

INSTRUCTIONS FOR USE

THIS MANUAL FORMS AN INTEGRAL PART OF THE FEEDER AND MUST BE KEPT WITH IT UNTIL DEMOLITION.

THESE INSTRUCTIONS APPLY TO FEEDER DESIGNED FOR INDUSTRIAL USE.

THE INSTRUCTIONS MUST BE COMPLETED WITH THE CURRENT LEGISLATIVE PROVISIONS AND TECHNICAL REGULATIONS AND DO NOT REPLACE ANY MACHINE REGULATIONS OR POSSIBLE ADDITIONAL DIRECTIVES, EVEN IF NOT LEGISLATIVE, ISSUED IN ANY CASE FOR THE PURPOSES OF SAFETY.

GENERAL SAFETY WARNINGS



THE FEEDER GET MOVING PARTS WHICH ARE DANGEROUS.
THEREFORE:



- INCORRECT USE
- REMOVAL OF THE GUARDS AND/OR DISCONNECTION OF THE PROTECTION DEVICES
- LACK OF INSPECTION AND MAINTENANCE

CAN CAUSE SERIOUS DAMAGE TO PERSONS OR THINGS

THE RESPONSIBLE FOR SAFETY MUST THEREFORE GUARANTEE THAT:

THE FEEDER IS MOVED, INSTALLED, STARTED UP, USED, SERVICED AND REPAIRED BY QUALIFIED PERSONNEL ONLY WHO MUST HAVE:

- SPECIFIC TECHNICAL TRAINING EXPERIENCE.
- KNOWLEDGE OF THE TECHNICAL STANDARDS AND APPLICABLE LAWS.
- KNOWLEDGE OF THE GENERAL NATIONAL SAFETY REGULATIONS, LOCAL AND INSTALLATION..

WORKS ON THE ELECTRICAL PARTS OF THE PUMP/FEEDER MUST BE AUTHORIZED BY THE RESPONSIBLE FOR SAFETY.

AS THE FEEDER IS DESIGNED TO FORM PART OF A SYSTEM, IT IS THE RESPONSIBILITY OF THE INSTALLER TO GUARANTEE THE WHOLE SAFETY, ADOPTING THE NECESSARY ADDITIONAL PROTECTIVE MEASURES.

INSTRUCTIONS FOR USE

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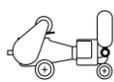
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INSTRUCTIONS FOR USE

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INSTRUCTIONS FOR USE

B TRANSPORT, STORAGE AND LIFTING

B.1 TRANSPORT

B.1.1 The pump is protected by its packing consisting of a hard base (pallet) and cardboard.

B.1.2 The packing materials are recyclable.



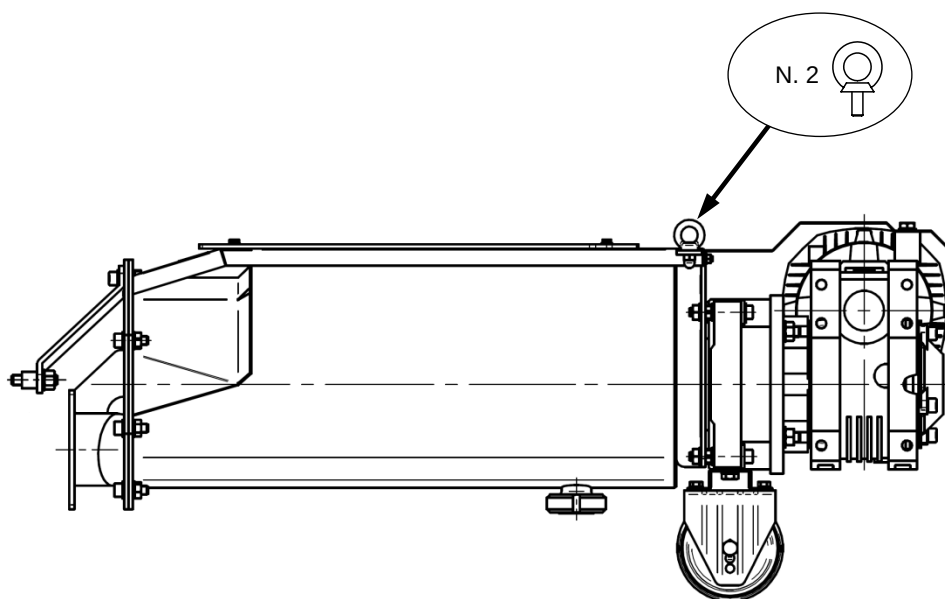
B.2 STORAGE

B.2.1 Open, exposed and excessively damp areas must not be used for storage.

B.2.2 For storage periods over 60 days, protect any coupling surface (flanges for gearbox or motors) with suitable anti-oxidizing products.

B.3 LIFTING

B.3.1 To lift the feeder, see the picture below.

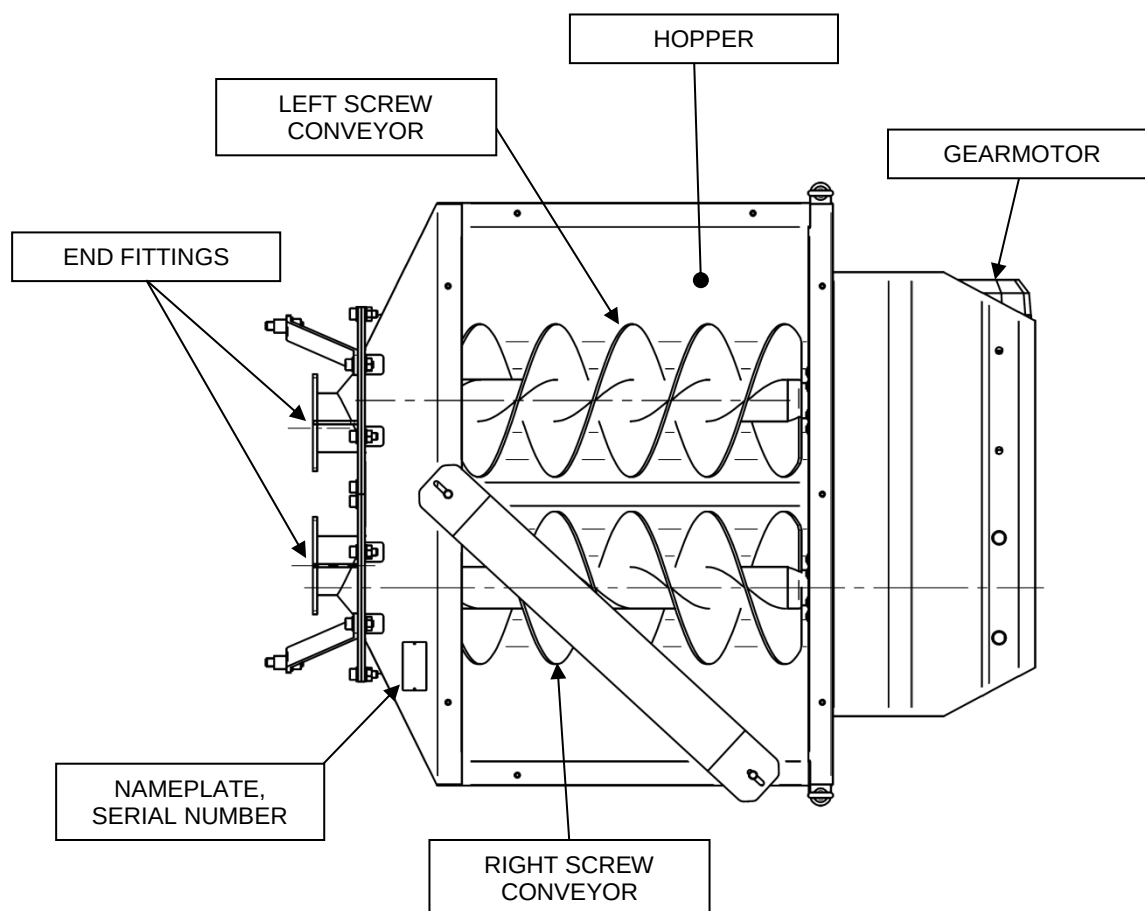


INSTRUCTIONS FOR USE

C GENERAL DESCRIPTION

C.1 FEEDER FOR ROTHO PERISTALTIC PUMP

The unit consists of the following main elements:



C.2 OPERATING PRINCIPLE

- C.2.1 The screw conveyor arrange and doses the product to the pump suction.
- C.2.2 The flow rate is proportional to the number of revolutions of the screw conveyor.
- C.2.3 Dry operation (empty pump) does not cause any damage.

INSTRUCTIONS FOR USE

C.3 WARNINGS



- C.3.1 The instructions given in this manual, whose failure causes a lack of safety, are identified by this symbol.

ISO 3864-B.3.1



- C.3.2 The instructions given in this manual where they are involved the electrical safety devices are identified by this symbol.

ISO 3864-B.3.6



- C.3.3 The instructions given in this manual where it has reported a probable residual risk, are identified by this symbol.



- C.3.4 The instructions given in this manual, whose failure compromises the correct functioning of the machine are marked with this symbol.

C.4 GENERAL DESCRIPTION

- C.4.1 The moving mechanical parts are protected by guards which can only be removed by tools.

- C.4.2 During use, all parts of the feeder must be correctly fitted.

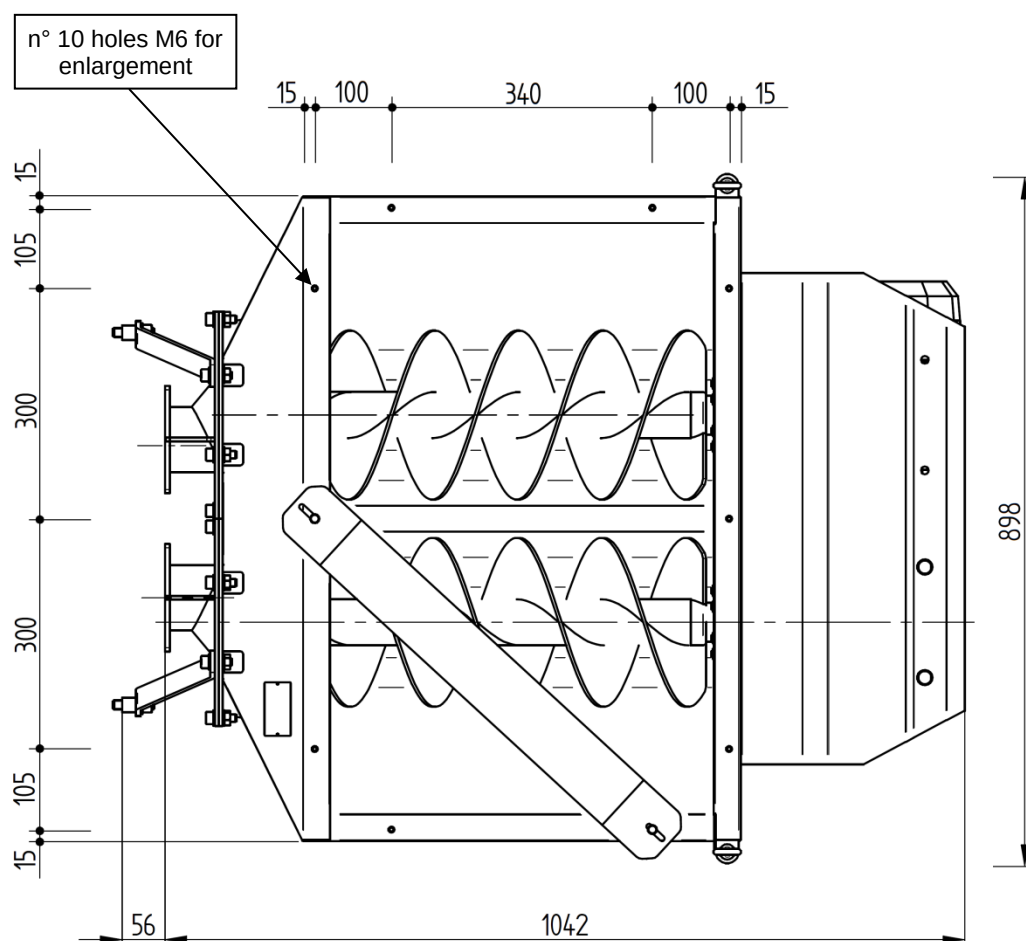
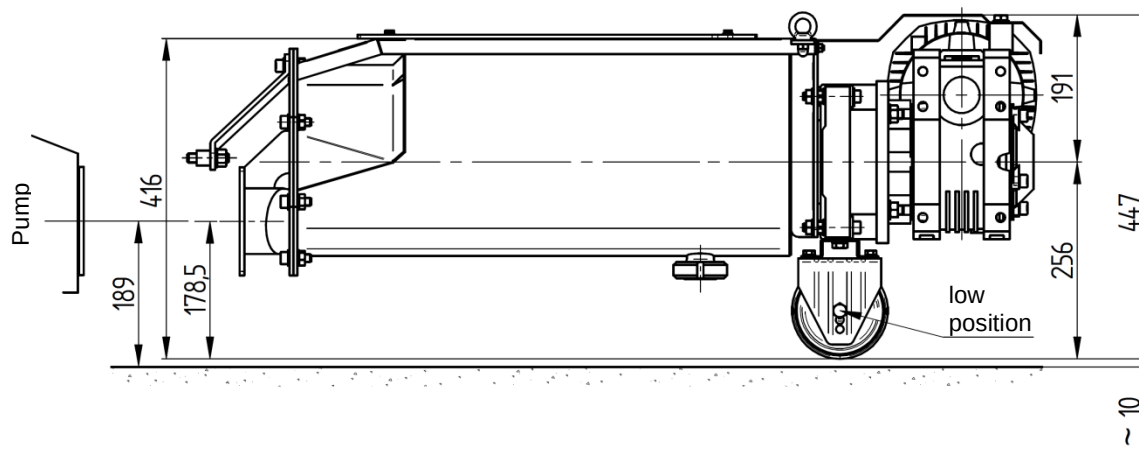
- C.4.3 The moving mechanical parts of the product are at high danger of crushing and cut.

- C.4.4 Reduction of such danger is obtained, sometime, only by opportune signals and instructions to operators.

- C.4.5 All operations requiring opening of the electrical control panel and/or opening of the motor terminal board box (electrical parts), must be carried out by trained personnel



C.5 DIMENSIONS



INSTRUCTIONS FOR USE

D INSTALLATION

D.1 PLACE FOR USE AND MAINTENANCE

The machine must be positioned to ensure easy access to the parts requiring regular and extra maintenance.

- D.1.1 The installation is made exclusively coupling the equipment to the right pump model.



D.2 CHECKS

- D.2.1 After removed the machine from its packing, check the machine has not been grazed or damaged. The packing is recyclable material.



- D.2.2 Check the main voltage corresponds to the motor voltage.

D.3 ELECTRICAL CONNECTION

- D.3.1 The electrical connection is made by the waterproof plug 3P+T 16A 400V (IEC 309) mounted on the cable of the equipment (Length = 1950mm), in the right socket provided on the electric panel pump.

- D.3.2 Works on the electrical parts, must be carried out with the machine at a standstill and disconnected from the main.



D.4 CONNECTION WITH RECEIVING PRODUCT INSTALLATION

- D.4.1 Given the danger of the moving mechanical parts, it needs to follow all the fixed instructions for the protection of the operators.



- D.4.2 For carrying out any special protections indicated in "D.5", to follow the directive UNI EN ISO 13857:2008



- D.4.3 To get the best efficiency of the feeder for peristaltic pump, places it in order the product drops at the beginning of the screw.

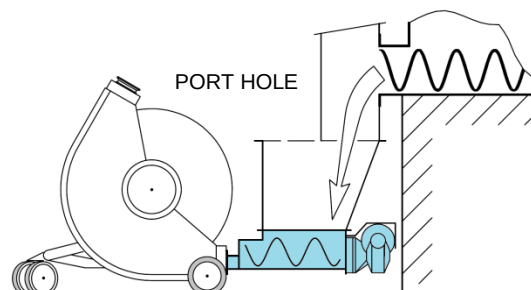


INSTRUCTIONS FOR USE

D.5 CORRECT PLACING FOR INSTALLATION

D.5.1 Sealed connection:

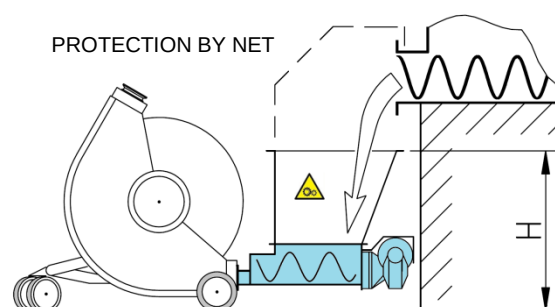
Arrange a port hole for inspection that can be opened by a suitable tool only.



D.5.2 Opened side with protection by net:

Arrange an enlargement to reach the height "H" and with right capacity to avoid any overflowing.

If the height "H" is lower than 1600mm, provide with protection by a net; it permits to work with safety avoiding any contact with moving devices.



Probable residual risks; add the right signals on the accessible sides of the feeder

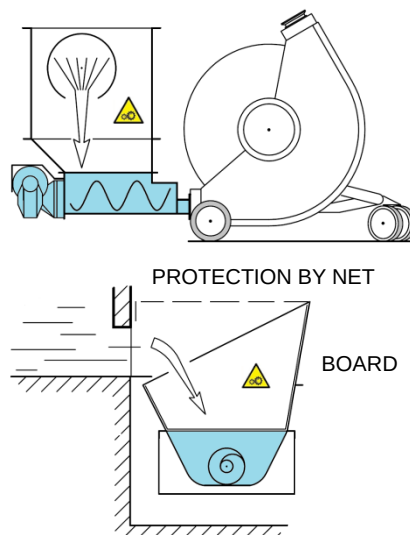


D.5.3 Pump with feeder placed for several uses put on the wall:

Arrange an "enlargement" in order to protect at least one side, to avoid the introduction of a foot inside the feeder.

Arrange a protection by net to avoid any contact with moving parts..

Forbid the entrance and exit of operators by the open side of the feeder even if it is electrically disconnected.



Probable residual risks; add the right signals on the accessible sides of the feeder



INSTRUCTIONS FOR USE

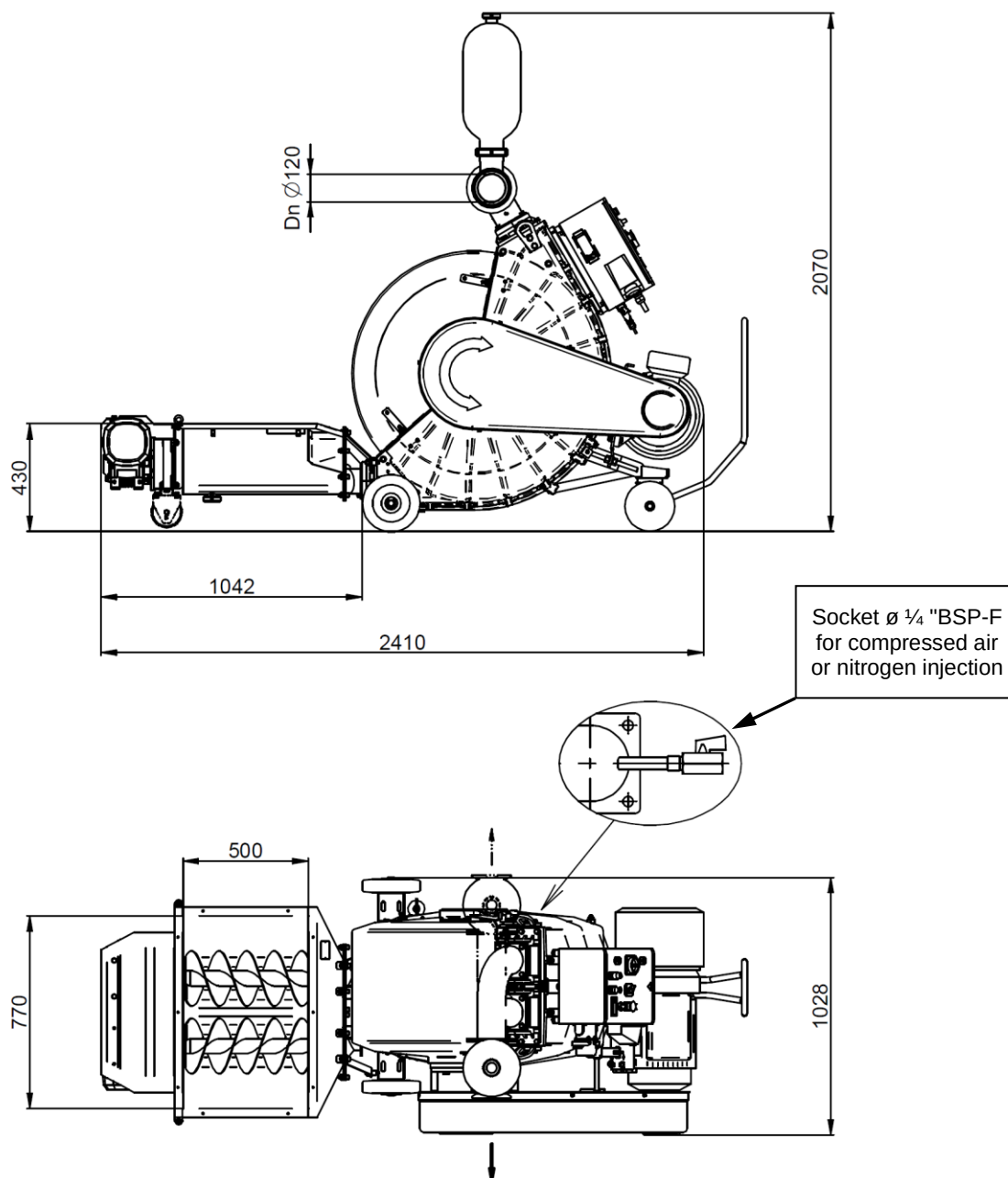
D.6 CONNECTION TO PUMP

D.6.1 The connection to the pump of the feeder requires:

Disassembling of the end fittings liquids (complete with dampener)

The mounting of the feeder at inlet connection

The mounting of the output connector, with bigger passage, adjustable in function of the positioning of the discharge pipe.



D.7 OPTIONAL

On request they can be supplied with the following option / accessory:

- Enlargement
- Kit front wheels
- Drain Manifold
- Drain valves

INSTRUCTIONS FOR USE

E INSTRUCTIONS FOR STARTING - RUNNING - STOPPING

E.1 STARTING

Before to start the pump, ensure that:

- E.1.1 The main voltage corresponds to the voltage of the motor and control panel;
- E.1.2 Check that the protections of the moving parts are mounted;
- E.1.3 The feeder is firmly connected to the pump;
- E.1.4 Check any electrical optional components are connected to the control panel and test the functionality.



E.2 RUNNING

- E.2.1 Start, reverse and stop buttons are those of the control panel pump.
- E.2.2 The feeder starts with the pump.
- E.2.3 The adjustment of the rpm feeder (flow rate), is proportional to those of the pump.

E.3 SUGGESTIONS ON PUMPING RED FERMENTED

E.3.1	BE SURE THE PIPING DIAMETER HAS THE SAME OR BIGGER DIMENSION OF THE PUMP OUTPUT
E.3.2	TO PUMP LIQUID TO LUBRICATE THE PIPING BEFORE TO PUMP THE RED FERMENTED
E.3.3	BE SURE THE PRODUCT FALLS WHERE THE SCREW BEGINS TO RUN, IN ORDER TO DOSE IN THE RIGHT WAY THE PRODUCT
E.3.4	RUN THE PUMP/FEEDER AT THE MAX SPEED AVAILABLE IF EQUIPPED WITH FREQUENCY INVERTER OR IN II SPEED IF EQUIPPED WITH MOTOR DOUBLE SPEED.
E.3.5	START THE PUMP/FEEDER AND ON THE SAME TIME ADD SOME LIQUID BY A TUBE OF DN 20mm
E.3.6	AT LEAST AND SOME COPRESSED AIR 2/3 BAR OR NITROGEN
E.3.7	WHEN THE PUMPING RUN WELL, TRY TO LOW GRADUALLY THE LIQUID INJECTION AVOIDING TO GET ANY CRITICAL POINT OF DRY PRODUCT.
E.3.8	BEFORE TO STOP THE PUMP/FEEDER REMIND TO CLEAN THE PIPING TO AVOID ANY PLUG FOR RESTART

INSTRUCTIONS FOR USE

E.4 WHAT NOT TO DO

- E.4.1 At the end of use, do not leave residual product in the feeder.
- E.4.2 Do not increase the setting of the motor protection beyond the limits specified on the rating plate.
If motor performance is insufficient, check the system data and contact the technical service.
- E.4.3 When cleaning the pump with a jet of water, do not turn it directly to the motor or electrical equipment.



E.5 STOPPING

- E.5.1 The pump stops by the pump control panel of the pump. Be careful when automatic systems are used (ex.: probes level), for which the machines during standby can automatically start.
- E.5.2 In case of stop, provide to stop the product feeding to the feeder to avoid the overflowing.



E.6 RESIDUAL RISK

The use of the feeder and the need for vents sampling and / or conveyor belts can determine the presence of residual risks for the accessing to dangerous area.

These residual risks can be eliminated with instructions to operators, maintenance and safety checks of the danger signals with appropriate reports.



INSTRUCTIONS FOR USE

F MAINTENANCE

**ANY ACTION ON THE MACHINE NEEDS TO BE DONE AT A STANDSTILL AND
DISCONNECTED FROM THE MAIN**

- F.1.1 By a schedule and maintenance plan, you can get the best use of the feeder at the lowest cost.
- F.1.2 To drain the feeder after cleaning, remove the cap under the hopper.
- F.1.3 Be careful during disassembly / reassembly not to damage the seals.
- F.1.4 Any operation inside the electrical control panel or in areas marked by the symbol on the side, it must be carried out by trained personnel only.



INSTRUCTIONS FOR USE

G PROBLEMS AND SOLUTIONS

PROBLEMS	CAUSES	SOLUTIONS
G1 THE PRODUCT MAKE THE "BRIDGE" AND THE PUMP DOESNT PRIME	Product too dry.	To add some liquid and/or inject compressed air or nitrogen by the socket output conn.
G2 INSUFFICIENT EFFICIENCY: THE PRODUCT PILES UP CLOSE TO THE PUMP ENTRANCE	Falling of the product too close the pump side	Follow the instructions in D.4.3
	Product too dry; too fast loading of the feeder	To add some liquid and/or inject compressed air or nitrogen by the socket output conn; to dose the product during loading of the feeder from the beginning of the screw conveyor
	Excessive wear on the tubular element	Replace the tubular element
G3 EXCESSIVE HEATING OF ELECTRICAL MOTOR: FIRSTLY CHECK THE ABSORPTION ON THE TREE PHASES AND COMPARE IT WITH THE VALUES ON THE MOTOR RATING PLATE	Too high pressure on output pump	To add some liquid and/or inject compressed air or nitrogen by the socket output conn; slower the rpm pump
	Drop in main voltage or unbalanced phases	Consult the technical service
	Insufficient ventilation	To check the fan is fitted on the motor shaft
G4 NOISES AND RATTLING INSIDE THE PUMP	Plug or narrowing on pump suction due to solid parts	Reverse the pump + feeder, in order to unplug, then start again; if the problem carries on, check the machine and eventually test if the pump primes. If it doesn't prime proceed with the tubular element replacement
G5 PUMP STARTS PRESSING THE "START BUTTON", BUT IT STOPS ON RELEASING.	The sensors give the signal of pump stop.	Check the optional sensors, and their electrical connections: - Leak detector - Pressure switch - Sensor closure - Sensor RRA system - Additional probes (see manual pump)

For any problems not included in the above list, contact our technical service.

INSTRUCTIONS FOR USE

M SPARE PARTS

M.1 HOW TO ORDER THE SPARE PARTS

To avoid misunderstandings and / or shipments of wrong parts, please fix the following identification data (position C.1 to see the data plate):

- Type of feeder
- Feeder serial number
- Drawing reference
- Code
- Description
- Quantity
- Type of shipment required

M.2 ORDER EXAMPLE

Type of feeder: DF or DF90

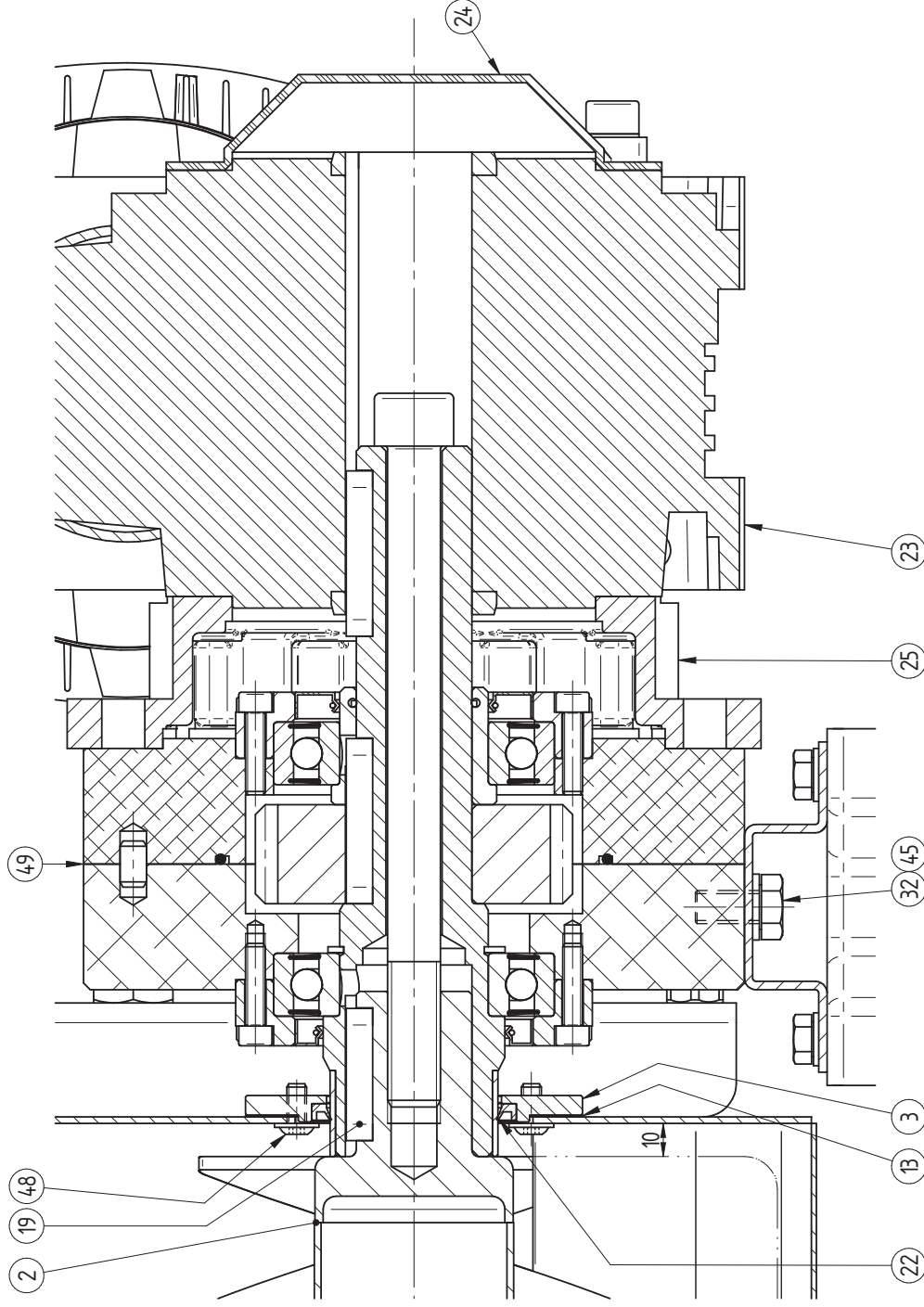
Feeder serial number : XXXXXX

Code	Description	Quantity
A7002505A	WHEEL REAR SUPPORT TR A20	N° 1
A9062502A	PACKING TR A20	N° 1

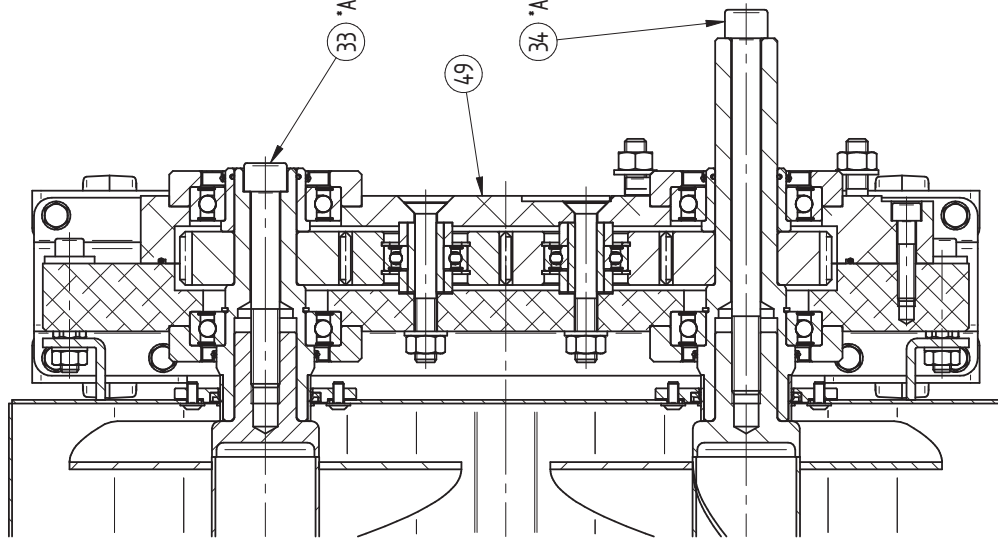
Type of shipment required: by carrier: YYYYYY

Component parts list and references see enclosed drawing:

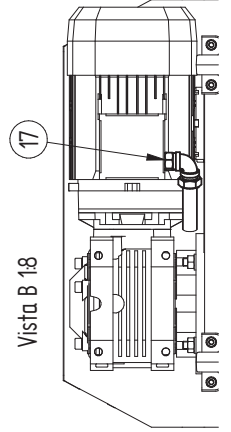
Sez. M-M 1:15



Sez. N-N 1:3



Vista B 18



	DISEGNATORE GV	CONTROLLO GV	SCALA Foglio 2 / 3	Formato A3	MASSA Kg 153.72	DATA 19/11/09
	DENOMINAZIONE /- TRAMOGGIA DF90 304 ST2 ENO A20 -01-	IN DATA 05/11/12	NEDIZ. COD. DISEGNO 01	KE4121101	A termine di legge ci riserviamo la proprietà del presente disegno e il diritto di divulgazione senza nessuna autorizzazione scritta	

/- TRAMOGGIA DF90 304 ST2 ENO A20 -01-
/- FEEDER DF90 304 ST2 ENO A20 -01-

Draw code
KE4I21101 ISSUE 01

EN

Pos	Descrizione (it)	Description (en)	Q.ty	Code
1	COCLEA A20 D220 SX	FEEDER LEFT SCREW A20 D220	1	A1012500A
2	COCLEA A20 D220 DX	FEEDER RIGHT SCREW A20 D220	1	A1012501A
3	COPERCHIO COCLEA TR A20	COVER FEEDER SCREW A20	2	A3002517A
4	TRAMOGGIA A20 D220 -IMBOCCO SDF90 DX	FEEDER A20-D220 RIGHT ENTRANCE SDF90	1	A5002506A
5	TRAMOGGIA A20 D220 -IMBOCCO SDF90 SX	FEEDER A20-D220 LEFT ENTRANCE SDF90	1	A5002507A
6	SUPPORTO RUOTA POST TR A20	SUPPORT REAR WHEEL TR A20	1	A7002505A
7	TIRANTE TR A20 -SDF/SDF90 CORTO	TIE ROD SHORT TR A20 -SDF/SDF90	2	A7002511A
8	PROTEZIONE COCLEA TRAM A20 DF	PROTECTION FEEDER SCREW A20 DF	1	A8022506A
9	TRAMOGGIA A20 D220 DF-DF90	FEEDER A20 D220 DF-DF90	1	A8042502A
10	BANDELLA DI SICUREZZA TRAM.SDF	SDF FEEDER SAFETY PROTECTION	1	A9001866A
11	TARGHETTA MATRICOLA si CE	SERIAL NUMBER PLATE "CE"	1	A9001953A
12	DISTANZIALE QUADRO ELETTRICO SF	SPACER FOR SF CONTROL PANEL	2	A9021213A
13	GUARNIZIONE PIANA TRAM A20	FLAT GASKET FEEDER A20	2	A9062502A
14	GOLFARE PER SOLLEVAMENTO M 8 M	RAISING RING M8 M	2	A9092501A
15	RUOTA PLS/PLS d125 SUPP FS G 0 INOX -lav-	WHEEL PLS/PLS d125 SUPP FS G 0 SS	2	A9092527A
16	ETICHETTA -BANDELLA SICUR.TRAM.	FEEDER SAFETY LABEL	1	ADV200101
17	CAVO PER TRAMOGGIA GUAINA SDF L=3400	SDF FEEDER CABLE L=340	1	CF0201003
18	MINUT EL FISSAGUAINA D25	FIXED SHEATH D25	2	EN0010001
19	LINGUETTA 10.8.40 A	KEY 10.8.40 A	2	GL010040B
20	MOTORE 04P KW 3 100 B140 2340	EL. MOTOR 04P KW 3 100 B140 2340 GR	1	GMBBE8840
21	OR d250 T3	O-RING d250 T3	2	GR00M0002
22	PARAOLIO G NBR 50. 62. 5	OIL SEAL G 50.62.5	2	GUGG50062
23	RID W 86 U i= 30 Pam100 B14 Pos.B3	REDUC. W 86 P1 i= 30 Pam100 B14 Pos.B3	1	N50000078
24	RID--COPERCHIO PROTEZ. W 86	RID-- W86 PROTECTION COVER	1	NC0000002
25	RID--FLG_U - W86 FC	RID--FLG_U - W86 FC	1	NF5000010
26	GIRELLO DIN 304 32 F	ROUND NUT DIN 304 32 F	2	RGD124000
27	GUARNIZIONE DIN SILICONE 32 M	SILICON GASKET DIN 32M	2	RHDX23000
28	TAPPO DIN 304 32 M	PLUG DIN 304 32 M	2	RUD123000
29	VITE TE UNI 5737 A2 M10x 60	SCREW TE UNI 5737 A2 M10x 60	2	S1AE06000
30	VITE TE UNI 5739 A2 M 6x 12	SCREW TE UNI 5739 A2 M 6x 12	4	S3AC01200
31	VITE TE UNI 5739 A2 M 8x 16	SCREW TE UNI 5739 A2 M 8x 16	8	S3AD01600
32	VITE TE UNI 5739 A2 M10x 20	SCREW TE UNI 5739 A2 M10x 20	2	S3AE02000
33	VITE TCE UNI 5931 8Zn M16x110	SCREW TCE UNI 5931 8Zn M16x110	1	S53L11000
34	VITE TCE UNI 5931 8Zn M16x200	SCREW TCE UNI 5931 8Zn M16x200	1	S53L20000
35	VITE TCE UNI 5931 A2 M10x 30	SCREW TCE UNI 5931 A2 M10x 30	16	S5AE03000
36	DADO ALTO UNI 5587 OT M12	NUT UNI 5587 OT M12	2	SA9F00000
37	DADO UNI 5588 A2 M 6	NUT UNI 5588 A2 M 6	2	SBAC00000
38	DADO UNI 5588 A2 M 8	NUT UNI 5588 A2 M 8	8	SBAD00000
39	DADO UNI 5588 A2 M10	NUT UNI 5588 A2 M10	18	SBAE00000
40	DADO CIECO UNI 5721 A2 M 8 Fil.Utile 10 MIN	NUT UNI 5721 A2 M 8	2	SFAD00000
41	VITE TC UNI 6107 cil. A2 M 5x 12	SCREW TC UNI 6107 A2 M 5x 12	2	SGAB01200
42	RONDELLA xTE UNI 6592 A2 M 5	WASHER xTE UNI 6592 A2 M 5	2	SMAB00000
43	RONDELLA xTE UNI 6592 A2 M 6	WASHER xTE UNI 6592 A2 M 6	4	SMAC00000
44	RONDELLA xTE UNI 6592 A2 M 8	WASHER xTE UNI 6592 A2 M 8	16	SMAD00000
45	RONDELLA xTE UNI 6592 A2 M10	WASHER xTE UNI 6592 A2 M 10	38	SMAE00000
46	RONDELLA xTE UNI 6592 A2 M12	WASHER xTE UNI 6592 A2 M12	2	SMAF00000
47	PRIG UNI 5911 A2 M12 x 54 12/18	PRIG UNI 5911 A2 M12 x 54 12/18	2	SUAF04218
48	VITE TCBEI UNI 7380 CON FLANGIA A2 M 6x 12	SOCKET BUTTON HEAD SCREW UNI 7380 A2 M 6x 12	12	SXAC00002
49	+ SCATOLA TRASMISSIONE TR A20 DF -01-	TRANSMISSION BOX TR A20 DF -01 -	1	W12625020



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