

Formwork & Scaffolding. We make it work.

Forming self-compacting concrete (SCC)

User Information

Instructions for assembly and use (Method statement)







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System overview

Several Doka articles are available for pouring selfcompacting concrete (SCC) in wall formwork.

Doka article	Compatible formwork systems ¹⁾	Required accessories						
Framed formwork								
Framax Xlife universal panel SCC 0.90x2.70m	Framax Xlife	Framax hose to panel coupler SCC						
	Framax Xlife plus Panel closure tool D125 SCC							
	Alu-Framax Xlife							
Universal panel SCC 0.45x1.50m	Frami Xlife	Framax hose to panel coupler SCC						
	DokaXlight	Panel closure tool D125 SCC						
		DokaXlight adapter Frami						
		(for combination with DokaXlight)						
Timber-beam formwork								
Filler neck GF SCC	■ FF20 ²⁾	Panel closure tool D125 SCC						
	■ Top 50 ³⁾							
	 Top 100 tec 							
Steel formwork								
SuperCurve filler neck SCC	 SuperCurve 	SuperCurve panel SCC 2.40x1.50m						
		Panel closure tool D125 SCC						

¹⁾ Combination with other formwork systems on request!

²⁾ For compatible Formwork elements FF20, see <u>Article list</u>.

³⁾ Incl. Column formwork Top 50.



In addition to this document, observe the corresponding User Information for the formwork system used.



For the use of self-compacting concrete (SCC) in tunnel formwork, observe the relevant User Information.

Benefits:

- The concrete is pumped in with the pump hose through the built-in connection point and forced upward under pressure.
- Concrete is placed from below.
- No vibrating needed.
- Walls can be poured up against existing floor-slabs.
- Little or no soiling of the formwork.
- Only a small number of pouring platforms are needed.



NOTICE

The connection points for self-compacting concrete (SCC) are not suitable for pouring conventional concrete!

Framed formwork

Framax Xlife universal panel SCC 0.90x2.70m



- A Integral connection point for pump hose (horizontally operable panel closure tool)
- **B** Locking part (included with product)



NOTICE

The connection point for self-compacting concrete (SCC) is not suitable for pouring conventional concrete!

With the Framax Xlife universal panel SCC, self-compacting concrete (SCC) can be pumped in from below and forced upwards under pressure.

 Otherwise, the panel has the same dimensions and functions as the Framax Xlife universal panel 0.90x2.70m.



- Can be used in the wall area and as stop-end form-work.
- When used as a stop-end formwork, wall thicknesses of 15 to 45 cm are possible, in 5 cm increments.

 For compatible framed formwork and required accessories, see the section headed <u>System overview</u>.

Permissible fresh-concrete pressure of the formwork panel: 80 kN/m², however, the permissible fresh-concrete pressure of the formwork system must always be taken into account.

Practical examples





Universal panel SCC 0.45x1.50m



A Integral connection point for pump hose (vertically operable panel closure tool)

B Locking part (included with product)

NOTICE

I

The connection point for self-compacting concrete (SCC) is not suitable for pouring conventional concrete!

With the Universal panel SCC 0.45x1.50m, self-compacting concrete (SCC) can be pumped in from below and forced upwards under pressure.

• Otherwise, the panel has the same dimensions and functions as the Frami Xlife panel 0.45x1.50m.



- Can be used in the wall area.
- For compatible framed formwork and required accessories, see the section headed <u>System over-</u><u>view</u>.



NOTICE

Always tie in the formwork panel of the leading system!

Permissible fresh-concrete pressure of the formwork panel: 70 kN/m², however, the permissible fresh-concrete pressure of the formwork system must always be taken into account.

Practical examples



doka 999426002 - 04/2025

Accessory

Framax hose to panel coupler SCC



For pushing in the remaining concrete plug in the connection point of the SCC formwork panel for the pump hose.

Panel closure tool D125 SCC



The Panel closure tool D125 SCC is attached to the pump hose (diameter 125 mm) and is used to connect to the formwork and shut off the concrete supply.

NOTICE

I

A pump hose with a Panel closure tool D125 SCC fitted may only be connected to the following Doka products:

- Framax Xlife universal panel SCC 0.90x2.70m
- Universal panel SCC 0.45x1.50m
- Filler neck GF SCC
- SuperCurve filler neck SCC
- When using in tunnel formwork, observe the corresponding User Information.



Instructions for assembly and use (Method statement)

Note:

The pouring operation shown below is illustrated using the Framax Xlife universal panel SCC 0.90x2.70m as an example.

The pouring operation for the Universal panel SCC 0.45x1.50m is identical, but the panel closure tool is mounted vertically and must therefore be opened and closed vertically.

Before pouring

Preparing the SCC formwork panel

 Lift the safety latch, open the closure tool and remove the locking part.



- A Safety latch
- B Integral closure tool
- C Locking part

Preparing the pump hose

Use the lever coupling to fasten the Panel closure tool D125 SCC to the pump hose.



- D Panel closure tool D125 SCC
- E Lever coupling
- F Pump hose

Pouring

Use the lever coupling of the Panel closure tool D125 SCC to fix the pump hose to the Framax Xlife universal panel SCC. Then open both closure tools.



- B Integral closure tool
- D Panel closure tool D125 SCC
- E Lever coupling
- F Pump hose

> Pouring can now begin.

After pouring

> Lift the safety latch and close both closure tools.

- A Safety latch
- B Integral closure tool
- D Panel closure tool D125 SCC

> Undo the lever coupling between both closure tools.



Dismount the pump hose from the formwork panel together with the Panel closure tool D125 SCC.



- D Panel closure tool D125 SCC
- F Pump hose
- Clean the closure tool and insert the locking part.



- C Locking part
- Use the lever coupling to mount the Framax hose to panel coupler SCC to the Framax Xlife universal panel SCC, and turn the spindle to screw the locking part in as far as the closure tool.



- G Framax nose to panel coupler SCC
- Lift the safety latch and open the closure tool. Screw in the locking part with the Framax hose to panel coupler SCC, as far as it will go. This pushes in the remaining concrete plug.



- A Safety latch
- B Integral closure tool
- **G** Framax hose to panel coupler SCC

Close the closure tool and secure it with the safety latch so that it cannot be accidentally opened. Then dismount the Framax hose to panel coupler SCC.



- A Safety latch
- B Integral closure tool
- G Framax hose to panel coupler SCC
- The pouring operation is now finished. Clean the closure tool.



B Integral closure tool



Timber-beam formwork

Filler neck GF SCC



- A Connection point for pump hose (horizontally operable panel closure tool)
- B Hose to panel coupler
- **C** Fixing items (loose in separate pack)

With the Filler neck GF SCC, self-compacting concrete (SCC) can be pumped in from below and forced upwards under pressure for timber-beam formwork.

- Suitable for form-ply thicknesses of 20 60 mm.
- For compatible timber-beam formwork, see <u>System</u> overview.

The connection point for self-compacting concrete (SCC) is not suitable for pouring conventional concrete!

Practical examples



Wall formwork FF20



Large-area formwork Top 50

Accessory

Panel closure tool D125 SCC



The Panel closure tool D125 SCC is attached to the pump hose (diameter 125 mm) and is used to connect to the formwork and shut off the concrete supply.



A pump hose with a Panel closure tool D125 SCC fitted may only be connected to the following Doka products:

- Framax Xlife universal panel SCC 0.90x2.70m
- Universal panel SCC 0.45x1.50m
- Filler neck GF SCC
- SuperCurve filler neck SCC
- When using in tunnel formwork, observe the corresponding User Information.

Instructions for assembly and use (Method statement)

Before pouring

Cutting wooden spacer to size

Wooden spacer



Installation example



- a ... see table
- b ... see table
- c ... 60 mm
- d ... 118 mm e ... 170 mm
- f ... 220 mm
- g ... Diameter 18 mm
- x ... Form-ply thickness 20 60 mm
- y ... Centre-to-centre distance 266 mm
- z ... Diameter 145 mm
- A Wooden spacer
- B Filler neck GF SCC

Form-ply thickness x	а
20 - 42	57 - x
42 - 60	87 - x

Doka beam	b
H20 N	27
H20 P	32
H24 N	27
I tec 20	35
XT20	28

Dimensions in mm

Example:

Form-ply thickness 27 mm and Doka beam H20 N **a** = 57 mm minus 27 mm = 30 mm

b = 27 mm

Mounting the Filler neck GF SCC

The Filler neck GF is fitted together with 2 pcs. wooden spacer in the middle between two adjacent Doka beams.

- Possible form-ply thicknesses: 20 to 60 mm.
- Required centre-to-centre distance of the Doka beams: 266 mm



The hose to panel coupler can be removed to make it easier to fit the filler neck.

Position of the Filler neck GF SCC

	horizontal	vertical
Formwork elements FF20 2.00m	in panel centre	selectable
Formwork elements FF20 0.75m	selectable	above the lower multi-purpose waling
Large-area formwork Top 50, and Top 100 tec	selectable	selectable

Installation example



Installation:

- Attach the wooden spacer to the form-ply side beam flange of the two adjacent Doka beams and use it as a drilling template.
- Drill 4 holes in each of the Doka beams using an angle drill.
- Fix the wooden spacers to the inside of the two Doka beams with nails (drill holes in the wooden spacer aligned with those in the Doka beam).



- A Wooden spacer
- C Doka beam
- D Hole in the Doka beam (diameter 18 mm)
- E Fixation with nails



 Cut a hole in the formwork sheeting(horizontally centred between Doka beams and vertically centred to the wooden spacer).



- A Wooden spacer
- C Doka beam
- **F** Hole in the formwork sheeting (diameter 145 mm)
- G Formwork sheeting
- Insert the Filler neck GF SCC so that it is flush with the front of the formwork sheeting.
- Attach the Filler neck GF SCC to the Doka beams using bolting items.



- B Filler neck GF SCC
- C Doka beam
- H Bolting items
- Additionally seal the Filler neck GF SCC on the front of the formwork sheeting with silicone.

The Filler neck GF SCC is now ready for use.



Preparing the pump hose

Use the lever coupling to fasten the Panel closure tool D125 SCC to the pump hose.



- D Panel closure tool D125 SCC
- E Lever coupling
- F Pump hose

Pouring

Use the lever coupling of the Panel closure tool D125 SCC to fix the pump hose to the Filler neck GF SCC. Then open both closure tools.



- B Integral closure tool
- **D** Panel closure tool D125 SCC
- E Lever coupling
- F Pump hose

> Pouring can now begin.

Close both closure tools.



- B Integral closure tool
- D Panel closure tool D125 SCC
- Open lever coupling between Filler neck GF SCC and Panel closure tool D125 SCC.



- A Filler neck GF SCC
- D Panel closure tool D125 SCC
- E Lever coupling
- Remove the pump hose from the Filler neck GF SCC.



F Pump hose

Clean filler neck and attach hose to panel coupler.



Use the lever coupling to mount the hose to panel coupler, and twist it to advance it as far as the integral closure tool.



- B Integral closure tool
- E Lever coupling
- G Hose to panel coupler
- Open the integral closure tool and screw in the hose to panel coupler up to the end of the spindle.



- **B** Integral closure tool
- G Hose to panel coupler
- Close integral closure tool. The pouring operation is now finished.



B Integral closure tool



Steel formwork

SuperCurve filler neck SCC



- A Connection point for pump hose (horizontally operable panel closure tool)
- B Hose to panel coupler
- **C** Bolting items (loose in separate pack)

With the SuperCurve filler neck SCC, self-compacting concrete (SCC) can be pumped in from below and forced upwards under pressure for the steel formwork SuperCurve. The SuperCurve filler neck SCC is mounted on the SuperCurve panel SCC 2.40x1.50m for this purpose.



NOTICE

The connection point for self-compacting concrete (SCC) is not suitable for pouring conventional concrete!

Practical example



A SuperCurve panel SCC 2.40x1.50m

B SuperCurve filler neck SCC

Accessory

SuperCurve panel SCC 2.40x1.50m



A Cover cap (included with product)

The SuperCurve filler neck SCC can be fitted to the SuperCurve panel SCC 2.40x1.50m. Same dimensions and functions as the SuperCurve panel 2.40x1.50m.

Panel closure tool D125 SCC



The Panel closure tool D125 SCC is attached to the pump hose (diameter 125 mm) and is used to connect to the formwork and shut off the concrete supply.

NOTICE

I

A pump hose with a Panel closure tool D125 SCC fitted may only be connected to the following Doka products:

- Framax Xlife universal panel SCC 0.90x2.70m
- Universal panel SCC 0.45x1.50m
- Filler neck GF SCC
- SuperCurve filler neck SCC
- When using in tunnel formwork, observe the corresponding User Information.

Instructions for assembly and use (Method statement)

Before pouring

Mounting the SuperCurve filler neck SCC



The hose to panel coupler can be removed to make it easier to fit the filler neck.

> Remove the cover cap from the opening in the SuperCurve panel SCC 2.40x1.50m and fasten it to the formwork panel in the parking position.



Parking position of the cover cap



Α Cover cap

- С Hexagon bolt
- Insert the SuperCurve filler neck SCC into the opening of the SuperCurve panel SCC 2.40x1.50m and fasten with bolting items.



- B SuperCurve filler neck SCC
- D Bolting items

- Additionally seal the SuperCurve filler neck SCC on the front of the formwork sheeting with silicone.
- The SuperCurve filler neck SCC is now ready for use.



B SuperCurve filler neck SCC

Preparing the pump hose

> Use the lever coupling to fasten the Panel closure tool D125 SCC to the pump hose.



- D Panel closure tool D125 SCC
- E Lever coupling
- Pump hose F

Pouring

Note:

Concrete is poured in the same way as when using the Filler neck GF SCC (see the sections headed Pouring and After pouring).



NOTICE

If the SuperCurve panel SCC 2.40x1.50m is used without a filler neck, the cover cap (B) must be fitted.





		[kg]	Article N°	[kg]	Article N°
Framax Xlife universal pane Framax Xlife-Uni-Element SCC 0	el SCC 0.90x2.70m ,90x2,70m Galvanised, powder-coated	170.3	588119500	Formwork element FF20 2.00x1.00m 27mm19Formwork element FF20 2.00x2.75m 27mm34Formwork element FF20 0.75x2.75m 27mm13Fertigelement FF20 27mm13)5.0 8.0 6.0	587616000 587606000 587602000
Universal panel SCC 0.45x Uni-Element SCC 0,45x1,50m	1.50m	47.5	589446000			
	Galvanised, powder-coated			SuperCurve filler neck SCC	40.0	587883000
				SuperCurve-Füllstutzen SCC Galvanised Length: 66 cm		
Framax hose to panel coup	bler SCC	10.0	588121000			
Framax-Spindelaufsatz SCC	Galvanised			SuperCurve panel SCC 2.40x1.50m 51	0.0	587882000
C.	Length: 48 cm Diameter: 27 cm			SuperCurve-Element SCC 2,40x1,50m Galvanised		
Panel closure tool D125 SC Sperrschieber D125 SCC	C	18.0	588127000			
	Galvanised Length: 18 cm Width: 33 cm Height: 27 cm					
DokaXlight adapter Frami		2.0	589153000			
	Galvanised Height: 35 cm					
Filler neck GF SCC GF-Füllstutzen SCC		39.0	580217000			
	Galvanised Length: 66 cm					
Formwork element FF20 2. Formwork element FF20 2. Formwork element FF20 2. Formwork element FF20 0. Formwork element FF20 0. Fertigelement FF20 21mm	00x1.00m 21mm 00x2.75m 21mm 00x3.75m 21mm 75x3.75m 21mm 75x2.75m 21mm	190.0 335.0 440.0 172.0 131.0	587523000 587512000 587564000 587561000 587504000			



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