

## Connecting Shafts RNW, backlash free, with half shell clamp

**Material:** Hubs and tube made of aluminium (stainless steel on request).

Spider (elastic insert) made from polyurethane, hardness 98° Shore A, red.

- Zero backlash, insertable elastic connecting shaft.
- Vibration-damping, ideal for connecting of gearbox shafts.
- Compensation of large shaft misalignment.
- The runout will get tested at each shaft.
- With half shell clamp hubs, ready-to-install, for rapid mounting / demounting without removal of the other units.

Temperature range: -30°C to +100°C.

**Every shaft will be custom made in short time.**

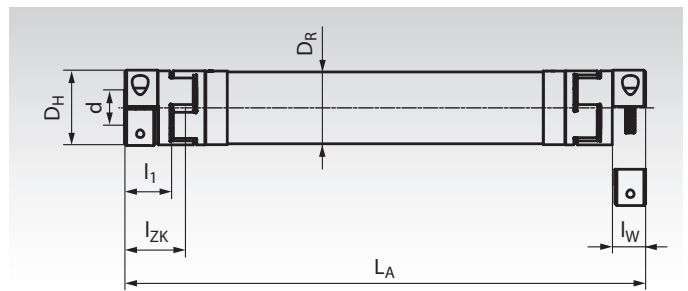
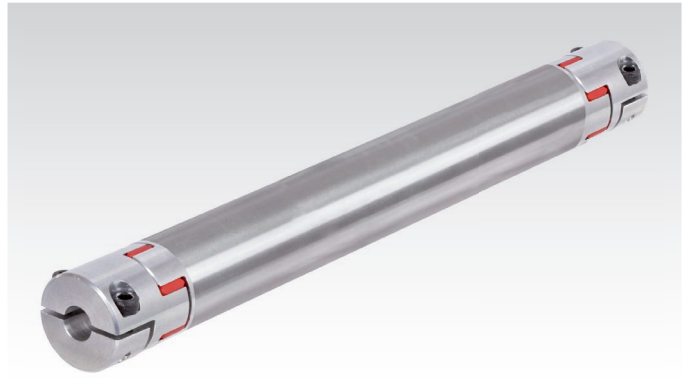
**Delivery time: Regularly only 7 days.**

**Length:** The total length  $L_A$  can be chosen stepless in a wide range.

**Boreholes:** The bores can be chosen stepless in a wide range.

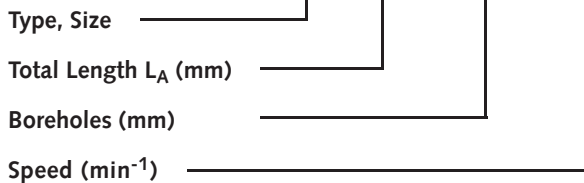
**Ordering details:** Type, size - total length  $L_A$  - bore / bore - speed<sup>1)</sup>.

The product no. will be created in accordance with the customer's specifications.



### Ordering

**Example:** RNW 14 - 0934 - 12 - 14 - 1500



**Note:** Total length and speed<sup>1)</sup> must be specified with 4 digits.

Type, Size	Torques		Boreholes d for choosen <sup>3)</sup> mm	Length $L_A$ for choosen <sup>4)</sup> mm	$D_H$ mm	$D_R$ mm	$\varnothing$ max. <sup>5)</sup> mm	$l_1$ mm	$l_W$ mm	$l_{ZK}$ mm	Weight without tube kg	Weight only tube kg/m
	$T_{K \text{ nom.}}$ <sup>2)</sup> Nm	$T_{K \text{ max.}}$ <sup>2)</sup> Nm										
RNW 14	12,5	25	4 - 14	102 - 3000	30	30	34	11	8	17,5	0,08	1,1
RNW 19	17	34	8 - 20	133 - 3000	40	35	46	25	19,5	33	0,30	1,32
RNW 24	60	120	10 - 28	157 - 3500	55	50	57,5	30	22	39	0,73	1,98
RNW 28	160	320	14 - 38	181 - 4000	65	60	73	35	25	45	1,04	2,42
RNW 38	325	650	18 - 45	229 - 4000	80	75	83,5	45	33	57	1,98	4,45
RNW 42	450	900	22 - 50	253 - 4000	95	100	100	50	36,5	63	3,31	7,90
RNW 48	525	1050	22 - 55	281 - 4000	105	100	100	56	39,5	70	4,57	7,90

<sup>1)</sup> The max. speed depends on the size and on the total length  $L_A$ . See chart on next page.

<sup>2)</sup> These torques can be endured by the insert. For the dimensioning, the max. torque rates of the clamp hubs must also be considered.

<sup>3)</sup> Standard boreholes with the max. torques of the clamp hubs see next page.

<sup>4)</sup> Greater lengths on request.

<sup>5)</sup> Screw head protrudes past diameter  $D_H$  or  $D_R$ .

### Further Details

Type Size	Screw Size DIN 912	Tightening Torque Nm	Torsion Stiffness CT/m dyn. Nm/rad	Moment of Inertia of Couplings <sup>1)</sup> $10^{-3}$ Kgm <sup>2</sup>	Moment of Inertia of Tube/m $10^{-3}$ Kgm <sup>2</sup>
RNW 14	M4	5	500	0,001	0,18
RNW 19	M6	10	1770	0,044	0,30
RNW 24	M6	10	6400	0,133	1,01
RNW 28	M8	25	11400	0,202	1,84
RNW 38	M8	25	23000	0,491	5,13
RNW 42	M10	49	194000	4,08	16,2
RNW 48	M12	86	194000	6,86	16,2

<sup>1)</sup> Moment without tube, calculated at the biggest borehole.

### Spare Part Inserts

Product-No.	Type, Size	$\varnothing$ ca. mm	Number of Teeth	Weight g
605 198 14	RNW 14	30	4	4,6
605 198 19	RNW 19	40	6	7
605 198 24	RNW 24	55	8	18
605 198 28	RNW 28	65	8	29
605 198 38	RNW 38	80	8	49
605 198 42	RNW 42	95	8	79
605 198 48	RNW 48	105	8	98

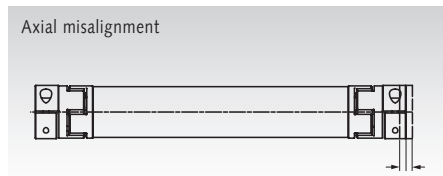
## Connecting Shafts RNW, further details

### Boreholes and maximum torques of the clamp hubs

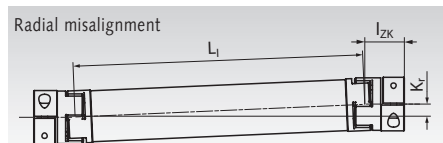
Type, Size	4	6	8	10	11	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	46	48	50	55
	Standard boreholes [mm] max. torque rates of the clamp hubs [Nm] <sup>1)</sup>																									
RNW 14	3,5	4,8	5,1	5,5	5,6	6,1																				
RNW 19			17	21	23	30	32	34	38	40	42															
RNW 24				21	23	30	32	34	38	40	42	47	51	53	59											
RNW 28						54	58	62	70	74	78	86	93	97	109	117	124	136	148							
RNW 38									70	74	78	86	93	97	109	117	124	136	148	156	163	175				
RNW 42												136	149	155	174	186	198	217	235	248	260	279	285	297	310	
RNW 48												199	217	226	253	271	290	317	344	362	380	407	416	434	452	498

<sup>1)</sup> Other boreholes (intermediate sizes) are available at the same price. Keyways are available at extra charge.

### Max. shaft displacement

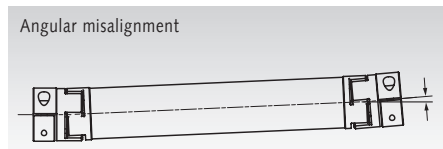


See table misalignment values.



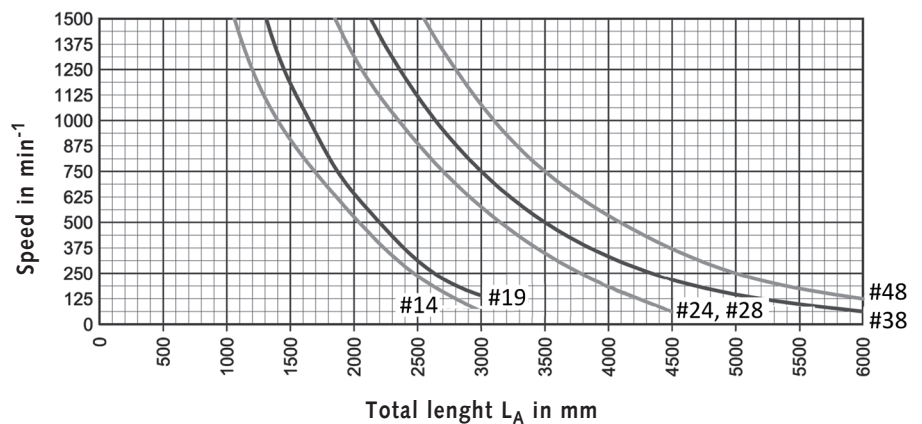
$$L_1 = L_A - (2 \times l_{ZK})$$

$$K_r \text{ max.} = 1.2 \text{ mm per } 100 \text{ mm } L_1$$



See table misalignment values.

### Max. speed in relation to the total length $L_A$ . Higher speed on request.



### Misalignment values of the connecting shafts

Type, Size	Axial Misalignment mm	Angular Misalignment °
RNW 14	+1,0 / -0,5	0,9
RNW 19	+1,2 / -0,5	0,9
RNW 24	+1,4 / -0,5	0,9
RNW 28	+1,5 / -0,7	0,9
RNW 38	+1,8 / -0,7	0,9
RNW 42	+2,0 / -1,0	0,9
RNW 48	+2,1 / -1,0	0,9

Please note that the max. misalignment values (axial, radial and angular displacement) are mutually exclusive. If the misalignment in one direction reaches the maximum, the other two remaining misalignments must be at zero.

### Further models on request

#### One side stiff:

One side stiff, other side with elastic coupling.  
For example for use with a pillow block bearing at the stiff side.

#### Both sides stiff:

Both sides stiff, without any elastic coupling.  
To use only, if there is no misalignment.

#### Stainless steel:

All models are also available in stainless steel (couplings and also the tube).