
**User's
Manual**

**Model PH8HG
Drop-in Guide Pipe**

IM 12B7M2-01E

vigilantplant.[®]

◆ INTRODUCTION

This manual covers the PH8HG drop-in guide pipe. Other related items are described in the following manuals:

Model	Title	IM No.
PH8ERP	KCI Refillable type pH Sensor	IM 12B7K1-02E
PH8EFP	KCI Filling type pH Sensor	IM 12B7J1-01E
DO30G	Dissolved Oxygen Sensor	IM 12J5B3-01E
SS380G	MLSS Detector	IM 12E6C1-01E
OR8EFG	KCI Filling type OPR Sensor	IM 12C07J01-01E
OR8ERG	KCI Refillable type OPR Sensor	IM 12C04K01-01E

◆ For the safe use of this equipment

■ Safety, Protection, and Modification of the Product

- In order to protect the system controlled by the product and the product itself and ensure safe operation, observe the safety precautions described in this user's manual. We assume no liability for safety if users fail to observe these instructions when operating the product.
- If this instrument is used in a manner not specified in this user's manual, the protection provided by this instrument may be impaired.
- Be sure to use the spare parts approved by Yokogawa Electric Corporation (hereafter simply referred to as YOKOGAWA) when replacing parts or consumables.
- Modification of the product is strictly prohibited.
- The following symbols are used in the product and user's manual to indicate that there are precautions for safety:

■ Notes on Handling User's Manuals

- Please hand over the user's manuals to your end users so that they can keep the user's manuals on hand for convenient reference.
- Please read the information thoroughly before using the product.
- The purpose of these user's manuals is not to warrant that the product is well suited to any particular purpose but rather to describe the functional details of the product.
- No part of the user's manuals may be transferred or reproduced without prior written consent from YOKOGAWA.
- YOKOGAWA reserves the right to make improvements in the user's manuals and product at any time, without notice or obligation.
- If you have any questions, or you find mistakes or omissions in the user's manuals, please contact our sales representative or your local distributor.

■ Warning and Disclaimer

The product is provided on an "as is" basis. YOKOGAWA shall have neither liability nor responsibility to any person or entity with respect to any direct or indirect loss or damage arising from using the product or any defect of the product that YOKOGAWA can not predict in advance.

■ Symbol Marks

Throughout this user's manual, you will find several different types of symbols are used to identify different sections of text. This section describes these icons.



WARNING

Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.



IMPORTANT

Indicates that operating the hardware or software in this manner may damage it or lead to system failure.



NOTE

Draws attention to information essential for understanding the operation and features.



Tip

This symbol gives information that complements the current topic.



SEE ALSO

This symbol identifies a source to be referred to.

◆ After-sales Warranty

- **Do not modify the product.**

- **During the warranty period, for repair under warranty consult the local sales representative or service office. Yokogawa will replace or repair any damaged parts. Before consulting for repair under warranty, provide us with the model name and serial number and a description of the problem. Any diagrams or data explaining the problem would also be appreciated.**
 - If we replace the product with a new one, we won't provide you with a repair report.
 - Yokogawa warrants the product for the period stated in the pre-purchase quotation. Yokogawa shall conduct defined warranty service based on its standard. When the customer site is located outside of the service area, a fee for dispatching the maintenance engineer will be charged to the customer.

- **In the following cases, customer will be charged repair fee regardless of warranty period.**
 - Failure of components which are out of scope of warranty stated in instruction manual.
 - Failure caused by usage of software, hardware or auxiliary equipment, which Yokogawa Electric did not supply.
 - Failure due to improper or insufficient maintenance by user.
 - Failure due to modification, misuse or outside-of-specifications operation which Yokogawa does not authorize.
 - Failure due to power supply (voltage, frequency) being outside specifications or abnormal.
 - Failure caused by any usage out of scope of recommended usage.
 - Any damage from fire, earthquake, storms and floods, lightning, disturbances, riots, warfare, radiation and other natural changes.

- **Yokogawa does not warrant conformance with the specific application at the user site. Yokogawa will not bear direct/indirect responsibility for damage due to a specific application.**

- **Yokogawa Electric will not bear responsibility when the user configures the product into systems or resells the product.**

- **Maintenance service and supplying repair parts will be covered for five years after the production ends. For repair for this product, please contact the nearest sales office described in this instruction manual.**

Model PH8HG Drop-in Guide Pipe

IM 12B7M2-01E 3rd Edition

CONTENTS

◆ INTRODUCTION	i
◆ For the safe use of this equipment	ii
◆ After-sales Warranty	iv
1. Specifications	1-1
1.1 Standard Specifications	1-1
1.2 Model and Suffix Codes	1-2
1.3 External Dimensions	1-2
2. Installation	2-1
2.1 Selection of Location	2-1
2.2 Installation Procedure	2-1
2.2 Mounting the Sensor	2-2
Customer Maintenance Parts List	CMPL 12B07M02-01E
Customer Maintenance Parts List	CMPL 12B07M02-02E
Revision Information	i

1. Specifications

The PH8HG drop-in guide pipe protects the sensor and allows measurement to be conducted at a constant measurement point.

This guide pipe simply hang the sensor in the guide pipe, permitting easy sensor maintenance.

1.1 Standard Specifications

Applicable sensors:

PH8EFP KCl filling type pH sensor

PH8ERP KCl refillable pH sensor

OR8EFG KCl filling type ORP sensor

OR8ERG KCl refillable type ORP sensor

DO30G dissolved oxygen sensor

SS300G MLSS sensor

(Note) When using a KCl filling type sensor, a stanchion or mounting bracket is required separately.

Mounting: 2-inch pipe mounting vertical or horizontal

(Note) Make sure the mounting pipe is firmly installed.

Weight: Guide pipe: "-PP"; Approx. 1 kg, "-PP"; Approx. 1.6 kg

Mounting bracket; Approx. 1 kg/set

Pipe length: 2 m

Pipe Material: Hard polyvinyl chloride or polypropylene resin

Mounting bracket: Galvanized iron or stainless steel (SUS304)

Measuring temperature:

-5 to 50°C (for hard polyvinyl chloride)

-5 to 80°C (for polypropylene resin)

(Note) The temperature may be limited by the specifications of the sensor.

When the property of the solution to be measured is one of following, use a submersion type holder or flow-through type holder.

- The temperature of the solution to be measured is in excess of 80°C.
- The solution to be measured value is pH 2 or lower or pH 12 or higher.
- Measurement is being conducted in a strong oxidizing solution (aqua regia, chromate, hypochlorite, perchlorate, etc.)
- The solution to be measured contains corrosive agents (ammonia, chlorate, hydrogen sulfide).
- The solution to be measured contains organic solvent or oil components of percent order.

1.2 Model and Suffix Codes

Model	Suffix Code	Option Code	Description
PH8HG	.....	.....	Drop-in Guide Pipe (*1)
Material	-PV	.....	Polyvinylchloride (fluid temperature 50°C or less)
	-PP	.....	Polypropylene (fluid temperature 80°C or less)
Style Code	*A	.....	Style A
Option	Mounting Bracket (*2)	/MS5	Stainless steel mounting bracket (1 set)

*1 : Pipe length: 2 m

*2 : A set of 2-inch galvanized pipe mounting bracket is provided as standard.

T0101.ai

1.3 External Dimensions

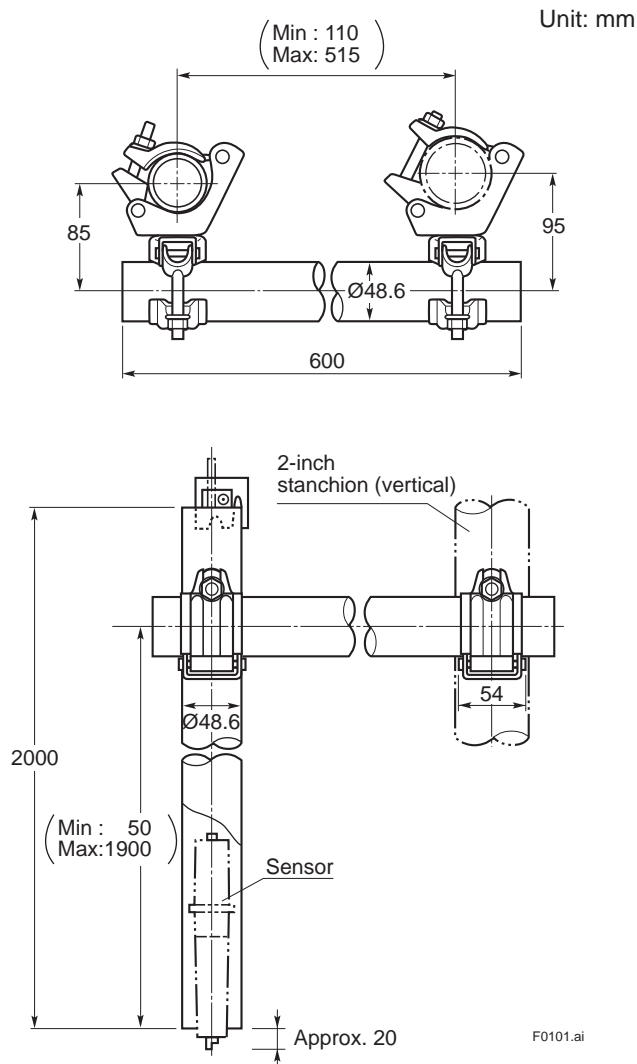
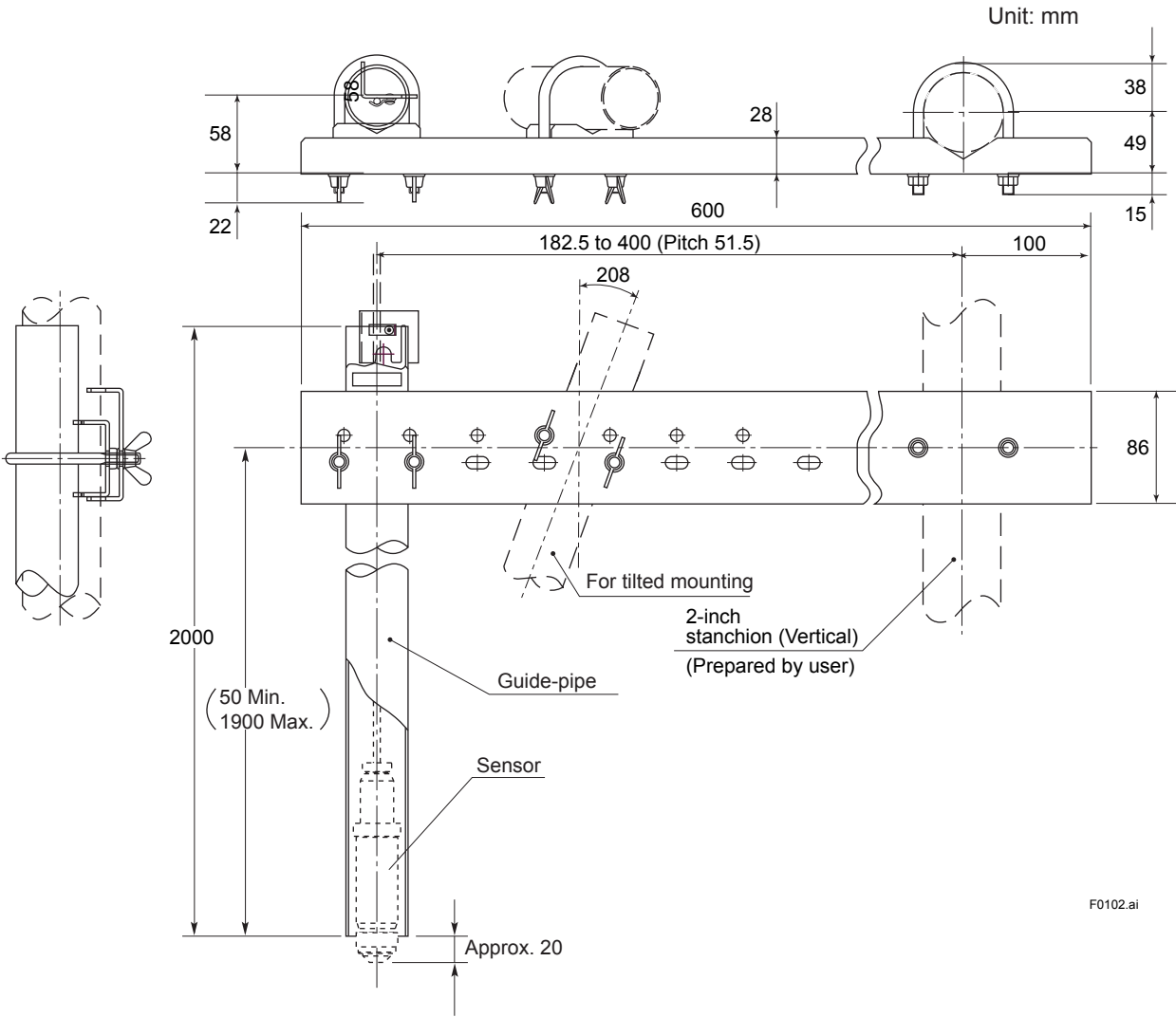


Figure 1.1 External Dimension of Drop-in Guide Pipe



F0102.ai

Figure 1.2 External Dimension of Drop-in Guide Pipe with Option /MS5

2. Installation

2.1 Selection of Location

Install the holder so that the sensor is correctly positioned at the prescribed measuring point. Normally, the point in the object solution at which at typical measurements can be obtained is selected as the measuring point; therefore, if the solution to be measured is unevenly distributed, the measured values may vary greatly. Avoid such locations.

To determine the installation location of the guide pipe, consider the various operating conditions that will affect the measurement, including the temperature and flow speed of the solution to be measured. Then select a sensor and guide pipe specification that matches the conditions; also be sure that the selected location offers easy maintenance access.

CAUTION



Installation Location of Guide-pipe

The guide-pipe should be used in a place that is as vibration free as possible.

Using the guide-pipe in a place where it is affected by vibration, may result in damage to the guide-pipe.

2.2 Installation Procedure

When unpacked the package, referring to the parts list (CMPL 12B07M02-01E, -02E), check that there are no missing parts in the guide pipe.

The guide pipe can be attached to a vertically provided pipe (2-inch) that has sufficient strength. Attach the guide pipe to the arm pipe while taking the sensor position into consideration.

The stopper is attached to the sensor cable.

*1: A mounting pipe used for device is mounted at the site can be used.

Should it be found that the guide pipe can not be installed vertically and there is no option code, install a pipe (nominal 40A) that functions in the same way as the arm pipe in the horizontal direction.

Should it be found that the guide pipe can not be installed vertically and option code /MS5 has been included, install a pipe (2-inch) that functions in the same way as the arm bracket in the horizontal direction.

2.2 Mounting the Sensor



SEE ALSO

For the sensor installation, refer to the relevant section of the sensor.

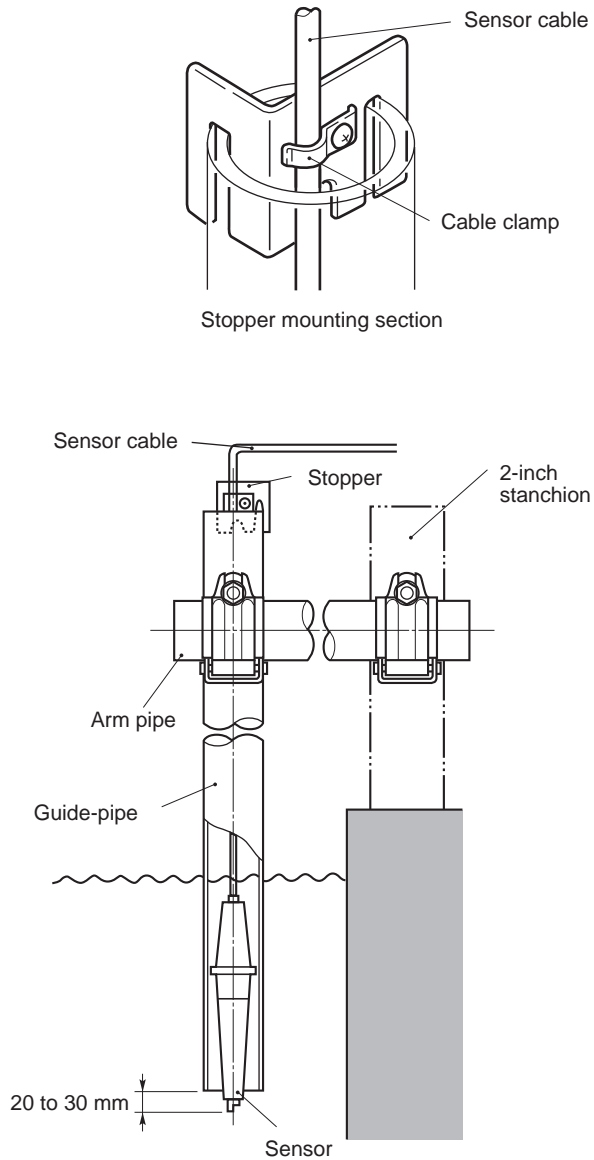
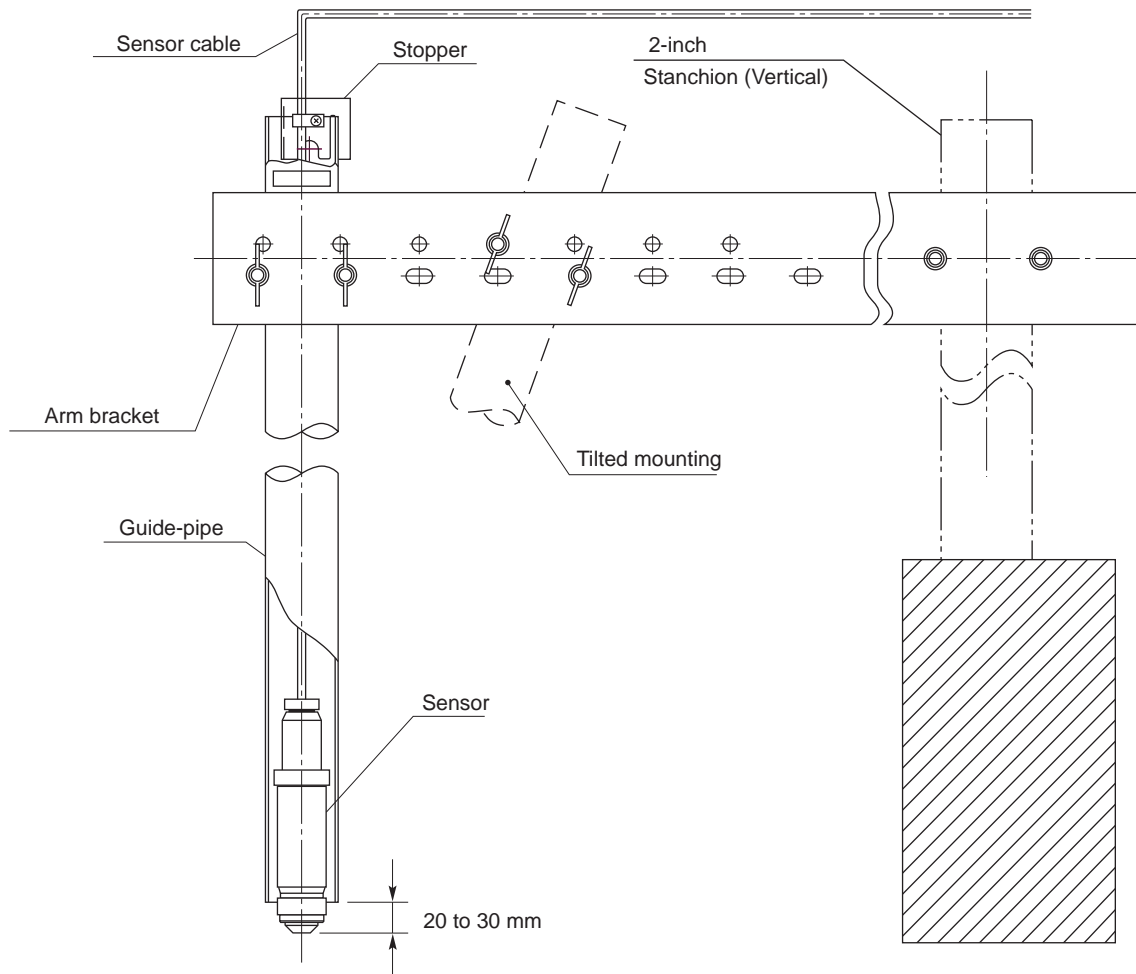


Figure 2.1 Mounting the sensor to the guide pipe

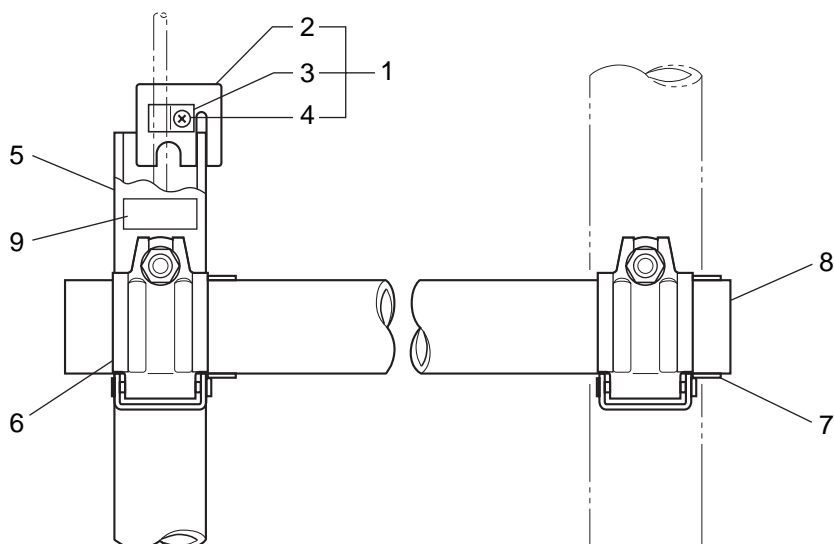


(Note) To incorporate the dissolved oxygen sensor DO30G or SS300G MLSS detector, it is recommended the detector be installed on an angle to prevent the stagnation of bubbles at the sensor trip (detection) section.

Figure 2.2 Mounting the sensor to the guide pipe with option /MS5

Customer Maintenance Parts List

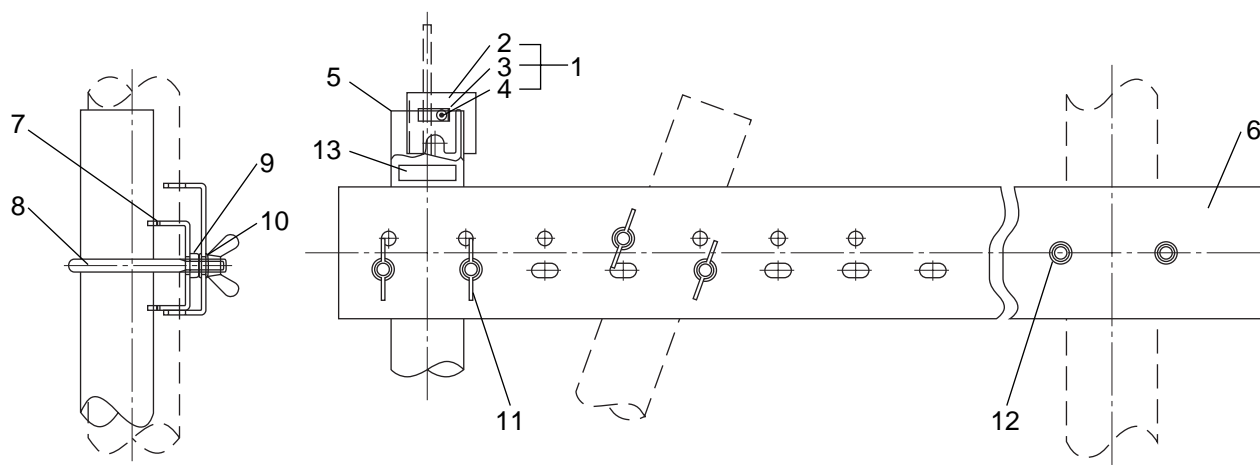
Model PH8HG Drop-In Guide Pipes



Item	Part No.	Qty	Description
1	K9144AA	1	Stopper Assembly
2	K9144AB	1	Bracket
3	K9144AC	1	Clamp
4	Y9408JU	1	Pan H. Screw, M4 × 8
5	Below	1	Pipe
	K9144AK		Hard Polyvinyl Chloride
	K9144AL		Polypropylene
6	L9813VN	1	Clamp
7	L9813VP	1	Clamp
8	K9144AM	1	Pipe
9	K9145NA	1	Nameplate

Customer Maintenance Parts List

Model PH8HG.../MS5 Drop-In Guide Pipes (Stainless steel mounting bracket)



Item	Part No.	Qty	Description
1	K9144AA	1	Stopper Assembly
2	K9144AB	1	Bracket
3	K9144AC	1	Clamp
4	Y9408JU	1	Pan H. Screw, M4 × 8
5	Below	1	Pipe
	K9144AK		Hard Polyvinyl Chloride
	K9144AL		Polypropylene
6	K9145LQ	1	Bracket
7	K9145LR	1	Bracket
8	K9145LP	1	U-Bolt
9	Y9801BU	4	Nut
10	Y9800SU	6	Washer
11	L9800PV	2	Wing Nut
12	L9800JJ	1	U-Bolt
13	K9145NA	1	Nameplate

Revision Information

- Title : Model PH8HG Drop-in Guide Pipe
- Manual No. : IM 12B7M2-01E

Oct. 2011/3rd Edition Page layout changed by InDesign

Jul. 2006/2nd Edition

Some error correction.

Aug. 1998/1st Edition

Newly published.

-
- If you want to have more information about Yokogawa products, you can visit Yokogawa's home page at the following web site.
Home page: <http://www.yokogawa.com/an>
-

Thank you for selecting our Model PH8HG Guide Pipe.

The User's Manual IM 12B7M2-01E 3rd edition supplied with this product has been amended as follows, please make a note in your copy.

Revisions:

- Page 1-2 Some revision of names for guide pipe in MS-code, etc.
- Some revision of CMPL 12B07M02-01E 2nd edition (P/N deletion for Item 9).
- Some revision of CMPL 12B07M02-02E 2nd edition (P/N deletion for Item 13).

1.2 Model and Suffix Codes

Model	Suffix Code	Option Code	Description
PH8HG	.....	.....	Guide Pipe (*1)
Material	-PV	.....	Polyvinylchloride (fluid temperature 50°C or less)
	-PP	.....	Polypropylene (fluid temperature 80°C or less)
Style Code	*A	.....	Style A
Option, Mounting Bracket (*2)		/MS5	Stainless steel mounting bracket (1 set)

*1 : Pipe length: 2 m

*2 : A set of 2-inch galvanized pipe mounting bracket is provided as standard.

T0101.ai

1.3 External Dimensions

Unit: mm

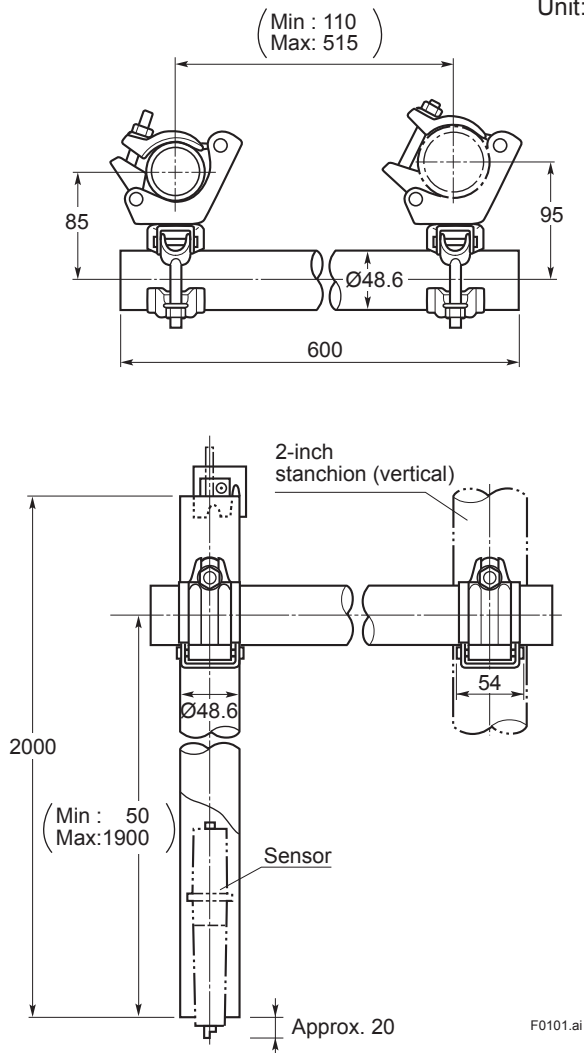
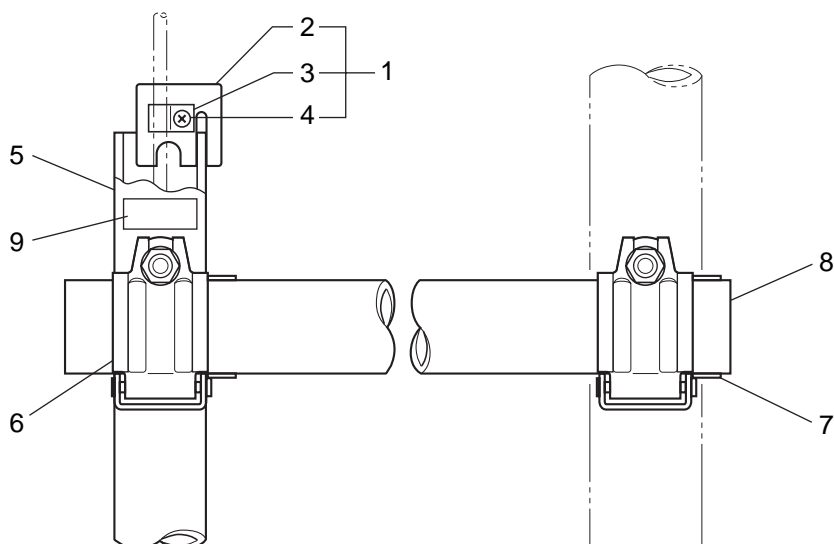


Figure 1.1 External Dimension of Guide Pipe

Customer Maintenance Parts List

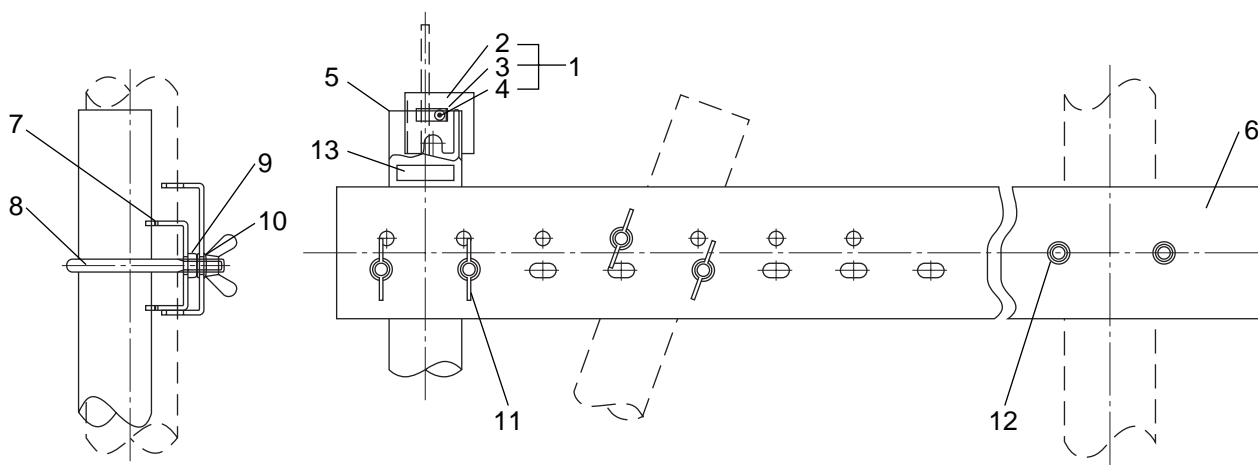
Model PH8HG Guide Pipe



Item	Part No.	Qty	Description
1	K9144AA	1	Stopper Assembly
2	K9144AB	1	Bracket
3	K9144AC	1	Clamp
4	Y9408JU	1	Pan H. Screw, M4 × 8
5	Below	1	Pipe
	K9144AK		Hard Polyvinyl Chloride
	K9144AL		Polypropylene
6	L9813VN	1	Clamp
7	L9813VP	1	Clamp
8	K9144AM	1	Pipe
9	—	1	Name plate

Customer Maintenance Parts List

Model PH8HG.../MS5 Guide Pipe (with stainless steel mounting bracket)



Item	Part No.	Qty	Description
1	K9144AA	1	Stopper Assembly
2	K9144AB	1	Bracket
3	K9144AC	1	Clamp
4	Y9408JU	1	Pan H. Screw, M4 × 8
5	Below	1	Pipe
	K9144AK		Hard Polyvinyl Chloride
	K9144AL		Polypropylene
6	K9145LQ	1	Bracket
7	K9145LR	1	Bracket
8	K9145LP	1	U-Bolt
9	Y9801BU	4	Nut
10	Y9800SU	6	Washer
11	L9800PV	2	Wing Nut
12	L9800JJ	1	U-Bolt
13	—	1	Name plate