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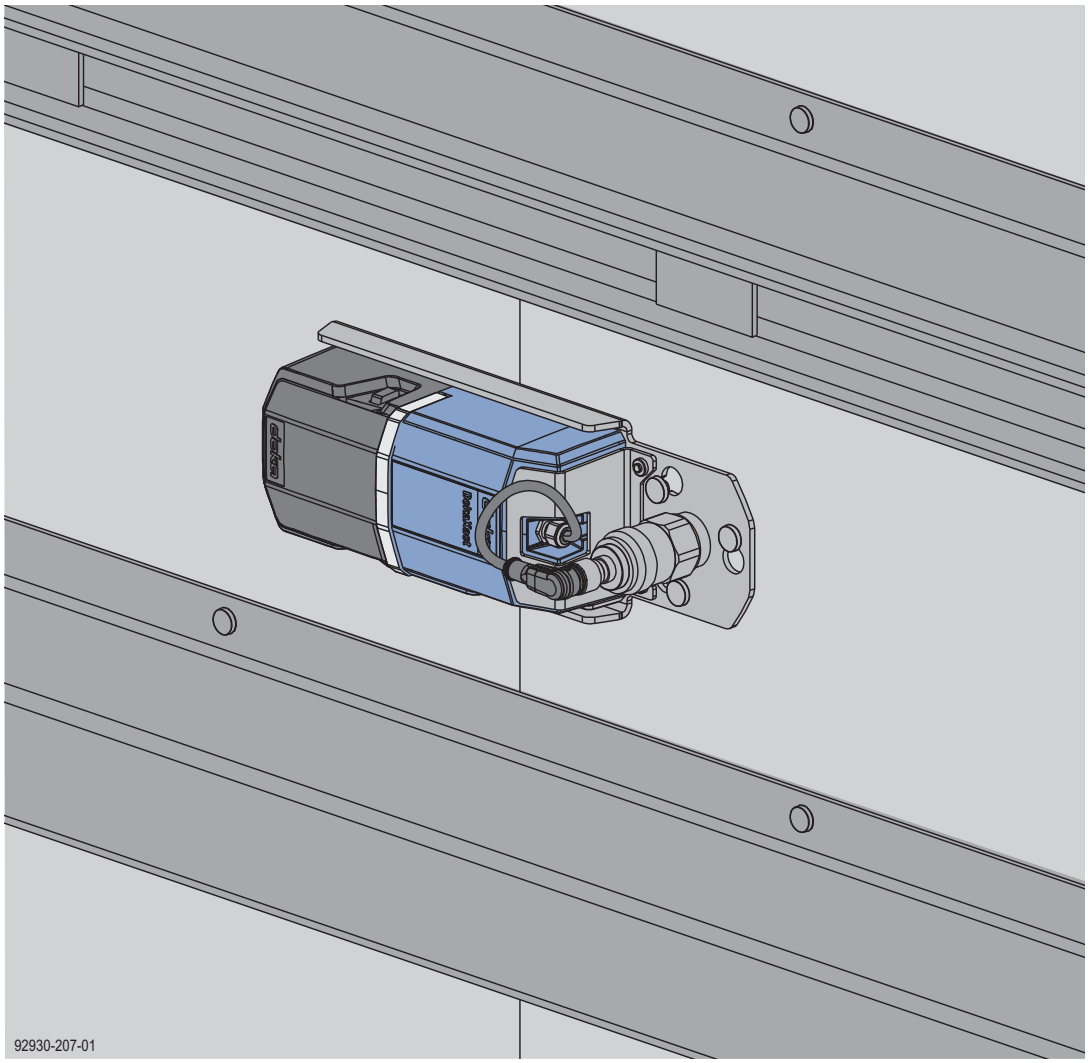
en-GB

Formwork & Scaffolding.
We make it work.

DokaXact Pressure

Original Operating Instructions

Please retain for future reference



Contents

Introduction

Elementary safety warnings

User target groups

- This booklet is aimed at all persons who will be working with the Doka product or system that it describes. It contains information on the standard design for setting up this system, and on correct, compliant utilisation of the system.
- All persons working with the product described herein must be familiar with the contents of this booklet and with all the safety instructions it contains.
- Persons who are incapable of reading and understanding this booklet, or who can do so only with difficulty, must be instructed and trained by the customer.
- The customer is to ensure that the information materials provided by Doka (e.g. User Information booklets, Instructions for Assembly and Use, Operating Instruction manuals, plans etc.) are up to date and available to all users, and that they have been made aware of them and have easy access to them at the usage location.
- In the relevant technical documentation and formwork utilisation plans, Doka shows the workplace safety precautions that are necessary in order to use the Doka products safely in the usage situations shown.
  In all cases, users are obliged to ensure compliance with national laws, standards and regulations throughout the entire project and to take appropriate additional or alternative workplace safety precautions where necessary.

Hazard assessment

- The customer is responsible for drawing up, documenting, implementing and continually updating a hazard assessment at every job-site.
  This booklet serves as the basis for the site-specific hazard assessment, and for the instructions given to users on how to prepare and utilise the system. It does not substitute for these, however.

Remarks on this booklet

- This document can be used as general Instructions for Assembly and Use (Method Statement) or be incorporated into site-specific Instructions for Assembly and Use (Method Statement).
- **The graphics, animations and videos in this document or app sometimes depict partially assembled assemblies and may require additional safety equipment and/or measures to comply with safety regulations.**
  The customer must ensure all applicable regulations are complied with, even if they are not shown or implied in the graphics, animations and videos provided.
- **Individual sections contain further safety instructions and/or special warnings as applicable.**

Planning

- Provide safe workplaces for those using the formwork (e.g. for when it is being erected/dismantled, modified or repositioned etc). It must be possible to get to and from these workplaces via safe access routes!
- **If you are considering any deviation from the details and instructions given in this booklet, or any application which goes beyond those described in the booklet, then revised static calculations must be produced for checking, as well as supplementary assembly instructions.**

Regulations; industrial safety

- All laws, Standards, industrial safety regulations and other safety rules applying to the utilisation of our products in the country and/or region in which you are operating must be observed at all times.
- If a person or object falls against, or into, the sideguard component and/or any of its accessories, the component affected may only continue in use after it has been inspected and passed by an expert.

Rules applying during all phases of the assignment

- The customer must ensure that this product is erected and dismantled, reset and generally used for its intended purpose in accordance with the applicable laws, standards and rules, under the direction and supervision of suitably skilled persons.
  These persons' mental and physical capacity must not in any way be impaired by alcohol, medicines or drugs.
- Doka products are technical working appliances which are intended for industrial / commercial use only, always in accordance with the respective Doka User Information booklets or other technical documentation authored by Doka.
- The stability and load-bearing capacity of all components and units must be ensured during all phases of the construction work!
- Do not step on or apply strain to cantilevers, closures, etc. until suitable measures to ensure their stability have been correctly implemented (e.g. by tie-backs).
- Strict attention to and compliance with the functional instructions, safety instructions and load specifications are required. Non-compliance can cause accidents and severe injury (risk of fatality) and considerable damage to property.
- Sources of fire in the vicinity of the formwork are prohibited. Heaters are permissible only when used correctly and situated a correspondingly safe distance from the formwork.
- Customer must give due consideration to any and all effects of the weather on the equipment and regards both its use and storage (e.g. slippery surfaces, risk of slipping, effects of the wind, etc.) and implement appropriate precautionary measures to secure the equipment and surrounding areas and to protect workers.
- All connections must be checked at regular intervals to ensure that they are secure and in full working order.
  In particular threaded connections and wedged connections have to be checked and retightened as necessary in accordance with activity on the jobsite and especially after out-of-the-ordinary occurrences (e.g. after a storm).
- It is strictly forbidden to weld Doka products – in particular anchoring/tying components, suspension components, connector components and castings etc. – or otherwise subject them to heating.
  Welding causes serious change in the microstructure of the materials from which these components are made. This leads to a dramatic drop in the failure load, representing a very great risk to safety.
  It is permissible to cut individual tie rods to length with metal cutting discs (introduction of heat at the end of the rod only), but it is important to ensure that flying sparks do not heat and thus damage other tie rods.
  The only articles which are allowed to be welded are those for which the Doka literature expressly points out that welding is permitted.

Assembly

- The equipment/system must be inspected by the customer before use, to ensure that it is in an acceptable condition. Steps must be taken to exclude components that are damaged, deformed, or weakened due to wear, corrosion or rot (e.g. fungal decay).
- Using our safety and formwork systems together with those of other manufacturers can create risks that may lead to injury and damage to property. This requires separate verification by the user.
- The equipment/system must be assembled and erected in accordance with the applicable laws, standards and rules by trained customer personnel whilst maintaining any applicable safety inspections that may be required.
- It is not permitted to modify Doka products; such modifications constitute a safety risk.

Closing the formwork

- Doka products and systems must be set up so that all loads acting upon them are safely transferred!

Pouring

- Do not exceed the permitted fresh-concrete pressures. Over-high pouring rates overload the formwork, cause greater deflection and risk breakage.

Stripping the formwork

- Do not strip out the formwork until the concrete has reached sufficient strength and the person in charge has given the order for the formwork to be stripped out!
- When stripping out the formwork, never use the crane to break concrete cohesion. Use suitable tools such as timber wedges, special pry-bars or system features such as Framax stripping corners.
- When stripping out the formwork, do not endanger the stability of any part of the structure, or of any scaffolding, platforms or formwork that is still in place!

Transporting, stacking and storing

- Observe all country-specific regulations applying to the handling of formwork and scaffolding. For system formwork the Doka slinging means stated in this booklet must be used – this is a mandatory requirement.
  If the type of sling is not specified in this document, the customer must use slinging means that are suitable for the application envisaged and that comply with the regulations.
- When lifting, always make sure that the unit to be lifted and its individual parts can absorb the forces that occur.
- Remove loose parts or secure them so that they cannot slip out of position and drop.
- When lifting formwork or formwork accessories with a crane, no persons must be carried along, e.g. on working platforms or in multi-trip packaging.
- All components must be stored safely, following all the special Doka instructions given in the relevant sections of this document!

Maintenance

- Only original Doka components may be used as spare parts. Repairs may only be carried out by the manufacturer or authorised facilities.

Miscellaneous

The weights as stated are averages for new material; actual weights can differ, depending on material tolerances. Dirt accretions, moisture saturation, etc. can also affect weight.
We reserve the right to make alterations in the interests of technical progress.

Symbols used

The following symbols are used in this document:

DANGER
This is a notifier drawing attention to an extremely dangerous situation in which non-compliance with this notifier will lead to death or severe, irreversible injury.

WARNING
This is a notifier drawing attention to a dangerous situation in which non-compliance with this notifier can lead to death or severe, irreversible injury.

CAUTION
This is a notifier drawing attention to a dangerous situation in which non-compliance with this notifier can lead to slight, reversible injury.

NOTICE
This is a notifier drawing attention to a situation in which non-compliance with this notifier can lead to malfunctions or damage to property.

Instruction
Indicates that actions have to be performed by the user.

Sight-check
Indicates that you need to do a sight-check to make sure that necessary actions have been carried out.

Tip
Points out useful practical tips.

Reference
Cross-references other documents.

Support

Help or questions drop us a line at **dokaxact@doka.com.** We are here for you!

Services

Support in every stage of the project

- Project success assured by products and services from a single source.
- Competent support from planning through to assembly directly on site.

Project assistance from start to finish

Every single project is unique and calls for individualised solutions. When it comes to the forming operations, the Doka team can help you with its consulting, planning and ancillary services in the field, enabling you to carry out your project effectively, safely and reliably. Doka assists you with individual consulting services and customised training courses.

Efficient planning for a safe project sequence

Efficient formwork solutions can only be developed economically if there is an understanding of project requirements and construction processes. This understanding is the basis of Doka engineering services.

Optimise construction workflows with Doka

Doka offers special tools that help you in designing transparent processes. This is the way to speed up pouring processes, optimise inventories and create more efficient formwork planning processes.

Custom formwork and on-site assembly

To complement its system formwork range, Doka offers customised formwork units. And specially trained personnel assemble load-bearing towers and formwork on site.

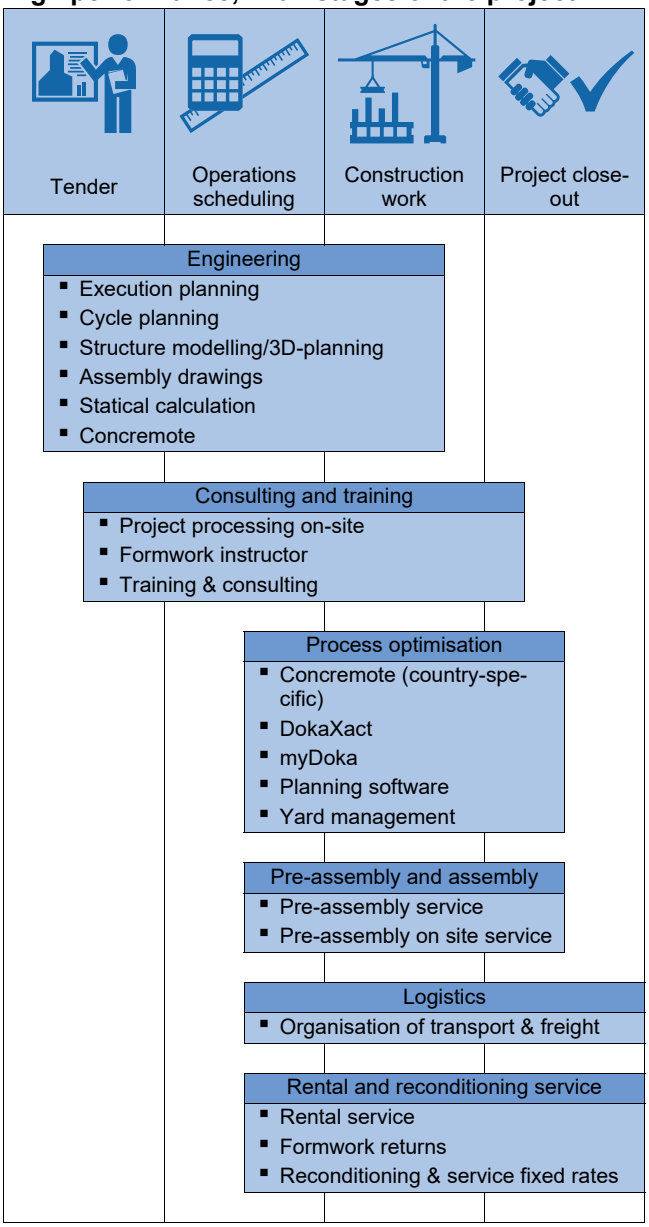
Just-in-time availability

Formwork availability is a crucial factor in realising your project on time and on budget. The worldwide logistics network puts the necessary formwork quantities on site at the agreed time.

Rental and reconditioning service

The formwork material needed for any particular project can be rented from Doka's high-performing rental park. Doka Reconditioning cleans and overhauls both client-owned equipment and Doka rental equipment.

High performance, in all stages of the project

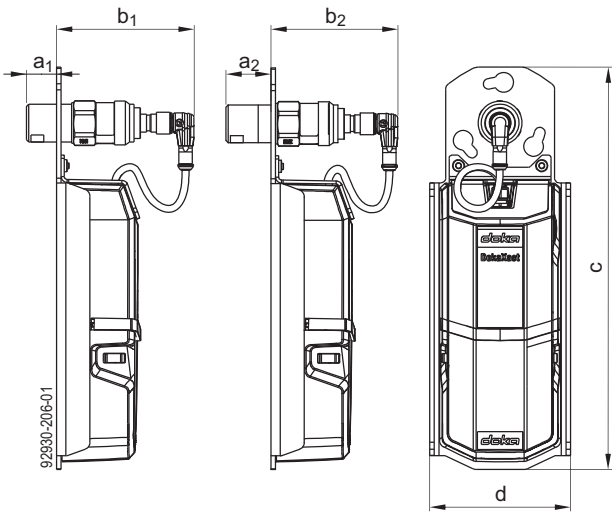


Digital Services
for higher productivity in construction

From planning to completion of construction - with our digital services we want to set the pace for boosting productivity in construction. Our digital portfolio includes solutions for planning, procuring and managing to performing on site. Learn more about our digital offer at doka.com/digital.

Product description

Product presentation



a_1 ... 20 mm ($^3/_4$") (as-delivered condition)
a_2 ... 27 mm ($1^1/_{16}$")
b_1 ... 91 mm ($3^1/_2$")
b_2 ... 84 mm ($3^1/_4$")
c ... 266 mm ($10^1/_2$")
d ... 93 mm ($3^3/_4$")

Technical data

- Range of use: -20 °C to 50 °C (13 °F to 122 °F)
- Measuring range: 0 - 250 kN/m² (0 - 5220 psf)
- Accuracy: ± 1 % typ. / ± 2 % max.
- Measuring interval: 3 - 10 seconds
- Formwork-sheet thickness: 9 - 27 mm ($^3/_8$" - $1^1/_{16}$")
- Hole size: 26 mm (1")
- Weight: 1.65 kg (3.0 lb)

The DokaXact Pressure sensor is supplied with a DokaXact battery:

- Battery type: Lithium ion
- Battery runtime: up to 3 weeks
- Battery charging time: up to 3 hours
- Degree of protection: IP65 with battery installed*)

*) without battery: electrical contacts excluded

Intended use

DokaXact Pressure measures the fresh-concrete pressure with a pressure sensor. Via Bluetooth, the sensor transmits the measured values to a mobile device. The mobile device displays the measured values and forwards them to the DokaXact web portal.

Concrete pressure monitoring: how it works, how it is used

Measuring fresh-concrete pressure in real time.

DokaXact Pressure is a service for measuring fresh-concrete pressure during concrete placement on the jobsite.
The sensors monitor the fresh-concrete pressure to which the vertical formwork is subjected during placement of the concrete.
The sensors enable monitoring of the safe and optimum rate of placement and pouring in the formwork (wall, column, tunnel formwork, etc.).

This service comprises three parts:

- Measuring device (DokaXact sensor)
- App on the user's mobile device
- Web portal for data processing

The **sensors** are attached to the rear of the formwork. Through a hole drilled in the formwork, the sensor head is in direct contact with the concrete. As soon as the diaphragm of the sensor head comes into contact with the liquid concrete, pressure is measured.

The **app** displays the measured values transmitted to the user's mobile device.

The **web portal** is for visualisation of the measured data and enables reports of the measurements to be generated.

Control by precision measurement

The measured values help the user to control concrete placement and to utilise the load limits of the formwork to the full without exceeding them.
This enables safe and fast concreting and continuous improvement of the formworking and concreting operation.

Multi-functional

DokaXact Pressure features a precise, re-usable, flush-mount sensor head.

The wireless sensor can be installed on various formwork systems with a formwork-sheet thickness in the range from 9 to 27 mm ($^3/_8$" - $1^1/_{16}$"):

- Wall and column formwork
- Bridge and tunnel building sites
- Mass concrete
- Lost formwork
- Utilisation of pumped concrete in constricted situations

Certainty for the construction project

Helps you take decisions and records your data

- Well-founded decision-taking on the basis of the measured data.
- Early estimation and tracking of pressure development by graphic visualisation.
- Printing and storage of data for long-term verification.

Easy online access to the data

Via the user-optimised DokaXact web portal, users can access their measured data at any time.
Accurate documentation ensures both certainty for the building process and transparency.

Wireless data transmission and easy access from anywhere

DokaXact sensors	DokaXact app	DokaXact cloud	DokaXact web portal

Numerous decisions can be taken more accurately with the aid of the data on form-tie load and fresh-concrete pressure:

- Placing rate
- Loads on the formwork due to fresh-concrete pressure and compaction
- Schedule for concrete deliveries and ordering
- Control of the concrete placement pump
- Optimisation of the concreting process

Follow the instructions in the ‘DokaXact app & web portal’ User Manual!

Maintenance / inspection / storage

- Repairs may only be carried out by the manufacturer!
- Doka accepts no liability for products that have been altered!

Before every use

➤ Check for any signs of damage or visible deformation.

Sensors that do not meet the following criteria must be withdrawn from use immediately:
- No deformation.
- No cracks or notches.
- No damage due to the influence of heat.

Storage

- Store DokaXact articles in a dry, well ventilated place, protected from climatic influences and aggressive substances.

Disposal

For more information on the disposal of articles, consult your Doka contact partner.

Use of DokaXact Pressure

General remarks

NOTICE

- Keep the sensor head free of concrete deposits and concrete residues and grease the head after every 3-5 use cycles.
- Do not drop the sensor.
- Use site-provided rope to secure sensors placed at height.
- The sensor is resistant to ingressing rainwater and moisture.
- The sensor is not waterproof - avoid situations in which the sensor might be immersed in water.
- Avoid contact with internal and external concrete compactors.
  (min. 0.6 m (1'-11 5/8"))
- Before each new project, delete the sensor from the app (sensor flashes green).

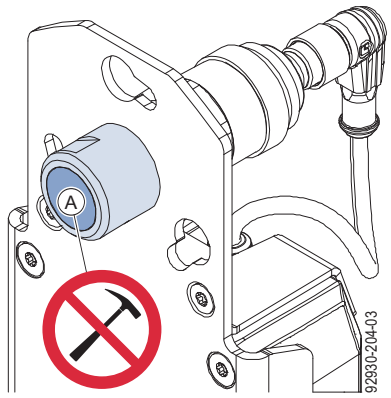
Preparation

Setting sensor length

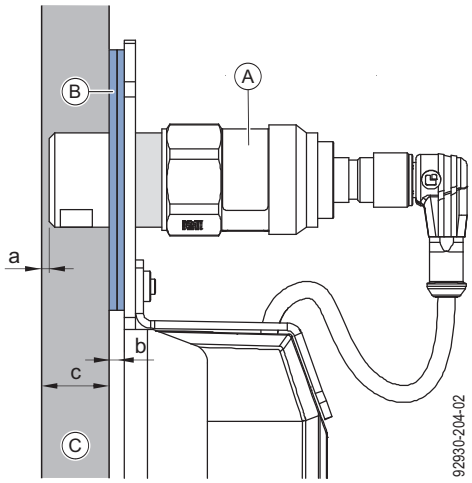
NOTICE

Highly sensitive sensor range **(A)**

- Use no tools to set up the sensor head.



Formwork-sheet thickness 9 - 21 mm (3/8" - 7/8")



a ... max. ±1 mm (1/32")
b ... thickness of the spacers
c ... formwork-sheet thickness 9 - 21 mm (3/8" - 7/8")

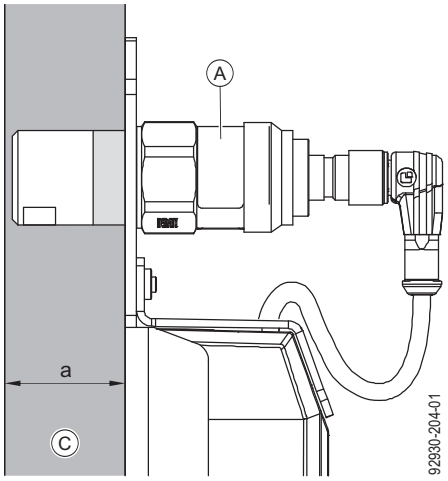
A	DokaXact Pressure sensor
B	DokaXact Pressure spacer 2mm or 3mm (optional)
C	Formwork sheet

➤ As necessary, install **spacers of thickness 2 mm** (1/16") and/or **3 mm** (1/8") between sensor and formwork sheet.
This reduces sensor length.

Note:

The difference between sensor length and formwork-sheet thickness must be no more than max. **±1 mm** (1/32").

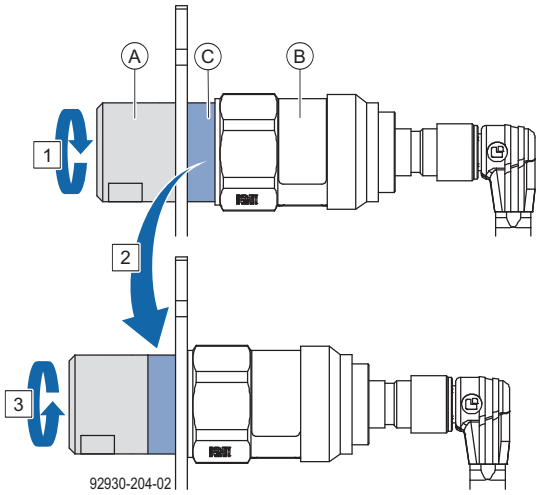
Formwork-sheet thickness 22 - 27 mm ($^{7}/_{8}$" - $1^{1}/_{16}$")



a ... formwork-sheet thickness 22 - 27 mm ($^{7}/_{8}$" - $1^{1}/_{16}$")

A	DokaXact Pressure sensor
B	Formwork sheet

➤ Unscrew sensor nut and pull sensor head out of metal plate **(1)**.
➤ Remove spacer ring.
➤ Push sensor head through the metal plate and slip spacer ring into position on the other side of the metal plate **(2)**.
➤ Tighten sensor nut **(3)**.
Tightening torque:
20 - 25 Nm (not lubricated)
15 - 20 Nm (lubricated)



A	Sensor nut
B	Sensor head
C	Spacer ring

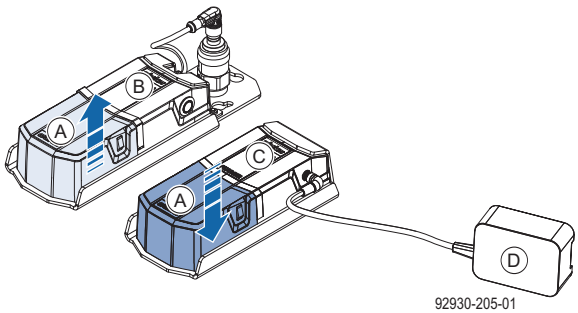
➤ As necessary, install additional spacers between sensor and formwork sheet (see the section headed Formwork-sheet thickness 9 - 21 mm (3/8" - 7/8")).

Tools needed:
- fork wrench 23 mm ($^{15}/_{16}$")

Charging the battery

NOTICE
- Keep the charger at a dry location indoors.
- Protect the AC adapter against water ingress.
- Charge the battery to 100% at least every 6 months.

➤ Press to disengage battery latches.
➤ Lift battery off sensor.
➤ Press latch and insert battery into the charger.
➤ Connect charger to AC adapter.
➤ Connect AC adapter to power outlet.



A	DokaXact battery
B	DokaXact Pressure sensor
C	DokaXact charger
D	AC adapter of the DokaXact charger (EU, UK, US/CA included in the scope of supply)

- Degree of protection of the charger: IP20
- Operating temperature for charging: 0 to +45°C
- 5% to 95% relative humidity

Note:
The charging cycle takes approx. three hours.

LED status indicator

LED status indicator on the DokaXact sensor:

LED	LED behaviour	Seconds			Operating status
		1	2	... 8	
Green	Flashing				Ready to connect
Blue	Flashing				Device connected = ready to measure
Red	Quick-flashing				Battery level ≤ 20 %
White	Double-flashing followed by ‘ready to connect’ operating status				Bluetooth Mesh reset
Yellow	Fade in / fade out				Power up

LED status indicator on the DokaXact charger:

LED	LED behaviour	Seconds			Operating status
		1	2	... 8	
Green	Flashing				Charging in progress
Green	Showing steadily				Battery level 100 %
Red	Showing steadily				Battery not connected, battery temperature too high or too low, malfunction, battery faulty
Red	Flashing				Connection of wrong power supply unit with insufficient power

Measurements

➤ Scan QR code.
➤ Install DokaXact app from Play Store on an Android device.

Positioning on the formwork

Basic rule:

The DokaXact sensors ensure that the formwork's permissible concrete pressure is not exceeded.

Consequently, the sensors are needed only in areas where the expected fresh-concrete pressure approaches the limit for the formwork's permissible concrete pressure.

Recommended positioning of the sensor at height:

Sensor	Distance from floor level
1	0.3 m (12")
2	1.3 m (4'-3 1/4")
3	2.3 m (7'-6 1/2")
4	3.8 m (12'-5 1/2")

Recommended positioning of the sensor in longitudinal direction:

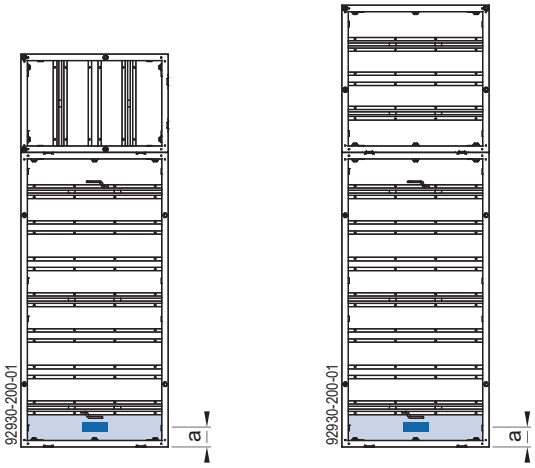
- Starting zone for pouring
- Optional validation: 5.0 m (16'-5") away from the starting zone
- In corner zones
- Every 20.0 m (65'-7 1/2")
- Additionally at every location where the concreting conditions change significantly, e.g. placing rate (e.g. because of thinner walls), reinforcement, box-outs.

Example: Framed formwork Framax Xlife

Follow the directions in the 'Framed formwork Framax Xlife' User Information booklet.

Note:
Symbolic illustrations without form ties, inter-panel connections and universal walings.

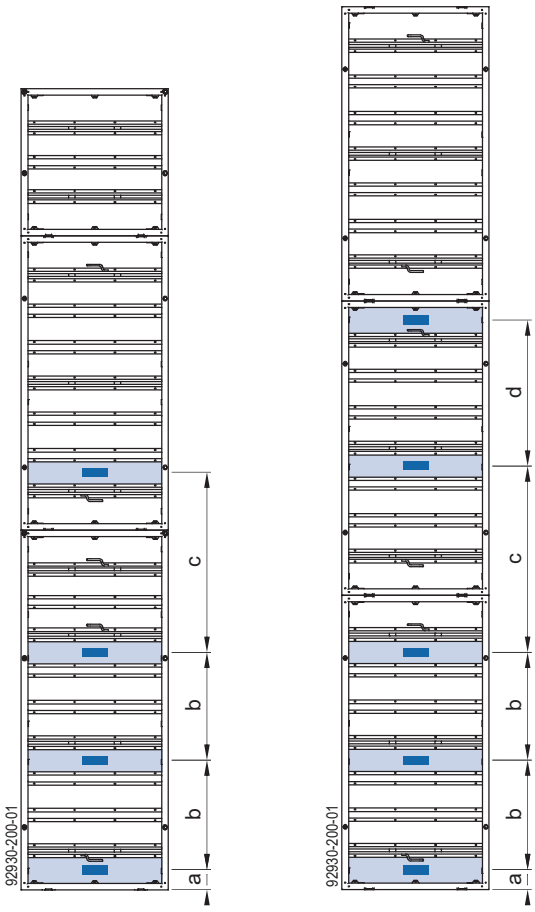
Formwork height: 360 cm (11'-9 3/4") / 405 cm (13'-3 1/2")



Formwork height: 465 cm (15'-3") / 540 cm (17'-8 1/2")

Formwork height: 600 cm (19’-8 1/4") / 660 cm (21’-8")

Formwork height: 735 cm (24’-1 3/8") / 810 cm (26’-7")



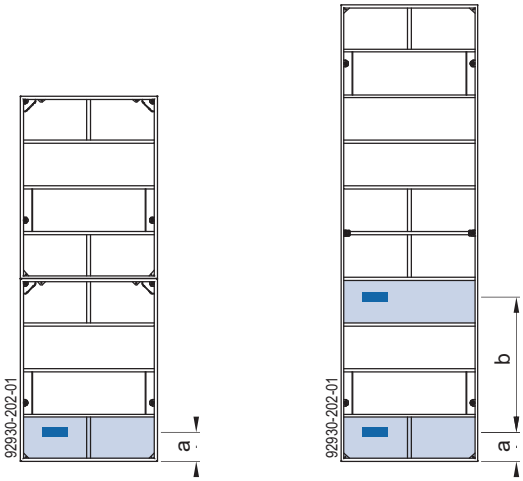
a ... approx. 20 cm (7 3/4")
b ... approx. 100 cm (3’-3 1/4")
c ... approx. 160 cm (5’-3")
d ... approx. 140 cm (4’-7")

Example: Framed formwork Frami Xlife

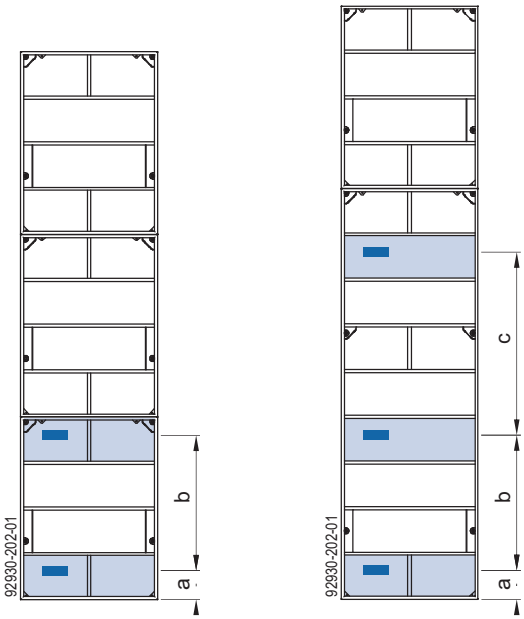
Follow the directions in the 'Framed formwork Frami Xlife' User Information booklet.

Note:
Symbolic illustrations without form ties, inter-panel connections and universal walings.

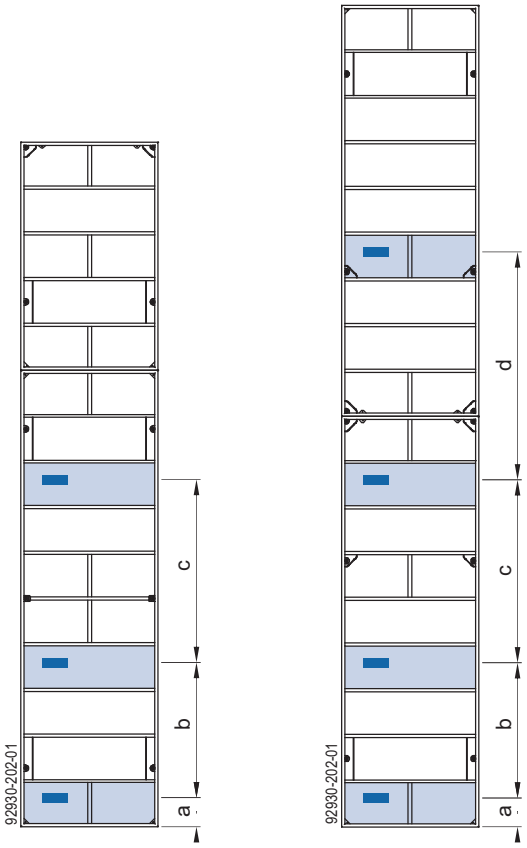
Formwork height: 240 cm (7’-10 1/2") / 300 cm (9’-10")



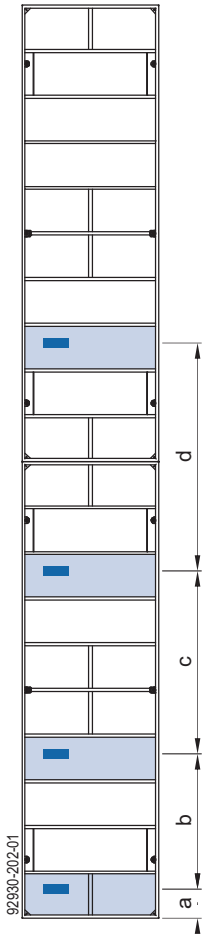
Formwork height: 360 cm (11’-9 3/4") / 390 cm (12’-9 1/2")



Formwork height: 450 cm (14’-9 1/4") / 540 cm (17’-8 1/2")



Formwork height: 600 cm (19’-8 1/4")



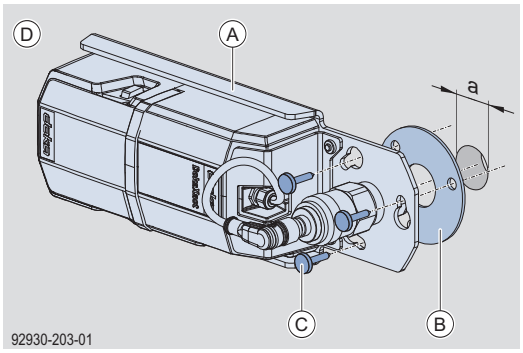
a ... approx. 20 cm (7 3/4")
b ... approx. 90 cm (2’-11 1/2")
c ... approx. 110 cm (3’-7 1/4")
d ... approx. 150 cm (4’-11")

Assembly

➤ Use drill bit from the DokaXact Pressure installation kit to drill a diam. 26 mm (1") hole in the formwork sheet.

➤ Push prepared sensor (see the section headed Preparation) through the hole.

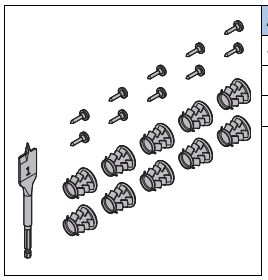
➤ Secure the sensor to the formwork sheet with Framax screws.



a ... diam. 26 mm (1")

A	DokaXact Pressure sensor
B	DokaXact Pressure spacer 2mm or 3mm (optional)
C	Framax screw (included in the scope of supply of the DokaXact Pressure installation kit)
D	Formwork sheet

DokaXact Pressure installation kit

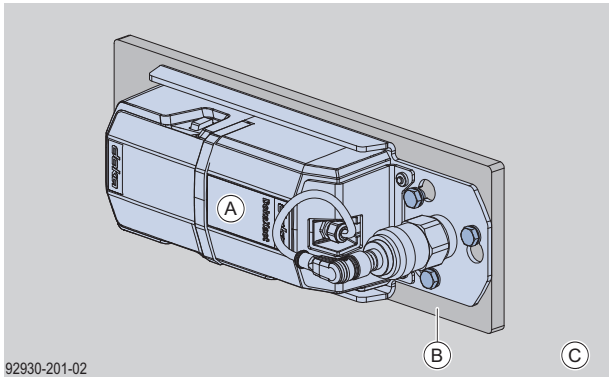


Article	Units
Spade drill bit 26mm	1
Framax screw	10
Universal plug R20/25	10

Other possible areas of use

Note:

For use other than the possibilities shown (e.g. steel form-facing), project-specific planning is necessary. For more information contact Support.



A	DokaXact Pressure sensor
B	Assembly plate
C	Steel form-facing

What to do in the event of sensor malfunction

Proper functioning of the sensors depends on battery power, good wireless connectivity and smooth functioning of the DokaXact app.

If data transmission is interrupted the user is informed directly via their smartphone.

Failure due to connectivity problems

In areas with a poor or with no network connection, a microwave link can be set up by the user.

If wireless transmission is temporarily interrupted, data are not buffered in the sensor.
When the wireless connection is restored measurement resumes and the new measured values are transmitted.

Failure due to low battery power

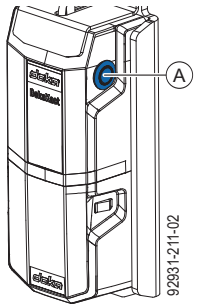
A sensor with a discharged battery cannot save data. In the event of a failure due to low battery power, the battery must be recharged as quickly as possible.

Battery state of charge can be monitored in the mobile app running on the smartphone.

Other failures

In the event of a failure which is not due to connectivity problems or low battery power, resetting the sensor may solve the problem:

➤ Press the ON/OFF button **(A)** and hold it down for 15 seconds to reset the sensor.



The LED changes from flashing blue to flashing green.

Declaration of conformity

CE

EU Declaration of Conformity

Manufacturer:	Doka GmbH	
Address:	Doka GmbH Josef Umdasch Platz 1 3300 Amstetten	
Product designation / article number:	**DokaXact Load sensor** **DokaXact Pressure sensor**	586980000 586984000
Accessories:	DokaXact charger* DokaXact battery	586988000 586989000

* including external power supply (tested with the device)

The subject of this declaration as described above corresponds to the pertinent EU harmonisation legislation:

- 2014/35/EU Low Voltage Directive (LVD)
- 2014/30/EU Electromagnetic Compatibility Directive (EMC)
- 2014/53/EU Radio Equipment Directive (RED)
- 2011/65/EU Restriction of the use of certain Hazardous Substances (RoHS)
- 1907/2006/EU Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The following harmonised standards and technical specifications have been applied:

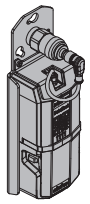
IEC 62368-1:2014 / EN 62368-1:2014/A11:2017	Audio/video, information and communication technology equipment - Part 1: Safety requirements
IEC 62133-2	Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems (IEC 62133-2:2017 + AMD1:2021); German version EN 62133-2:2017 + A1:2021
EN 60529	Degrees of protection provided by enclosures (IP code) (IEC 60529:1989 + A1:1999 + A2:2013); German version EN 60529:1991 + A1:2000 + A2:2013
EN 61326-1:2013; EN IEC 61326-1:2021	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements (IEC 61326-1:2020); German version EN IEC 61326-1:2021
EN 61000-6-4:2007 + A1:2011; EN IEC 61000-6-4:2019	Electromagnetic Compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments (IEC 61000-6-4:2018); German version EN IEC 61000-6-4:2019
EN 61000-6-2:2005 + AC:2005; EN IEC 61000-6-2:2019	Electromagnetic Compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments (IEC 61000-6-2:2016); German version EN IEC 61000-6-2:2019
ETSI EN 303 446-2 V1.2.1	Electromagnetic Compatibility (EMC) standard for combined and/or integrated radio and non-radio equipment - Part 2: Requirements for equipment intended to be used in industrial locations (endorsement of the English version EN 303 446-2 V1.2.1 (2019-10))
ETSI EN 301 489-1 V1.9.2; ETSI EN 301 489-1 V2.2.3	Electromagnetic Compatibility (EMC) standard for radio equipment and services - Part 1: Common technical requirements - Harmonised standard for electromagnetic compatibility (endorsement of the English version EN 301 489-1 V2.2.3 (2019-11))
ETSI EN 301 489-3 V2.1.1; ETSI EN 301 489-3 V2.3.2	Electromagnetic Compatibility (EMC) standard for radio equipment and services - Part 3: Specific conditions for Short Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz - Harmonised standard for electromagnetic compatibility (endorsement of the English version EN 301 489-3 V2.3.2 (2023-01))
ETSI EN 301 489-17 V3.2.4	Electromagnetic Compatibility (EMC) for radio equipment and services - Part 17: Specific conditions for broadband data transmission systems - Harmonised standard for electromagnetic compatibility (endorsement of the English version EN 301 489-17 V3.2.4 (2020-09))
EN 62311:2008	Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz)
ETSI EN 300 328 V2.2.2	Wideband transmission systems - Data transmission equipment operating in the 2.4 GHz band - Harmonised standard for access to radio spectrum (endorsement of the English version EN 300 328 V2.2.2 (2019-07))
ETSI EN 300 330 V2.1.1	Short Range Devices (SRD) - Radio equipment in the frequency range 9 kHz to 25 MHz and inductive loop systems in the frequency range 9 kHz to 30 MHz - Harmonised standard covering the essential requirements of article 3.2 of Directive 2014/53/EU (endorsement of the English version EN 300 330 V2.1.1 (2017-02))
EN 61000-3-2:2014; EN IEC 61000-3-2:2019	Electromagnetic Compatibility (EMC) - Part 3-2: Limits – Limits for harmonic current emissions (equipment input current ≤ 16 A per phase) (IEC 61000-3-2:2014); German version EN IEC 61000-3-2:2019
EN 61000-3-3:2013; EN 61000-3-3:2013 +A1:2019	Electromagnetic Compatibility (EMC) - Part 3-3: Limits – Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection (IEC 61000-3-3:2013); German version EN 61000-3-3:2013 + A1:2019
EN 61000-6-4:2007 + A1:2011; EN IEC 61000-6-4:2019	Electromagnetic Compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments (IEC 61000-6-4:2007); German version EN IEC 61000-6-4:2019
EN 61000-6-2:2005 + AC:2005; EN IEC 61000-6-2:2019	Electromagnetic Compatibility (EMC) - Part 6-2: Generic standards - Immunity standard for industrial environments (IEC 61000-6-2:2005); German version EN IEC 61000-6-2:2019

Amstetten, 02/05/2024

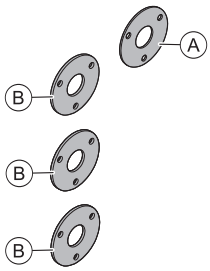
Robert Hauser
CEO

Rainer Bolz
Director
Research & Development

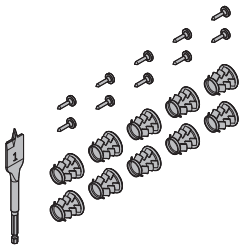
	[kg]	Article N°
DokaXact Pressure sensor DokaXact Pressure-Sensor	**1.6**	**586984000**



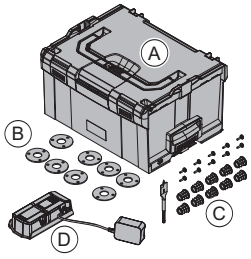
DokaXact Pressure spacer set DokaXact Pressure-Distanzscheibenset consisting of:	**0.28**	**586987000**
(A) **DokaXact Pressure spacer 2mm**	**0.05**	**586985000**
(B) **DokaXact Pressure spacer 3mm**	**0.08**	**586986000**



DokaXact Pressure installation kit DokaXact Pressure-Montageset	**0.17**	**586992000**



DokaXact Pressure accessory kit DokaXact Pressure-Zubehörset consisting of:	**4.7**	**586994000**
(A) **DokaXact Pressure transport box**	**3.1**	**586991000**
(B) **DokaXact Pressure spacer set**	**0.28**	**586987000**
(C) **DokaXact Pressure installation kit**	**0.17**	**586992000**
(D) **DokaXact charger**	**1.4**	**586988000**



DokaXact battery DokaXact-Akku	**0.4**	**586989000**

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