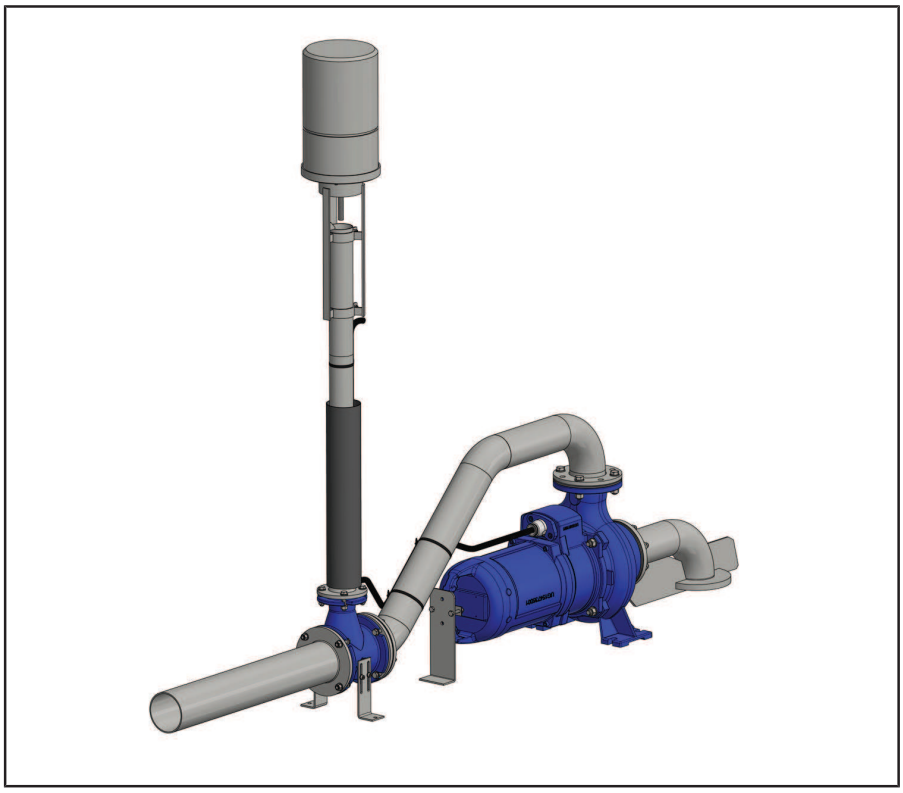
Cleaning System

SewerAmajet

For Generating Shock Waves

Mounting / Installation Manual



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Mounting / Installation Manual SewerAmajet

Original operating manual

Subject to technical modification without prior notice.

Contents

1 General

This mounting / installation manual supplements the operating manual of the pump and the mounting / installation manual of the Amajet cleaning system. All information given in the operating manual of the pump and the mounting / installation manual of the cleaning system must be observed.

Table 1: Relevant operating manuals

Type series	Reference number of the installation / operating manual
Amarex KRT	2553.8820
Amajet	1574.8

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2 Configuration and Function

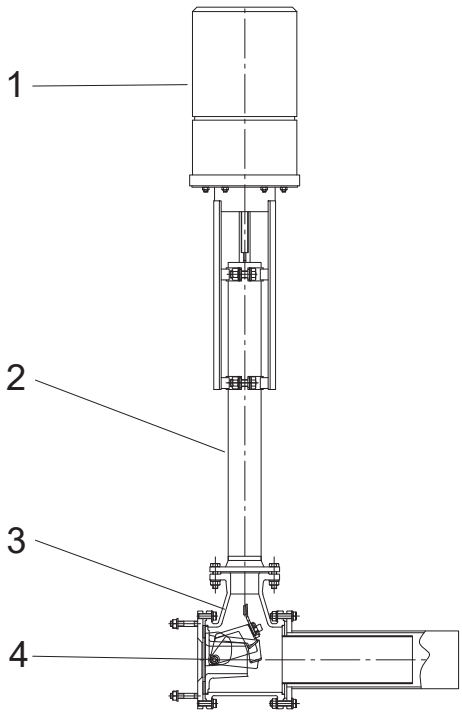

Fig. 1: Design of the ejector set

1	Lifting magnet	2	Vent pipe
3	Ejector set	4	Throttle valve

Design The ejector set for generating shock waves is designed with a lifting magnet (1) and a throttle valve (4). The throttle valve is supplied fitted in the mixing chamber.

Function SewerAmajet is installed on the sewer floor in the storage area. It is positioned next to the channel for dry weather flow. By means of a suction pipe and ejector set (3) SewerAmajet mixes waste water with air and ejects the mixture in opposite direction to the drain flow in the channel / tank. The control unit of SewerAmajet starts up the pump set as soon as a falling trend is recognised and the fill level is at least 0.1 m below the upper edge of the vent pipe (2). The control unit transmits the required impulses for opening and closing the throttle valve (4). The throttle valve closes the nozzle opening by 2/3, causing the pressure in the discharge line to rise by up to 1.5 times. When the lifting magnet (1) opens the throttle valve, this energy is released abruptly and produces shock waves in the channel / tank. The throttle valve closes and opens at different intervals to prevent the formation of an even wave.

In storage sewers with a diameter of more than 2.50 m intermittent cleaning operation is used, following the pattern of 15 minutes operation, 15 minutes break. Continuous operation starts when the fill level in the channel / tank falls below approximately 1 m. The pump set stops when the set fill level is reached or, preferably, when the phase current remains below the set current value for approximately 60 s. Cleaning is stopped as soon as a rising trend of the fill level in the channel / tank is recognised.

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3 Fitting the Lifting Magnet

Fit the lifting magnet in accordance with the corresponding general assembly drawing (⇨ Section 4.1, Page 7) and installation drawing (⇨ Section 4.2, Page 8) .

3.1 Fastening the lifting magnet

1. Remove the discharge line from ejector 67-10. Turn the ejector by 90°. Verify that the vent nozzle is parallel to the tank floor.
2. Guide wire 59-24 through vent pipe 705 from below.
3. Fasten vent pipe 705 to ejector 67-10.
4. Lift the end of the vent pipe by approximately 1 m. Check that throttle valve 746 closes again automatically after it has been opened.
5. Mount lifting magnet 97-3 and slide it further until it abuts the stop projection.
6. Fasten lifting magnet 97-3 with the holder.

3.2 Fastening the wire

1. Loosen nut M16 at the wire clamping piece.
2. Lower the wire clamping piece by approximately 25 mm.
3. Wind adhesive fabric tape around the end of wire 59-24 protruding from the top of the vent pipe. Cut the wire so it protrudes by 300 mm. Cut the wire in the middle of its taped surface.
4. Loosen the clamping plate at lift rod 574. Guide wire 59-24 through the wire clamping piece.
5. Move lift rod 574 and throttle valve 746 into their upper limit position.
6. Guide the wire end to the clamping plate. Pull wire 59-24 taut and fasten it with the clamping plate.
   Make sure that both ends of wire 59-24 are laid next to each other and straight when tightening the clamping plate.

3.3 Adjusting the wire

1. Turn ejector 67-10 back by 90°. Connect it to the discharge line with screws/nuts.
2. Tighten wire 59-24 with nuts M16.
   Make sure that throttle valve 746 is close to its travel stop and the nozzle cross-section is completely free. After it has been tightened, the wire must only give way by a maximum of 10 mm when pushed sideways.

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4 Related Documents

4.1 General assembly drawing with list of components

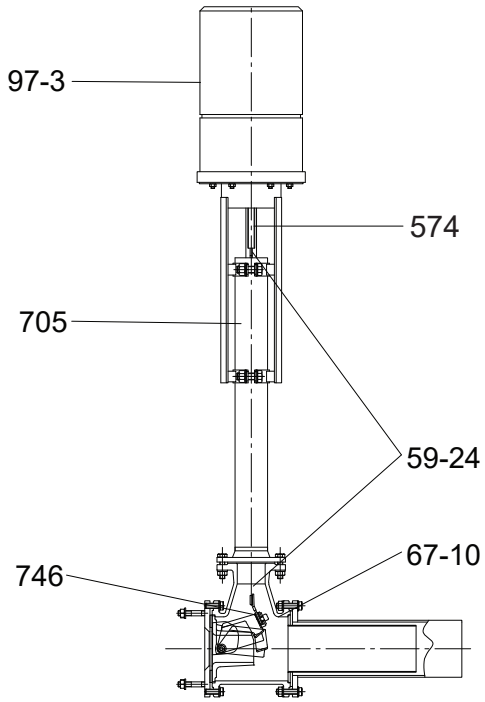

Fig. 2: Ejector set for producing shock waves

Table 2: List of components

Part No.	Description	Part No.	Description
59-24	Wire	705	Vent pipe
574	Lift rod (with wire clamping piece and clamping plate)	746	Throttle valve
67-10	Ejector set	97-3	Lifting magnet (including holder)

4.2 Installation drawing

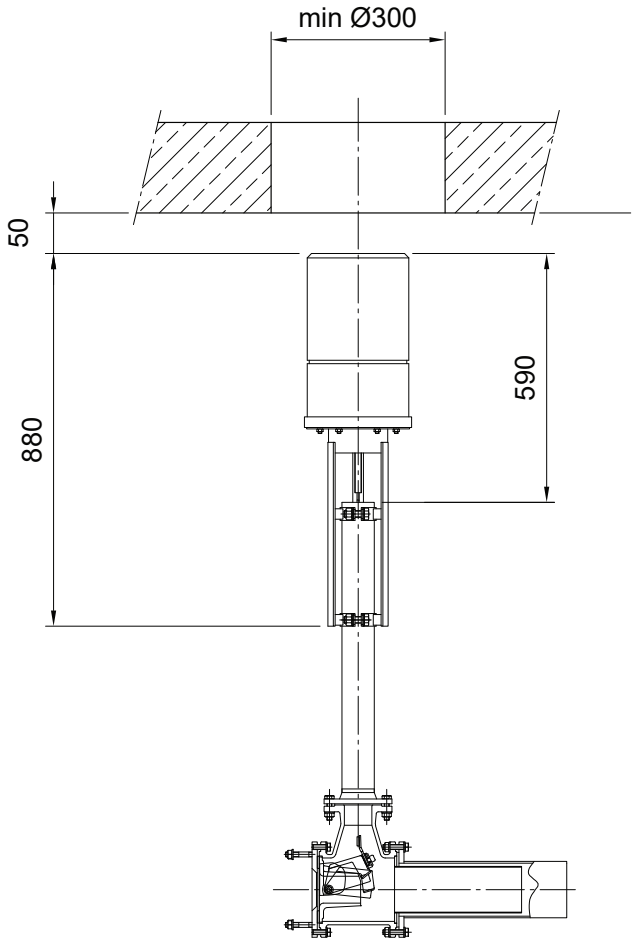

Fig. 3: Ejector set installation drawing

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