

**Webercem Install Plus
flowable mortar system,
material & equipment
checklist and instructions
for use**

install *plus*



**SUPPORTING THE REDUCTION
OF WHOLE-LIFE COSTS**

Equipment and materials checklist

This checklist offers recommendations and guidance on the materials and equipment required to install carriageway access covers and gully gratings using the *install plus* frame levelling and installation system. It is recommended that this checklist should be read in accordance with other relevant requirements or specifications.

NOTES FOR GUIDANCE

The recommended amount of bedding material assumes typical conditions and is based on the use of the PAM UK **SLOTFORM** shuttering system to ensure the most efficient use of materials.

- ▶ A minimum flowable mortar depth of 15mm below the frame.
- ▶ Enveloping above the frame flange to a depth of 20mm.
- ▶ To an area 60mm beyond the outermost edge of the frame flange.

Note: on uneven surfaces it is recommended to seal the bottom of the shuttering system to prevent the flowable material leaking. The seal material must conform to CD 534.



TOOLS FOR MIXING AND APPLICATION OF INSTALLATION MATERIALS

- ▶ Mechanical paddle mixer.
- ▶ Generator.
- ▶ Gorilla tubs.
- ▶ Trowels.
- ▶ Water for cleaning equipment.



EQUIPMENT FOR IRONWORK HANDLING & INSTALLATION

- ▶ Straight edge or level.
- ▶ Two lifting keys.
- ▶ 19mm socket or spanner to rotate *install plus* frame levelling bolts.
- ▶ **SLOTFORM** shuttering system to the required frame dimensions specified on the following pages.



OPTIONAL/OTHER MATERIALS

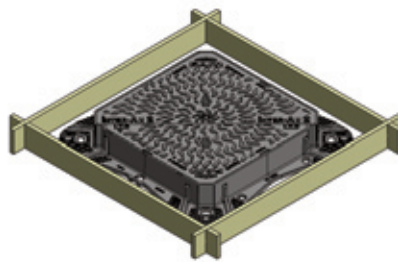
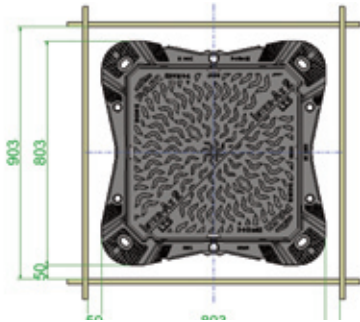
- ▶ Class A or B solid engineering bricks or concrete seating ring alternatives.
- ▶ Hot or cold applied wearing course/asphalt reinstatement material.
- ▶ Seal and tack coat.
- ▶ Overbanding (dependant on local authority approval).

MATERIAL VOLUMETRICS

This guide will help give an indication of the amount of material required to help minimise waste and ensure the optimum amount is used to ensure a durable installation.

Below are two typical examples.

1. Access cover and frame with a 600mm x 600mm clear opening and an overall frame dimension of 800mm x 800mm would require.



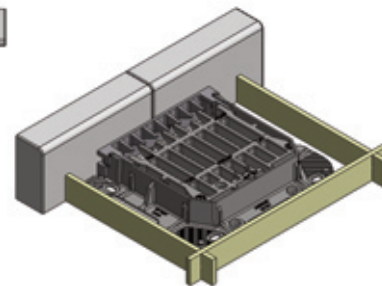
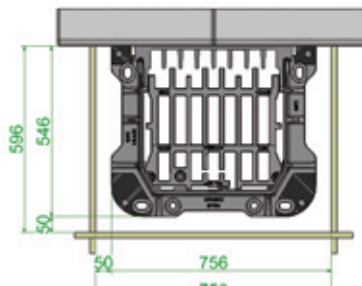
A minimum of 0.5 x 20kg bag to form the internal mortar dam.

A minimum of 3 x 20kg bags of flowable mortar around the frame.

2. Gully grating and frame with a 450mm x 450mm clear opening and an overall frame dimension of 546mm x 756mm.

A minimum of 0.5 x 20kg bag to form the internal mortar dam.

A minimum of 2.5 x 20kg bags of flowable mortar around the frame.



For more information on the benefits and use of Install Plus please visit our website or contact our technical team on:

📞 0115 989 8903 ✉ pamsales@saint-gobain.com

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MATERIAL VOLUMETRIC TABLE

The material volume details below are meant for guidance purposes only and have been calculated using the internal dimensions of the **SLOTFORM** shuttering system method of installation. It assumes an average material depth of 20mm below the frame flange and 30mm above and is based on multiples or parts of webercem Install Plus flowable mortar 20kg bags of dry powder.

	SIZE OF CLEAR OPENING (MM)	SIZE OF FRAME (MM)	MATERIAL REQUIRED TO FORM INTERNAL DAM (BAGS)		MATERIAL REQUIRED AROUND THE FRAME (BAGS)	
			MIN	MAX	MIN	MAX
ACCESS COVERS	600 x 450	800 x 600	0.5	1	3	4
	600 x 600	800 x 800	0.5	1	3.5	4
	675 x 675	880 x 830	0.5	1	3.5	4
	750 x 600	900 x 800	0.5	1	3.5	4
	750 x 750	1,005 x 1,005	0.75	1	4	5
	900 x 600	1,100 x 800	0.75	1	4	5
	920 x 450	1,110 x 640	0.5	1	3.5	4
	900 x 900	1,165 x 1,155	1	2	4	5
	1,000 x 1,000	1,125 x 1,255	1	2	4.5	5
	1,220 x 685	1,380 x 885	1	2	4.5	5
	1,250 x 675	1,500 x 880	1	2	5	6
	1,200 x 750	1,340 x 945	1	2	5	6
	1,340 x 900	1,500 x 1,060	1.5	2	5	6
	1,500 x 750	1,660 x 940	1.5	2	6	7
1,830 x 685	2,000 x 885	1.5	2	7	8	
GULLY GRATINGS	SIZE OF CLEAR OPENING (MM)	SIZE OF FRAME (MM)	MATERIAL REQUIRED TO FORM INTERNAL DAM (BAGS)		MATERIAL REQUIRED AROUND THE FRAME (BAGS)	
	MIN	MAX	MIN	MAX	MIN	MAX
	300 x 560	710 x 565	0.3	1	2	3
	370 x 430	525 x 525	0.3	1	2	3
	434 x 434	585 x 525	0.3	1	2	3
450 x 450	600 x 555	0.3	1	2.5	3	

We always recommend carrying more material than required to overcome on site issues.



Installation instructions

To get the most from the use of the Install Plus system, it's recommended that before beginning any reinstatement work, a site assessment is undertaken to determine the type of reinstatement required and to also include an assessment of the appropriate materials to be used.

Following these simple steps will ensure that the installation is right the first time, saving time, reducing cost and minimising the disruption caused by streetworks.

PREPARATION

1. Excavate 200mm around the frame to remove all failed reinstatement material
2. All existing bedding material must be removed. Make repairs to the chamber structure as required ensuring a stable supporting surface.
3. Webercem Install Plus mortar can be used to repair the chamber or lay bricks as required.



FRAME PREPARATION

1. It's essential that the top surface of the frame and cover is installed flush and level with the surrounding surface. Locate the frame squarely over the chamber opening ensuring that the vertical wall of the frame is aligned with the chamber opening.
2. Located in the frame flange are four nylon inserts which are preset to allow for a minimum depth of bedding mortar of 15mm.
3. If required, further adjustment can be made by rotating the four nylon bolts (supplied loose) clockwise to allow for gradient, camber in the road or to raise the frame to the required finished level. The bolts have a range of adjustment of 15mm to 50mm.



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INSTALLATION INSTRUCTIONS CONTINUED**FRAME INSTALLATION**

4. Apply a stiff mix of webercem Install Plus CD 534 compliant bedding material inside the frame, creating a dam. This will prevent the flowable mortar pouring out into the chamber.
6. Pour from one side of the pre-levelled chamber at a time. Work your way around the frame until, enveloping it to a depth of 20mm using the caps as a depth indicator. It will self compact and completely fill all voids.



5. Mechanically mix the webercem Install Plus flowable mortar in accordance with the instructions that can be found on the bag and apply within four minutes of mixing.



7. Once the flowable mortar has cured, there is the option to remove any part of the four levelling screws that may be protruding above the mortar prior to applying the reinstatement material. This will aid compaction.

We advise that these installation instructions are read in conjunction with the Install Plus equipment and materials checklist.