

6.1 Product Characteristics ARS

As a complement to the linear modules, the rotary module ARS was developed.

All rotating elements move within an oil bath. The sealed housing allows any required vertical and horizontal installation positions.

By using optimally dimensioned cross-roller bearings for the rotating table, these modules can accept very high axial and radial forces.

With single or double bearing supports for the worm gear shafts, rapid positioning as well as precise reversing operation is possible.

The worm drive, through an eccentric cam, can be adjusted to have practically no play (backlash). The drive consists of a carefully selected combination of materials with low wear.

The large dimensioned through bore is particularly suitable for pass-through applications and for the passing through of lines or cables.

The numerous accessories, such as base plates and table plates, reference switches, motors and control systems have to be ordered separately.

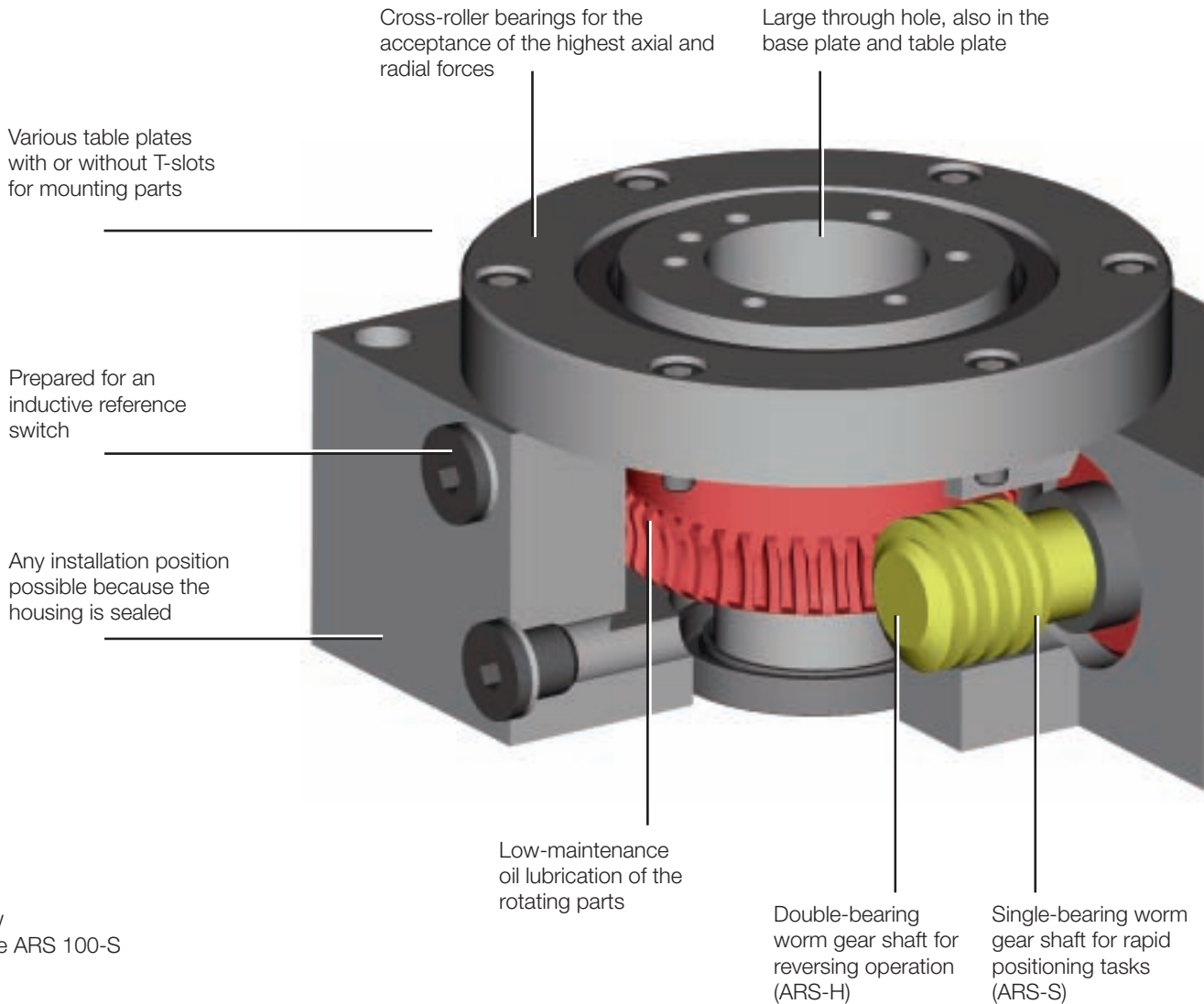
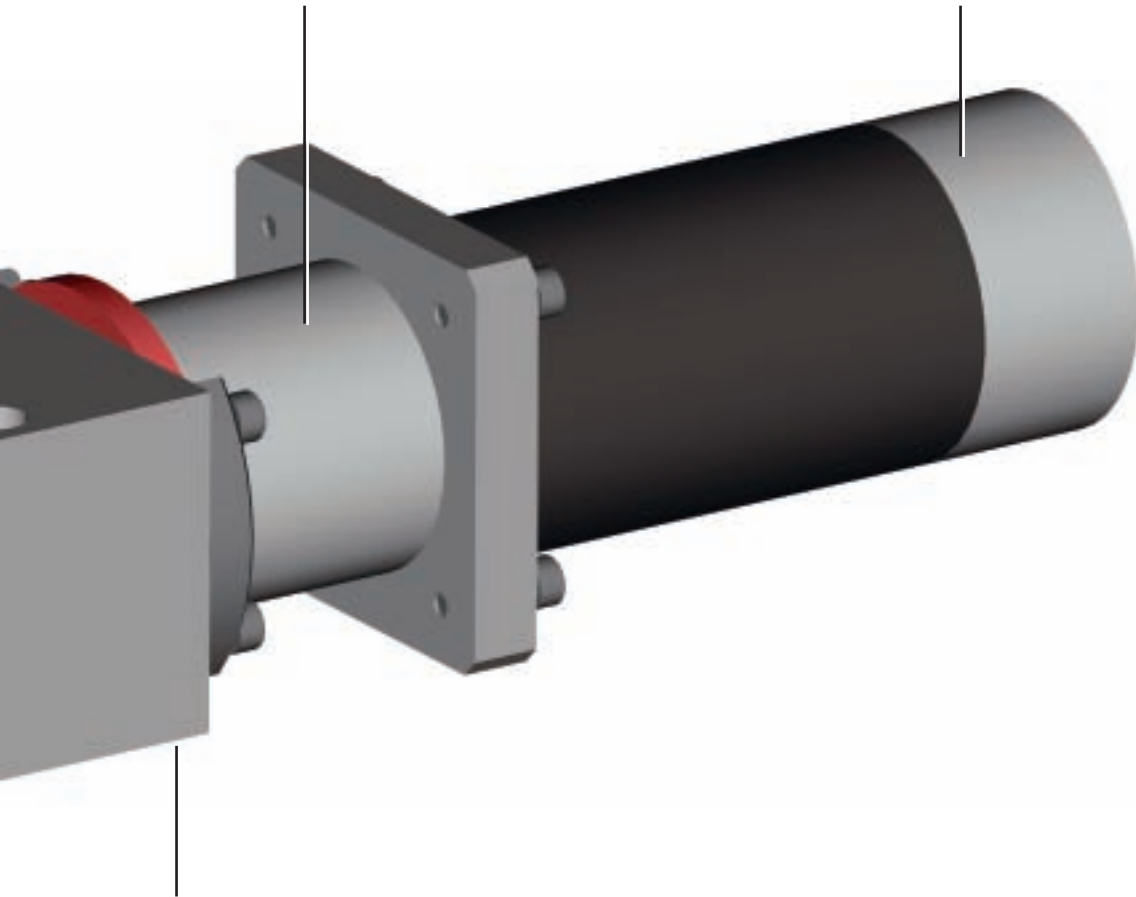


Figure 1:
Selection view
Rotary module ARS 100-S

Coupling housing with motor
flange and coupling

Possible attachment of commercially available motors
(2-, 3- or 5-phase stepping motors or DC/AC-servomotors)



Adaptation of the base plate is possible

6.2 Technical Data Type ARS-S

Figure 2: Rotary module ARS 100-S-O-O-M-R



	ARS 100-S	ARS 200-S	ARS 300-S
Transmission ratio worm gear i	45:1	72:1	90:1
Perm. static central load bearing cap. (N)	8500	13500	45000
Perm. static tilting (tipping) moment (Nm)	200	400	1500
Permissible static torque (Nm)	150	500	800
Positioning accuracy* (°)	±0.05	±0.020	±0.015
Repeatability* (°)	±0.010	±0.010	±0.010
Concentricity-axial run-out (wobble) (mm)	<0.01	<0.01	<0.01
Maximum positioning speed* (°/s)	180	180	150
Maximum drive torque** (Nm)	2	3.5	5
Weight*** (kg)	5.8	11	31.8
Weight of base plate BV (kg)	1.4	3.8	9.5
Weight of base plate BH (kg)	1	2	5.2

* Dependent on the selected motor (without load)

** Counter-clockwise; in clockwise direction, the values have to be reduced by 50%

*** Without motor and base plate

6.3 Technical Data Type ARS-H

Figure 3: Rotary module ARS 100-H-O-O-M-R

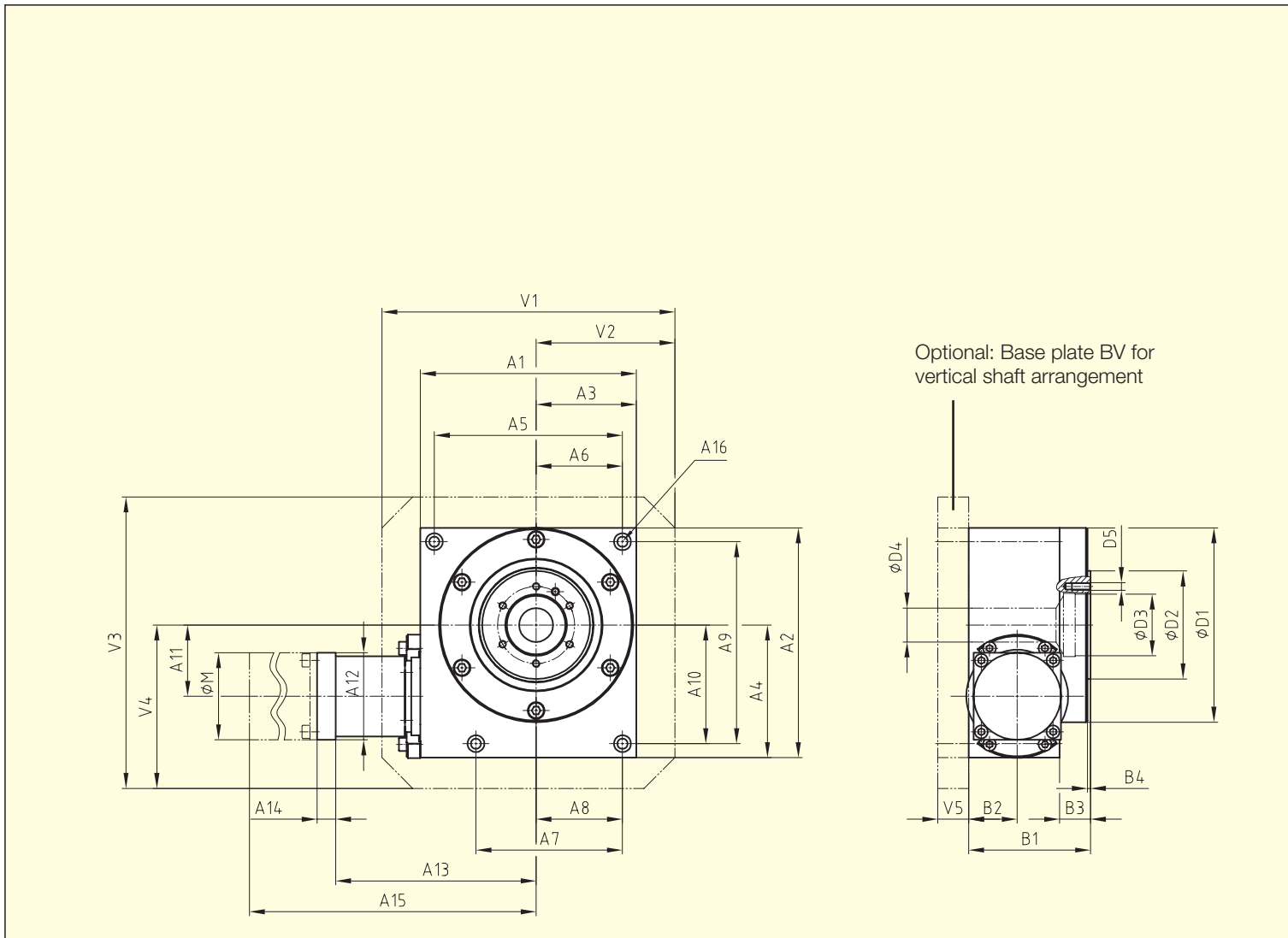


		ARS 100-H	ARS 200-H	ARS 300-H
Transmission ratio worm gear i		45:1	72:1	90:1
Perm. static centr. load bearing cap.	(N)	8500	14000	35000
Perm. static tilting (tipping) moment	(Nm)	200	450	1500
Permissible static torque	(Nm)	250	600	1000
Positioning accuracy*	(°)	±0.05	±0.020	±0.015
Repeatability*	(°)	±0.010	±0.010	±0.010
Concentricity-axial run-out (wobble)	(mm)	<0.01	<0.01	<0.01
Maximum positioning speed*	(°/s)	180	180	150
Maximum drive torque	(Nm)	2	3.5	5
Weight**	(kg)	8	14.3	38.4
Weight of base plate BV	(kg)	1.9	3.9	9.7
Weight of base plate BH	(kg)	1.1	2.4	5.7

* Dependent on the selected motor (without load)

** Without motor and base plate

6.4 Dimension Table Type ARS-S

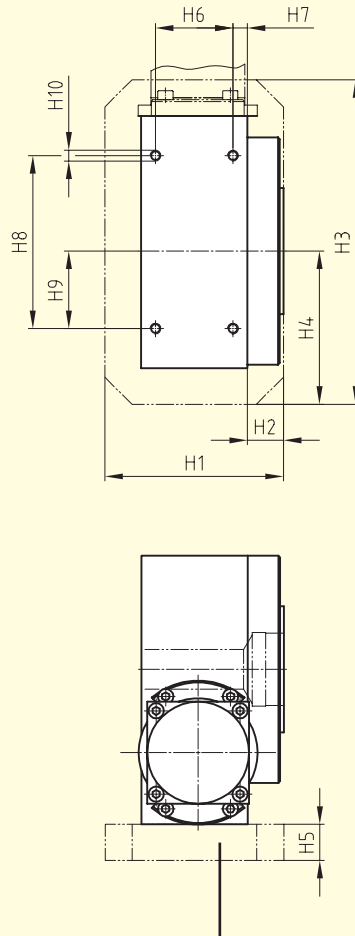


Details of reference switching point and motor connection dimensions on request!

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A 10
ARS 100-S	140	149	65	86	122	56	95	56	131	77
ARS 200-S	200	200	100	112	120	60	120	60	180	102
ARS 300-S	260	299	130	169	220	110	160	80	259	149

	D1	D2	D3	D4	D5	H1	H2	H3	H4	H5
ARS 100-S	125	70	40H7	22	TK= 50, 6×M5-12 deep	99	20	180	85	20
ARS 200-S	170	100	60H7	50	TK= 78, 4×M8-10 deep	114	27.5	255	127.5	25
ARS 300-S	255	165	120H7	95	TK= 145, 6×M6-12 deep	176	35	330	165	30

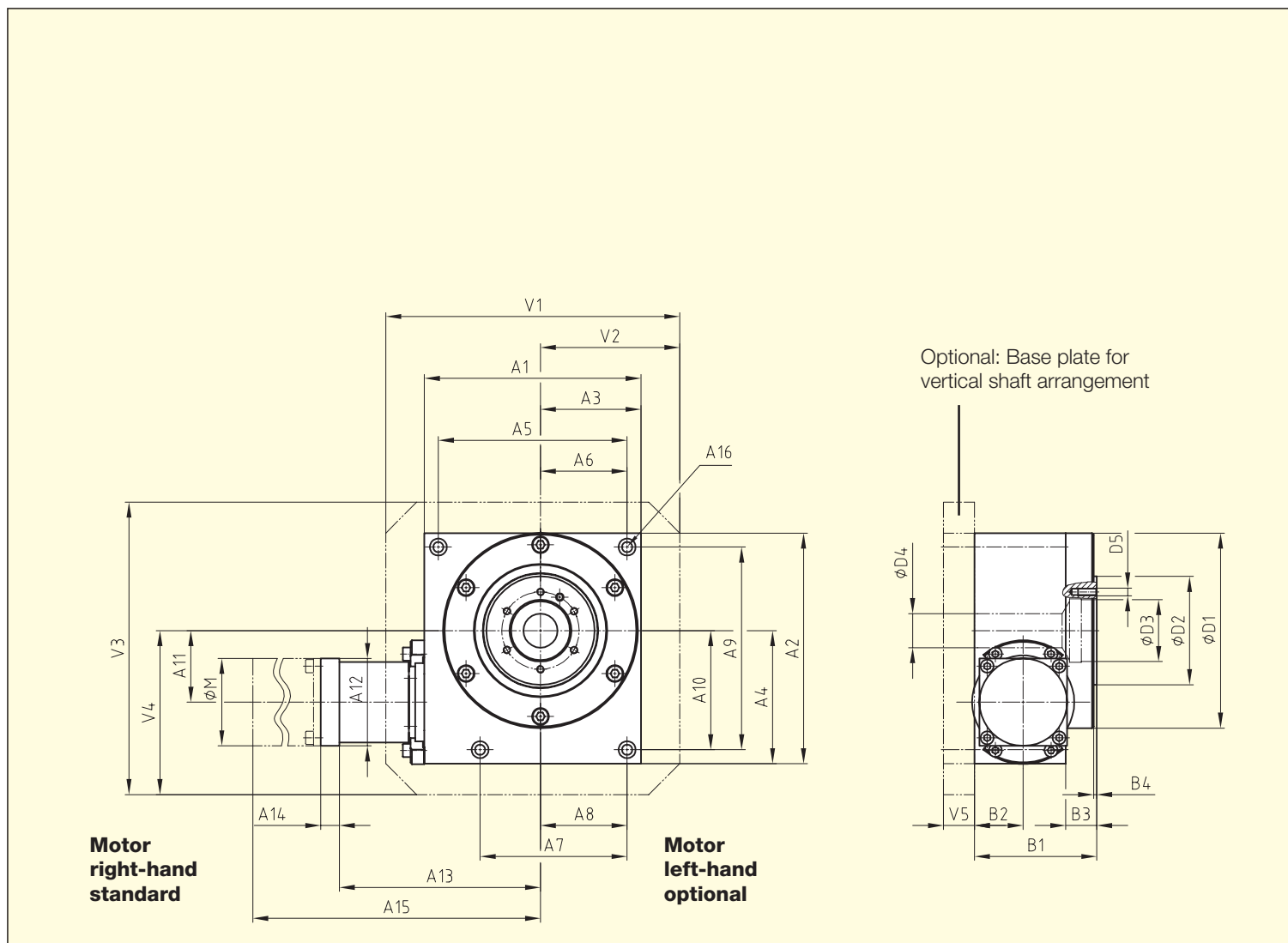
* Dependent on the type of motor
All dimensions in mm. Subject to dimensional and design modifications!



Optional: Base plate BH
for horizontal shaft arrangement

A11	A12	A13	A14	A15	A16	∅M	B1	B2	B3	B4
46.3	*	*	*	*	Km6 DIN 74, M8-16 deep	*	79	33	20	2
66.5	*	*	*	*	Km8 DIN 74, M10-20 deep	*	84	31.5	25	2
104	*	*	*	*	Km12 DIN 74, M16-32 deep	*	125	56.4	19.4	5.4
H6	H7	H8	H9	H10	V1	V2	V3	V4	V5	
43	8	96	43	M6-10 deep	180	85	189	106	20	
44	7.5	150	75	M8-16 deep	255	127.5	255	139.5	25	
66	19.6	210	105	M8-18 deep	330	165	369	204	30	

6.5 Dimension Table Type ARS-H

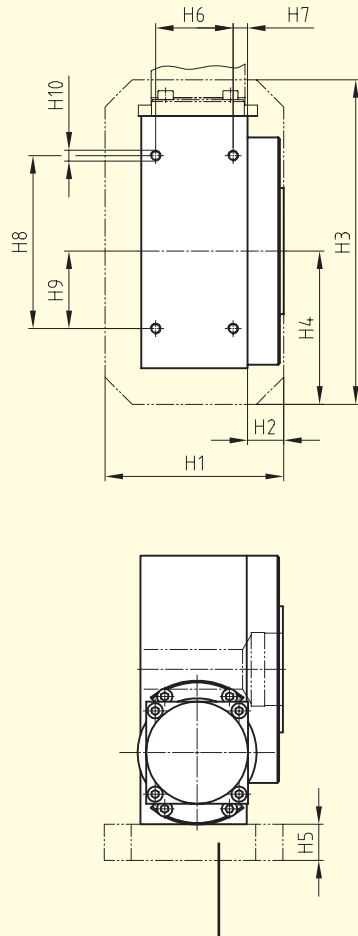


Details of reference switching point and motor connection dimensions available on request!

	A1	A2	A3	A4	A5	A6	A7	A8	A9	A 10
ARS 100-H	150	160	75	90	80	40	80	40	140	80
ARS 200-H	186	225	93	132	120	60	120	60	205	122
ARS 300-H	290	331	145	186	240	120	110	55	270	170

	D1	D2	D3	D4	D5	H1	H2	H3	H4	H5
ARS 100-H	120	70f7	50H7	25.3+0.2	TK= 60, 6×M6-10 deep	100	13	200	75	19
ARS 200-H	160	100f7	60H7	50.4+0.2	TK= 78, 4×M8-12 deep	150	36	250	125	25
ARS 300-H	236	130g6	85H7	85H7	TK= 110, 6×M6-12 deep 6×M8-12 deep	220	52	350	145	30

* Dependent on the type of motor
All dimensions in mm. Subject to dimensional and design modifications!



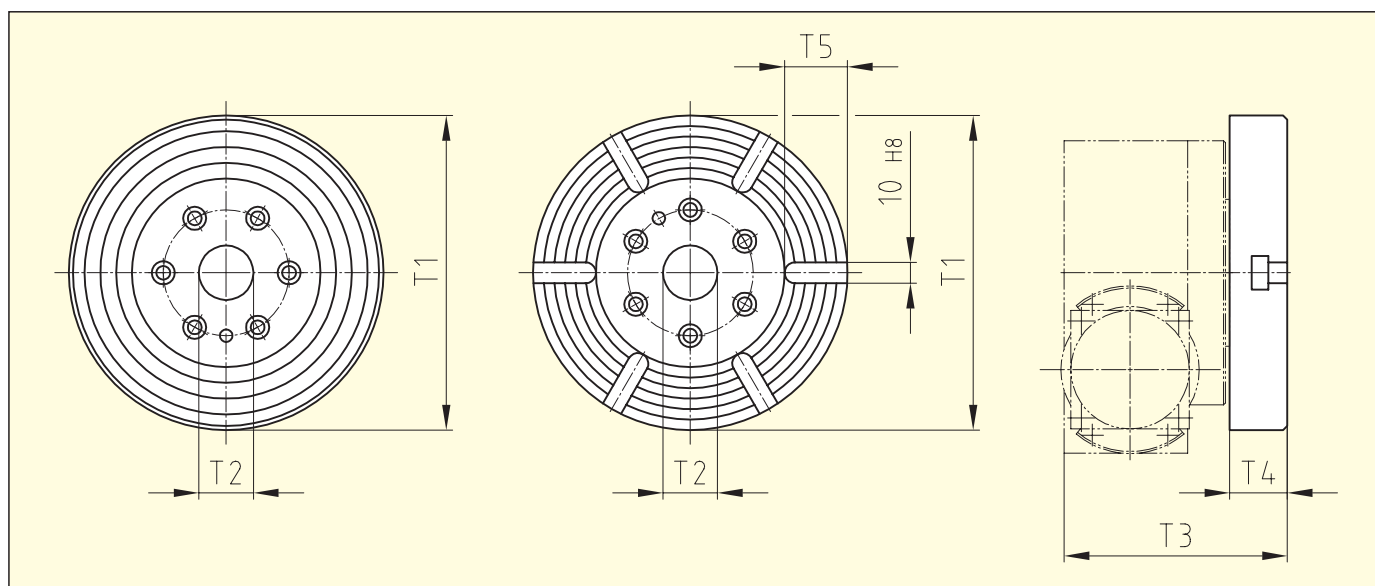
Optional: Base plate BH
for horizontal shaft arrangement

A11	A12	A13	A14	A15	A16	∅M	B1	B2	B3	B4
51.5	*	*	*	*	Km8 DIN 74, M10-20 deep	*	93	36	18	3
86	*	*	*	*	Km8 DIN 74, M10-20 deep	*	92	37.5	15	5
128	*	*	*	*	Km12 DIN 74, M16-32 deep	*	126	54	10	5

H6	H7	H8	H9	H10	V1	V2	V3	V4	V5
59	8	50	25	M8-16 deep	200	100	200	110	19
44	17	150	75	M8-15 deep	240	120	280	160	25
52	31	190	95	M14-32 deep	350	175	390	215	30

6.6 Accessories – to be ordered separately

- Reference switch PNP
The inductive switches are available both as PNP normally closed as well as PNP normally open (10...30V). The free cable length is approx. 2m.
- Base plate BV/BH
For the adaptation on the surroundings, base plate type BV (vertical shaft arrangement), or type BH (horizontal module axis) is available.
- Table plate T
For receiving, e.g. work-pieces, instruments and other parts, table plates in various sizes and with or without T-slots are available.



Size	Type	T1	T2	T3	T4	T-slot DIN 650 number	T5	T6	Utilization with horizontal module axis	Weight (kg)	
										without slot	with slot
100	TK	150	26	115.5	27.5	4	30	8H7	x	3.2	3.0
	TG	200	26	115.5	27.5	4	55	8H7	–*	5.9	5.5
200	TK	200	26	113	27.5	4	40	8H7	x	5.9	5.5
	TG	300	26	123	37.5	6	90	8H7	–*	17.1	16.5
300	TK	300	26	155	37.5	6	80	12H7	x	17.1	16.5
	TG	400	26	155	37.5	6	130	12H7	–*	24.3	23.5

* The table plate protrudes over the external contour of the rotary module! On request, a special base plate is available.
All dimensions in mm. Subject to dimensional and design modifications!

- Coupling CP
Corresponding to the selected motor, a coupling suitable for it has to be selected.
- Motor flange MF
The motor flange serves to adapt the motor to the coupling housing.

6.7 Ordering Information

Rotary module ARS

		—	ARS	100	-H	-TKO	-BV	-M	-R
Quantity									
Type	ARS								
Size	100, 200, 300								
Worm gear shaft bearing	S Single H Double								
Table plate	O Without table plate TKO Table plate small without slots TKM Table plate small with slots TGO Table plate large without slots TGM Table plate large with slots								
Base plate	O Without base plate BH Base plate for horizontal application BV Base plate for vertical application								
Motor	O Without motor or -adapter M With motor adapter or motor mounting (to be specified separately)								
Motor position*	R Motor/drive right-hand (standard) L Motor/drive left-hand (only in case of version -H)								

* In case of the orientation of the motor vertically upwards, this indispensable has to be indicated in the order!

Accessories rotary module ARS – to be ordered separately

Reference switch

		—	PNP	-O	-ARS
Quantity					
Designation	PNP				
Type	O Normally closed S Normally open				
Version	ARS Applicable for all types of module				

Coupling

		—	CP	-100	-S
Quantity					
Designation	CP				
Size	100, 200, 300				
Type	S Special version (the motor has to be specified)				

Motor flange

		—	MF	-100	-S
Quantity					
Designation	MF				
Size	100, 200, 300				
Version	S Special version (the motor has to be specified)				