

FAAC

FAAC CITY

**Semi-automatic concealing
traffic bollards
FAAC CITY 220/275 H600
with pit**



Technical installation manual

- **CE Declaration of conformity**
- **Warnings for the installer**
- **Technical specifications of the traffic bollard**
- **Preparing and installing the traffic bollard**
- **Traffic bollard installation lay-out**
- **Manual lowering operation**
- **Lifting procedure**
- **Maintenance operation**



CE DECLARATION OF CONFORMITY FOR MACHINES **(DIRECTIVE 98/37/EC)**

Manufacturer: FAAC S.p.A.

Address: Via Benini, 1 - 40069 Zola Predosa BOLOGNA - ITALY

Declares that: traffic bollard **FAAC CITY 220 H600 and FAAC CITY 275 H600 SEMI-AUTOMATIC**

- is built to be integrated into a machine or to be assembled with other machinery to create a machine under the provisions of Directive **98/37/EC**;
- conforms to the essential safety requirements of the following EEC directives:

73/23/EEC and subsequent amendment **93/68/EEC**.

89/336/EEC and subsequent amendment **92/31/EEC** and **93/68/EEC** and **93/97/EEC**.

and also declares that **it is prohibited to put into service the machinery** until the machine in which it will be integrated or of which it will become a component has been identified and declared as conforming to the conditions of Directive **98/37/EC**.

Bologna, 01 January 2007

The Managing Director
A. Bassi



WARNINGS FOR THE INSTALLER – GENERAL SAFETY OBLIGATIONS

1	ATTENTION! To ensure the safety of people, it is important that you read all the following instructions. Incorrect installation or incorrect use of the product could cause serious harm to people.	14	Make sure that the earthing system is perfectly constructed, and connect metal parts to it.
2	<u>Carefully read the instructions</u> before beginning to install the product	15	The automated system is supplied with an intrinsic anti-crushing safety device consisting of a torque control. Nevertheless, its tripping threshold must be checked as specified in the Standards indicated at point 10.
3	Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger.	16	The safety devices (EN 12978 standard) protect any danger areas against mechanical movement Risks , such as crushing, dragging, and shearing.
4	Store these instructions for future reference.	17	Use of at least one indicator-light is recommended for every system (i.e. flashing lamp integrated in the bollard head), as well as a warning sign in addition to the devices mentioned at point "16".
5	This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger.	18	For maintenance, strictly use original parts by FAAC S.p.A.
6	FAAC S.p.A. declines all liability caused by improper use or use other than that for which the automated system was intended.	19	FAAC S.p.A. declines all liability as concerns safety and efficient operation of the automated system, if system components not produced by FAAC S.p.A. are used.
7	Do not install the equipment in an explosive atmosphere: the presence of inflammable gas or fumes is a serious danger to safety.	20	Do not in any way modify the components of the FAAC CITY automated system.
8	For non-EU countries, to obtain an adequate level of safety, the Standards mentioned above must be observed, in addition to national legal regulations.	21	The installer shall supply to the Customer all information concerning manual lowering of the bollard in case of an emergency, and shall hand over to the user the warnings handbook supplied with the product.
9	FAAC S.p.A. is not responsible for failure to observe Good Technique in the installation of the FAAC CITY products and relating accessories or for any deformation that may occur during use.	22	Do not allow children or adults to stay near the bollard while it is operating.
10	Installation must be performed in compliance with the currently Ruling Standards	23	Keep radio controls or other pulse generators away from children, to prevent the automated system from being activated involuntarily.
11	Before attempting any job on the system, cut out electrical power.	24	Transit on the FAAC CITY traffic bollard is permitted only when the automated system is idle.
12	The mains power supply of the automated system must be fitted with an all-pole switch with contact opening distance of 3mm or greater. Use of a differential 6A thermal breaker with all-pole circuit break is recommended	25	The user must not attempt any kind of repair or direct action whatever and contact qualified personnel only.
13	Make sure that a differential switch with threshold of 0.03 A is fitted upstream of the system.	26	Anything not expressly specified in these instructions is not permitted.



TECHNICAL SPECIFICATIONS OF FAAC CITY 220 H600 SEMI AUTOMATIC –STEEL

Driving method	Single effect nitrogen operator
Driven cylinder	FE37 steel – thickness 4 mm.
Driven cylinder treatment	Polyester powder paint, dark grey colour, metalised (RAL 7021)
Paint option	Customised spray painting in RAL range
Driven cylinder diameter	220 mm.
Driven cylinder stroke	600 mm.
Cylinder top part (head)	Anticorodal case hardened aluminium
Cylinder top part (head) treatment	Polyester powder paint, light grey colour (RAL 9006)
Rise time	about 3 sec.
Use frequency	2,000 manoeuvres per day
Resistance class	Heavy duty > 2,000,000 manoeuvres
Protection class	IP 67
Reflecting adhesive strip	Standard height 55 mm.
Operating ambient temperature	- 15°C + 70°C
Total weight with pit	Kg. 150
Manual lowering operation in emergency	YES with release key
Impact resistance without deformation	5,000 joule
Break-in resistance	60,000 joule
Dimensions of pit to be walled in	330 x 330 x 850 H
Power for heating element	24 Vdc. 80 W.

TECHNICAL SPECIFICATIONS OF FAAC CITY 220 H600 SEMI-AUTOMATIC – STAINLESS STEEL

Driving method	Single effect nitrogen operator
Driven cylinder	AISI 304 steel – thickness 4 mm.
Driven cylinder treatment	Polyester powder paint, dark grey colour, metalised (RAL 7021)
Finish option	Satin finish
Paint option	Customised spray painting in RAL range
Driven cylinder diameter	220 mm.
Driven cylinder stroke	600 mm.
Cylinder top part (head)	Anticorodal case hardened aluminium
Cylinder top part (head) treatment	Polyester powder paint, light grey colour (RAL 9006)
Rise time	about 3 sec.
Use frequency	2,000 manoeuvres per day
Resistance class	Heavy duty > 2,000,000 manoeuvres
Protection class	IP 67
Reflecting adhesive strip	Standard height 55 mm.
Operating ambient temperature	- 15°C + 70°C
Total weight with pit	Kg. 150
Manual lowering operation in emergency	YES with release key
Impact resistance without deformation	5,000 joule
Break-in resistance	60,000 joule
Dimensions of pit to be walled in	330 x 330 x 850 H
Power for heating element	24 Vdc. 80 W.



TECHNICAL SPECIFICATIONS OF FAAC CITY 275 H600 SEMI-AUTOMATIC –STEEL

Driving method	Single effect nitrogen operator
Driven cylinder	FE37 steel – thickness 6 mm.
Driven cylinder treatment	Polyester powder paint, dark grey colour, metalised (RAL 7021)
Paint option	Customised spray painting in RAL range
Driven cylinder diameter	275 mm.
Driven cylinder stroke	600 mm.
Cylinder top part (head)	Anticorodal case hardened aluminium
Cylinder top part (head) treatment	Polyester powder paint, light grey colour (RAL 9006)
Rise time	about 3 sec.
Use frequency	2,000 manoeuvres per day
Resistance class	Heavy duty > 2,000,000 manoeuvres
Protection class	IP 67
Reflecting adhesive strip	Standard height 55 mm.
Operating ambient temperature	- 15°C + 70°C
Total weight with pit	Kg. 154
Manual lowering operation in emergency	YES with release key
Impact resistance without deformation	15,000 joule
Break-in resistance	120,000 joule
Dimensions of pit to be walled in	560 x 560 x 1020 H
Power for heating element	24 Vdc. 80 W.

TECHNICAL SPECIFICATIONS OF FAAC CITY 275 H600 SEMI-AUTOMATIC – STAINLESS STEEL

Driving method	Single effect nitrogen operator
Driven cylinder	AISI 304 steel – thickness 6 mm.
Driven cylinder treatment	Polyester powder paint, dark grey colour, metalised (RAL 7021)
Finish option	Satin finish
Paint option	Customised spray painting in RAL range
Driven cylinder diameter	275 mm.
Driven cylinder stroke	600 mm.
Cylinder top part (head)	Anticorodal case hardened aluminium
Cylinder top part (head) treatment	Polyester powder paint, light grey colour (RAL 9006)
Rise time	about 3 sec.
Use frequency	2,000 manoeuvres per day
Resistance class	Heavy duty > 2,000,000 manoeuvres
Protection class	IP 67
Reflecting adhesive strip	Standard height 55 mm.
Operating ambient temperature	- 15°C + 70°C
Total weight with pit	Kg. 154
Manual lowering operation in emergency	YES with release key
Impact resistance without deformation	15,000 joule
Break-in resistance	120,000 joule
Dimensions of pit to be walled in	560 x 560 x 1020 H
Power for heating element	24 Vdc. 80 W.



PREPARATIONS FOR FAAC CITY 275 H600 **SEMI-AUTOMATIC BOLLARD WITH PIT**

1) Make sure that the place where the FAAC traffic bollard is to be installed is not a cavity; if this situation is present, partially protect the FAAC traffic bollard with a drainage channel equipped with covering grid.

2) Excavate (with a mini-excavator, or manually) down to the following depth:

about **1.30 m.** for traffic bollard 275

about **1.10 m.** for traffic bollard 220

the section must have one side of about **1 m.**

3) Make sure that the soil absorbs water well (run a test by feeding in about 40 litres of water and see if the water is emptied in less than 30 minutes); if it is not, construct a rain water drain, using a 60 mm. diameter pipe, connected to the water mains or connected to a pit (with an emptying system e.g. a motor pump) with a depth greater than the cement pipe which collects and discharges rain water.

4) Introduce gravel (grain with a diameter of approx. 8 - 20 mm.) to obtain a thickness of about **20/30 cm.** (see Fig. 1), taking care to compact it well to avoid "future settlements".

5) Lay the metallic pit complete with counter frame taking care to position it plumb-straight and taking into account that the frame should be higher by about 10 mm than the tread surface height (to limit the intake of rain water in the pit).



Fit the pit checking the reference of the counter frame in relation to the transit direction (see Fig. 5)

6) When the pit has been installed, lay a flexible sheath (with **40 mm.** inside diameter) from the electrical connection in the pit to the motion control station (to connect the traffic bollard to the control station). If you are using an integrated flashing lamp and/or heating element (optional articles), lay a flexible sheath with **50 mm.** diameter.

7) Distribute concrete all around the pit, up to about -10 cm. from the tread surface dimension (this dimensions should be evaluated according to the type of road carpet finish), making sure that the anchors supplied with the pit are appropriately positioned. When the cement has set, finish the road carpet with the same type of material.



POSITIONING THE FAAC CITY 220 H600

FAAC CITY 220 H600 SEMI-AUTOMATIC TRAFFIC BOLLARD
INSTALLATION DIAGRAM FOR METAL HOUSING

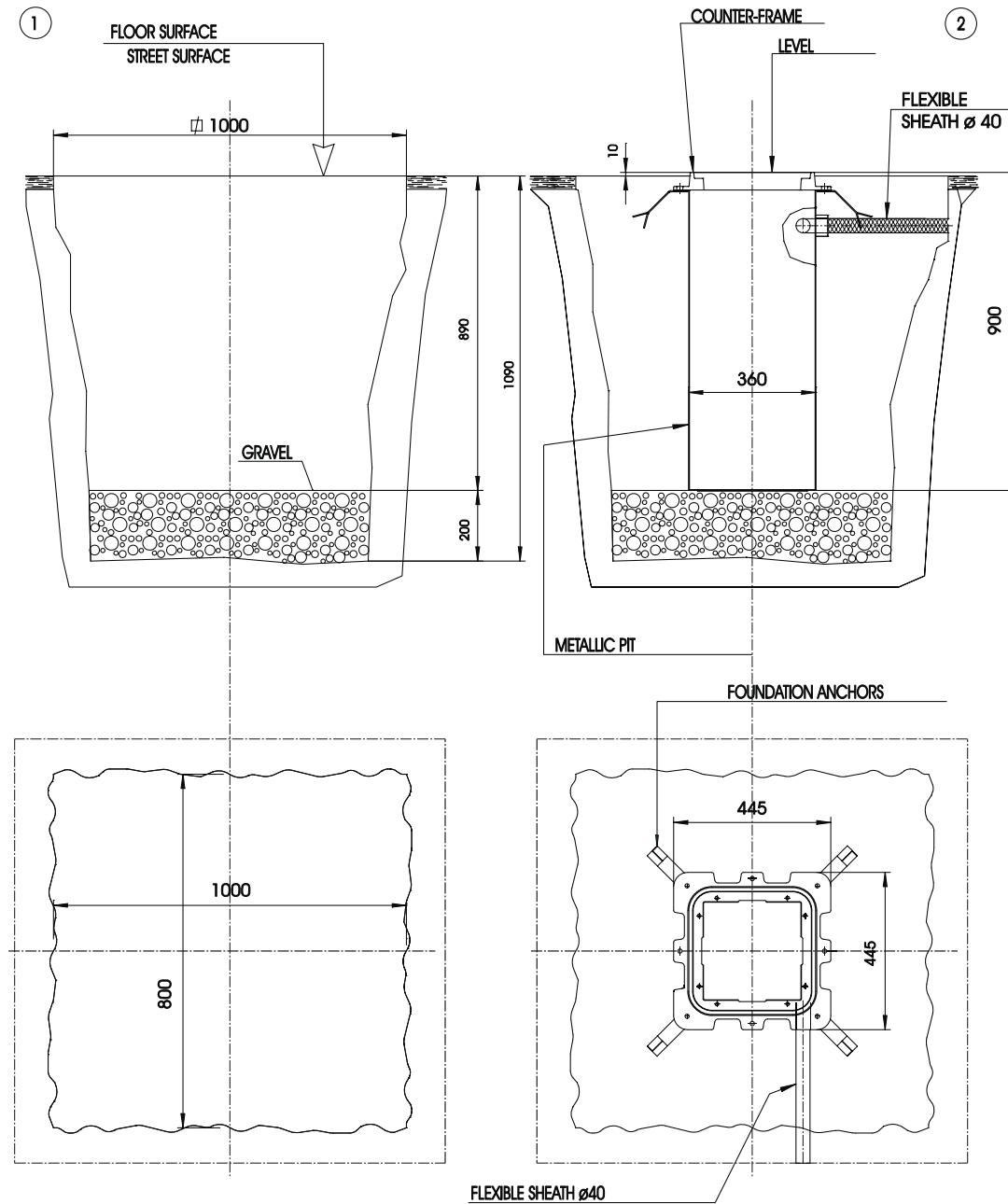


Fig. 1

FAAC CITY 220H600 SEMI-AUTOMATIC TRAFFIC BOLLARD
 INSTALLATION DIAGRAM FOR METAL HOUSING

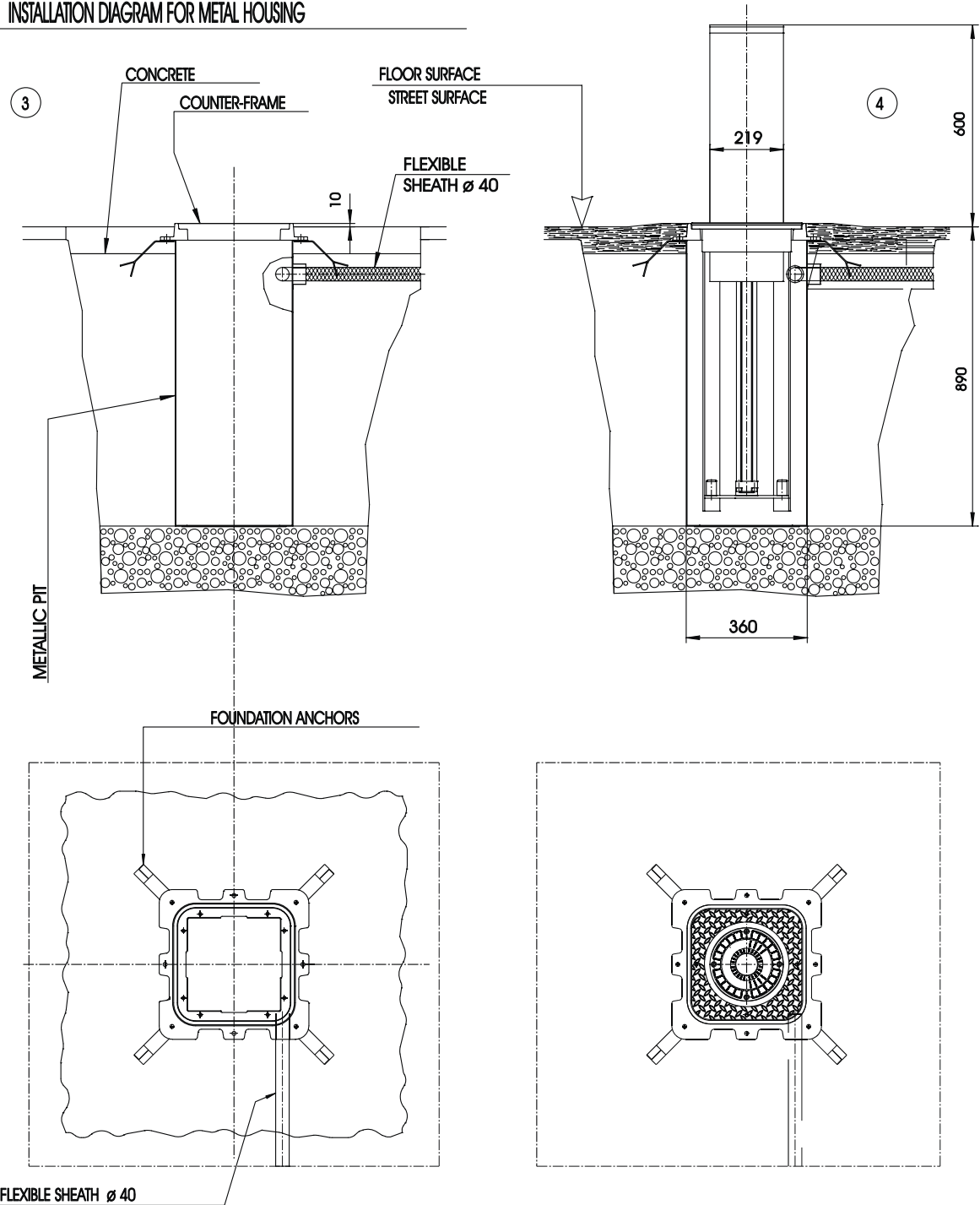


Fig. 2

POSITIONING THE FAAC CITY 275 H600

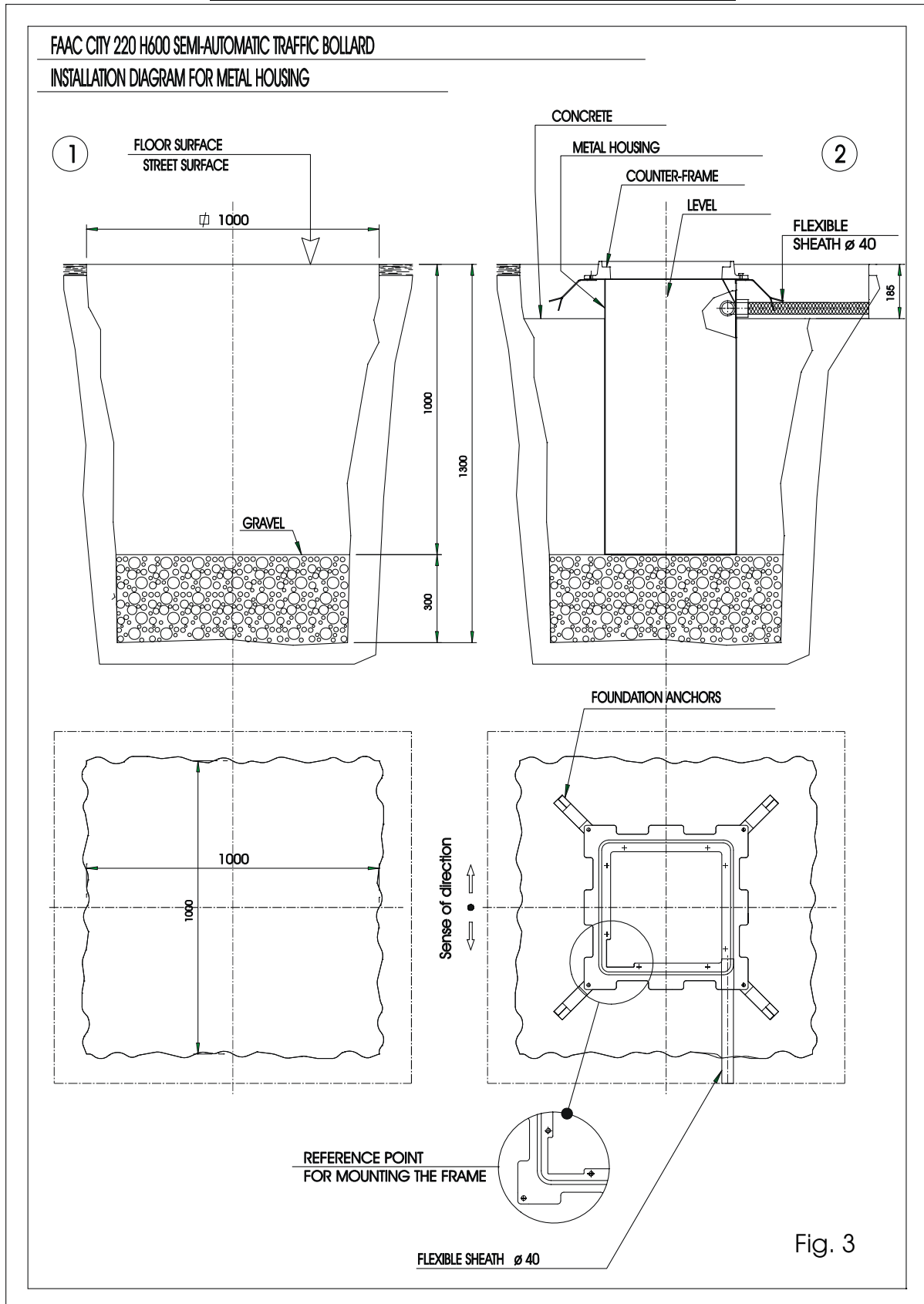


Fig. 3

FAAC CITY 220 H600 SEMI-AUTOMATIC TRAFFIC BOLLARD
 INSTALLATION DIAGRAM FOR METAL HOUSING

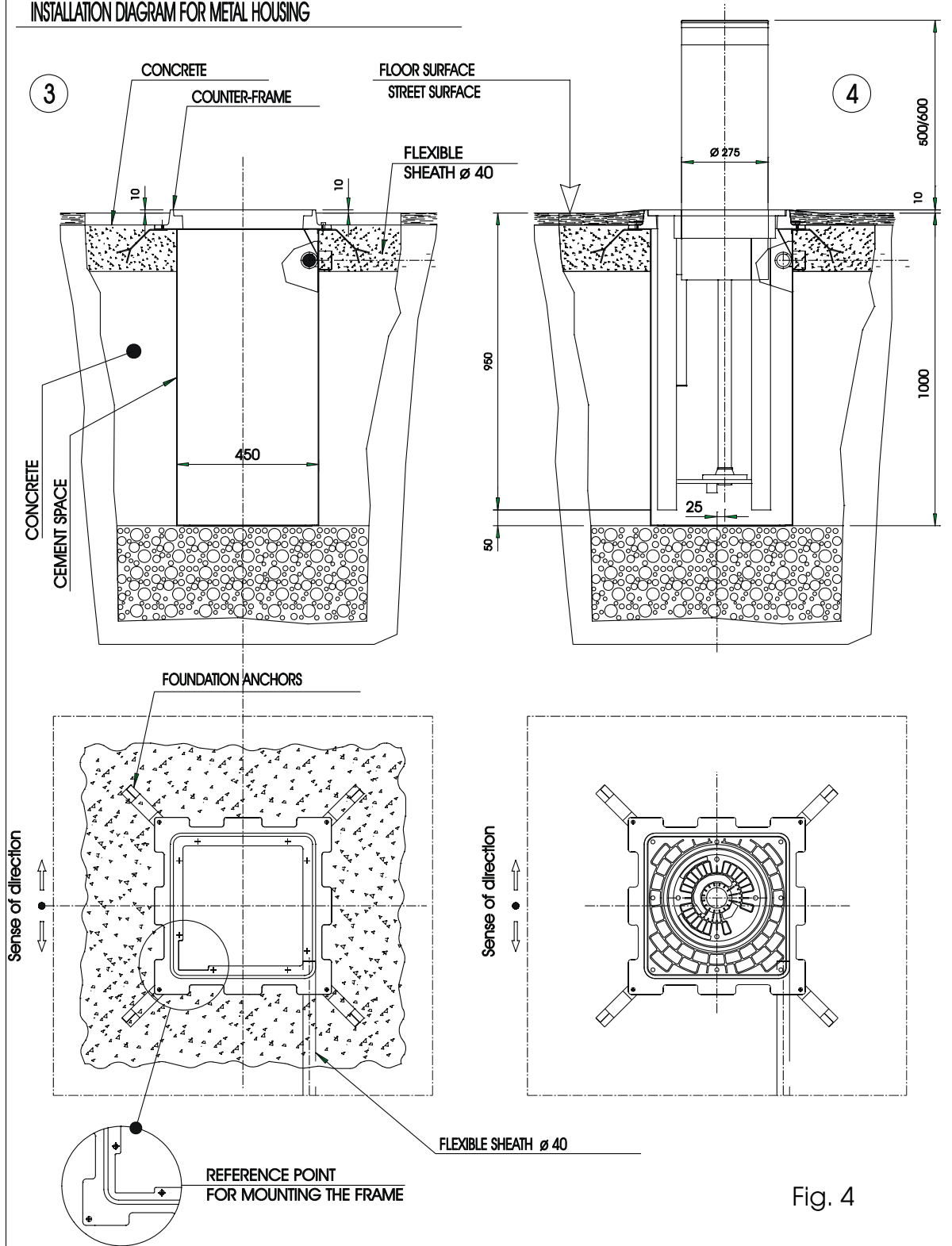


Fig. 4



MANUAL LOWERING OPERATION

Procedure for lowering the traffic bollard:

- Fit the key into the release lock on the top of the traffic bollard.
- Turn the key anti-clockwise by about 70°, and then lower the traffic bollard, exerting pressure with your foot on the centre of its top part.
- After being lowered, the traffic bollard locks automatically enabling you to extract the key.

LIFTING PROCEDURE

Procedure for lifting the traffic bollard:

- Fit the key into the release lock on the top of the traffic bollard.
- Exert foot pressure on the centre of the traffic bollard to facilitate mechanical release and then turn the key anti-clockwise by about 70°; the traffic bollard will lift due to the effect of the integrated gas operator.
- After being lifted, the FAAC CITY locks automatically enabling you to extract the key.



PROCEDURE FOR ORDINARY MAINTENANCE

(6-MONTHLY FOR CONCEALING TRAFFIC BOLLARD FAAC CITY 220/275 H600)

Standard procedure for a 6-monthly ordinary maintenance must be as follows:

- Clean the pit and remove any settled material by suction –
- Clean the water drainage systems on the pit bottom -
- Clean and lubricate the central sliding guide –
- Check (and replace, if necessary) the bottom limit-stop gaskets –
- Check the correct tightening of the bollard screws –
- Check if the lock unit is operating correctly -
- Clean and lubricate the lock unit –
- Clean the driven cylinder and touch up paint, if necessary -

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Distributor's stamp:

The descriptions and illustrations in this manual are not binding. While leaving the essential characteristics of the equipment unaltered, FAAC reserves the right, at any time and without having to update this publication, to make the modifications which it considers convenient for technical improvements or for any other construction or commercial requirements.