

# Operating Manual

## Rotary Plate DT1600

### Manufacturer

#### ULMER GmbH

Auf den Lüppen  
35745 Herborn – Hörbach  
Germany

Telephone: +49(0)2772/51000  
Fax: +49(0)2772/51677  
Email: info@ulmer-gmbh.de  
Homepage: www.ulmer-gmbh.de

Amtsgericht Herborn HR 191  
Managing directors: Siegfried Ulmer  
Werner Ulmer

### Machine Type and Specifications

**Machine type:** Rotary plate DT1600  
**Drive:** Three-phase drive  
**Speed:** up to 60 m/minute  
**Length:** 2.000 mm  
**Width:** 1.600 mm  
**Height:** 700 mm (top edge of control cabinet) plus output arm  
**Weight:** approx. 220 kg  
**Electrical connection:** 230 V/50 - 60 Hz /10 A

### Delivery

Immediately after unpacking, check the rotary plate DT1600 for transport damage, such as distortion and/or loose parts. If damage is detected: Immediately contact **ULMER GmbH**.

**Important! Do this also if the packing is damaged!**

### Scope of Supply

- Rotary plate DT1600
- Operating Manual



### Setup

The rotary plate must be setup on a level surface.

### Electrical Connection

The rotary plate DT1600 must be connected to a properly connected power socket with protective earth conductor (230 V/50-60 Hz), using the installed plug. The line fuse must not exceed 10 A.

### Linkage

When the rotary plate DT1600 is operated in conjunction with other machinery, the following connections for linkage must be achieved:

- EMERGENCY STOP signal from external machine
- EMERGENCY STOP signal to external machine

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info@schlemmer.com  
www.schlemmer.com

## Application and Processing Instructions

The rotary plate DT1600 is designed to wind up corrugated tubing. During operation, the rotary plate will automatically increase or reduce its winding speed as needed. This will allow to place the corrugated tube in "Layers" in the transport carton. Be sure to position the carton at the center of the rotary plate (stop rail).

Note! Applications not here listed must be approved in writing by ULMER GmbH.

We are pleased to respond to your further questions.

## Safety Instructions

- The rotary plate must be set up safely on a level surface.
- Do not put objects onto the machine.
- Be sure to link the rotary plate DT1600 with subsequent machinery (sockets at the control cabinet).
- Before linking it to other machinery, please contact ULMER GmbH.
- Before starting maintenance work, separate the machine from the power supply.
- Protect the unit from moisture and do not operate it in wet rooms.
- Have transport to another site in your works performed by trained specialists.
- During operation, do not reach with your hands or objects into the danger area of the rotary plate.
- Do not stand on the rotary plate while it is operating.

## Description of Operating Elements

### Red push-button STOP

The rotary plate stops within the time defined with the frequency converter parameters.

### Green push-button START

The rotary plate is set to the ready status and accelerates during the set acceleration time to the nominal speed. When the set speed is reached, the timer relay is activated and the rotary plate speed is reduced continuously during the set time. After time out, the speed will increase again.

### Potentiometer FEED

Use this potentiometer to set the maximum speed to be reached.

### Black push-button TOUCHControl

of rotation, the rotary plate will rotate at the set slow speed as long as you keep this button pressed **Selector switch SENSE OF ROTATION** This switch allows you to select the sense of rotation of the rotary plate.

### Timer relay RETURN TIME

The relay defines the time during which the rotary plate is to operate at lower speed. After time-out of this time, the rotary plate will accelerate to the original setpoint.

## Taking into Service and Operation

- Switch the rotary plate DT1600 on using the main switch.
- By pressing the push-button TOUCH Control, turn the rotary plate until it has reached the feed position for the carton.
- Position the carton at the centre of the rotary plate (stop rails).
- Select the sense of rotation at the selector switch.
- Set the speed at the potentiometer FEED.
- Feed the material to the carton.
- Switch the rotary plate on by pressing the green push-button START.

The rotary plate now winds up the corrugated tube fed.

## Maintenance and Care

The rotary plate DT1600 requires little maintenance. Only ensure cleanliness and correct operation.

**Note! Do not use aggressive solvents for cleaning!**

**Safety instruction! Check and clean the rotary plate only when it is disconnected from power!**

## Temporary De-Commissioning

When decommissioning the rotary plate DT1600 disconnect the machine from the power supply and cover it to protect it from dust, moisture and dirt.

## Terminal Chart

Designation in diagram	Connection	Terminal number	Connection	Designation in diagram
Supply	PE	PE		
Supply	L1	L1	1	F 1.11
Supply	N	N	3	F 1.11
EMERGENCY STOP from customer		1	12	S 1.61
EMERGENCY STOP from customer		2	A1	K 1.61
EMERGENCY STOP from customer		3	21	S 1.61
EMERGENCY STOP from customer		4	22	S 1.61
External stop		5	34	S 3.41
External stop		6	18	A 4.21
External stop		7	17	A 4.21
External stop		8	A1	K 2.31

## Red Checklight is not on after Power-Up

- Line fuse on sitedefective
- Circuit-breaker F1.11 has cut out
- Circuit-breaker F1.31 has cut out
- Power supply unit G1.31 defective
- Fuse F1.41 defective
- Failure of frequency converter A4.21

Consult the operating instructions of the manufacturer

## Spare Parts List, Electrical

Design	Artikel	Type designation	Supplier	Location	Article no.
A 4.21	Frequency converter	SK750/1FCT	Nordac	S	
A 4.21	Operating panel	mc	Nordac	S	
F 1.11	Circuit-breaker	10 A/1polig	Siemens	S	
F 1.31	Circuit-breaker	2 A/1polig	Siemens	S	
F 1.41	Fuse holder	282-120	Wago	S	
F 1.41	Fine fuse	1 A/5x20			
G 1.31	Power supply unit	NTG24-1.00	Konzept	S	
H 3.21	Light bulb	BA9/30VDC	Telemecanique	S	
H 3.21	Lamp socket	ZBV 6	Telemecanique	S	
H 3.31	Light bulb	BA9/30VDC	Telemecanique	S	
H 3.31	Lamp socket	ZBV 6	Telemecanique	S	
K 1.61	Power contactor	DIL-EM-10G	Moeller	S	
K 2.31	Relay	55.34.9.024.0090E	Finder	S	
K 2.31	Relay socket	94.84.1	Finder	S	
K 2.41	Relay	55.34.9.024.0090E	Finder	S	
K 2.41	Relay socket	94.84.1	Finder	S	
K 2.51	Timer relay	KOL 111	SAIA	S	
K 2.71	Timer relay	GT3A-4AD24-MK643	IDEC	S	
K 2.71	Installation frame	RTB-G01	IDEC	S	
K 2.71	Connecting socket	SR3P-05E	IDEC	S	
K 3.41	Relay	55.34.9.024.0090E	Finder	S	
K 3.41	Relay socket	94.84.1	Finder	S	
K 3.51	Relay	55.34.9.024.0090E	Finder	S	
K 3.51	Relay socket	94.84.1	Finder	S	
M 4.21	Three-phase drive Gearbox	0,55 kW	Getriebebau NORD	DT	
Q 1.11	Main switch	KG20A T103/04 FT22	Kraus & Naimer	S	
R 4.51	Potentiometer	10k Ohm	Rossmannith	S	
R 4.51	Pot drive	ZB5 AD912	Telemecanique	S	
R 4.51	Label carrier	ZBZ 35w	Telemecanique	S	
S 1.61	EMERGENCY STOP button	ZB5 AS844	Telemecanique	S	
S 1.61	Mounting flange	AZ 009	Telemecanique	S	
S 1.61	Contact element 1Ö	ZBE 102	Telemecanique	S	
S 1.61	Contrast label	ZBY 9230	Telemecanique	S	
S 2.21	Luminous push-button, red	ZB5 AW34	Telemecanique	S	
S 2.21	Mounting flange	AZ 009	Telemecanique	S	
S 2.21	Contact element 1Ö	ZBE 102	Telemecanique	S	
S 2.21	Label carrier	ZBZ 35	Telemecanique	S	
S 2.31	Luminous push-button, green	ZB5 AW33	Telemecanique	S	
S 2.31	Mounting flange	AZ 009	Telemecanique	S	
S 2.31	Contact element 1S	ZBE 101	Telemecanique	S	
S 2.31	Label carrier	ZBZ 35	Telemecanique	S	
S 3.41	Selector switch	ZB5 AD2	Telemecanique	S	
S 3.41	Mounting flange	AZ 009	Telemecanique	S	
S 3.41	Contact element 1S	ZBE 101	Telemecanique	S	
S 3.41	Contact element 1Ö	ZBE 102			
S 3.41	Label carrier	ZBZ 35	Telemecanique	S	
S 4.71	Push-button, black	ZB5 AA2	Telemecanique	S	
S 4.71	Mounting flange	AZ 009	Telemecanique	S	
S 4.71	Contact element 1S	ZBE 101	Telemecanique	S	
S 4.71	Label carrier	ZBZ 35	Telemecanique	S	
1 Stück	Control cabinet	AE1038/500	Rittal		

### Rotary Plate cannot be started (red checklight is on)

Switch-on relay K2.31 faulty

### Rotary Plate always runs at the same speed

- Connection between frequency converter and potentiometer faulty
- Timer relay K 2.71 faulty
- Warning message of frequency converter A4.21

Consult the operating instructions of the manufacturer.

### Rotary Plate shuts off automatically

Failure of frequency converter A 4.21  
Consult the operating instructions of the manufacturer.

## Parameterliste Frequenzumrichter Drehteller DT1600

Parameter	Function	Adjustable range	Set value	OK
P002	Hochlaufzeit	0 ... 650.0 sec.	32 sec.	
P003	Rücklaufzeit	0 ... 650.0 sec.	32 sec.	
P006	Frequenz Sollwertauswahl	0 ... 2	1	
P007	Tastaturbedienung	0 ... 1	0	
P009	Schlüsselparameter	0 ... 3	0-3	
P013	Maximal Frequenz	0 ... 650.0 Hz	97 Hz	
P022	Maximal Frequenz	0 ... 650.0 Hz	97 Hz	
P031	Tippsollwert rechts	0 ... 650.0 Hz	20 Hz	
P032	Tippsollwert links	0 ... 650.0 Hz	20 Hz	
P033	Hochlaufwert Tippsollwert	0 ... 650.0 Hz	8 Hz	
P034	Rücklaufwert Tippsollwert	0 ... 650.0 Hz	8 Hz	
P051	Auswahl der Steuerfunktion	0 ... 17	2	
P052	Auswahl der Steuerfunktion	0 ... 17	1	
P053	Auswahl der Steuerfunktion	0 ... 17	8	
P054	Auswahl der Steuerfunktion	0 ... 17	7	
P055	Auswahl der Steuerfunktion	0 ... 17	16	
P062	Auswahl der Relaisfunktion	0 ... 17	7	
P078	Statischer Boost	0 - 250 %	50 %	
P080	Cos. PHI	0 - 650.0	0,69	
P081	Motornennfrequenz	0 - 650.0 Hz	50 Hz	
P082	Motornendrehzahl	0 - 9999 U/min	1390 U/min	
P083	Motornennstrom	0.1 - 99.9 A	2,1 A	
P084	Motornennspannung	0 - 1000 V	230 V	
P085	Motornennleistung	0 - 50.0 kW	0.37 kW	
P086	Motorstrombegrenzung	0 - 250 %	170 %	

The Schlemmer Group is a global technology expert, which has focused on the development and production of industrial solutions, including the area of sensitive electrical installations. Drawing on 60 years of experience in cable protection, the Group has evolved into a leader

and comprehensive value added supplier. In addition to the traditional business segment Automotive, the Schlemmer Group operates in numerous other industries with its business segments Industry and Appliances.

### Any questions left?

Visit our website at [www.schlemmer.com](http://www.schlemmer.com) or write us an e-mail at [info@schlemmer.com](mailto:info@schlemmer.com)



## Declaration of Conformity

acc. to. EC Machinery Directive

We **ULMER GmbH**  
**Auf den Luppen**  
**35745 Herborn – Hörbach**  
**Germany**

herewith declare at our sole discretion that the product

**Rotary Plate DT1600**  
**XXXX / YYYY**

to which this declaration refers, is in conformity with the following standards and governing documents.

1. EC Machinery Directive, Annex 1  
Essential health and safety requirements relating to the design and construction of machinery.
2. DIN EN 292 parts 1 and 2  
Safety of machinery; basic concepts, general principles for design.
3. EN 60204/DIN VDE 0113  
Electrical equipment of machinery.
4. DIN EN 294  
Safety distances to prevent danger zones from being reached.

We herewith confirm that the evaluation procedure according to the

**Directive 89/392/EEC (06/14/1989), ammended by 91/368/EEC (06/20/1991), ammended by 93/68/EEC (08/30/1993)**  
Council directive on the approximation of the laws of the member states relating to machinery.

Has been followed and that the requirements of the standard

**DIN EN 45 014**  
General criteria for supplier's declaration of conformity

have been observed in the issue of the declaration of conformity.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Company stamp