

USE AND MAINTENANCE MANUAL

FEEDING-ZIP-STIR COVER



Summary

1	GENERAL INFORMATION	1
1.1	SYMBOLOLOGY	2
1.2	REFERENCE STANDARDS	3
1.3	DECLARATION OF INCORPORATION (ANNEX II B DIR. 2006/42/EC)	4
1.4	GLOSSARY	5
1.5	SERVICE AND MANUFACTURER CONTACT DETAILS	6
2	PRESENTATION AND OPERATION	7
2.1	EXPLODED VIEW	10
2.2	TECHNICAL DATA	12
3	SAFETY	15
3.1	COMPONENT SAFETY DEVICES	17
3.2	USEFUL FREE SPACES	17
3.3	RISK ZONES AND RESIDUAL RISK	17
4	TRANSPORT AND HANDLING	17
5	INSTALLATION	18
5.1	POSITIONING	18
5.2	CONNECTIONS	18
5.2.1	Electrical	19
5.2.2	Pneumatic	19
5.2.3	Fluidic	20
5.3	COMMISSIONING	20
6	SOFTWARE	20
7	PROCEDURE	21
7.1	DRUM CHANGE	22
7.2	DESSICATOR CONTENT CHANGE (SILICA GEL)	25
7.3	COMPLETE RECIRCULATION (DOSING SYSTEM/DRUM)	27
8	MAINTENANCE	28
9	TROUBLESHOOTING	30
10	END OF LIFE	31

1 GENERAL INFORMATION

This manual contains information regarding the installation, use, maintenance and end of life of the component and provides indications for the most appropriate behavior for correct operation. This manual has been designed to be simple and as immediate as possible, with a subdivision between chapters and sub-chapters that allows any desired information to be found quickly. Furthermore, the manual begins by giving a general description of the content, then an overview of the component, to arrive at aspects of safety, transport, installation and use and finally the end of life. In case of doubts about the interpretation or reading of this document, please contact the manufacturer.



DAV Tech disclaims all responsibility relating to improper use of the component. Comply with what is specified in this manual.



Read this manual before handling the component or performing any action on it



The manual constitutes an essential safety requirement and must accompany the component throughout its entire life cycle.

It is the responsibility of the end user to optimize the functionality of the component, always keeping in consideration the purpose for which it was built.



This manual must be kept, together with the attached documentation, in good condition, readable and complete. Furthermore, it must be stored near the component or, in any case, in a place accessible and known to all personnel who use the component itself or who must carry out maintenance or inspection interventions. In the event that the manual deteriorates or is no longer complete, a copy must be requested from the manufacturer, indicating the manual code and revision.



The manual is intended for personnel who use the component (operators), who perform maintenance on it (maintenance technicians), and personnel who must carry out checks or inspections. The manufacturer is not liable for damage to the component caused by personnel who have not followed the indications contained within the manual itself.

In case of doubts about the correct interpretation of the information contained in this manual, please contact the manufacturer.

GUARANTEE

During the design phase, materials and components were carefully selected for implementation in the project and subjected to routine inspection prior to delivery. All elements, from fastening assemblies to control mechanisms, have been engineered and manufactured with an appropriate safety factor to withstand loads exceeding those encountered during normal operating conditions.

For additional notes regarding equipment warranty provisions, please refer to Section 7 of the "GENERAL CONDITIONS OF SALE AND WARRANTY" form issued during either the quotation or order confirmation phase.

1.1 Symbology

The following symbols are used to give greater impact to the importance of the concept to be conveyed.



ATTENTION!

Refers to a warning that could lead to minor damage (minor injuries, damage to the component requiring maintenance technician intervention).



DANGER!

Refers to a major event that could cause significant damage (death, permanent injury, irreversible component failure).



NOTE. Indicates relevant information or elaboration.



OBLIGATION. Indicates an activity that must be performed, related to both the component and the manual.



REFERENCE. Refers to an external document that is important to view.

Furthermore, the symbol list is integrated with that of personnel authorized to use the component and their function, together with other symbols used within the manual.



Operator

Qualified person capable of operating on the component, performing adjustment, cleaning, start-up or restart operations. The operator is not authorized to perform maintenance.



Mechanical maintenance technician

Qualified technician capable of performing mechanical interventions, adjustment, maintenance and ordinary repair described in this manual. Not qualified to perform interventions on electrical systems in the presence of voltage.



Electrical maintenance technician

Qualified technician capable of performing electrical interventions, adjustment, maintenance and ordinary repair described in this manual. Capable of working in the presence of voltage on electrical cabinets and junction boxes. Not qualified to perform interventions on the mechanical side.



Manufacturer's technician

Qualified technician made available by the manufacturer to perform complex operations in particular situations, or in any case according to what has been agreed with the customer.

1.2 Reference standards

The normative and directive references for this manual are as follows:

Directives

- 2006/42/EC – Machinery Directive;

Essential safety and health requirements (ESHR) of Directive 2006/42/EC, reported in Annex I, paragraph:

- 1.1.2: Principles of safety integration
- 1.1.3: Materials and products
- 1.1.5: Machine design for handling purposes
- 1.1.6: Ergonomics
- 1.3.1: Risk of loss of stability
- 1.3.4: Risks due to surfaces, edges or corners
- 1.5.2: Static electricity
- 1.5.3: Energy other than electrical energy
- 1.5.4: Assembly errors
- 1.5.8: Noise
- 1.5.9: Vibrations
- 1.6.1: Machine maintenance
- 1.6.3: Isolation from energy supply sources
- 1.6.4: Operator intervention
- 1.7.4: Instructions

1.3 Declaration of incorporation (Annex II B DIR. 2006/42/EC)

Manufacturer's name: DAV Tech Srl
Address: Via G. Ravizza, 30, .36075, Montecchio Maggiore (VI)

DECLARES THAT THE PARTLY COMPLETED MACHINERY

Component: FEEDING ZIP STIR / FEEDING ZIP
Model: Cover for fluid feeding
Year: 2025
Intended use: Cover for fluid feeding via diaphragm pump

COMPLIES WITH THE INCORPORATION PROVISIONS DICTATED BY DIRECTIVE 2006/42/EC

The technical documentation has been drawn up in compliance with Annex VII B, as required by the following:

- Machinery Directive 2006/42/EC of the European Parliament and Council of 17 May 2006

FURTHER DECLARES THAT:

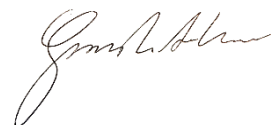
- The product has been designed and manufactured in accordance with the essential safety and health requirements provided for by Directive 2006/42/EC of the European Parliament and of the Council, of 17 May 2006, relating to machinery, and satisfies all applicable safety regulations indicated in chapter 1.2 of this manual
- We undertake to transmit, in response to an adequately motivated request from national authorities, relevant information on this partly completed machinery;
- The technical file has been constituted by Andrea Grazioli, via Ravizza, 30, Montecchio Maggiore (VI), IT.

This partly completed machinery cannot be used until the machinery on which it will be used is declared compliant with standard 2006/42/EC.

Montecchio Maggiore, 03 February 2025

The legal representative

Andrea Grazioli



1.4 Glossary

The following are the most used terms within this manual with their meanings.

TERM	DEFINITION
Enable	Term that defines the act of preparing (enabling) an action. The action will be activated as soon as criteria are satisfied which, as a consequence, lead to the activation of the enabled action.
Activate	The action that is performed instantaneously upon command actuation.
Hold-to-run Commands	Commands that, used for manual operations, must be kept activated for the action to be completed. When the command is released, the action stops.
Two-hand Commands	Hold-to-run commands that require simultaneous actuation of two manual commands to perform an action.
PPE	Personal Protective Equipment. Includes all objects necessary to ensure personnel protection from possible accidental damage (safety shoes, gloves, helmet, and others).
Display	Used to display information. Can be in any form and size, including touch screen.
Manufacturer	Natural or legal person who designed and manufactured the component subject to this manual.
HP	High Pressure. Abbreviation indicating high pressure.
Icon	Small image that symbolically represents a command, function or even a document or operating program, which appears on a computer screen. When selected by the user, it starts the function or program it symbolizes.
Joystick	Lever controller used in command panels.
N/A	Not Applicable, indicating a field that does not apply to this particular manual and cannot be integrated into the component.
Operator Panel	Command station where machine control instruments are located.
P.I.	Possible Implementation, currently absent from the component described in this manual, but possible to add and implement.
Screen	Interface system between man and component. Screen images displayed on the operator panel that allow the user to receive and provide information to the management software.
Control Panel	Composition of buttons and selectors that allow direct action on component behavior.
Keyboard	Keyboard only (standalone element) or in addition to a display (keys only, no selectors or other).
Touch Screen	Touch screen that allows the user to interact with a graphical interface using fingers or special objects.

1.5 Service and manufacturer contact details

For any reason relating to use, maintenance or request for spare parts, the customer must contact the manufacturer directly (or the service center if present), specifying the component identification data.

The customer can avail themselves of commercial technical support from area agents or importers, who are in direct contact with DAV Tech Srl.

Company name	DAV Tech Srl
Postal address	Via Ravizza, 30, 37065, Montecchio Maggiore (VI) – (IT)
Telephone	+39 0444 574510
Fax	+39 0444 574324
email	davtech@davtech.it
Website	www.davtech.it

2 PRESENTATION AND OPERATION

This manual aims to examine the operation of the Feeding-Zip-Stir component, which is a cover specifically designed to be installed on top of drums to extract the fluid placed inside without having to transfer it. This component consists of a diaphragm pump, a desiccator and an agitator. In other words, the function of this component is:

TO FEED A DOSING SYSTEM DIRECTLY FROM DRUM

The intended use is considered to be that described in the chapter below, while any other use that is not described within this manual, with products of different material and format from those for which it was built, is considered improper use.

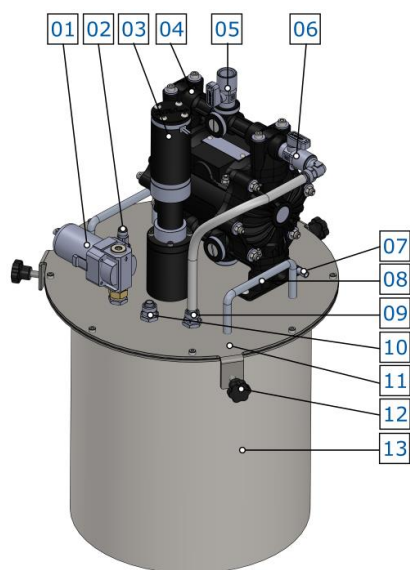


Figure 01 – Feeding-Zip-Stir detail

No. DESCRIPTION

01	Desiccator
02	Level sensor
03	Agitator
04	Diaphragm pump
05	Dosing fluidic outlet
06	Recirculation fluidic outlet
07	Ground connection
08	Handle
09	Pump recirculation fluidic inlet
10	Circuit recirculation fluidic inlet
11	Cover
12	Slot fasteners
13	Drum

Before using a specific type of fluid, it must be verified that:

- The fluid viscosity is compatible with the component characteristics
- The fluid characteristics satisfy the desired requirements
- The fluid technical data sheet provided by the manufacturer contains all information regarding the product such as viscosity, applications, drying and storage times
- The fluid storage time has not been exceeded
- The fluid packages are hermetically sealed

In case it is necessary to use multiple fluids with the same cover, it must be thoroughly cleaned to avoid residues from previous processing affecting the processing to be performed.

SPECIAL VERSIONS

This component can be supplied with or without the agitator, based on requirements and fluid type (in case it is without agitator, the component is called Feeding-Zip). Additionally, there are two sizes of Feeding-Zip-Stir, based on the size of the stem. In the smaller version, the agitator cannot be installed due to clutter.

OPERATION

This component consists of:

- A **diaphragm pump**, which serves to extract fluid from the container on which the cover rests, bring it inside and then push it toward the dosing system
- A **desiccator**, which serves to keep the air inside the container free of water, which can cause fluid crosslinking reactions or fluid contamination
- An **agitator**, which serves to keep the fluid moving, in case it tends to separate
- A **level sensor**, that can be:
 - An **ultrasonic sensor** for fluid level, which serves to send the fluid level to the management system, so as to indicate the level inside the drum and send notifications in case the fluid is running out
 - A **radar sensor**, which operates via localized microwaves, which are transmitted to the fluid and, when they return, the level is calculated using the velocity formula.
- A **pressure reducer** in the pneumatic inlet of the diaphragm pump, so as to regulate the operating pressure

Furthermore, there are two additional fluidic inlets, which serve for:

- **Pump recirculation**, which serves to purge any air that is created during drum change
- **Dosing system recirculation**, which serves to keep the product homogeneous inside the tubes in case of prolonged machine stops

For minimum working pressures, refer to [chapter 2.2](#).

The component cannot operate autonomously. To make it dispense product, it must be positioned above a drum containing fluid and then connected to a dosing system.



ATTENTION!

It is recommended to connect the component to the sources indicated in this manual in [chapter 2.2](#). Connecting it to other sources or to products with characteristics not indicated in this manual could damage it.

Below we want to explain the operation of the component.

Under the cover, connected to the diaphragm pump, there is a suction tube specifically designed to be as long as the drum height minus a few centimeters, so as to be able to draw fluid from the base. From there, the pump draws the fluid, which is pushed into the dosing circuit. To function, the diaphragm pump needs a pneumatic connection, which sets the membranes inside the component in motion, which serve to suction the fluid from inside the drum. In case an agitator is present, the agitator blades are designed not to go against the suction tube, but to move enough content to keep all the fluid moving inside the drum itself.

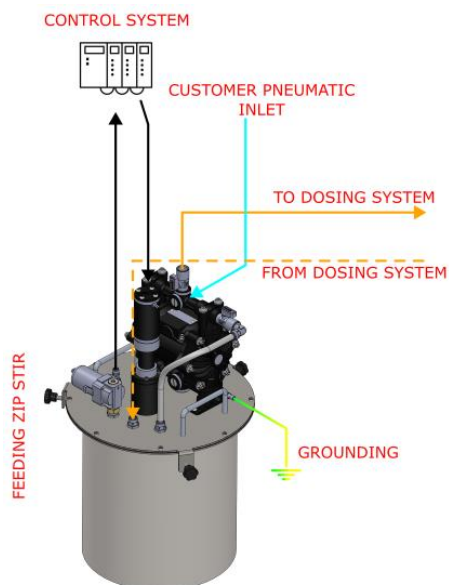
SPARE PARTS

This paragraph aims to analyze the available spare parts for this component; in particular:

- Complete diaphragm pump
- Agitator
- Agitator motor
- Cover membrane (in FKM)
- Suction tube
- Desiccator
- Pressure reducer
- Level sensor (both ultrasonic and radar)

USEFUL TIPS

P.I.



COLOR

CYAN

YELLOW

YELLOW DASHED.

BLACK

YELLOW-GREEN

RED

MEANING

Main air

Product

Recirculation

Data

Ground connection

Notes

Figure 02 – Connection Example

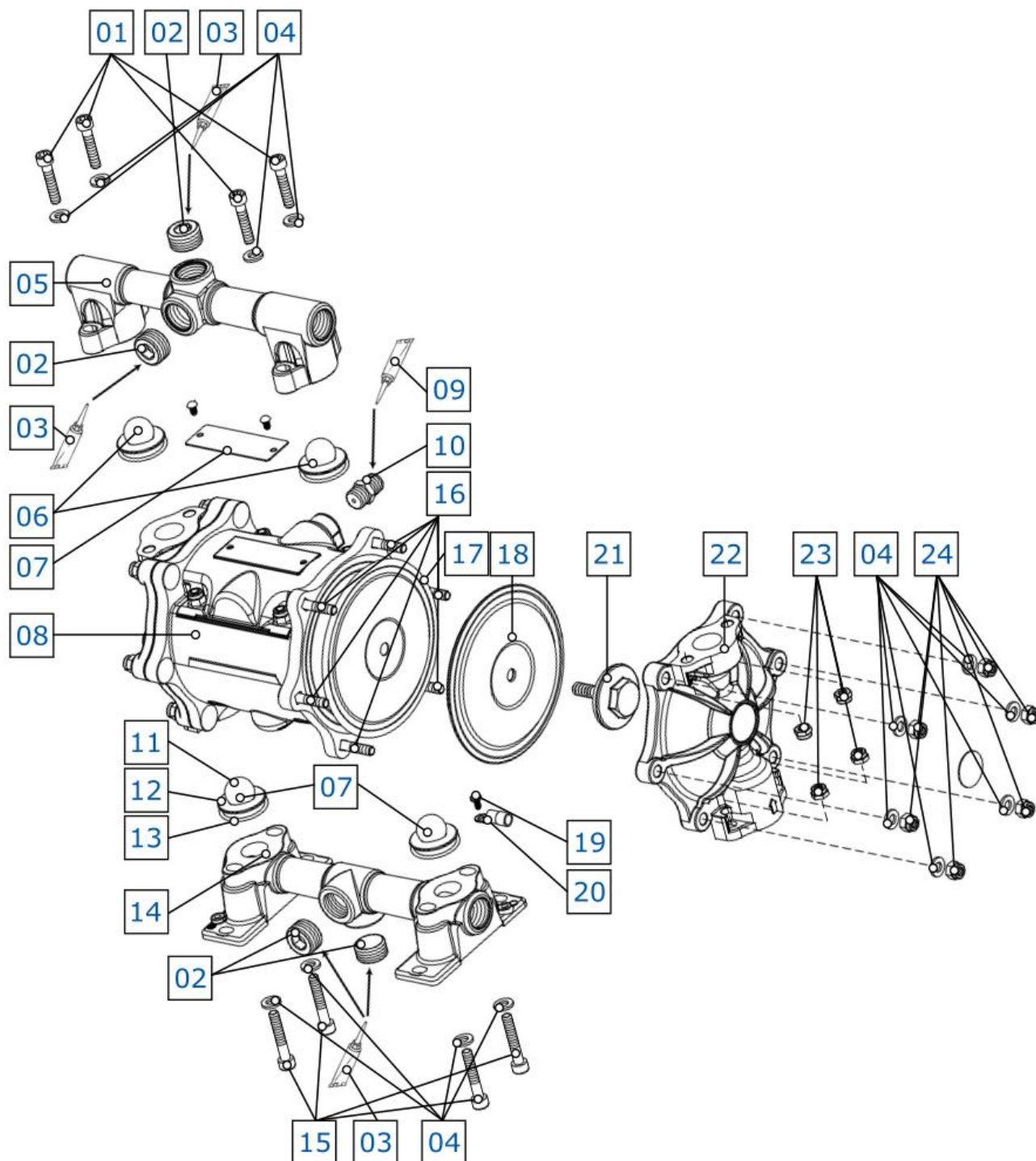


ATTENTION!

The air entering the pump must be filtered and without water (dried), otherwise it risks forming oxide inside the component and wearing it more rapidly.

2.1 Exploded view

Below there is the exploded view of the ZIP component present in the FEEDING-ZIP-STIR system, with related spare parts codes.



No.	Description	Var.	Code	Variants details
01	M6X30 screw	-	K183.62	Maximum draft torque = 5 Nm
02	1/2" cap	-	M254.14A	-
03	Loctite 577	-	3201587	-
04	Washer 6	-	9920103	-
05	Dispensing manifold	-	F185.01C	-
06	Valve group	-	T6105.00C	-
07	Motor	-	T6103.00	-
08	Rivet	-	K1041.62	-
09	Loctite 542	-	9992831	-
10	Nipple	-	B0177.14	-
11	Sphere	-	K805.07D	-
12	Sphere seat	-	B0148.07R	-
13	O-Ring	-	L206.05	-
14	Inlet manifold	-	F184.01C	-
15	M6X35 screw	-	K142.62	Maximum draft torque = 5 Nm
16	Screw	-	K1044.62	-
17	Support membrane	-	G921.06	-
18	Material membrane	-	G921.05	-
19	Screw	-	K1012.62	-
20	Wire nut	-	Y622.00A	-
21	Outer membrane disc	-	F834.07R	Maximum draft torque = 12Nm
22	Membrane lid	-	F978.01	-
23	M6 nut	-	9910204	-
24	M6 nut	-	K311.62	Maximum draft torque = 5 Nm
-	Full ZIP-52	-	U550.ATR07	-

2.2 Technical data

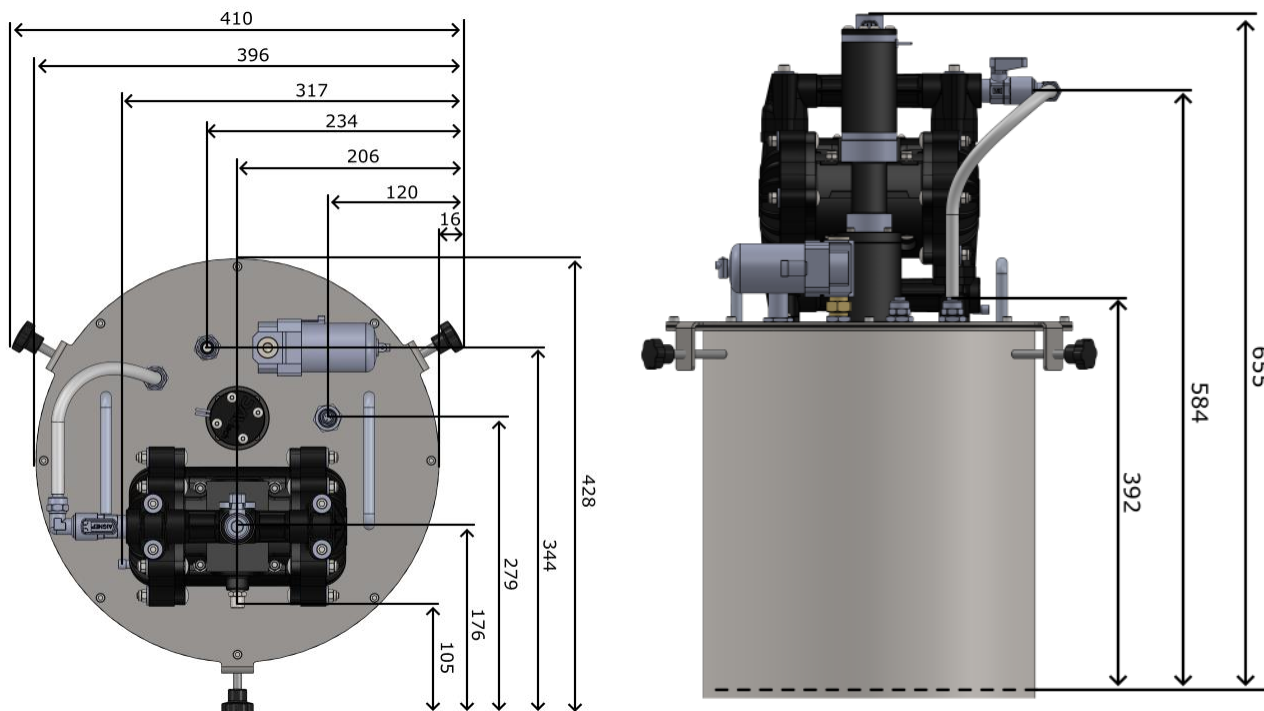
Below are all the technical characteristics regarding the component of this manual.

SPECIFICATIONS		
Description	UdM	Values
GENERAL		
Model	\	FEEDING-ZIP-STIR
Actuation	\	Pneumatic
Equivalent acoustic pressure at 50 cycles/min (5 bar)	dB(A)	73
Equivalent acoustic pressure with maximum flow rate (8 bar)	dB(A)	85
Sound level with maximum flow rate (8 bar)	dB(A)	99
Air supply connection	BSP(R)	1/4"
Fluidic connection	BSP(G)	1/2"
PNEUMATIC		
Fluidic pressure range	bar	1 ÷ 8
Pneumatic pressure range	bar	1 ÷ 8
Pneumatic : fluidic pressure ratio	\	1:1
Maximum flow	l/min	52
Maximum pump speed	DH/min	490
COMPRESSED AIR QUALITY		
Particle concentration	mg/m ³	5 ÷ 10
Pressure dew point (air humidity)	°C	≤ 7
Oil content	mg/m ³	≤ 5
TEMPERATURE		
Product temperature range	°C	4 ÷ 90
ENVIRONMENTAL CHARACTERISTICS		
Description	UdM	Values
Working Ambient Temperature	°C	4 ÷ 40
Storage Ambient Temperature	°C	-20 ÷ 55
Permissible non-condensing humidity	%	5 ÷ 90
USABLE FLUIDS		
Resins		
Various low-medium viscosity products (contact manufacturer for more information)		

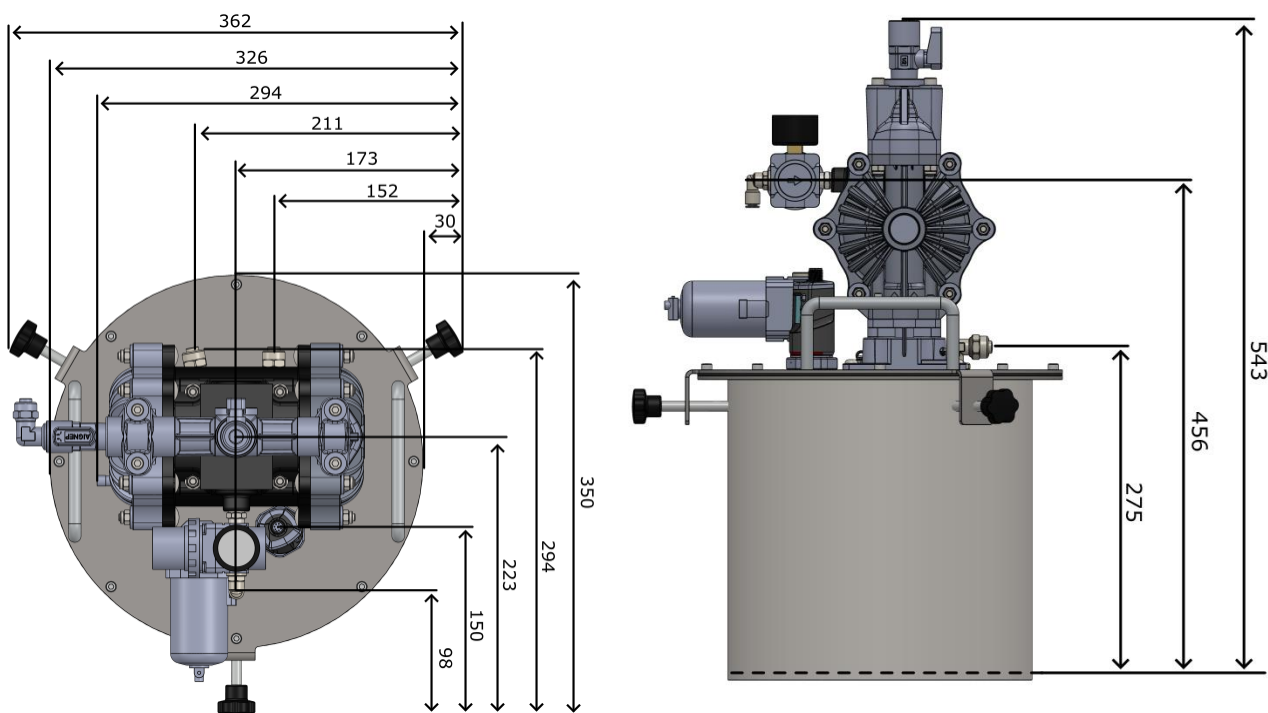
DIMENSIONAL AND WEIGHT CHARACTERISTICS

Description	UdM	Value
Component length (min ÷ max)	mm	421
Component depth (min ÷ max)	mm	427
Component height (min ÷ max)	mm	655
Component weight	kg	15

Component (big)



Component (small)



It is possible to request the 3D of the component from the manufacturer in the desired version without any commitment.

3 SAFETY

Below is the list of warnings regarding the component covered by this manual. Please read carefully before proceeding with the next chapters.



DANGER!

Before putting the component into operation or performing any action on it, carefully read this manual.



DANGER!

Do not use the component under the influence of drugs or other substances that may alter attention and reaction capacity.



DANGER!

Operators must perform only operations or interventions that are within the competence of the assigned role and qualification.



FIRE/EXPLOSION DANGER!

This component is not designed to work in ATEX environment.



DANGER!

Pay close attention during component maintenance phase, especially when disassembling components that have pressurized springs inside.



DANGER!

When the cover is lifted, the agitator does not lose power. Pay maximum attention while the agitator is not inside the drum.



DANGER!

Risk of pump explosion or release of toxic gases in case solvents are used to clean the pump that react with the products being used. Always carefully read the safety data sheets of the product in use.



ATTENTION!

No modifications should be made to the component in order to obtain different performance from that for which it was designed and built, unless authorized by the manufacturer.



ATTENTION!

The component's exhaust air contains oil, oil-free and water-free air must be used.

**ATTENTION!**

Avoid introducing foreign bodies into the pneumatic system, even small ones, which could cause system malfunction and compromise machine safety.

**ATTENTION!**

Risk of electrostatic charge accumulation due to very high fluid flow. Perform component grounding connection.

**ATTENTION!**

Do not use two-component products inside the pump. If they crosslink inside the pump itself, it risks breaking, even violently.



The component can only be used by trained and authorized operators and only for the purpose for which it was designed and built.



The component is built in compliance with the technical safety standards in force at the time of its construction.

3.1 Component safety devices

N.A.

3.2 Useful free spaces

N.A.

3.3 Risk zones and residual risk

N.A.

4 TRANSPORT AND HANDLING

Once the goods are received, it must be verified that the packaging is intact and that there is exact correspondence with the ordered material.



ATTENTION!

The original configuration of the component must not be modified. The manufacturer is not responsible for damage caused by inappropriate use of the component.



ATTENTION!

If the packaging is not intact, immediately contact the manufacturer, also sending photos of the packaging condition. Do not open it before notifying the manufacturer.

5 INSTALLATION



Component installation is performed by the customer. If necessary, the manufacturer can be contacted to have a specialized technician assist.

The component has been designed to be positioned above a drum and fixed through slots. It cannot be used in any other way than just described.



It is recommended to perform a component check before starting installation. If it shows obvious damage, please contact the manufacturer.



ATTENTION!

Please remove packaging with maximum care. In case damage is caused to the component, the manufacturer is not responsible.



Dispose of packaging correctly, taking into account the different nature of the components and following the regulations in force in the Country.

5.1 Positioning

N.A.

5.2 Connections

This chapter aims to explain the connection method that must be used for the component. The following types of connections are provided:

- Electrical connection
- Pneumatic connection
- Fluidic connection

5.2.1 Electrical

Authorized personnel		PPE to wear					
Component status	Positioned on top of the barrel						
Supply values	See chapter 2.2						
Necessary preparations	Electrical cable with correct power supply						
Required material	N.A.						
Required equipment	N.A.						



Electrical connection is the customer's responsibility.

The component itself does not need electrical power to function, since it operates pneumatically. However, there are components that need electrical power; in particular:

- Agitator
- Level sensor

To perform the connection of these components, it is recommended to consult the quick guide provided together with this manual for each component.

Furthermore, the component has a provision for performing the ground connection. It is highly recommended to perform it by unscrewing the appropriate screw and crimping a cable to the connector, then screwing it back in the same position.



ATTENTION!

Risk of electrostatic charge accumulation due to very high fluid flow. Perform component grounding connection.

5.2.2 Pneumatic

Authorized personnel		PPE to wear					
Component status	Positioned on top of the barrel						
Supply values	See chapter 2.2						
Necessary preparations	Functioning customer pneumatic system						
Required material	N.A.						
Required equipment	Wrench or screwdriver						



Pneumatic connection is the customer's responsibility.

To perform the pneumatic connection, the diaphragm pump air inlet must be identified, indicated in [chapter 2](#). For tube dimensions, it is necessary to consult [chapter 2.2](#).

5.2.3 Fluidic

Authorized personnel		PPE to wear
Component status	Positioned above the drum	
Supply values	See chapter 2.2	
Necessary preparations	N.A.	
Required material	N.A.	
Required equipment	Wrench or screwdriver	



Fluidic connection is the customer's responsibility.

To perform the fluidic connection, the position of the fluidic connections reported in [chapter 2](#) must be checked, with the connection dimensions reported in [chapter 2.2](#).



If this component is used for pressures above 5 bar, it is recommended to use high-pressure tubes.

5.3 Commissioning

Component commissioning is performed once positioning and connection operations are completed. Before performing component commissioning, the following checks must be performed:

- Verify that connections have been made correctly
- Verify that the component is free of dirt or various residues
- Verify that the component is firmly fixed in its position
- Verify that the drum is positioned so as not to move during normal work



ATTENTION!

If even just one of the points listed above is not compliant, commissioning must not proceed. Commissioning should only proceed when all points are successfully completed.

6 SOFTWARE

N.A.

7 PROCEDURE

This chapter aims to explain the main configurations that can be used on the component covered by this manual. In particular, it aims to explain in detail:

- How to perform drum change
- How to perform desiccator content change (silica gel)
- How to put the system in recirculation mode (system-drum recirculation)

8

7.1 Drum change

This procedure is used in case the ultrasonic level sensor sends an end-product signal to the control system, asking the operator to perform drum change due to insufficient fluid level.



It is recommended to perform this procedure with two people.

01

N.A.

Wait for the system to finish the last processing in progress. Generally, control systems are calibrated to send the end-drum signal and allow the machinery to complete the processing currently in progress, then block the next one.

02



Press the system emergency button, so that the diaphragm pump stops working. Once the emergency button is pressed, one of the following must be applied:

- Press the drum change button
- Remove electrical power supply.

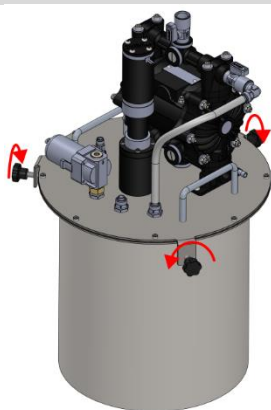
This serves to stop the agitator, so that it no longer moves during this phase.

03



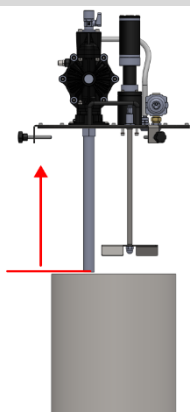
Close the pump outlet valve (delivery valve)

04



Turn the three slots that keep the cover locked to the drum surface

05



Lift the cover taking it by the appropriate handles;



ATTENTION!

The cover must be lifted enough to make the suction tube come out, so it is not enough to lift it slightly. In case the drum is in a raised position, calculate the heights appropriately.

05

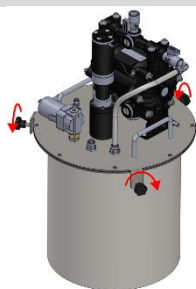
N.A.

Replace the drum with a new one

06

N.A.

Position the component above the new drum, taking care to place it centrally.

07


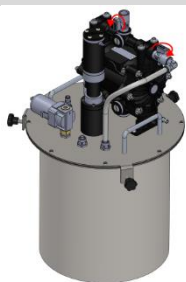
Pull the slots alternately so as not to lose component centrality.

08


Open the recirculation valve

09


Remove emergency and restore power to the machinery only when the component has been repositioned in its position and in a solid and correct manner.

10


After rearming the system, verify that the pump has expelled all the air that was created during the drum change (sufficient to wait about 10 seconds). Then close the recirculation valve and open the product delivery valve.

7.2 Dessicator content change (silica gel)

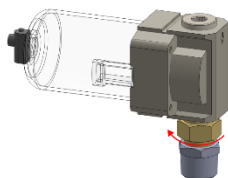
This procedure is used to change the spheres contained inside the desiccator (No.01, Figure 01, [chapter 2](#)), which must be changed when the sphere color is blue/light blue (originally they are yellow, so the change is very evident).

01



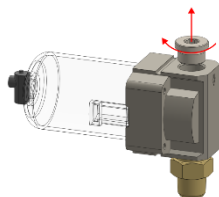
Press the system emergency button, so that the system remains stopped and the drum is depressurized

02



Using a size 22 wrench, unscrew the three-piece fitting from its seat, so as to have the desiccator and the fitting itself in hand

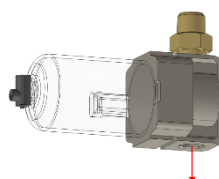
03



Remove the steel cap using a hex key

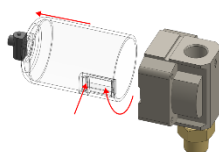
04

OPTIONAL STEP, TO BE DONE ONCE A YEAR



Remove some silica gel spheres by shaking the component and making them come out of the cap just removed. Continue until air is created between the silica gel and the component

05



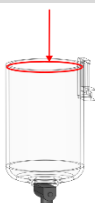
Press the lever located next to the component and rotate the silica gel container until it detaches, then remove it completely

06



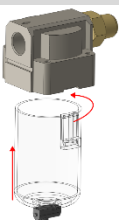
Remove all silica gel

07



Put new silica gel until the container is completely filled

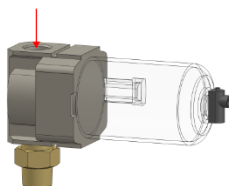
08



Keeping the component vertical, put the silica gel container back in position and screw it with its cap. Pay attention that if it does not remain vertical, the silica gel comes out of its seat

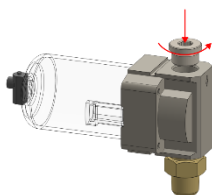
09

OPTIONAL STEP, TO BE DONE ONCE A YEAR



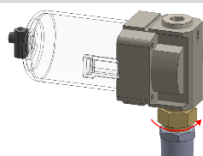
Putting the component horizontal with the cap facing up, insert more silica gel so that the container fills completely. While inserting, shake the component so that the spheres settle inside the component itself

10



Put the closure cap back in position using the appropriate hex key

11



Put the component back in position and screw the 3-way fitting and reset the emergency

7.3 Complete recirculation (dosing system/drum)

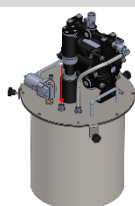
This procedure serves to explain how to put the component in recirculation mode between the dosing system and the drum, so as to avoid the product separating inside the tubes. Generally, this mode is applied for two-component products RESIN SIDE ONLY. In this case, there is a DA2K valve or PDP. In the following images a DA2K valve is represented; however, the operating concept is the same for the PDP pump.

ATTENTION!



At the system software level there must be a way either to exclude the operation of the valve and hardener tank, or to activate recirculation mode. If this were not possible, it is probably not necessary to use recirculation mode within your system. It is recommended to contact the system manufacturer.

01



Verify that the tube is correctly connected in the indicated position

02

At software level, disable the operation of the PDP pump and hardener circuit (in case of DA2K valve, the GP pump of the hardener circuit must be disabled).

N.A.



ATTENTION!

In case a dynamic mixer is present, the operation of this component must also be disabled.

03



Turn the recirculation circuit knob to "open" position. There may be a 3-way valve instead of the T-fitting shown in the figure; in this case, turn the valve 180°.



To return to normal working mode, the recirculation valve must first be closed and then the delivery valve to the system itself must be opened, in addition to re-enabling the operation of the pump and hardener circuit (and possibly the dynamic mixer).

8 MAINTENANCE

Maintenance interventions are all those activities to be performed on the component which, if performed correctly, allow it to have a longer life. In general, maintenance is divided into two groups:

- **Ordinary maintenance**, which are interventions at regular intervals or that can be performed by the customer's personnel, are the most important activities as they allow the component to be maintained in good working conditions;



ATTENTION!

Ordinary maintenance interventions must be performed with the methods and timing indicated in the following chapters.

- **Extraordinary maintenance**, i.e., all those interventions that are not at regular intervals or that have not been foreseen, or interventions that cannot be performed by the customer. They can also arise from the lack of ordinary maintenance interventions.



ATTENTION!

Extraordinary maintenance interventions must be performed together with the manufacturer's specialized technicians.

Regarding frequency, it must be considered that:

- **When necessary**: Operation to be performed when the need to perform it is seen;
- **Every machine start or end of work**: Indicates a daily time period, in general. This can imply every 24 hours (therefore at the beginning of shift every day, or end of shift every day), or even more frequently, based on applications;
- **Long pause**: Indicates a time period greater than approximately one hour;
- **Every drum change**: Indicates every time the supply system is changed (tank, drum, cartridge or other);
- **Every mixer disassembly**: Indicates that every time the mixer is replaced, a specific operation must be performed;
- **Weekly**: Indicates a time span equal to seven calendar days;
- **Monthly**: Indicates a time span equal to one calendar month;
- **Semi-annual**: Indicates a time span equal to six calendar months;
- **Annual**: Indicates a time span equal to one calendar year.



ATTENTION!

The times indicated below are indicative as they depend on how the component is used. Follow the variations suggested by technicians.

Assigned	Description	Frequency	Chapter
	Perform superficial cleaning of the component	Every machine start or end of work	\
	Silica gel replacement	When necessary	7.2

ATTENTION!



In case of prolonged pauses (based on the type of fluid used) it is recommended to put the component in complete recirculation ([chapter 7.3](#)), so as to avoid problems to the dosing system.



ATTENTION!

In case an agitator is present, it is recommended to keep it running to avoid the fluid crosslinking inside the drum itself.



ATTENTION!

For component cleaning use only soft brushes or cotton cloths.

9 TROUBLESHOOTING

This chapter addresses the most common problems that could arise when using the component of this manual.



ATTENTION!

Once the operator has found a problem or supposes there is a problem, he must call the technician responsible for maintenance. Maintenance must always be performed by a specialized and qualified technician.

DEFECT	CAUSE	SOLUTION
The pump does not work	The pneumatic motor does not work or stops	Close the air shut-off valve, increase pressure and immediately reopen the valve
	No pressure indication	Briefly interrupt compressed air supply
	Insufficient compressed air supply	Repair or replace the pressure regulator
	Insufficient compressed air supply	Increase pneumatic inlet pressure
The pump works, but no fluid is pushed	Delivery line clogged	Check the delivery line
	Absence of liquid at pump inlet	Check fluid level
Product flow is interrupted	Cavitation (air bubbles)	Check that the tube is immersed in the fluid
The agitator does not start even when commanded	Incorrect wiring	Check wiring
The level sensor sends incorrect level to the system	Dirty sensor	Clean the sensor

10 END OF LIFE

End of life means all those activities that put the component out of service. End of life activities can be:

- **Storage**, that is when the component is temporarily placed inside the warehouse for future use
- **Stocking**, that is when the component is placed inside the warehouse for an unspecified period waiting for a third party to buy the component
- **Dismantling**, that is when the component has reached the end of working period, whether due to age, obsolescence or failures that cannot be repaired, or that can be repaired but it is more convenient to buy a new component

If installation is not planned in the short term, the component can remain packaged and must be stored in a sheltered and preferably closed place. The ambient temperatures to be respected are reported in [chapter 2.2](#).

Instead, for dismantling and consequent scrapping of the component or its parts, the different nature of the various components must be taken into account and differentiated scrapping must be performed. It is recommended to commission specialized companies for this purpose and the laws in force regarding waste disposal must always be observed.