Operating instructions / Spare parts list

DOK-049-GB.doc Rev. 2

Designation Compressed air mini stirrer

Type RL 10

Article no.: 6313-000

- Keep in a safe place for future use -

Krautzberger

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1. Use for intended purpose

The compressed air mini stirrer RL 10 is suitable for use in closed containers and is solely designed to stir liquid and low-viscosity media with a maximum temperature of +50°C. The main application is for installation in pressureless and pressurised material containers in the lacquering and coating field.

2. General safety notes

⚠ STIRRERS MAY ONLY BE OPERATED AT THE PARAMETERS (PRESSURE, TEMPERATURE ETC.) LISTED UNDER "TECHNICAL DATA"!
STIRRERS MUST BE FIRMLY MOUNTED IN CONTAINER COVERS.
THE ROTATING PARTS (STIRRER SHAFT WITH STIRRER BLADES) MAY ONLY BE OPERATED IN A CLOSED CONTAINER.

⚠ THE STIRRER SHAFT IS MADE OF STAINLESS STEEL; THE STIRRER BLADES AND PROTECTIVE RING ARE MADE OF PLASTIC. THE COMPATIBILITY OF THE STIRRER MATERIALS WITH THE COATING SUBSTANCES USED MUST BE CHECKED BY THE OPERATOR. FOR THIS PURPOSE, PLEASE REFER TO THE SAFETY DATA SHEET OF THE MANUFACTURER OF THE COATING SUBSTANCE!

⚠ BEFORE OPENING THE CONTAINER:
- SWITCH OFF STIRRER AND SECURE AGAINST RENEWED SWITCH-ON
- IN THE CASE OF PRESSURISED MATERIAL CONTAINERS, ALWAYS INTERRUPT THE COMPRESSED AIR FEED AND RELIEVE THE PRESSURE IN THE CONTAINER VIA THE VENTING VALVE

⚠ ALL WORK CONNECTED WITH INSTALLATION AND MAINTENANCE MUST BE PERFORMED BY SUITABLY QUALIFIED PERSONNEL. ALWAYS USE THE PARTS LISTED IN THE SPARE PARTS LIST WHEN REPLACING PARTS.

⚠ EACH TIME BEFORE YOU START WORKING, CHECK THE MATERIAL AND COMPRESSED AIR CONNECTIONS FOR FIRM SEAT AND DAMAGE! LOOSE, PRESSURISED HOSES MAY CAUSE ACCIDENTS DUE TO WHIPLASH-LIKE MOVEMENT AND THE DISCHARGE OF FLUIDS.

⚠ NEVER POINT COMPRESSED AIR AT PEOPLE OR ANIMALS

2.1 Important when using with hazardous substances:

⚠ ALWAYS COMPLY WITH THE STIPULATIONS IN THE SAFETY DATA SHEET OF THE MANUFACTURER OF THE COATING SUBSTANCE. IN PARTICULAR, ADHERE TO INSTRUCTIONS RELATING TO:
- THE WEARING OF PERSONAL PROTECTIVE EQUIPMENT.
- THE AVOIDANCE OF EXPLOSIVE OR HARMFUL ENVIRONMENTS

⚠ ELECTROSTATIC CHARGES DURING OPERATION OF THE STIRRER CAN LEAD TO ELECTRIC SHOCKS AND SPARK FORMATION.
THE STIRRER AND THE CONTAINER MUST THEREFORE BE EARTHED.
ALSO EARTH AIR PIPES, OPERATING EQUIPMENT AND ELECTRICALLY CONDUCTIVE SURFACES IN THE WORKING ZONE.

⚠ ROOMS IN WHICH HAZARDOUS SUBSTANCES ARE STORED OR PROCESSED MUST HAVE ADEQUATE VENTILATION. IT MAY BE NECESSARY TO INSTALL A TECHNICAL VENTILATION SYSTEM. IF THE VENTILATION SYSTEM FAILS, WORK MUST BE STOPPED IMMEDIATELY!

⚠ DO NOT STORE ANY FLAMMABLE SUBSTANCES, EMPTY COATING SUBSTANCE CONTAINERS OR OTHER MATERIALS THAT HAVE BEEN IN CONTACT WITH THE COATING SUBSTANCE (PAPER, CLOTHS ETC.) WITHIN OR IN THE WORKING ZONE.

⚠ WHEN USING THE MOTOR IN POTENTIALLY EXPLOSIVE AREAS, YOU MUST FIT FILTERS/SOUND ABSORBERS ON THE OUTLET PORTS OF THE MOTOR.

⚠ DO NOT USE HALOGENATED DETERGENTS. CHEMICAL REACTIONS MAY CAUSE EXPLOSIVE AND CAUSTIC COMPOUNDS!

⚠ IN THE WORKING ZONE, AVOID OPEN FLAMES AND RED-HOT COMPONENTS AS WELL AS EQUIPMENT, TOOLS AND PARTS THAT CAN CREATE IGNITABLE SPARKS.

⚠ HANG UP “NO SMOKING” SIGNS IN A 5 METRE RADIUS OF THE WORKING ZONE. MAKE FIRE EXTINGUISHERS AVAILABLE IF THESE ARE NOT ALREADY IN PLACE!

⚠ THE STIRRER MUST BE FITTED WITH A LOCKING DEVICE TO ENSURE THAT THE STIRRER CAN ONLY BE SWITCHED ON IF THE STIRRER SHAFT IS IN THE CONTAINER.

⚠ COMPLY WITH ALL NATIONAL AND REGIONAL WATER PROTECTION REGULATIONS.

COMPLY WITH ALL NATIONAL AND REGIONAL WASTE DISPOSAL REGULATIONS.

2.3 Important when using in the food and pharmaceutical sector:

⚠ USE A FOOD GRADE OIL WITH VISCOSITY CLASS HL 32 TO LUBRICATE THE STIRRER MOTOR.

⚠ COMPLY WITH THE OFFICIAL AND IN-HOUSE HYGIENE REGULATIONS AND GUIDELINES!

3. Installation

ℹ *The motor is designed for an operating pressure of max. 6-7bar. Hose length max. 3m. If hoses are longer than this, you must take the resulting pressure loss into account.*

- Screw the stirrer firmly to the container cover
- Screw the shaft with stirrer blade to the gear rim of the motor
- Connect the compressed air feed

Fit a suitable shutoff device (ball valve or similar) in the compressed air feed line for easy switching on and switching off of the motor.

Fit a suitable compressed air regulator with pressure gauge for speed adjustment in the compressed air feed line.

4. Mounting of the container

Containers must be mounted in such a way that:

- there is no risk to employees or third parties
- they are accessible for regular inspections
- the rating plate is easily visible
- the container can be operated from a safe position
- they are protected against external mechanical influences
- they are protected against unauthorised access/tampering

5. Start-up and maintenance

Before connecting the motor, you should thoroughly blow out the compressed air line and lubricate the compressed air connection using a few drops of low-viscosity resin-free and acid-free pneumatic oil.

The compressed air motor must be operated using processed, dried compressed air (air quality in accordance with DIN ISO 8573-1: quality class 4). We advise you to use a maintenance unit but at least a mist lubricator.

The maintenance unit must be positioned as close as possible to the motor.

The compressed air motor will enjoy an optimum service life if it is operated with 50mm³ of resin-free and acid-free pneumatic oil per m³ compressed air. (One drop is equivalent to approx. 15mm³)

Inadequate lubrication results in rapid wear and reduced output!

If neither a maintenance unit nor a mist lubricator is present, you must take note of the following:

- drip approx. 10 drops of oil into the compressed air connection every two operating hours
- drain the water out of the compressed air line every day
- following lengthy operating breaks, pour a small amount of petroleum into the compressed air connection, run the compressed air motor for a short period, then lubricate as usual
- avoid lengthy no-load operation

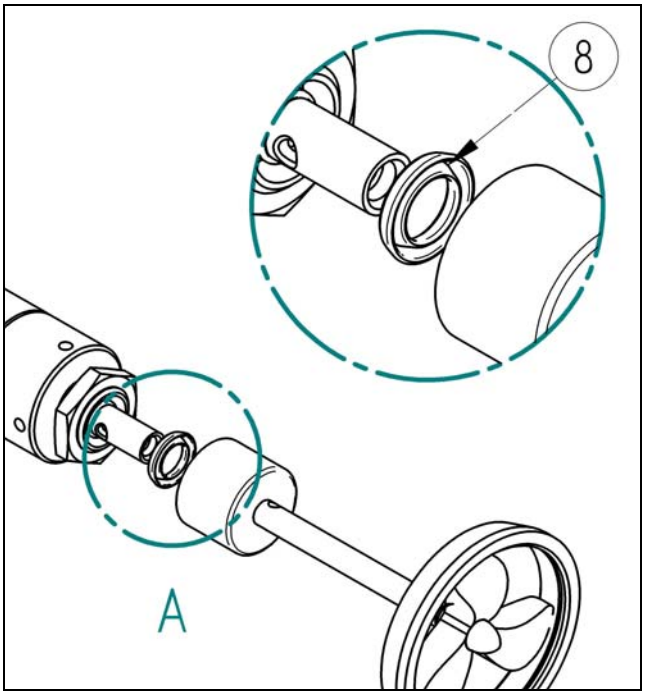
6. Regular checks

In order to maximise the service life of the motor, you should conduct a maintenance routine after 12 months or 500 operating hours. The maintenance intervals should be shorter if the motor is used under extreme conditions. We recommend that the maintenance work be performed by our service technicians. If you perform maintenance yourself, you should lubricate the planetary gear, the bearings and the gaskets of the motor using a resin-free and acid-free grease (NLGI class 2, saponification type: lithium, dropping point 185°C, worked penetration 265-295).

- Check the shaft seal (item 8) for seal tightness at least every 500 operating hours and replace if necessary.

Ensure that the shaft seal is mounted in the correct position (see illustration, item 8)!

- Check the room ventilation system regularly to ensure that it is working properly
- Regularly check the proper function of the earth connection of the container and the stirrer
- Clean the stirrer and the container on a regular basis



7. Technical data

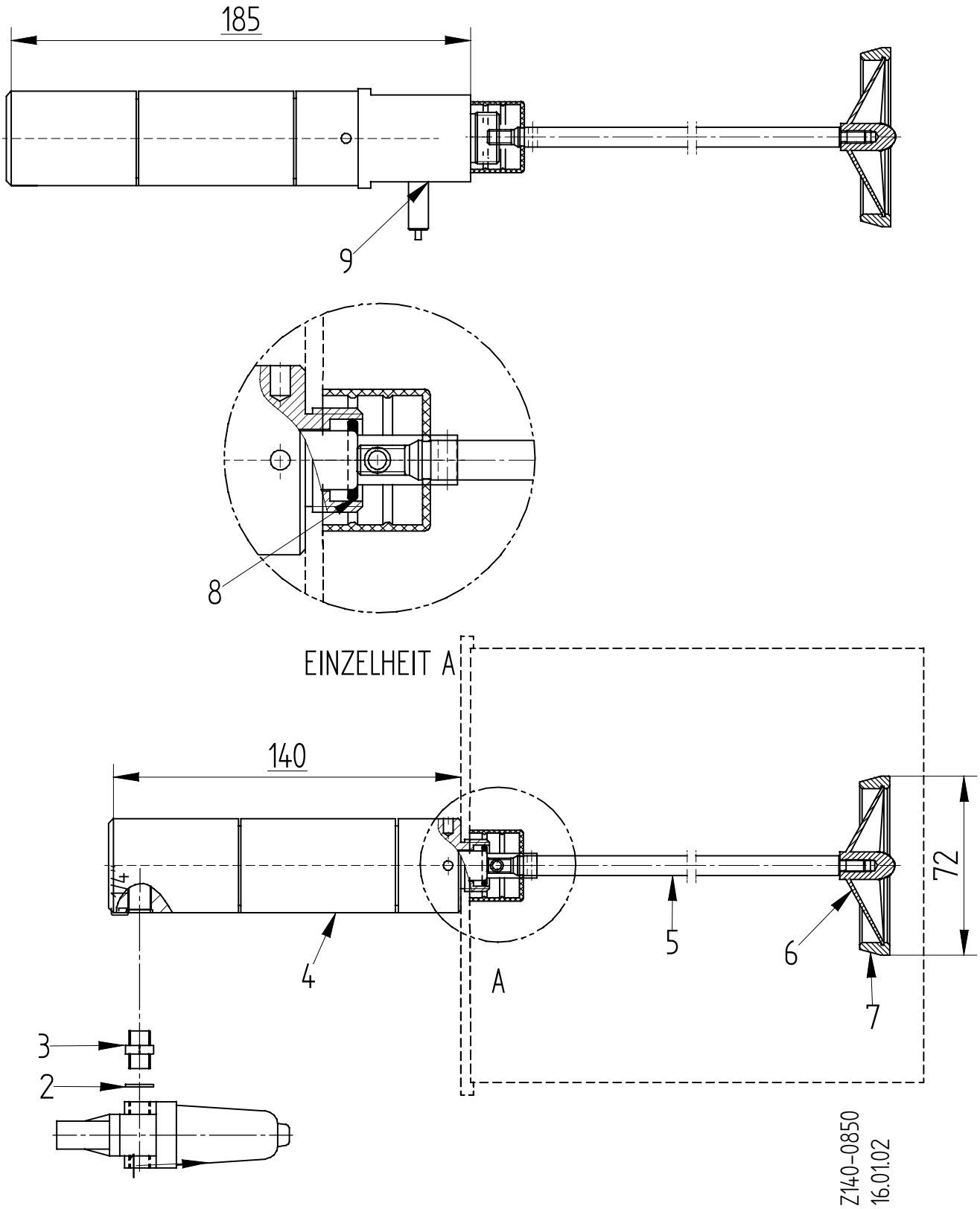
Maximum operating pressure	6.3bar	Speed calculation	
Compressed air quality	filtered <40µm, lubricated	Inlet air pressure in bar	Revolutions in rpm
No-load speed	2,000 min^{-1}	0.2	230
Load speed	1,000 min^{-1}	0.4	460
Load torque	1.8Nm	0.5	560
Max. torque	2.8Nm	1.0	920
Output	0.22KW	1.5	1,160
Air consumption, no load	550l/min	6.3	2,200
Air consumption, load	420l/min	*Data calculated in no-load mode*	
Direct of rotation	clockwise	*Air consumption in no-load mode approx. 540l/min*	
Connection thread	G ¼" female		
Recommended air feed	min. NW 6		
Sound level	67-69dB(A)		
Ambient temperature	0 ... +50°C		
Data calculated using a hose length of 100 cm, hose diameter 9 mm and operating pressure 6.3bar			

8. Accessories

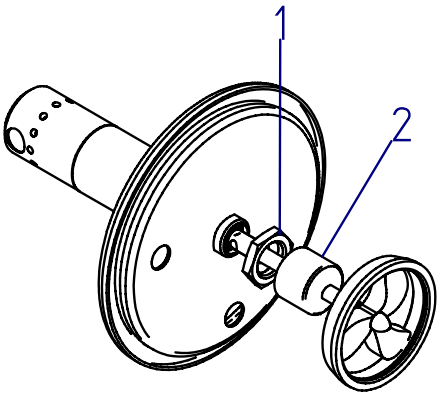
Sensor for speed measurement
Inductive proximity switch, IP 67, explosion-protected version, switching frequency 5,000Hz, fitted in add-on housing (item 9)

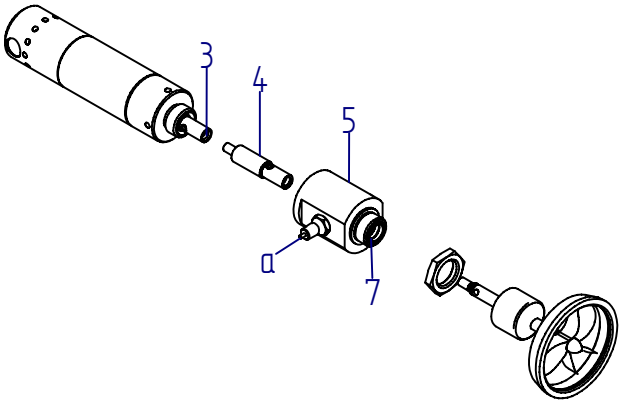
9. Spare parts list

Item	Designation	Article no.	Material
1	Compressed air mist lubricator with plastic container	030-4011	Plastic
2	Gasket for double nipple	010-0174	584 Fibre
3	Double nipple (for direct connection to the mist lubricator on the compressed air motor)	030-2235	400 Brass
4	Compressed air motor with gasket, item 8	080-2865	
5-7	Stirrer shaft with stirrer blade for 2-litre stainless steel container	080-0221	
5-7	Stirrer shaft with stirrer blade for 5-litre stainless steel container	080-0222	
5-7	Stirrer shaft with stirrer blade for 7.5-litre stainless steel container	080-0224	
5-7	Stirrer shaft with stirrer blade for 10-litre stainless steel container, type 5707	080-1745	
5-7	Stirrer shaft with stirrer blade for 10-litre stainless steel container, type 5710	080-0223	
5	Stirrer shaft for 2-litre stainless steel container	040-0135	1.4305 (stainless steel)
5	Stirrer shaft for 5-litre stainless steel container	040-0136	1.4305 (stainless steel)
5	Stirrer shaft for 7.5-litre stainless steel container	040-0138	1.4305 (stainless steel)
5	Stirrer shaft for 10-litre stainless steel container, type 5707	040-3228	1.4305 (stainless steel)
5	Stirrer shaft for 10-litre stainless steel container, type 5710	040-0137	1.4305 (stainless steel)
6-7	Stirrer blade with protective ring	080-0237	570 PA, 571, PA6
6	Stirrer blade without protective ring	030-1933	570 PA
7	Protective ring for stirrer blade	040-0866	571-PA6
8	Shaft seal	010-0190	
9	Connection housing for sensor for speed measurement	200-0262	

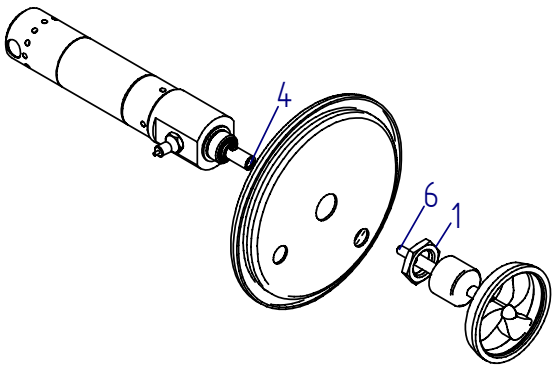

185
9
8
EINZELHEIT A
140
14
4
A
5
6
7
72
3
2
Z140-0850
16.01.02

Retrofitting of RL 10 stirrer with connection housing for speed measurement





a) optional: explosion protected stainless steel sensor for speed measurement



- Remove the stirrer from the container cover
- Pull the overflow nozzle (2) downwards and loosen the nut (1)
- Screw the shaft (4) of the connection housing (5) to the shaft (3) of the stirrer
- Route the shaft (4) through the connection housing (5) and screw the connection housing to the stirrer. Make sure you do not damage the gaskets (7) during this process!
- Screw the shaft (4) of the connection housing to the shaft (6) of the stirrer blade
- Screw the connection housing (5) with nut (6) to the container cover
- Set the overflow nozzle (2) back to its original position

EC MANUFACTURER DECLARATION

in acc. with Annex II B of the EC Machine Directive 98/37/EC

Krautzberger GmbH
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We hereby declare that the following product

Designation	Compressed air mini stirrer
Unit no.	6313-000
Function	pneumatically operated stirrer

is designed for mounting in closed containers. Start-up of the system is prohibited until it has been established that the entire system complies with the provisions of the EU Machine Directive 98/37/EG.

The following harmonised EU standards were applied:

- DIN EN 292 Parts 1 and 2
- DIN EN 1050
- DIN prEN 12757-1 June 1997

The following national standards were applied:

- BGV A1
- VBG 5

Date / Signature	November 14, 2000	
Details of signee	Head of Design	M.Stoffels