

DOC273.52.00084.Jul05

Rail mounting LZY285 and LZY316

Installation instructions



DOC273.52.00084



LANGE 

UNITED FOR WATER QUALITY

Installation instructions

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Rail mounting

Introduction

These installation instructions describe the installation of the rail mounting LZY316 or LZY285 on railings.

One analysis instrument can be fitted to the short version (LZY316), one analysis instrument and one sc100 controller with weather guard can be fitted to the long version (LZY285).

Items supplied LZY316 and LZY285

Items supplied rail mounting LZY316 (see [Figure 1 on page 2](#)):

- 1 short mounting rail
- 5 U profiles LZY3565
- 1 angle bracket LZY357
- 1 angle plate LZY358
- 1 set of screws LZY220

Items supplied rail mounting LZY285 (see [Figure 1 on page 2](#)):

- 1 long mounting rail
- 5 U profiles LZY3565
- 1 angle bracket LZY357
- 1 angle plate LZY358
- 1 set of screws LZY220

Items supplied set of screws LZY220 (see [Figure 1 on page 2](#)):

- 6 screws M8X120
- 3 screws M8X12
- 7 nuts M8
- 11 spring washers for M8
- 18 hex socket head screws M5X8
- 18 spring washers for M5

Note: For sizes and dimensions, please see the figures [2](#) and [3](#) on pages [3](#) and [4](#).

Rail mounting

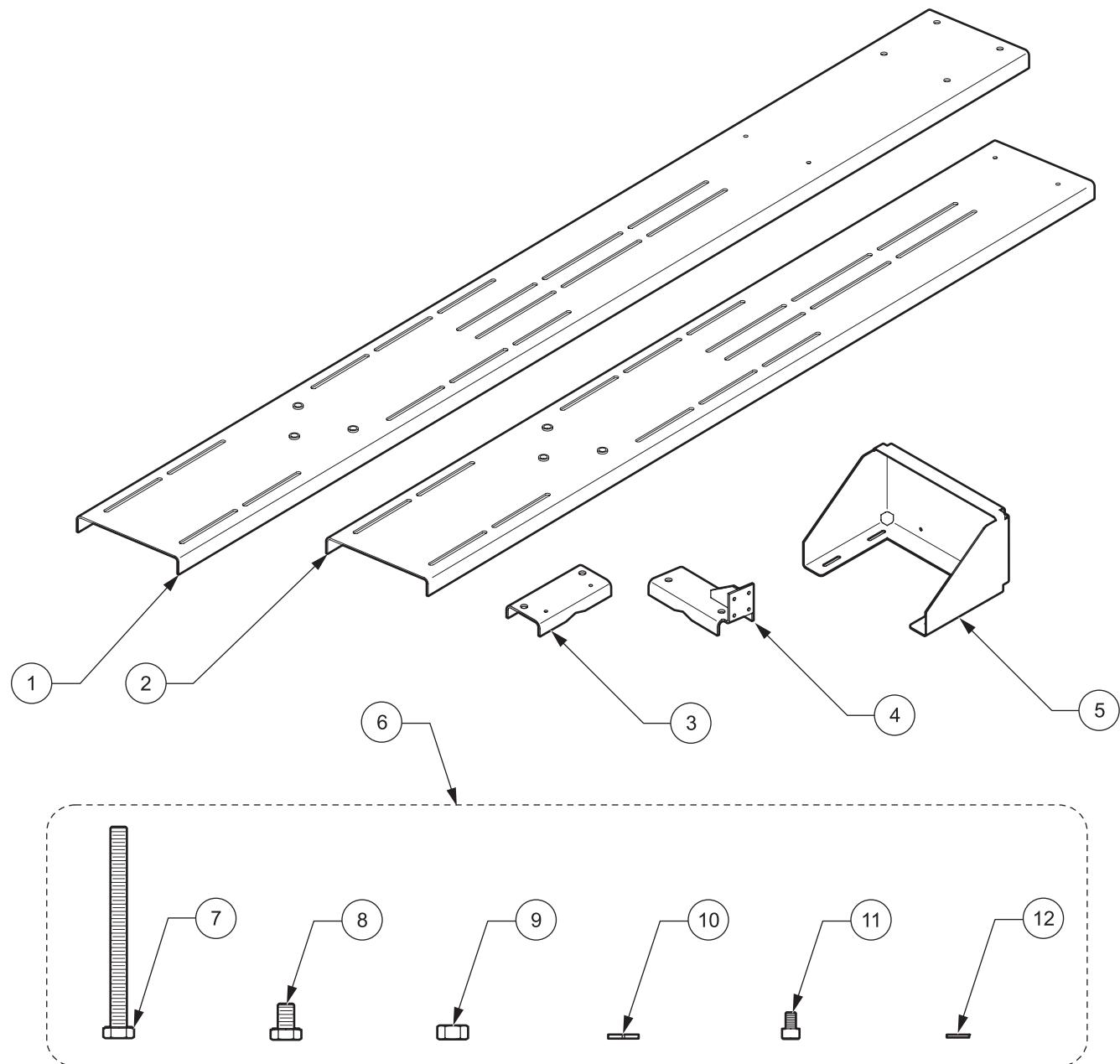


Figure 1 Items supplied with the rail mounting¹

1 Mounting rail for the rail mounting LZY285 (1X) (for mounting one analysis instrument and one sc1000)	7 Screw M8X120 (6X), from LZY220 M8 X 120
2 Mounting rail for the rail mounting LZY316 (1X) (for mounting one analysis instrument)	8 Screw M8X12 (3X), from LZY220
3 U profile LZY356 (5X)	9 Nuts M8 (7X), from LZY220
4 Angle bracket LZY357 (1X)	10 Spring washer for M8 (11X), from LZY220
5 Angle plate LZY358 (1X)	11 Hex socket head screw M5X8 (18X), from LZY220
6 Set of screws rail mounting LZY220 (1X)	12 Spring washer for M5 (18X), from LZY220

¹ We reserve the right to make changes without notice

Sizes and dimensions LZY316 and LZY285

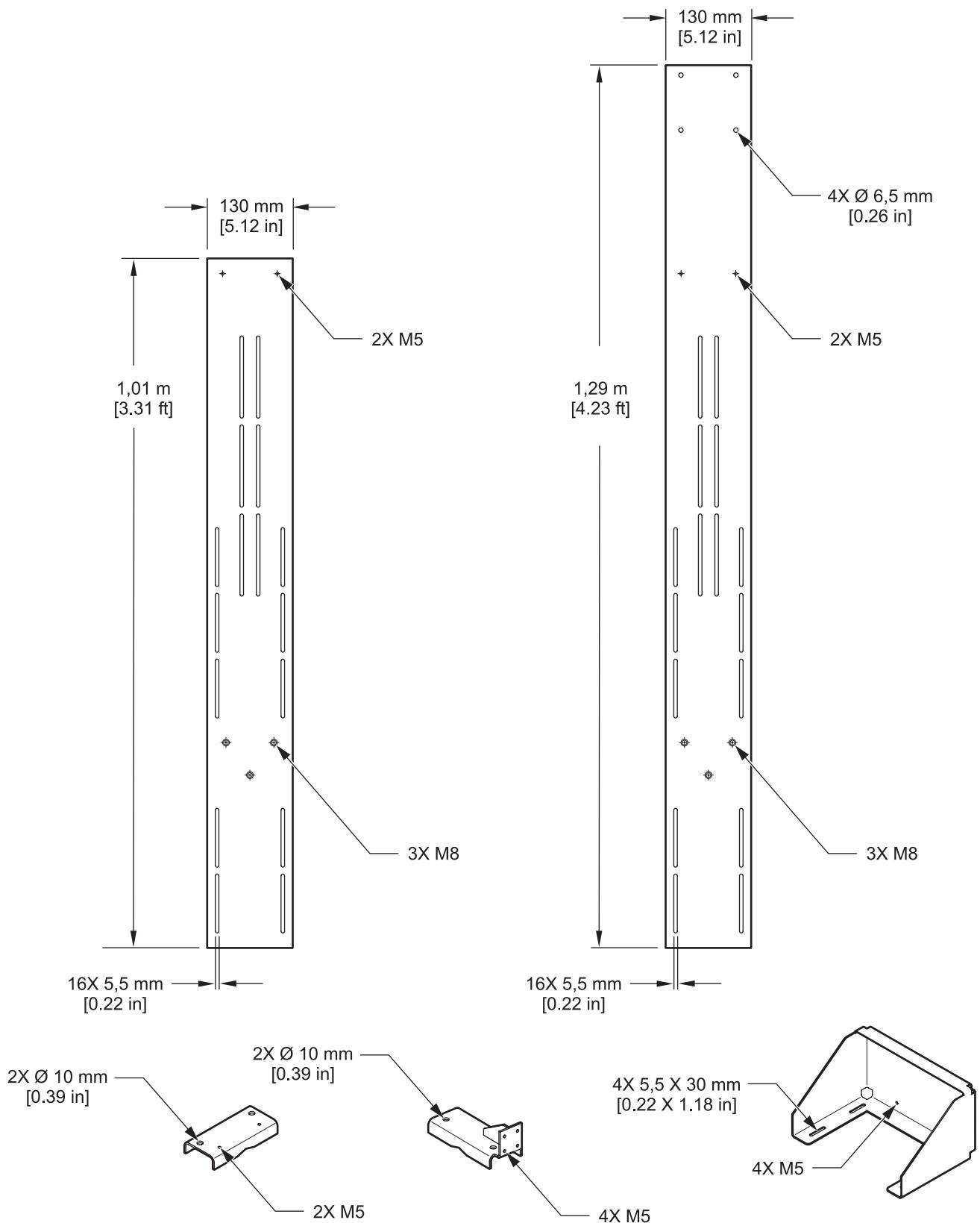


Figure 2 Sizes and dimensions LZY316 and LZY285

Rail mounting

Mounting dimensions LZY316 and LZY285

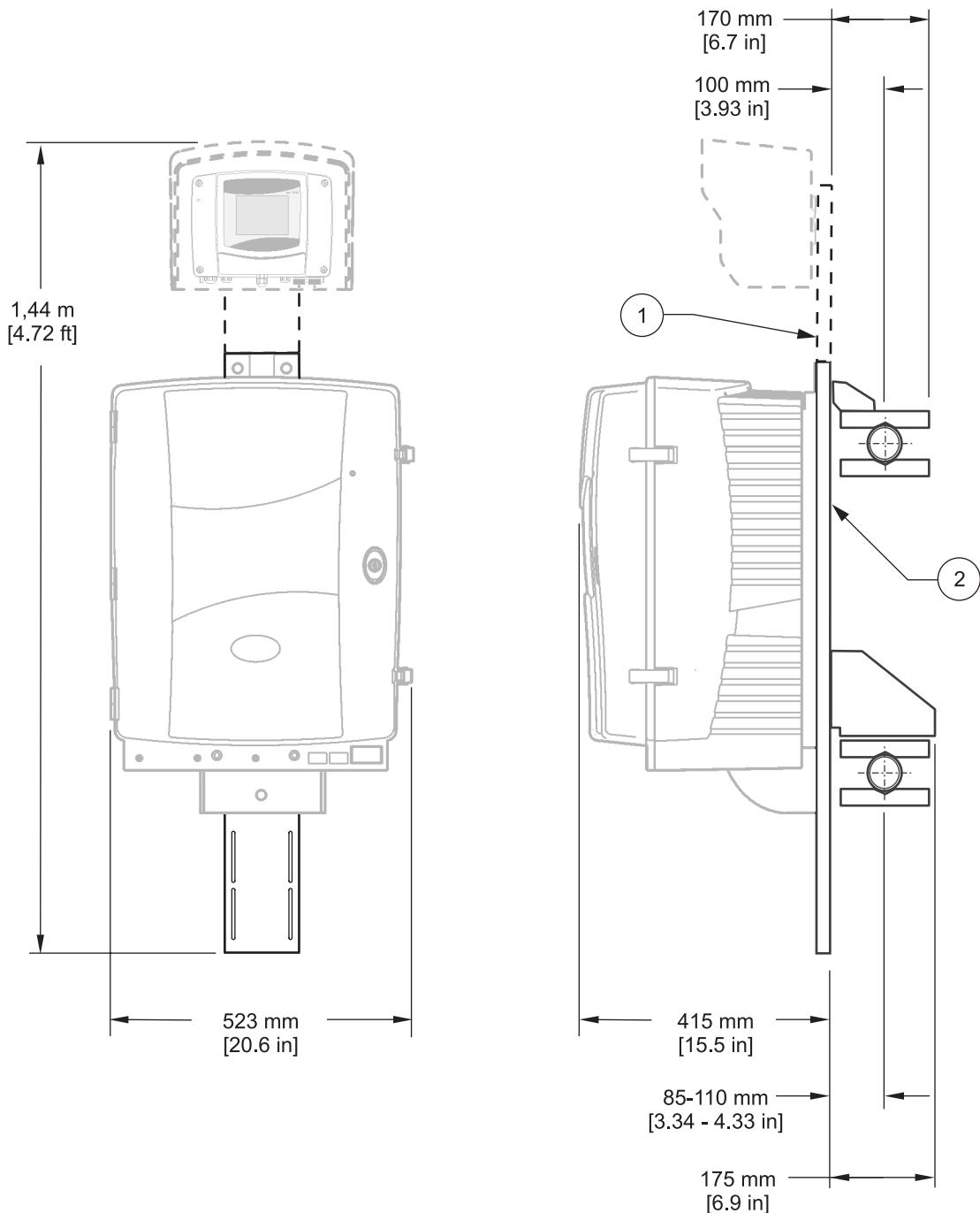


Figure 3 Mounting dimensions LZY285 and LZY316

1 Mounting rail for the rail mounting LZY285 (1X)
(for mounting one analysis instrument and one sc1000)

2 Mounting rail for the rail mounting LZY316 (1X)
(for mounting one analysis instrument)

Selecting the installation location

Important note: When you are installing the analysis instrument, pay attention to all safety instructions and instructions on hazards in the operating instructions for the analysis instrument.

Note: During the selection of the installation location, make sure the analysis instrument is mounted vertically.

During the selection of the installation location, pay attention to

- The weight of the analysis instrument (approx. 40 kg),
- Clear access to the enclosure door and ease of access for loading the analysis instrument with chemicals,
- The maximum cable and tubing lengths,
- Making sure wind forces cannot cause damage (wind load and vibration) and
- A clear view of the display module (on fitting sc100 to long rail mounting (LZY285)).

Note: Make sure you have the operating instructions for the analysis instrument
DOC023.XX.00025.YYYyy or DOC023.XX.00026.YYYyy (xx=language, YYYyy= date) at hand.

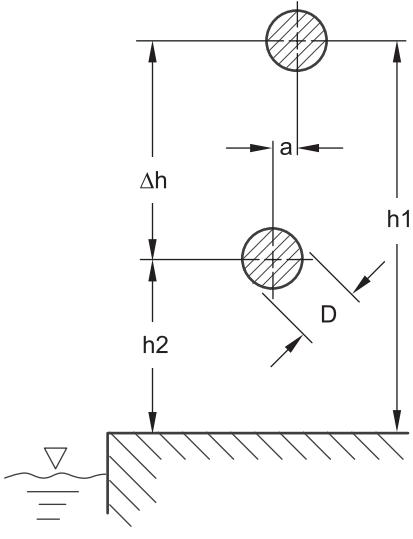
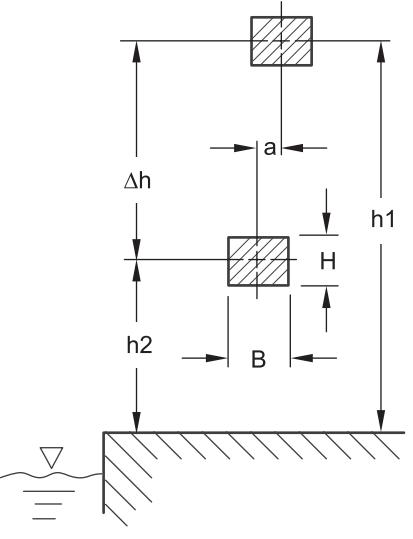
Rail mounting

Check the characteristics of the railings

The rail mounting is designed for installation on round (Figure 4) or on rectangular (Figure 5) railing profiles. Please see Table 1 below for information on the specifications railings must meet for straightforward installation.

Note: Check other railing profiles for suitability to ensure adequate load bearing capacity.

Table 1 Characteristics of railings

Round railing profiles	Rectangular railing profiles
	
Figure 4 Section drawing of round railing profile	Figure 5 Section drawing of rectangular railing profile
D: 25–75 mm [1.00–2.95 in.]	B: 40–90 mm [1.57–3.54 in.]; H: 5–68 mm [0.20–2.67 in.]
a: ≤ 25 mm [1.00 in.]	
h1: 850–1200 mm [33.50–47.25 in.]	
h2: 580–800 mm [22.80–31.50 in.]	
Δh: 300–620 mm [11.80–24.40 in.]	

Installing the rail mounting (LZY316 and LZY285)

1. Loosely mount two U profiles to the angle plate using two M5 hex socket head screws and spring washers (see [Figure 6 on page 8](#)).

Note: Only tighten the screws when the entire rail mounting is aligned and adjusted for height.

2. Loosely mount the angle bracket to the mounting rail using four M5 hex socket head screws and spring washers (see [Figure 7 on page 8](#)).

Note: You can change the installation height by sliding the angle bracket along the slots or by using other slots.

3. Find a suitable installation location and place the angle bracket on the top rail.
4. Loosely screw a U profile to the angle bracket using the M8X120 screws, spring washers and M8 nuts (see [Figure 8 on page 9](#)).
5. Loosely mount the angle plate to the mounting rail using M5 hex socket head screws and loosely screw it to the bottom rail with two U profiles (see [Figure 9 on page 10](#)).

Note: You can adjust the installation height by sliding the angle plate in the slots, by using other slots or by mounting the angle plate rotated by 180° (see [Figure 10 on page 11](#))

Note: If you want to fit the angle plate to a vertical rail, you can also mount the angle plate rotated by 90° on the mounting rail.

Note: If you slide the M5 hex socket head screws in the slots on the angle plate, you can align the mounting rail so that it is vertical.

6. Screw the top angle bracket from the items supplied with the analysis instrument to the analysis instrument (see [Figure 11 on page 12](#) and also the operating instructions for the analysis instrument, Installation section).
7. Fit the fastening bracket (from the items supplied with the analysis instrument) to the mounting rail using the three M8X12 screws and spring washers (see [Figure 11 on page 12](#) and operating instructions for the analysis instrument, Installation section).
8. Align all parts until the mounting rail is vertical and then tighten all screws.
9. Slide the analysis instrument onto the fastening bracket and screw the enclosure to the fastening bracket (see operating instructions for the analysis instrument, Installation section).
10. Screw the top angle bracket (from the items supplied with the analysis instrument) on the analysis instrument to the mounting rail (see [Figure 11 on page 12](#)).
11. Feed the cables and tubing through the mounting rail.
12. Continue as described in the operating instructions for the analysis instrument.

Rail mounting

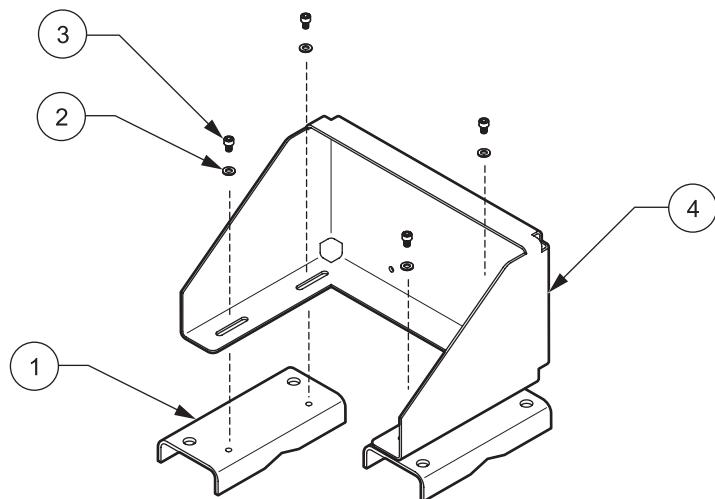


Figure 6 Installation of the U profile on the angle plate

1 U profile LZY356 (2X)	3 Hex socket head screw M5X8 (4X), from LZY220
2 Spring washer for M5 (4X), from LZY220	4 Angle plate LZY358 (1X)

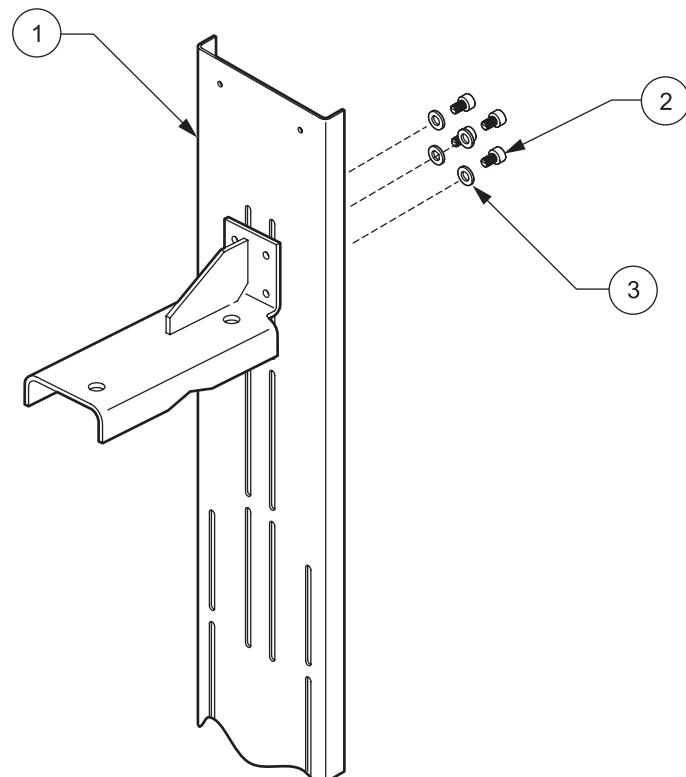


Figure 7 Installation of the angle bracket on the mounting rail

1 Mounting rail for the rail mounting LZY285 or LZY316 (LZY316 shown)	3 Spring washer for M5 (4X), from LZY220
2 Hex socket head screw M5X8 (4X), from LZY220	

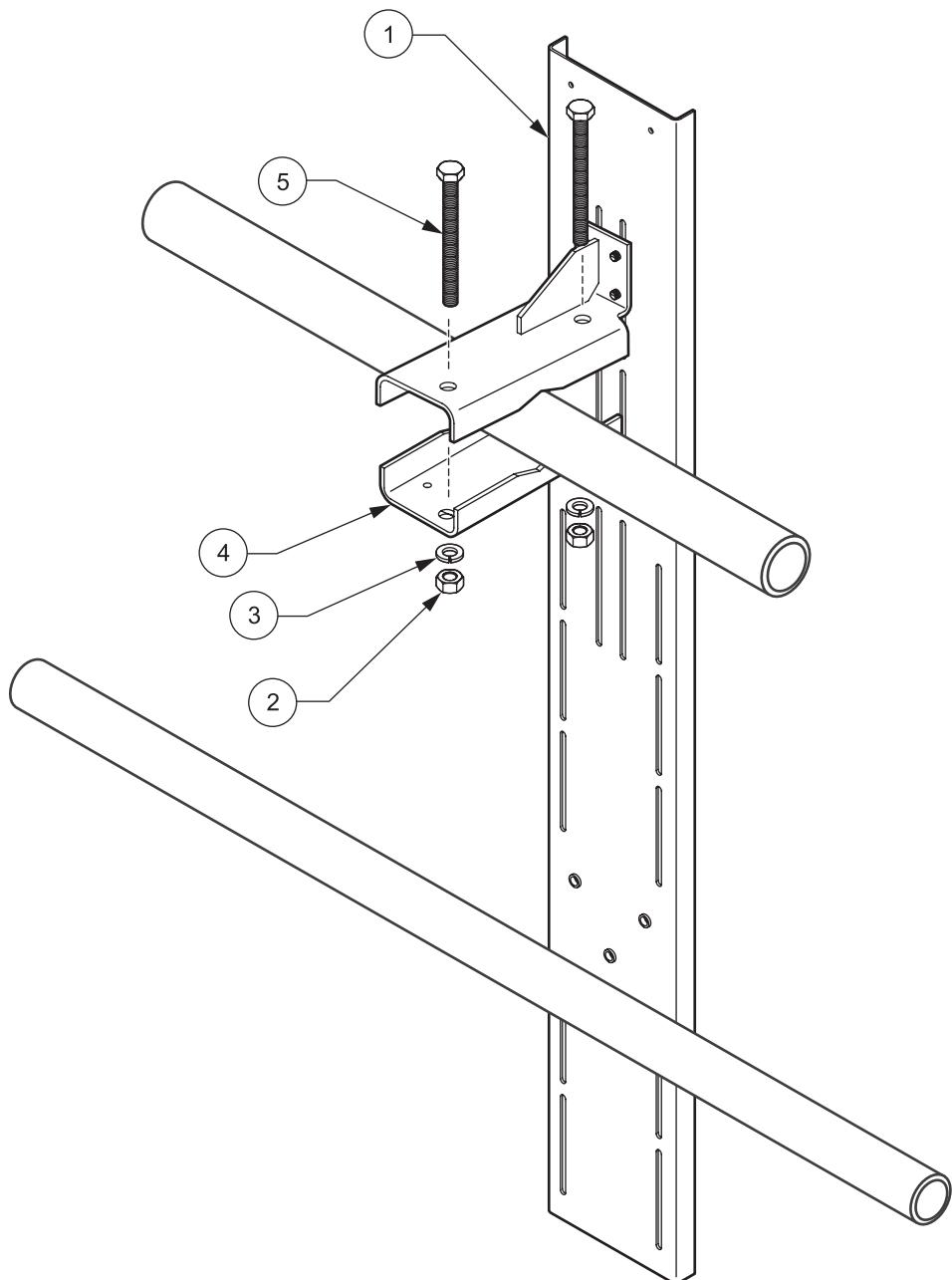


Figure 8 Installation of the angle bracket on the top rail

1 Mounting rail for the rail mounting LZY285 or LZY316 (LZY316 shown)	4 U profile LZY356
2 Nuts M8 (2X), from LZY220	5 Screw M8X120 (2X), from LZY220
3 Spring washer for M8 (2X), from LZY220	

Rail mounting

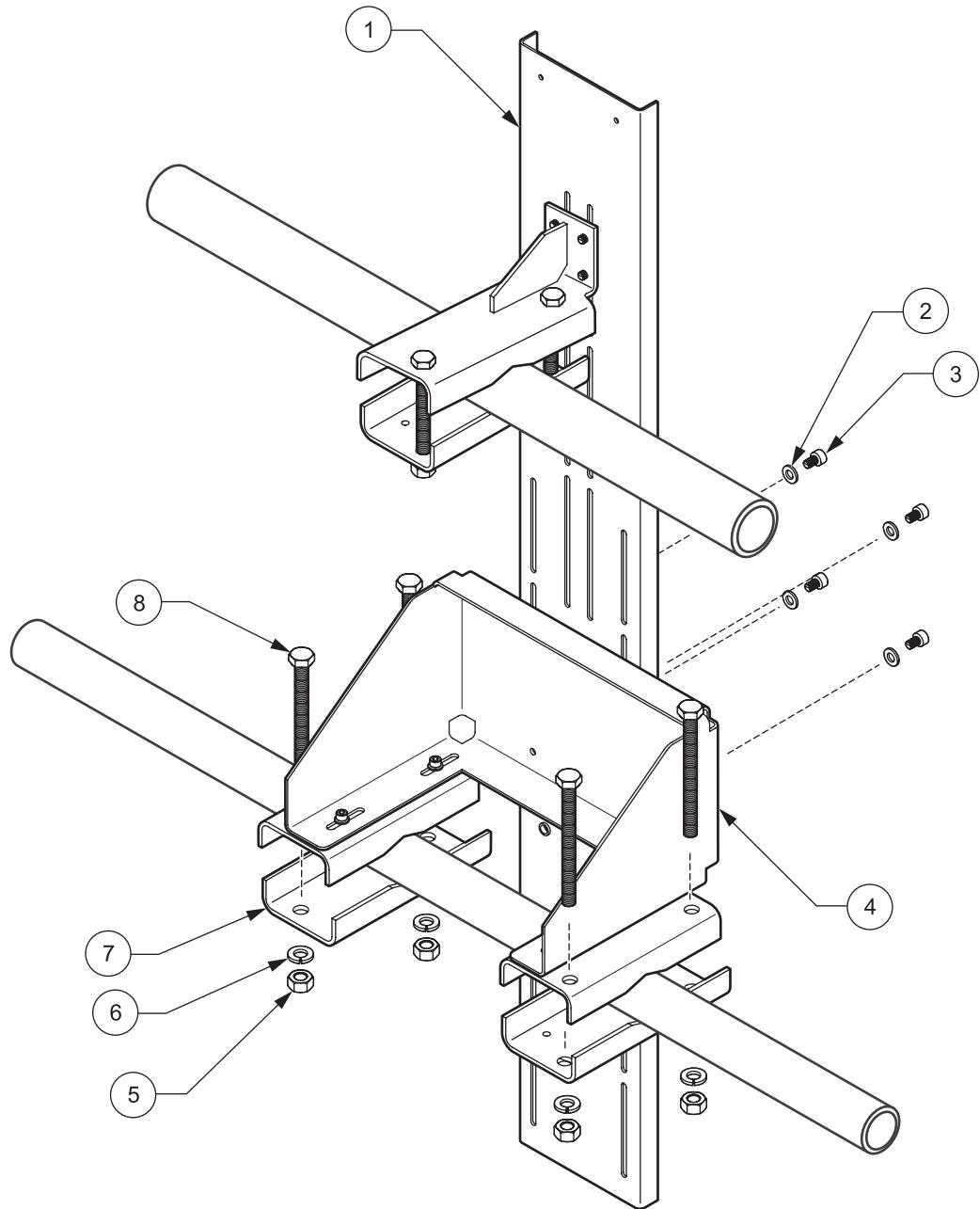


Figure 9 Installation of the angle bracket on the mounting rail

1 Mounting rail for the rail mounting LZY285 or LZY316 (LZY316 shown)	5 Nuts M8 (4X), from LZY220
2 Spring washer for M5 (4X), from LZY220	6 Spring washer for M8 (4X), from LZY220
3 Hex socket head screw M5X8 (4X), from LZY220	7 U profile LZY356 (2X)
4 Angle plate LZY358, pre-installed	8 Screw M8X120 (4X), from LZY220

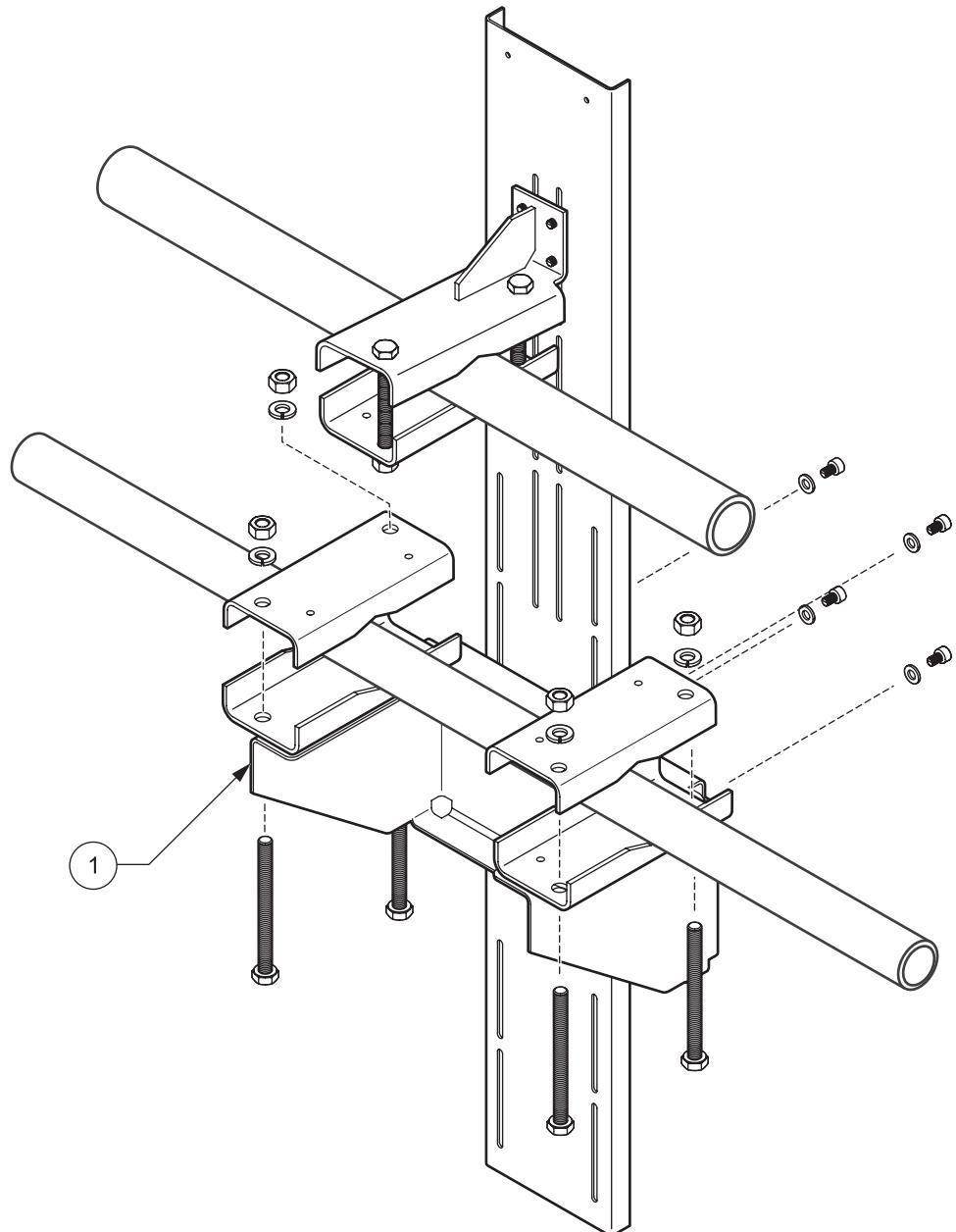


Figure 10 Installation of the mounting rail rotated by 180°

1 Angle plate LZY358, pre-installed

Rail mounting

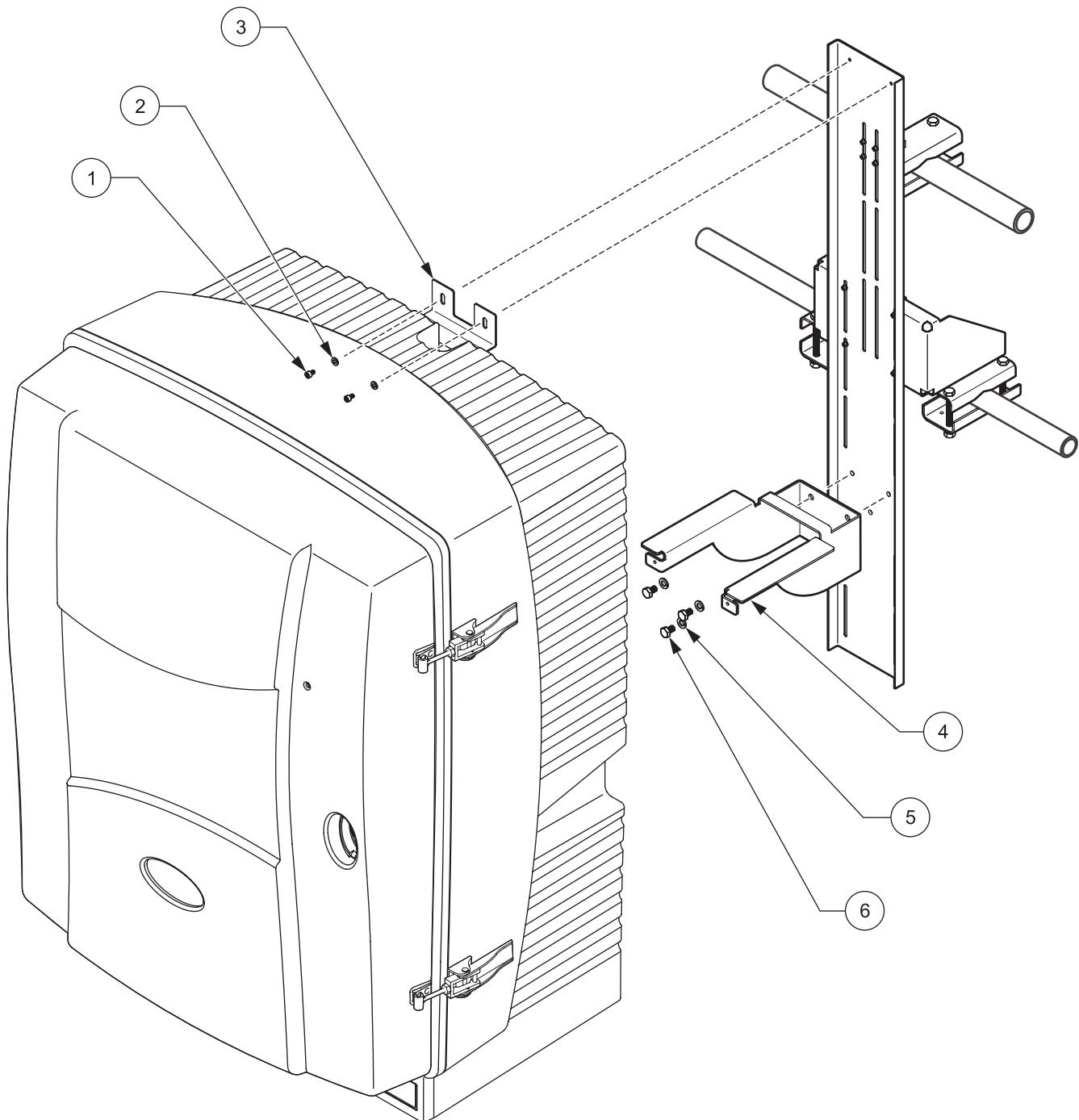


Figure 11 Installation of the analysis instrument on the mounting rail

1 Hex socket head screw M5X8 (2X), from LZY220	4 Fastening bracket (from the items supplied with the analysis instrument)
2 Spring washer for M5 (2X), from LZY220	5 Spring washer for M8 (3X), from LZY220
3 Angle bracket (from the items supplied with the analysis instrument)	6 Screw M8X12 (3X), from LZY220

Installing the sc1000 (only LZY285)

If you want to install an sc1000 controller on a long mounting rail (LZY285), you must fit the weather guard for the controller to the mounting rail. Make sure you have the weather guard and the related installation instructions (DOC273.99.03425.YYYyy, YYy= date) at hand.

1. Insert the M6X110 screws supplied with the weather guard through the weather guard and the mounting rail.
2. Tighten the nuts supplied with the weather guard with the washers.
3. Install the sc1000 in the weather guard.

Spare parts and accessories

Description	Number	Order number
Angle bracket	1	LZY357
Angle plate	1	LZY358
U profile	1	LZY356
Set of screws rail mounting	1	LZY220

Rail mounting

Warranty, liability and complaints

HACH LANGE GmbH warrants that the product supplied is free of material and manufacturing defects and undertakes the obligation to repair or replace any defective parts at zero cost.

The warranty period for instruments is 24 months. If a service contract is taken out within 6 months of purchase, the warranty period is extended to 60 months.

With the exclusion of the further claims, the supplier is liable for defects including the lack of assured properties as follows: all those parts that, within the warranty period calculated from the day of the transfer of risk, can be demonstrated to have become unusable or that can only be used with significant limitations due to a situation present prior to the transfer of risk, in particular due to incorrect design, poor materials or inadequate finish will be improved or replaced, at the supplier's discretion. The identification of such defects must be notified to the supplier in writing without delay, however at the latest 7 days after the identification of the fault. If the customer fails to notify the supplier, the product is considered approved despite the defect. Further liability for any direct or indirect damages is not accepted.

If instrument-specific maintenance and servicing work defined by the supplier is to be performed within the warranty period by the customer (maintenance) or by the supplier (servicing) and these requirements are not met, claims for damages due to the failure to comply with the requirements are rendered void.

Any further claims, in particular claims for consequential damages cannot be made.

Consumables and damage caused by improper handling, poor installation or incorrect use are excluded from this clause.

HACH LANGE GmbH process instruments are of proven reliability in many applications and are therefore often used in automatic control loops to provide the most economical possible operation of the related process.

To avoid or limit consequential damage, it is therefore recommended to design the control loop such that a malfunction in an instrument results in an automatic change over to the backup control system; this is the safest operating state for the environment and the process.

Contacts

HACH LANGE GmbH

Willstaetterstrasse 11
D-40549 Duesseldorf
Tel. +49 (0) 211- 52 88 - 0
Fax +49 (0) 211- 52 88 - 143
info@hach-lange.de
www.hach-lange.de

HACH LANGE LTD

Pacific Way
Salford
Manchester, M50 1DL
Tel. +44 (0)161 8 72 14 87
Fax +44 (0)161 8 48 73 24
info@hach-lange.co.uk
www.hach-lange.co.uk

HACH LANGE

HACH SAS
33, Rue du Ballon
F-93165 Noisy Le Grand
Tél. +33 (0)1 48 15 68 70
Fax +33 (0)1 48 15 80 00
info@hach-lange.fr
www.hach-lange.fr

DR. BRUNO LANGE

GES. MBH
Industriestrasse 12
A-3200 Obergrafendorf
Tel. +43 (0) 2747 - 74 12
Fax +43 (0) 2747 - 42 18
info@hach-lange.at
www.hach-lange.de

DR. BRUNO LANGE AG

Juchstrasse 1
CH-8604 Hegnau
Tel. +41 (0)44 - 9 45 66 10
Fax +41 (0)44 - 9 45 66 76
info@hach-lange.ch
www.hach-lange.ch

HACH LANGE SA

Motstraat 54
B-2800 Mechelen
Tél. +32 (0)15 42 35 00
Fax +32 (0) 1541 61 20
info@hach-lange.be
www.hach-lange.be

DR. LANGE NEDERLAND

B.V.
Laan van Westroijen 2a
NL-4003 AZ Tiel
Tel. +31 (0)3 44 63 11 30
Fax +31 (0)3 44 63 11 50
info@hach-lange.nl
www.hach-lange.nl

HACH LANGE AB

Vinthundsvägen 159A
SE-128 62 SKÖNDAL
Tel. +46 (0)8 7 98 05 00
Fax +46 (0)8 7 98 05 30
info@hach-lange.se
www.hach-lange.se

HACH LANGE A/S

Åkandevej 21
DK-2700 Brønshøj
Tel. +45 36 77 29 11
Fax +45 36 77 49 11
info@hach-lange.dk
www.hach-lange.dk

HACH LANGE S.L.U.

C/Araba 45, Apdo. 220
E-20800 Zarautz/Guipúzcoa
Tel. +34 9 43 89 43 79
Fax +34 9 43 13 02 41
info@hach-lange.es
www.hach-lange.es

HACH LANGE SP.ZO.O.

ul. Opolska 143 a
PL-52-013 Wrocław
Tel. +48 71 3 42 10 -81
Fax +48 71 3 42 10-79
info@hach-lange.pl
www.hach-lange.pl

HACH LANGE S.R.L.

Via Riccione, 14
I-20156 Milano
Tel. +39 02 39 23 14-1
Fax +39 02 39 23 14-39
info@hach-lange.it
www.hach-lange.it

HACH LANGE S.R.O.

Lešanská 2a/1176
CZ-141 00 Praha 4
Tel. +420 272 12 45 45
Fax +420 272 12 45 46
info@hach-lange.cz
www.hach-lange.cz

HACH LANGE S.R.O.

Sabinovská 10
SK-821 02 Bratislava
Tel. +421 2 4820 9091
Fax +421 2 4820 9093
info@hach-lange.sk
www.hach-lange.sk

HACH LANGE LDA

Rua dos Malhões,
Edif. D. Pedro I
P-2770-071 Paço D'Arcos
Tel. +351 210 00 1750
Fax +351 210 00 8140
info@hach-lange.pt
www.hach-lange.pt

HACH LANGE S.R.L.

str. Aviator Teodor Iliescu nr.37
Bucuresti, Sector 1
RO-011672
Tel. +40 (0)21 2 08 95 78
Fax +40 (0)21 2 08 95 78
info@hach-lange.com
www.hach-lange.com

HACH LANGE KFT.

Íves u. 2.
H-9027 Győr
Tel. +36 (0)696 511 400
Fax +36 (0)696 329 981
info@hach-lange.com
www.hach-lange.hu

HACH LANGE

8, Kr. Sarafov str.
BG-1164 Sofia
Tel. +359 (0) 2 963 19 21
Fax +359 (0)2 866 04 47
info@hach-lange.com
www.hach-lange.com