

ARBOGA - DARENTH

OPERATING INSTRUCTIONS FOR COMPACTVEYOR

Customer:

Order No.:

Manufacturing No.:

Delivery date:

ARBOGA-DARENTH AB

Box 1022, S-732 27 ARBOGA, Sweden, Tel +46 589 - 12720, Fax +46 589 -16960
E-Mail: info@arbogadarenth.se

Contents

Foreword	2
Guarantee	3
Safety regulations	4
Operation	5
Installation.....	6
Maintenance instruction.....	6
Dismantling the screw	7
Dismantling the bearings.....	7
Lubrication	8
Trouble-shooting	8
Spare parts list.....	9
Exploded view	10
Enclosures	

Foreword

ARBOGA-DARENTH Conveyors guarantee good design, quality components and skilled labour plus years of experience in swarf handling and swarf crushing. All these abilities have been used to design a product with high reliability and long service life. We are convinced that your experiences will confirm your choice of ARBOGA-DARENTH Swarf Conveyors.

Length of life and reliability can, as with any machine tool, be prolonged with correct installation and correct maintenance. It pays off to follow our advice for maintenance.

This maintenance manual consists of instructions and spare parts list for your new ARBOGA-DARENTH Compactveyor. It also contains greasing instructions, exploded view and a simple schedule for trouble-shooting.

ARBOGA-DARENTH Swarf Conveyors are normally used in all machine tools on the market as well as in swarf handling systems which ARBOGA-DARENTH designs, sells and installs.

All Conveyors which leave our works are checked and do not need any additional maintenance other than stated in this manual.

For orders of spare parts and if you want to contact our engineers please find our phone number and address at the front page of this instruction.

Guarantee

All products from ARBOGA-DARENTH are guaranteed free from any fault in material and labour during a period of one year. One year consists of 365 calendar days or 1800 hours whichever ever occurs first. The guarantee period for our products starts the day the equipment is sent to the client and continues during one year as earlier described. This is due if our maintenance and control recommendations are followed.

The guarantee is not valid for incorrect erection, misuse, incorrect maintenance or if maintenance is not made due to our recommendations and accepted industry practice.

During the guarantee period and after written notice to us, we guarantee that all parts manufactured in our plant which are faulty regarding material or labour shall be replaced. We give no further guarantee either written or verbal for costs except material and man labour.

This guarantee or other guarantees from us do not cover:

1. Damage after the guarantee period is ended.
2. Damage caused by chemical reactions or wear due to the detail has been submitted to external influences.
3. Equipment damaged at delivery or by accidents.
4. Damage through misuse, incorrect use or feeding of the centrifuge or if recommended maintenance is not followed.
5. Damage to equipment which have been repaired or changed by others than by the one who has been acknowledged as our sole representative.
6. Wear parts

Safety regulations

- Electrical installations have to be done by qualified personnel only.
- At connection of voltage feed as well as at service and maintenance work on the conveyor the circuit breaker must be off.
- Test the emergency stop at installation and always when maintenance and service have been done.
- The conveyor must not be operated with the covers removed.
- The data sheet from the coolant supplier must be studied as parts from coolant can cause allergic reactions.

WARNING!

The floor around the conveyor might get slippery from coolant getting outside the machine.

Operation

ARBOGA-DARENTH Compactveyors are designed to handle a variation of material in different shapes and forms. They can convey short or long swarf, dry as well as wet.

The conveyor consists of the following main components:

- ◆ Conveyor frame
- ◆ Discharge hopper
- ◆ Drive system
- ◆ Coolant tank with pump (optional)

The Compactveyor is equipped with a watertight trough. In the trough there is a conveying screw, which not only conveys the swarf in the conveying direction, but also compresses it. Thereby you get swarf with the volume reduced to approx. 30% of the original swarf volume. This means easier handling, fewer swarf bins and less in-plant transportations.

The trough can be equipped with an optional coolant tank and pump. The power is transmitted from a gear over two chain reductions to the conveying screw. To prolong the life time, the screw is hardwelded in the front part. The screw is supported in the end part (see the exploded view).

ARBOGA-DARENTH Compactveyor is intended for all types of swarf. However, due to the design of the conveyor some swarf types have to be conveyed with caution.

Below you will find a specification of applications:

Steel swarf, swarf balls	Will do well
Steel swarf, short swarf	Will do well
Brass, swarf balls	Will do well
Brass, short swarf	The weight of short swarf can be so high, that the conveyor gets overloaded. The motor power can be increased or the hopper can be shortened.
Cast iron swarf, short	Like short brass swarf. During longer standstill (weekends) cast iron swarf can burn together if you use coolant. Before starting, these swarf has to be removed.

Installation

The conveyor will be delivered in two parts – complete trough and hopper.

The conveyor or the parts are selfsupporting and can be handled by a crane. See that the lifting equipment have approved quality and strength and that they are adapted in a safe way in the lifting lugs.

The conveyors can be placed on a plane ground without expansion bolts. No dynamic forces are being transmitted from the conveyor. You can, however if you wish, fasten the conveyor with expansion bolts.

Maintenance instruction

After approx. 3 months operation in one shift, the following items shall be checked:

- 1) The chain tension on the drive (NB! End and front)
- 2) That the screw is straight.
- 3) The oil level in the drive.

Bar ends with lengthes or diametres more than 20 mm must not be conveyed in the screw.

ARBOGA-DARENTH Compactveyor can compress and convey stampings up to 0.2-0.5 mm in size, depending on material and shape. Ask for advice!

Dismantling the screw

The screw needs normally to be dismantled only by two reasons.

- Extra hardwelding
- Exchange of bearings

Dismantle the screw as follows:

1. Dismantle cover (4)
2. Dismantle chain tensioner (30)
3. Dismantle chain (22)
4. Dismantle cap (28)
5. Dismantle bearing (27)
6. Loosen the stop screw in the bearing house (26)
7. Loosen the stop screw in the sprocket (25)
8. Loosen the stop screw in the sprocket (20)
9. Dismantle the lower hopper (10A)
10. Dismantle the shaft. NB! the shaft must not be damaged. Use brass mandrel!
11. Assembly takes place in the reverse order.

Dismantling the bearings

Dismantle the bearings as follows:

1. Dismantle cover (4)
2. Dismantle chain tensioner (30)
3. Dismantle chain (22)
4. Dismantle cap (28)
5. Dismantle bearing (27)
6. Loosen the stop screw in the bearing house (26)
7. Loosen the stop screw in the sprocket (25)
8. Loosen the stop screw in the sprocket (20)
9. Dismantle the lower hopper (10A)
10. Dismantle the shaft. NB! the shaft must not be damaged. Use brass mandrel!
11. Dismantle the bearing houses (18, 24, 26)

Lubrication

The gear manufacturer's specifications are to be followed (see enclosure).

NB! Some gears are delivered without oil. It is in these cases fully marked on the gear.

The gear manufacturer's specification is valid.

Drive and tail end

The bearings at the tail end (18, 24) are life-long greased and require normally no additional greasing. The drive shaft bearing (26) is to be greased every 6 months.

It is to recommend to grease the bearings additionally, when the conveyor is placed outdoors. Bearing grease of good quality is to be used.

Trouble-shooting

Problem	Cause	Measures
The screw does not move though that the motor is running	The chain (22) too loose tightened or worn	Tension the chain with the chain tensioner (30) or exchange it
The screw is jammed	Bar end has come into the screw	Remove the bar end
Swarf is not pressed up in the hopper	The screw is worn	Strengthen the screw by hardwelding in the front part

Spare parts list

NB! When ordering spare parts, please specify the following data:

- Type
- Serial number
- Denomination

Pos	Designation
1	Coolant tank
2	Sleeve
3	Trough
4	Cover
5	Swarf cover
6	Chain cover
7	Cover
8	Cover with pump flange
9	Plate
10	Discharge hopper, upper
10A	Discharge hopper, lower
11	Lock
12	Pump 55 l/min
13	Motor 1.5 kW with gear
14	Sprocket
15	Duplex chain
16	Sprocket
17	Shaft
18	Bearing house
19	Key
20	Sprocket
21	Stop screw
22	Triplex chain
23	Screw
24	Bearing house
25	Sprocket
26	Bearing house
27	Bearing
28	Cap
29	Packing
30	Chain tensioner (arm)
31	Chain tensioner (wheel)
32	Screw
33	Washer
34	Washer
35	Nut

Exploded view

