO 702-2	8	216	40	100	38	139,735	8700
088498	ISO 702-2	11	280	45	100	38	196,885	17000

Accessories CoAE

Accessories face drivers CoAE

A14

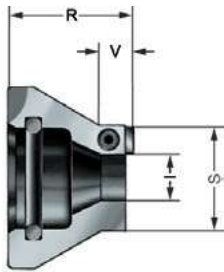
Driving discs, with interchangeable carbide driving plates 6 x 3.2, right- and left-hand rotation, max. workpiece hardness 40 HRC



Item no.	Clamping circuit Ø S mm	Approx. turning range	l mm	R mm	V mm	Assoc. centre point Ø Y mm	Axial load max. N
1341624	20 H	21-40	7	30	5	6	8000
1341625	25 H	26-50	11	30	8	10	8000
1341626	32 H	33-64	17,5	30	10	16	8000

A14

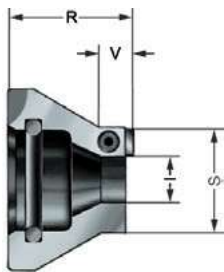
Driving discs, with interchangeable carbide driving plates 6 x 3.2, right-hand rotation, max. workpiece hardness 40 HRC



Item no.	Clamping circuit Ø S mm	Approx. turning range	l mm	R mm	V mm	Assoc. centre point Ø Y mm	Axial load max. N
1341628	20 H	21-40	7	30	5	6	8000
1341629	25 H	26-50	11	30	8	10	8000
1341630	32 H	33-64	17,5	30	10	16	8000

A14

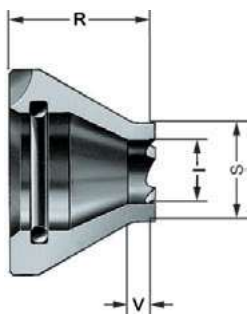
Driving discs, with interchangeable carbide driving plates 6 x 3.2, left-hand rotation, max. workpiece hardness 40 HRC



Item no.	Clamping circuit Ø S mm	Approx. turning range	l mm	R mm	V mm	Assoc. centre point Ø Y mm	Axial load max. N
1341631	20 H	21-40	7	30	5	6	8000
1341632	25 H	26-50	11	30	8	10	8000
1341633	32 H	33-64	17,5	30	10	16	8000

A14

Driving discs, toothed, right- and left-hand rotation, max. workpiece hardness 35 HRC



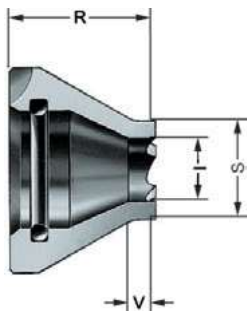
Item no.	Clamping circuit Ø S mm	Approx. turning range	l mm	R mm	V mm	Assoc. centre point Ø Y mm	Axial load max. N
1341603	8	9-16	4,5	38	4	4	4000
1341604	10	11-20	4,5	38	4	4	6000
1341605	12	13-24	7	36	4	6	6000
1341606	16	17-32	11	33	4	10	6000
1341607	20	21-40	13	30	4	12	8000
1341608	25	26-50	17	30	8	16	10000
1341609	32	33-64	22	30	10	16	12500

Mitnehmer-Scheiben mit Hartmetall-Verzahnung auf Anfrage

Accessories CoAE

A14

Driving discs, toothed, right-hand rotation, max. workpiece hardness 35 HRC

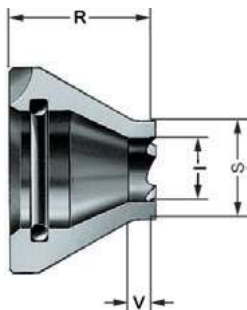


Item no.	Clamping circuit Ø S mm	Approx. turning range	l mm	R mm	V mm	Assoc. centre point Ø Y mm	Axial load max. N
1341610	8	9-16	4,5	38	4	4	4000
1341611	10	11-20	4,5	38	4	4	6000
1341612	12	13-24	7	36	4	6	6000
1341613	16	17-32	11	33	4	10	6000
1341614	20	21-40	13	30	4	12	8000
1341615	25	26-50	17	30	8	16	10000
1341616	32	33-64	22	30	10	16	12500

Driving discs with carbide toothings, friction lining or diamond grain on request

A14

Driving discs, toothed, left-hand rotation, max. workpiece hardness 35 HRC

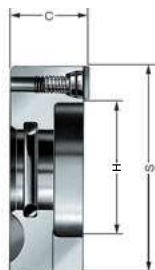


Item no.	Clamping circuit Ø S mm	Approx. turning range	l mm	R mm	V mm	Assoc. centre point Ø Y mm	Axial load max. N
1341617	8	9-16	4,5	38	4	4	4000
1341618	10	11-20	4,5	38	4	4	6000
1341619	12	13-24	7	36	4	6	6000
1341620	16	17-32	11	33	4	10	6000
1341621	20	21-40	13	30	4	12	8000
1341622	25	26-50	17	30	8	16	10000
1341623	32	33-64	22	30	10	16	12500

Driving discs with carbide toothings, friction lining or diamond grain on request

A14

Driving discs, with interchangeable carbide driving plates 9.5 x 3.2, right- and left-hand rotation, max. workpiece hardness 40 HRC



Item no.	Clamping circuit Ø S mm	Approx. turning range	H mm	C mm	Assoc. centre point Ø Y mm	Axial load max. N
1341627	40	41-80	20	24	16	14000
1341635	50	51-100	28	24	16	14000
1341636	63	64-126	41	24	16	14000
1341637	80	81-160	58	24	16	14000

A14

Driving discs, with interchangeable carbide driving plates 9.5 x 3.2, right-hand rotation, max. workpiece hardness 40 HRC



Item no.	Clamping circuit Ø S mm	Approx. turning range	H mm	C mm	Assoc. centre point Ø Y mm	Axial load max. N
1341638	40	41-80	20	24	16	14000
1341639	50	51-100	28	24	16	14000
1341640	63	64-126	41	24	16	14000
1341641	80	81-160	58	24	16	14000

Accessories face drivers CoAE

Accessories CoAE

Accessories face drivers CoAE

A14

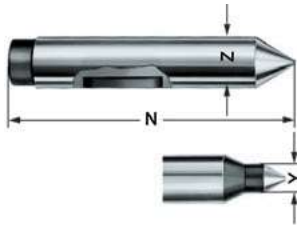
Driving discs, with interchangeable carbide driving plates 9.5 x 3.2, left-hand rotation, max. workpiece hardness 40 HRC



Item no.	Clamping circuit Ø S mm	Approx. turning range	H mm	C mm	Assoc. centre point Ø Y mm	Axial load max. N
1341642	40	41-80	20	24	16	14000
1341643	50	51-100	28	24	16	14000
1341644	63	64-126	41	24	16	14000
1341645	80	81-160	58	24	16	14000

A14

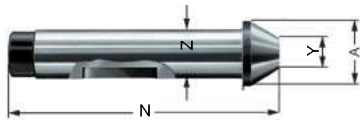
Centres CoAE



Item no.	Clamping circuit Ø S mm	N mm	Y mm	Z mm
1341941	8-10	90	4	16
1341942	12	90	6	16
1341943	16	90	10	16
1341944	20	90	12	16
1341945	25-80	90	16	16
1342112	25-80	110	16	16

A14

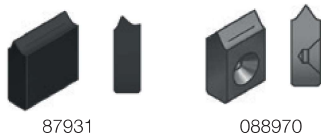
Centres CoAE



Item no.	Taper Ø		N mm	Z mm	Weight approx. g
	A mm	Y mm			
1341946	20	10	90	16	136
1341947	26	14	90	16	153
1341948	34	22	90	16	190
1341949	40	28	90	16	210
1341950	48	36	90	16	250
1341951	56	44	90	16	312

A14

Carbide driving plates, right- and left-hand rotation



Item no.	Size	Clamping circuit Ø mm
088970	6x3,2	20-32
087931	9,5x3,2	40-80

A14

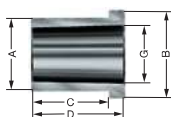
Carbide driving plates, right- or left-hand rotation



Item no.	Size	Clamping circuit Ø mm
088810	6x3,2	20-32
088209	9,5x3,2	40-80

A14

Mounting sleeve for clamping the face driver in the lathe chuck



Item no.	MT inside	A mm	B mm	C mm	D mm	G mm
085033	3	32	39	32	40	23,825
085034	4	40	47	42	50	31,267
085035	5	55	62	52	60	44,399
085036	6	75	83	62	70	63,448

Accessories CoAE

C15
Threaded pin



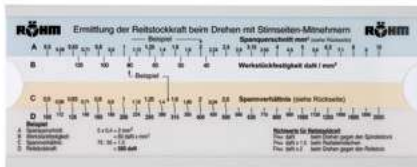
Item no.	Size	Clamping circuit Ø mm
234695	M 4 x 6	20
048205	M 5 x 8	25-32
088205	M 5 x 8	40-80

C15
O-ring



Item no.	Size
006252	21,82x3,53

A14
RÖHM slide rule for determining the axial tailstock force



Item no.
088230

C15
Semifluid grease F25 for face driver



Item no.	Design	Contents
036397	Dose	1000 g

CoAE - product ranges

A14
Basic equipment in a carton, hydraulic pressure compensation, clamping dia. 12 + 32 mm, turning range 13-64 mm
Included in delivery: 1x basic body, 2x driving discs (clamping circuit-Ø 12, 32), 2x centre points (centering Ø 6, 16)



Item no.	Mount	right-hand rotation	left-hand rotation	With draw-off nut.	Weight approx. g
1341543	MT3	•			2100
1341544	MT3	•		•	2400
1341545	MT3		•		2100
1341546	MT3		•	•	2400
1341547	MT4	•			2400
1341548	MT4	•		•	2700
1341549	MT4		•		2400
1341550	MT4		•	•	2700
1341551	MT5	•			3300
1341552	MT5	•		•	3600
1341553	MT5		•		3300
1341554	MT5		•	•	3600
1341555	MT6	•			4900
1341556	MT6	•		•	5200
1341557	MT6		•		4900
1341558	MT6		•	•	5200
1341559	ZA25	•			2100
1341560	ZA25		•		2100
1341561	ZA32	•			2400
1341562	ZA32		•		2400

CoAE - product ranges

A14

Small assortment in wooden box, hydraulic pressure compensation, clamping dia. 12-50 mm, turning range 13-100 mm
Included in delivery: 1x basic body, 4x driving discs (clamping circuit Ø 12, 20, 32, 50), 2x centre points (centering Ø 6, 12)



Constant face driver
CoAE

Item no.	Mount	right-hand rotation	left-hand rotation	right-hand and left-hand rotation	With draw-off nut.	Weight approx. g
1341563	MT3	•				3900
1341564	MT3	•			•	4200
1341565	MT3		•			3900
1341566	MT3		•		•	4200
1381611	MT3			•		3900
1382283	MT3			•	•	4200
1341567	MT4	•				4300
1341568	MT4	•			•	4600
1341569	MT4		•			4300
1341570	MT4		•		•	4600
1381612	MT4			•		4300
1382284	MT4			•	•	4600
1341571	MT5	•				4900
1341572	MT5	•			•	5200
1341573	MT5		•			4900
1341574	MT5		•		•	5200
1381613	MT5			•		4900
1382285	MT5			•	•	5200
1341575	MT6	•				6600
1341576	MT6	•			•	6800
1341577	MT6		•			6600
1341578	MT6		•		•	6800
1381614	MT6			•		6600
1382286	MT6			•	•	6800
1341579	ZA25	•				3900
1341580	ZA25		•			3900
1381609	ZA25			•		4300
1341581	ZA32	•				4300
1341582	ZA32		•			4300
1381610	ZA32			•		4300

A14

Large assortment in wooden box, hydraulic pressure compensation, clamping dia. 10-80 mm, turning range 11-160 mm
Included in delivery: 1x basic body, 10x driving discs (clamping circuit Ø 10, 12, 16, 20, 25, 32, 40, 50, 63, 80), 5x centre points (centering Ø 4, 6, 10, 12, 16)
1x RÖHM slide rule for determining the axial tailstock force



Item no.	Mount	right-hand rotation	left-hand rotation	right-hand and left-hand rotation	With draw-off nut.	Weight approx. g
1341583	MT3	•				5600
1341584	MT3	•			•	5600
1341585	MT3		•			5900
1341586	MT3		•		•	5900
1381617	MT3			•		5600
1382287	MT3			•	•	5900
1341587	MT4	•				6000
1341588	MT4	•			•	6000
1341589	MT4		•			6300
1341590	MT4		•		•	6300
1381618	MT4			•		6000
1382288	MT4			•	•	6300
1341591	MT5	•				6600
1341592	MT5	•			•	6600
1341593	MT5		•			6900
1341594	MT5		•		•	6900
1381619	MT5			•		6600
1382289	MT5			•	•	6900
1341595	MT6	•				8300
1341596	MT6	•			•	8300
1341597	MT6		•			8500
1341598	MT6		•		•	8500
1381620	MT6			•		8300
1382290	MT6			•	•	8500
1341599	ZA25	•				5600
1341600	ZA25		•			5600
1381615	ZA25			•		5600
1341601	ZA32	•				6000
1341602	ZA32		•			6000
1381616	ZA32			•		6000