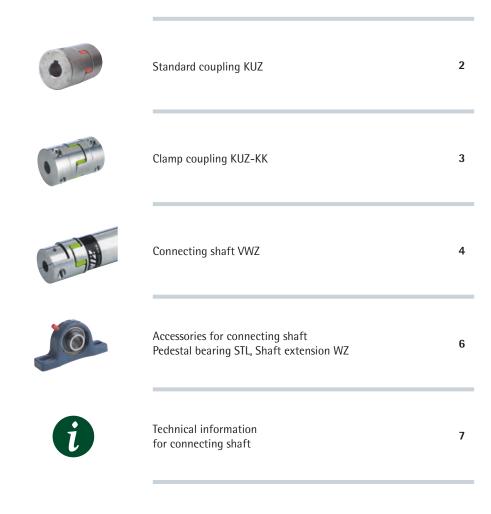




Contents

Connection Elements

Couplings Connecting shafts



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Standard coupling KUZ

Coupling with keyway and set screw:

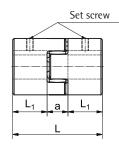
Material: as shown in the table, Provides rotational resilience and maintenance-free,

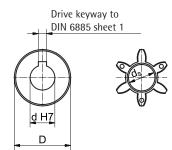
Drive keyway: DIN 6885/1-P9,

Bore U = not drilled

Elastomer - Star "red":

Material: Polyurethane, Medium to good damping, Very good long-term strength, Temperature range: -20°C to +70°C reduced to -30°C up to +100°C (Mx0,55)







Dimensions

Coupling size	D	L	L1	a	ds _{Star}	L1 _{Long hub}	Set screw	Tightening torque Nm
KUZ-09	20	30	10	10	-	-	M4	1.5
KUZ-14	27.5	44	16	12	-	-	M6 (M4)	4.8 (1.5)
KUZ-19	34.5	51	19	13	12	-	M6	4.8
KUZ-24	40	66	25	16	17	40	M5	2
KUZ-28	55	78	30	18	26	-	M5	2
KUZ-38	65	90	35	20	29	60	M6	4.8
KUZ-45	80	114	45	24	37	-	M8	10
KUZ-55	95	126	50	26	45	-	M8	10
KUZ-60	105	140	56	28	50	-	M8	10
KUZ-70	120	160	65	30	59	-	M10	17
KUZ-75	135	185	75	35	67	-	M10	17
KUZ-90	160	210	85	40	79	-	M10	17

Standard bores "d" mm

ı			
ı	KUZ-09	U, 5*, 6, 7, 8, 9	
ı	KUZ-14	U, 9, 11, 14	
ı	KUZ-19	U, 11, 14, 16, 19	
ı	KUZ-24	U, 11, 14, 16, 19, 19L, 20, 24	
ı	KUZ-28	U, 14, 16, 19, 20, 24, 25, 28	
ı	KUZ-38	U, 25, 28, 28L, 32, 38	
ı	KUZ-45	U, 25, 28, 32, 38, 42, 45	
ı	KUZ-55	U, 28, 42, 48, 55	
	U = not d	rilled (KUZ-14 and KUZ-19	
ı	pre-d	Irilled Ø6.3 mm)	
ı	L = longe	e hub	
ı	*Coupling	with set screw, without keyway	
	Other dia	meter available on request	

Technical data

Coupling size	Rated torque Nm	max. torque Nm	max. speed rpm	Shore hardness star	Material*	Weight drilled kg	Torsional stiffness C _{Tdyn} Nm/rad	Moment of inertia 10 ⁻³ kgm ²
KUZ-09	3	6	28000	92A	Α	0.05	-	-
KUZ-14	4.5	4.5	20000	55D	S	0.14	254	0.02
KUZ-19	7.3	7.3	14000	55D	S	0.27	274	0.03
KUZ-24	17	34	14000	98A	S	0.34	2920	0.1
KUZ-28	60	120	10600	98A	S	0.9	9930	0.4
KUZ-38	160	320	8500	98A	S	1.5	26770	1.4
KUZ-45	325	650	7100	98A	G	2.35	48570	2.5
KUZ-55	450	900	6000	98A	G	3.55	54500	6.1
KUZ-60	525	1050	5600	98A	G	4.85	65290	10.2
KUZ-70	625	1250	4750	98A	G	7.4	94970	20.3
KUZ-75	900	1300	4250	98A	G	10.8	129510	37.1
KUZ-90	1500	3000	3550	98A	G	17.7	197500	84

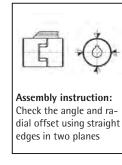
Ordering example:	
	KUZ-24-20/24
	* * *
Coupling size	
Bore d end 1	
Bore d end 2	_

Permissible assembly errors

*A=Aluminium, S=Sintered steel, G=Cast iron

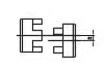
		,	
Coupling size	max. axial offset in mm	max. axis offset in mm	Angular error in degrees
KUZ-09	0.8	0.15	1.0°
KUZ-14	0.75	0.4	0.5°
KUZ-19	0.75	0.4	0.5°
KUZ-24	1.2	0.2	0.9°
KUZ-28	1.4	0.22	0.9°
KUZ-38	1.5	0.25	0.9°
KUZ-45	1.8	0.28	1.0°
KUZ-55	2	0.32	1.0°
KUZ-60	2.1	0.36	1.1°
KUZ-70	2.2	0.38	1.1°
KUZ-75	2.6	0.42	1.2°
KUZ-90	3	0.48	1.2°

Potential assembly errors

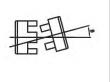








Axis offset R lateral



Angular error $\boldsymbol{\beta}$ angular

Clamp coupling KUZ-KK

Coupling with split shells:

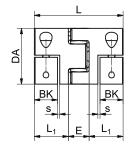
Material: high-tensile aluminium, Split shells permit easy radial insertion, High concentricity, High clamping forces, Low moment of inertia, Stepless adjustment facility thanks to the clamp hub rather than a fitted drive key, Drive keyway available on request

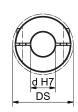
Elastomer - Star "ZIMM green":

Permanently free of play and dampens vibration,

Shore hardness 64D,

Temperature range: 0°C to +70°C reduced to -20°C up to +100°C (Mx0,55)







Dimensions, technical data

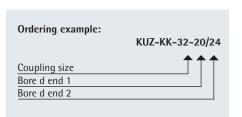
Coupling size	DA mm	DS mm	L mm	L1 mm	BK* mm	s mm	E mm	M 10.9	Tightening torque Nm	Moment of inertia 10 ⁻³ kgm ²	Torsional stiffness C _{Tdyn} Nm/rad	Weight kg	_
KUZ-KK-16	32	32	54	21	15	1.5	12	M4	4	0.01	1375	0.1	
KUZ-KK-24	42	44.5	66	25	17	1.5	16	M5	8	0.08	3700	0.2	
KUZ-KK-32	56	57	98	40	30	2	18	M6	15	0.24	9917	0.55	
KUZ-KK-35	67	68	114	47	35	2	20	M8	35	0.51	24417	0.9	
KUZ-KK-45	82	85	134	55	40	2	24	M10	70	2.4	33667	1.6	2
KUZ-KK-60	102	105	156	65	50	2	26	M12	120	6	67667	2.7	1
*BK=Shaft ex	tensio	n clamp	oing ler	igth									

Standard bores "d" mm

KUZ-KK-16	8, 9, 10, 11, 12, 14, 15, 16
KUZ-KK-24	9, 10, 11, 12, 14, 15, 16, 18,19,
	20, 22
KUZ-KK-32	10, 11, 12, 14, 15, 16, 18, 19,
	20, 22, 24, 25, 28, 30, 32
KUZ-KK-35	12, 15, 16, 18, 20, 22, 24, 25,
	28, 30, 32, 35
KUZ-KK-45	16, 19, 20, 22, 24, 25, 28, 30,
	32, 35, 38, 40, 42, 45
KUZ-KK-60	25, 28, 32, 38, 40, 42, 45, 48,
	50, 55
Other diamet	er available on request

Torques

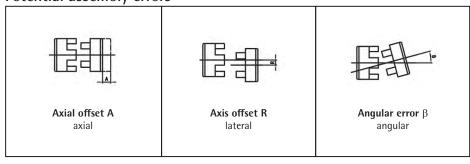
	Elaston	ner star				n	nax. tran	smittabl	e torque	of clamp	hub dep	ending (on the bo	re diam	eter (clar	np force)				
Coupling size	Rated torque Nm	max. torque Nm	Ø9 Nm	Ø11 Nm	Ø14 Nm	Ø16 Nm	Ø19 Nm	Ø20 Nm	Ø22 Nm	Ø24 Nm	Ø25 Nm	Ø28 Nm	Ø30 Nm	Ø32 Nm	Ø38 Nm	Ø40 Nm	Ø42 Nm	Ø45 Nm	Ø48 Nm	Ø55 Nm
KUZ-KK-16	16	32	21	26	33	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KUZ-KK-24	21	42	-	41	52	60	70	74	81	-	-	-	-	-	-	-	-	-	-	-
KUZ-KK-32	75	150	-	60	76	87	104	109	120	131	136	153	164	175	-	-	-	-	-	-
KUZ-KK-35	200	400	-	-	-	120	-	188	206	-	235	-	-	301	-	-	-	-	-	_
KUZ-KK-45	405	810	_	_	_	325	386	406	447	488	508	568	610	650	772	_	854	915	_	- 33
KUZ-KK-60	660	1350	-	-	-	-	-	-	-	-	570	638	-	730	866	914	960	1029	1097	1250



Permissible assembly errors

		,		_
Coupling size	max. axial offset in mm	max. axis offset in mm	Angular error in degrees	
KUZ-KK-16	<u>+</u> 1	0.08	1°	
KUZ-KK-24	<u>+</u> 2	0.08	1°	
KUZ-KK-32	<u>+</u> 2	0.1	1°	
KUZ-KK-35	<u>+</u> 2	0.15	1°	
KUZ-KK-45	±2	0.12	1°	Tab.34
KUZ-KK-60	+2	0.14	1°	Za.

Potential assembly errors



Connection Elements

Connecting shafts VWZ

Shafts with split shells:

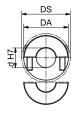
Material: high-tensile aluminium (stainless steel on request),
Split shells permit easy radial insertion,
High concentricity and clamping forces,
Low moment of inertia, Stepless adjustment facility
thanks to the clamp hub rather than a fitted drive key,
Drive keyway available on request

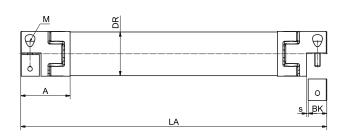
Elastomer - Star "ZIMM green":

Permanently free of play and dampens vibration,

Shore hardness 64D,

Temperature range: 0°C to +70°C reduced to -20°C up to +100°C (Mx0,55)





Standard bores "d" mm

VWZ-30 8, 9, 10, 11, 12, 14, 15, 16 VWZ-40 9, 10, 11, 12, 14, 15, 16, 18, 19, 20, 22 VWZ-60 10, 11, 12, 14, 15, 16, 18, 19, 20, 22, 24, 25, 28, 30, 32 VWZ-60V 12, 15, 16, 18, 20, 22, 24, 25, 28, 30, 32, 35 VWZ-80 16, 19, 20, 22, 24, 25, 28, 30, 32, 35, 38, 40, 42, 45 VWZ-100 25, 28, 32, 38, 40, 42, 45, 48, 50, 55 Other diameter available on request

Dimensions, Technical data

Size			- 1	Dimension	ıs			Clam	ping screw	Moment	of inertia	Torsiona	al stiffness	Wei	ght
	DA mm	DS mm	DR mm	BK* mm	s mm	A mm	LA min mm	M 10.9	Tightening torque Nm	Per coupling 10 ⁻³ kgm ²	Tube/m 10 ⁻³ kgm ²	Per star C _{Tdyn} Nm/rad	Per tube/m C _{Tdyn} Nm/rad	Both couplings kg	Tube/m kg
VWZ-30	32	32	30	15	1.5	34	99	M4	4	0.01	0.11	1375	1104	0.14	0.58
VWZ-40	42	44.5	40	17	1.5	46	133	M5	8	80.0	0.2	3700	2332	0.36	0.76
VWZ-60	56	57	60	30	2	63	177	M6	15	0.24	8.0	9917	8292	0.94	0.97
VWZ-60V	67	68	60	35	2	73	205	M8	35	0.46	8.0	24417	8292	1.42	0.97
VWZ-80	82	85	80	40	2	84	249	M10	70	2.4	3	33667	29102	2.98	2
VWZ-100	102	105	100	50	2	97	283	M12	120	6	5.8	67667	58178	4.62	2.47

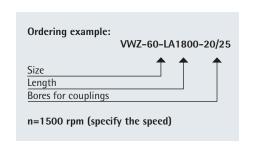
^{*}BK=Shaft extension clamping length

Torques

Size	Elaston	ner star				max.	transmi	ittable 1	orque o	of clamp	hub de	pending	g on the	bore di	ameter	(clamp	force)				Coupling type
	Rated torque Nm	max. torque Nm	Ø9 Nm	Ø11 Nm	Ø14 Nm	Ø16 Nm	Ø19 Nm	Ø20 Nm	Ø22 Nm	Ø24 Nm	Ø25 Nm	Ø28 Nm	Ø30 Nm	Ø32 Nm	Ø38 Nm	Ø40 Nm	Ø42 Nm	Ø45 Nm	Ø48 Nm	Ø55 Nm	
VWZ-30	16	32	21	26	33	37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	KUZ-KK-16
VWZ-40	21	42	_	41	52	60	70	74	81	-	-	_	-	-	-	-	-	-	_	_	KUZ-KK-24
VWZ-60	75	150	-	60	76	87	104	109	120	131	136	153	164	175	-	-	-	-	-	-	KUZ-KK-32
VWZ-60V	200	400	-	-	-	120	-	188	206	-	235	-	-	301	-	-	-	-	-	-	KUZ-KK-35
VWZ-80	405	810	-	-	-	325	386	406	447	488	508	568	610	650	772	-	854	915	-	-	KUZ-KK-45
VWZ-100	660	1350	-	-	-	-	-	-	-	-	570	638	-	730	866	914	960	1029	1097	1250	KUZ-KK-60

The max. torque is limited either by the star or by the clamping force

ZIMM VWZ shafts of 500 mm length and more are checked for concentricity as standard!





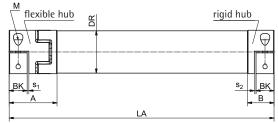
Connecting shaft VWZ with rigid hub

for pedestal bearing use

The installation situation is very important when selecting shaft dimensions. For example, the cost of a larger diameter connecting shaft not requiring additional pedestal bearing support can be considerably less than the cost of a smaller connecting shaft requiring costly sub-structures for the additional pedestal bearing. For this version we use the rigid hub version so that no radial misalignment can occur in the pedestal bearing.

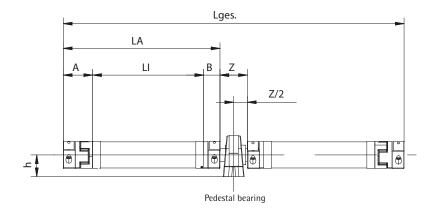






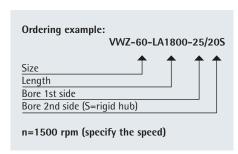


Size	Α	В	s1	s2	Bk*	d1	LA min
VWZ-30	34	20	2	1.2	15	15	85
VWZ-40	46	25	2	1.6	17	20	112
VWZ-60	63	40	2	2	30	20	154
VWZ-60V	73	42	2	2	35	30	175
VWZ-80	84	55	2	2	40	30	220
VWZ-100	97	65	2	2	50	50	251





Size	Α	В	Z	L _{WZ}	d1	h
VWZ-30	34	20	44	74	15	30.2
VWZ-40	46	25	42	76	20	33.3
VWZ-60	63	40	42	102	20	33.3
VWZ-30	34	20	44	74	15	30.2
VWZ-40	46	25	42	76	20	33.2
VWZ-60	63	40	42	102	20	33.2
VWZ-40	46	25	42	76	20	33.2
VWZ-60	63	40	42	102	20	33.2
VWZ-80	84	55	50	130	30	42.9
VWZ-40	46	25	42	76	20	33.2
VWZ-60	63	40	42	102	20	33.2
VWZ-60V*	73	42	60	130	30	42.9
VWZ-80*	84	55	50	130	30	42.9
VWZ-60	63	40	42	102	20	33.3
VWZ-60V	73	42	60	130	30	42.9
VWZ-80*	84	55	50	130	30	42.9
VWZ-60	63	40	42	102	20	33.2
VWZ-60V	73	42	60	130	30	42.9
VWZ-80	84	55	50	130	30	42.9
VWZ-60	63	40	42	102	20	33.2
VWZ-60V	73	42	60	130	30	42.9
VWZ-80	84	55	50	130	30	42.9
VWZ-80	84	55	50	130	30	42.9
VWZ-100	97	65	70	170	50	57.2
VWZ-80	84	55	50	130	30	42.9
VWZ-100	97	65	70	170	50	57.2
VWZ-80	84	55	50	130	30	42.9
VWZ-100	97	65	70	170	50	57.2
Can't be fitted with	nivat maunte I D					



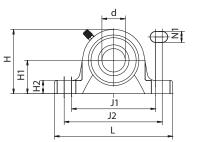
*Can't be fitted with pivot mounts LB

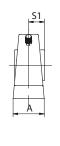
Connection Elements

Pedestal bearing STL

for connecting shaft VWZ

Housing material: Grey cast iron, primed in blue Bearing material: Roller bearing steel Temperature range: -30°C to +120°C







Part no.	d	Α	Н	H1	H2	J1	J2	L	N1	S 1	kg	_
STL-15-G	15	32	56	30.2	14	88	106	127	11.5	15.3	0.47	
STL-20-G	20	32	65	33.3	14	88	106	127	11.5	18.3	0.59	
STL-30-G	30	40	82.5	42.9	17	108	127	152	14	22.2	1.1	
STL-40-G	40	48	99	49.2	19	125	146	175	14	30.2	1.85	39
STL-50-G	50	54	114.5	57.2	22	149	165	203	18	32.6	2.7	Tab.

"

Pedestal bearings of plastic "white" or "black" (foodstuffs applications) on request.

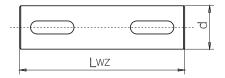
CAUTION: Dimensions may change!



Shaft extension WZ

for connecting shaft VWZ

Material: Steel, ground



Part no.	d1	LWZ	kg	
WZ-15/74-?P	15	74	0.1	
WZ-20/76-?P	20	76	0.19	
WZ-20/102-?P	20	102	0.25	
WZ-30/130-?P	30	130	0.72	_
WZ-40/170-?P	40	170	1.67	Tab.40
WZ-50/170-?P	50	170	2.61	Ta



Examples:



VWZ with rigid hub, for pedestal bearings.

Shaft extension without fitted key (OP)

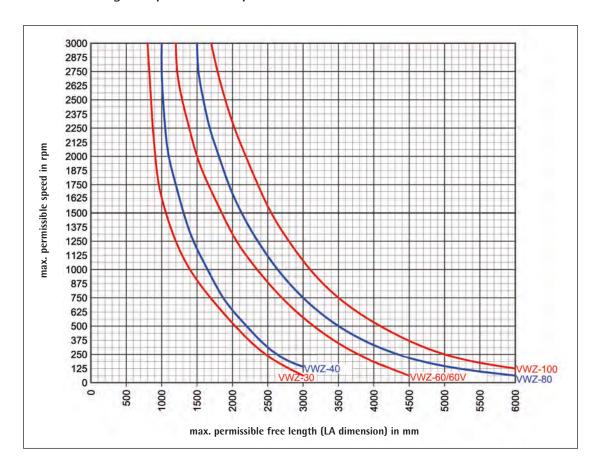


Pedestal bearing with handwheel for driving the VWZ shaft.

Shaft extensions with fitted key at one end (1P)

Connecting shaft VWZ – Length calculation

maximum length dependent on speed



max. permissible offset





Kr max. 1.5 mm per 100 mm LI

)

Installation:

By using split shell couplings connecting shafts can be mounted while drive shafts have already been installed. Simply attach the connecting shafts to the drive shafts using the split shell couplings and fix them with the mounting screw using a torque wrench (no drive key needed).

Screw tightening torque acc. to table.



Angular offset:



max. 2° (1° per coupling)

Axial offset:



approx. +/- 1 to 2 mm





Wide range of standard elements

www.zimm-antriebstechnik.com

(in German only)

No matter what you need – you will find the solution with ZIMM parts.

3 more key points of the versatile ZIMM Transmission Parts:

- Screw technology

Select the right part for your application from our extensive product range, whether it's a trapezoidal screw or a ball screw. We manufacture your spindles with short lead times and according to drawings.

- Gear technology

Here you will find a wide range of precise pinions, bevel gears, worm screws and worm wheels, internal ring gears and toothed racks.

- Linear technology

Innovative products as an alternative to profiled rail guides, ideal for use in combination with screw jack gearboxes.





Z series and GSZ series Sizes for 2.5 kN to 1000 kN

- Screw jacks with trapezoidal or ball screws
- Safety nuts
- Bevel gearboxes
- Three-phase AC motors and motor flanges
- Limit switches and rotary pulse encoders
- Connecting shafts and couplings
- Attachments (forked ends, rod ends, pivot bearing ends, fixing flanges, opposed bearing plates,...)
- Protective covers (bellows, spiral springs)
- Pivot bearing plates and pivot mounts

With the Screw Jack Building Block System we offer a wide range for the individual solutions. Precise, quiet, smooth: ZIMM's products reliably move loads in all directions and with minimum maintenance costs.

Adapted to application requirements, we provide an extensive product range.





About ZIMM

General terms and conditions

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Phone: +43 (0)5577 806-0, Fax: +43 (0)5577 806-8

E-mail: info@zimm.at, www.zimm.eu

1. General

All our contracts are subject to the following terms and conditions unless agreed to the contrary in writing: These terms and conditions are deemed acknowledged and agreed by signing the contract.

Any terms and conditions – of any nature – contrary to our general terms and conditions shall be completely inapplicable and invalid, irrespective of the form in which they were brought to our knowledge. Deviations from these general terms and conditions shall be effective only if they have been agreed and confirmed by us in writing. Any agreement to abandon this formal requirement must equally be in writing and signed by both parties. Silence concerning any terms and conditions that deviate from our standard conditions shall not be regarded as consent.

2. Quotations | prices | contractual content

- 2.1. Our quotations remain valid for 60 days after submission, subject to changes in accordance with Point 2.5.
- 2.2. Information in our our catalogues is not contractually binding (see also Point 3).
- 2.3. All our prices are understood to be in Euros and exclusive of VAT. Unless agreed to the contrary, the prices to be invoiced will be our list prices at the time of concluding the contract. These prices are ex works, excluding packaging, freight and/or shipping. Where consignment and delivery have been contractually agreed, prices do not include costs for unloading and transportation to the working site. Risk and rights of use are transferred to our contractual partner at the time of shipment. Delivery is thus always ex works.
- 2.4. Delivery lead times and dates are binding provided they have been promised by us in writing. This commitment lapses if our contractual partner requests modification of the order after placing the order or if obstacles outside our control occur, due for instance to force majeure or late delivery by our suppliers.
- 2.5. Changes to economic circumstances:

If new circumstances arise outside our control, such as materials, taxes, wage rates, strike, war, terrorist attacks, blockades, fire, natural catastrophes or acts of God, we are entitled to amend our quotations and contracts accordingly. This applies particularly in the event that the prices of copper or aluminium rise by more than 10%. In all these cases we are entitled, even after concluding the contract, to amend our prices and due dates.

3. Design and specification

Selection and dimensioning is the customer's responsibility, because we are not familiar with the design criteria such as installation location and type of application. On request we can provide support during selection and specification and make proposals with subassembly drawings and calculations based on your application parameters. This drawing including the parts list is subject to checking by you and approval by us. The drawing checked and approved by you is the basis for production and assembly.

4. Technical modifications during the contract

We are entitled to implement technical modifications after the conclusion of the contract, provided such modifications do not affect the contractual guaranteed performance of the goods.

5. Warranty and liability for defects

5.1. The warranty period is 1 year, without exception. Changes to the warranty period require our express commitment in writing.

- 5.2. Trial runs without load and under load in normal operating conditions (according to your design parameters) are necessary to ensure reliable operation. We perform our trials under no-load conditions, not under load, but under the customer's installation conditions. These on-site trial runs are necessary to achieve system alignment and to eliminate any factors which may impair operation. We do not accept any liability for damage that is traceable back to the non-performance of on-site trials under load and representative working conditions. Furthermore we do not accept any liability, except where we have entered into a written assurance to the contrary, for installation of our products in any type of land vehicle, aircraft or water craft.
- 5.3. Our contractual partners are obligated to verify goods after delivery and, if necessary, inform us in writing immediately, and in any case no later than within 14 days after delivery, about any defects. If no notice of defects is communicated within this time limit, the goods that are delivered are deemed approved and warranty claims –and damage claims shall be excluded.
- 5.4. Our liability shall be limited to intentional and severe gross negligence. Any liability for ordinary negligence, for consequential damages, financial loss, loss of profit, loss of interest or for damages resulting from claims of third parties shall be excluded.
- 5.5. Mechatronic products
 - Especially for applications that are installed outdoors, the equipment is subject to environmental conditions to an increased degree. If malfunctions arise, we require documentary evidence of the cause, such as environmental influences or product defects.
- 5.6. Rectification of defects

If product defects are accepted, the defective parts must be returned to us without delay, together with documentation of the defect. Your analysis of the cause of the defect is the basis for our laboratory testing and sustained defect prevention measures. The transport costs will be borne y the sender in each case.

6. Retention of title

- 6.1. All goods delivered shall remain our sole property until complete payment of the purchase price.
- 6.2. Our contractual partner is obliged to treat the goods carefully as long as retention of title applies to the delivered goods. If maintenance and/or inspection work is necessary, our contractual partner shall carry out such work regularly at his own expense.
- 6.3. Installation or modification of the delivered contractual goods will not result in loss of title to those goods. Our contractual partner is not entitled to resell the delivered contractual goods as long as retention of title remains in force.
- 7. Place of performance | Applicable law | Place of jurisdiction The exclusive place of performance for all contractual relations is A-6890 Lustenau. Austrian law applies exclusively, with exclusion of the tie-breaker rule. All legal disputes arising from or relating to the business relations and contracts shall be subject to the exclusive jurisdiction of the court having competence A-6800 Feldkirch.

8. Severability clause

Should any individual provisions in the above general terms and conditions be or become invalid, either in part or in full, this will not affect the validity of the other provisions. The invalid provision will be replaced by a ruling that is as close as possible in economic purpose to the invalid provision in a legally effective and practicable form.

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