

Operating instructions
Progressive
Air - Oil Mix A

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1. General

Prior to start up, we recommend to read these operating instructions carefully as we do not assume any liability for damages and operating troubles which result from the nonobservance of these operating instructions!

Any use beyond the applications described in these operating instructions is considered to be not in accordance with the product's intended purposes. The manufacturer is not to be held responsible for any damages resulting from this: the user alone bears the corresponding risk.

As to figures and indications in these operating instructions we reserve the right to make technical changes which might become necessary for improvements.

The copyright on these operating instructions is kept reserved to the company DELIMON. These operating instructions are intended for the erecting, the operating and supervising personnel. They contain regulations and drawings of technical nature which must not – completely or partially - be distributed nor used nor communicated to others without authorization for competition purposes.

Company address, spare parts and service address

DELIMON

Arminstraße 15

D-40277 Düsseldorf

Phone : +49 211 77 74-0

Fax : +49 211 77 74-210

Branch office

Am Bockwald 4

D-08344 Grünhain-Beierfeld

E-mail : kontakt@bijurdelimon.com

www.bijurdelimon.com

2. Safety

These operating instructions contain fundamental instructions which are to be observed during erection, operation and maintenance. Therefore it is absolutely necessary for the fitter and the competent qualified staff/user to read these operating instructions before installation and start-up. The operating instructions must be available at all times at the place of use of the machine/system.

Not only the general safety instructions stated under this main point "safety" are to be observed, but also the other specific safety instructions stated under the other main points.

2.1 Identification of safety warnings in the operating instructions

The safety warnings contained in these operating instructions which, if not observed, may cause dangers to people, are specially marked with general danger symbols



safety sign according to DIN 4844, warning about a danger spot,

in case of warning about electric voltage with



safety sign according to DIN 4844, warning about dangerous electric voltage.

In case of safety instructions which, if not observed, may cause damage to the machine and its function, the word

ATTENTION

is inserted.

Instructions that are directly attached to the machine, as for example

- rotational direction arrow
- identifications for fluid connections

must be observed at all events and maintained in a fully legible condition.

- Note: There is an increased skid risk in case of spilled/leaked out lubricants. They are to be removed at once properly.



Safety sign according to DIN 4844, warning about skid risk.

2. Safety (continuation)

2.2 Personnel qualification and training

The operating, maintaining, inspecting and erecting personnel must have the appropriate qualification for such work. Area of responsibility, competence and supervision of the personnel have to be regulated by the user. If the personnel do not have the necessary knowledge, they have to be trained and given instructions. This can be effected, if necessary, by the manufacturer/supplier on behalf of the user of the machine. Furthermore, the user has to make sure that the contents of the operating instructions are fully understood by the personnel.

2.3 Dangers in case of nonobservance of the safety instructions

The nonobservance of the safety instructions may result in hazards to persons, to the environment and to the machine. The nonobservance of the safety instructions may lead to the loss of any claims for damages.

In detail, the nonobservance may for instance lead to the following hazards:

- Failure of important functions of the machine/system
- Failure of prescribed methods for maintenance and repair
- Hazard to persons by electrical, mechanical and chemical influences
- Hazard to the environment by the leakage of dangerous substances

2.4 Safety conscious working

The safety instructions stated in these operating instructions, the existing national regulations as to the accident prevention as well as possible internal working, operating and safety rules of the user are to be observed.

2.5 Safety instructions for the user/operator

- If hot or cold machine parts lead to dangers, these parts have to be protected against touch.
- Protection against touch for moving parts (e. g. coupling) must not be removed when the machine is in operation.
- Leakages (e. g. from the shaft seal) of hazardous goods to be delivered (e. g. explosive, toxic, hot) are to be removed in such a way that there is no danger to persons and environment. Legal rules are to be observed.
- Hazards caused by electrical power are to be excluded (for details please refer for instance to the rules of the VDE and the local power supply companies).

2.6 Safety instructions for maintenance, inspection and installation work

The user has to take care that all the maintenance, inspection and installation work is executed by authorized and qualified skilled personnel who have informed themselves adequately by thoroughly studying the operating instructions.

Basically, work on the machine is only to be carried out during shut-down. It is obligatory to observe the shut-down procedure described in the operating instructions.

Pumps or pump aggregates that deliver media being hazardous to health have to be decontaminated. Immediately after completion of the work, all safety and protective equipments have to be reinstalled and/or reactivated.

- Advice: When working with compressed air, do wear glasses.



(DIN 4844 – Use breathing mask)

- Advice: Observe EC-Safety Data Sheet for materials of consumption and additives used and use personal protective equipment.



(DIN 4844 – Use breathing mask)

Before recommissioning, observe the points stated in section “initial start-up”.

2.7 Unauthorized conversion and manufacture of spare parts

Conversion or modifications to the machine are only permitted when agreed with the manufacturer. Original spare parts and accessories authorized by the manufacturer serve to ensure safety. The use of other parts may render the liability for consequential losses null and void.

2. Safety (continuation)

2.8 Unacceptable modes of operation

The operational reliability of the machine supplied is only guaranteed if the machine is used in accordance with its intended purposes as per section 1 - General - of the operating instructions. The limiting values specified in the data sheet must on no account be exceeded.

2.9 Guidelines & standards

1., 2. and 3. guideline (see data sheet: R&N_2009_1_GB)

3.0 Notes on environmental protection and waste disposal

In correct operation with lubricants, the components are subject to the special requirements set by environmental legislation.

The general requirements for lubricants are specified in the respective safety data sheets.

Used lubricants are hazardous forms of waste and therefore require special supervision in the sense of § 41 paragraph 1 sentence 1 and paragraph 3 no. 1 of KrW-/AbfG (Closed-Loop Waste Management Act).

Used oils must be handled in compliance with AltölV (Waste Oil Ordinance).

The devices or components contaminated with lubricant must be disposed of by a certified waste management company.

Records of proper waste management must be filed in conformance to NachwV (Ordinance on Waste Recovery and Disposal Records).

GENERAL PRODUCT CHARACTERISTICS

- up to 24 outlets
- electronical monitoring, potential
- Metering volume 0.1 ccm / 0.2 ccm / 0.3 ccm
- Lubricant: oil – air – mix
- Air flow volume infinitely variable at controllable

A. DISTRIBUTOR TYPE PLA

B. NUMBER OF SEGMENTS

3 – 12 segments.

NB:

The distributor may be equipped with a maximum of only 4 segments or 8 outlets when using the air lubrication unit A in *SKYJET* systems with downstream lances or compact distributors.

A greater number of outlets would result in an under supply of compressed air to the lubricated areas in *SKYJET* systems and therefore to an excessively low system pressure.

C. INSPECTION

Stage A

D. MONITORING

with non-return valve, with motion indicator
with non-return valve, with monitoring switch

E. CODE OF OUTLETS

A segment
M segment
E or M segment

NB:

Where there is an uneven number of outlets, connections with an external bridge (a “b” connection) should be avoided as assembly of the air block will not otherwise be possible. For implementation purposes “c” connections or external pipe connections should be used where there is an uneven number of outlets.

F. ACCESSORIES

without
Long hole angle
Fitting kit 1 (1 – 4 outlets)
Fitting kit 2 (5 – 8 outlets)
Fitting kit 3 (9 – 12 outlets)
Fitting kit 4 (13 – 16 outlets)
Fitting kit 5 (17 – 20 outlets)
Fitting kit 6 (21 – 24 outlets)

3. Application

The air lubrication unit A is used for dosing and distributing the lubricant during the oil – air lubrication. Its main area of application is rolling contact bearing lubrication, for example in rolling mills, extrusion plants, wire mills and central lubrication systems.

4. Design and Function

Air lubrication units A consisting of 3 to 12 individual segments screwed together and sealed against each other. A corresponding screwed on air block facilitates the addition of an adjustable quantity of air to each distributor output. By way of standard the lubrication units are adjusted for use with the maximum possible air flow quantity.

The air lubrication units A have the task of distributing the quantity of oil added under pressure into part quantities in sequence to up to 24 possible outlets, and to add a defined quantity of air per outlet.

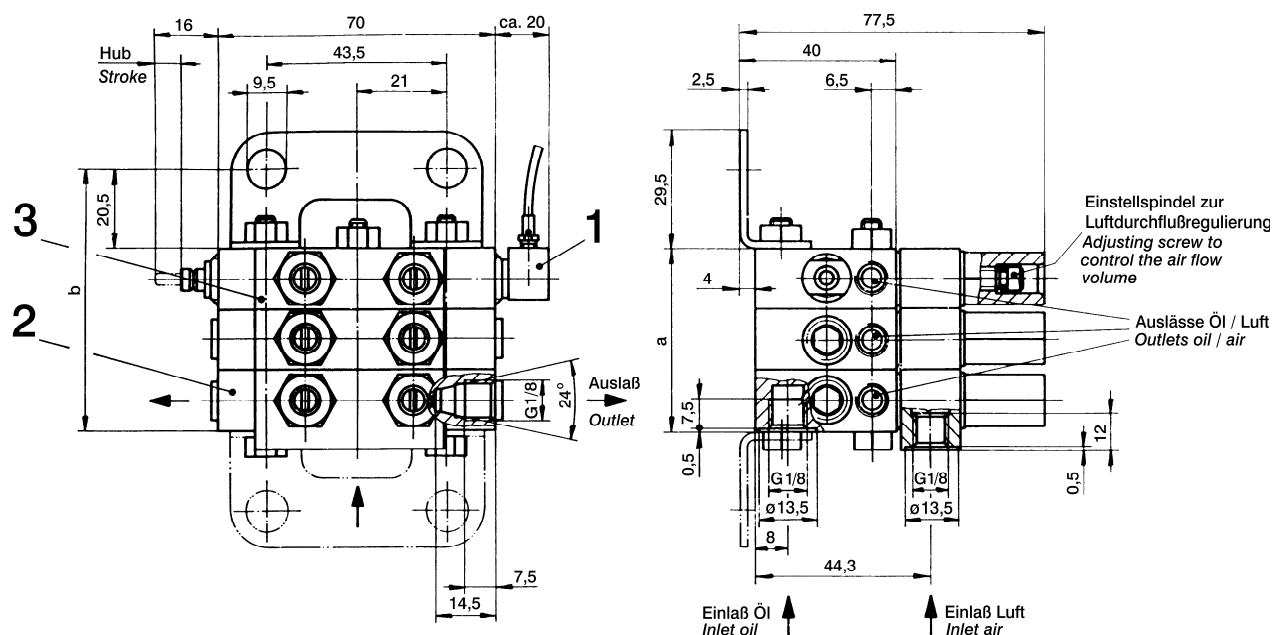
The air lubrication unit keeps working here for as long as lubricant is added. It is equipped with integrated check valves. These integrated check valves between delivery pistons and distributor outlets have the advantage that the compressed air is exclusively added to the outlets and does not interrupt the distributor circuit.

Visual monitoring of the lubrication unit function is guaranteed by two motion indicators in the end segment. The motion indicator can additionally be equipped with a monitoring switch for electrical monitoring and control of function.

The quantities of lubricant per outlet can be varied by the selection of various individual segments of the integrated progressive distributor. The air flow quantities per outlet are adjusted according to wear points of the rolling contact bearing by means of the adjusting screws in the air block. The resultant oil-air mixture is transported via piping and added to the respective lubricating points.

5. Specification

Service pressure oil/grease max.: 160 bar
 Service pressure air max.: 6 bar
 Response pressure distributor: approx. 10 bar
 Temperature range: 0° C up to + 80° C
 Media : mineral oils ISO VG 68 up to 1500 (DIN 51519) at 20° C ambient temperature
 compressed air, dried and cleaned
 Number of outlets: 1 up to 24
 Metered volume oil Öl: 0.1 cm³ / 0.2 cm³ or 0.3 cm³
 Metered volume air: see diagram
 Dichtungen : Pu, NBR
 Connecting thread inlet: G 1/8
 Connecting thread outlet: G 1/8

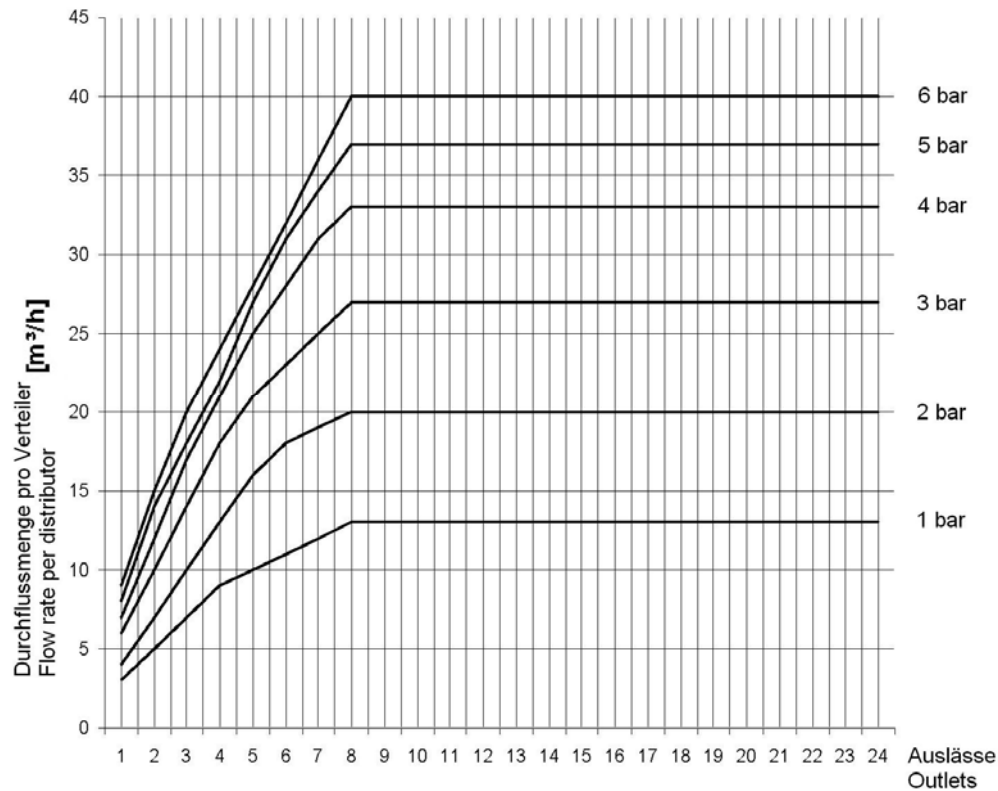


1. Monitoring switch
2. Distributor type ZP-A with non-return valve and motion indicator
3. Air dosing block

Dimensions (mm)		max. number of outletsl	Number of segments
a	b		
48	—	6	3 *
68	—	8	4 *
80	—	10	5
96	137	12	6
112	153	14	7
128	169	16	8
144	185	18	9
160	201	20	10
176	217	22	11
192	233	24	12

* see information in Points B and E

6. Flow characteristic



7. Plates

Type plate 26 x 52mm (75511-1311)

