Odlewnia Zawiercie Spółka Akcyjna
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Installation manual

TERASPRESS | M-profile

Product storage, transport and handling

Protect pipes and fittings from mechanical damage during transport and handling. Do not step on or compress them: deformation may impair their performance or make them unusable.

Store pipes and fittings under cover and protected from moisture. Avoid contact with sand, cement mortar and other materials that could damage the O-rings.

Preparation for installation

Check the following conditions before starting installation.

1. The water supply, power supply and material storage facilities on site meet the requirements.

2. Installers have been trained in the key installation procedures, understand the precautions and have read this manual.

3. The condition of the pipes, fittings and joint surfaces has been carefully checked. All dirt and foreign matter have been removed.

CONTENTS / PAGES

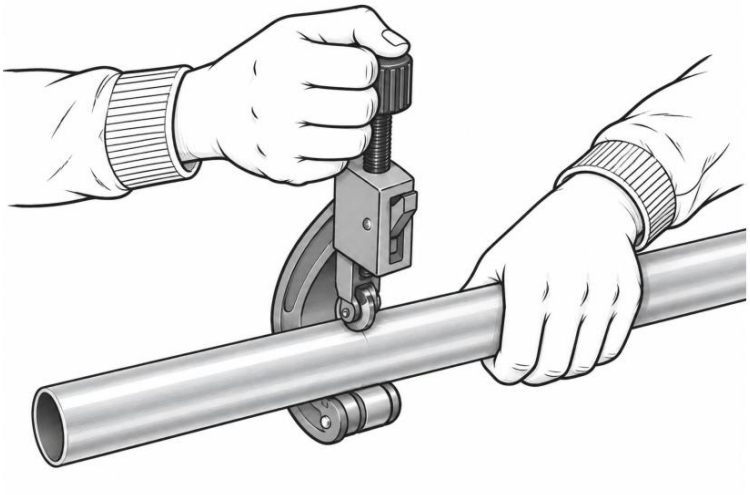
2 Cutting and deburring the pipe
3 O-ring and insertion depth mark
4 Joining the pipe and fitting
5 Before pressing
6 Pressing
7 Inspection after pressing
8 Installation checklist
9 Fitting spacing
10 Installation clearances
11 Pipe clamp spacing
12 Problems and prevention

Cutting and deburring the pipe

Prepare the pipe before inserting it into the fitting.

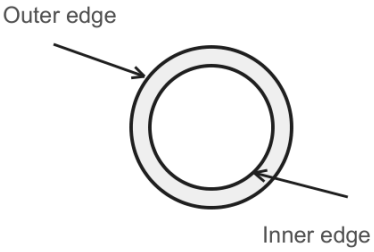
1. Cut the pipe to length

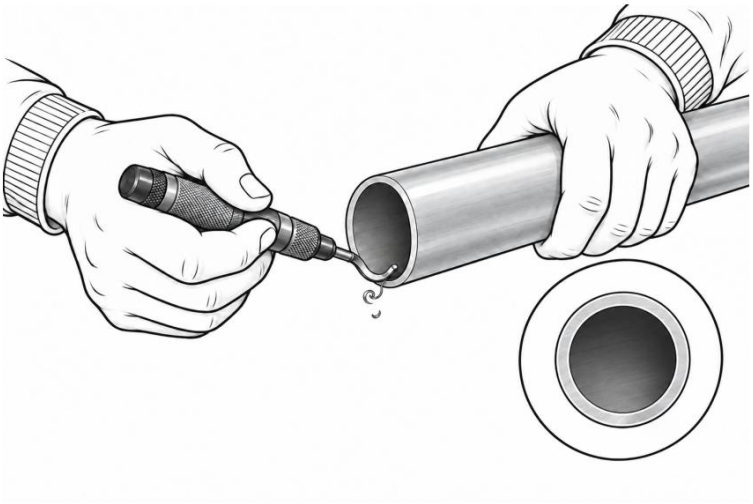
Cut the pipe to the required length with a professional pipe cutter or saw suitable for the material. The cut must be square to the pipe axis, not angled.



2. Deburr the cut end

After cutting, remove burrs and rough edges from the inside and outside of the pipe end. This prevents O-ring damage and leakage when the pipe is inserted.



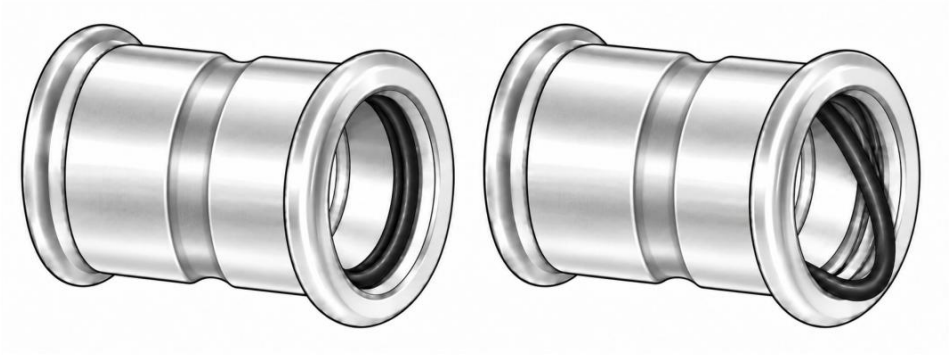


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O-ring and insertion depth mark

3. Check the O-ring

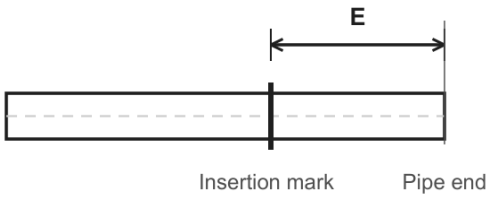
Make sure the O-ring is undamaged, correctly seated and clean. Remove sand and other foreign matter before installation.

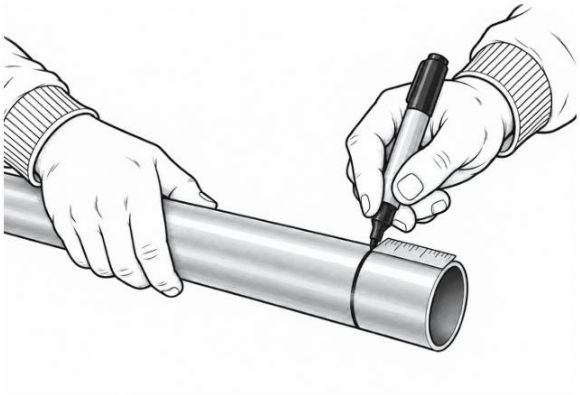


✓ O-ring correctly seated × O-ring displaced

4. Mark insertion depth E

Select E for pipe diameter d from the table below. Measure E from the cut end of the pipe and draw a line with a marker pen.





INSERTION DEPTH / MM

d (mm)	18	22	28	35	42	54	76.1	88.9	108
E (mm)	21	22	24	27	32	37	53	60	75

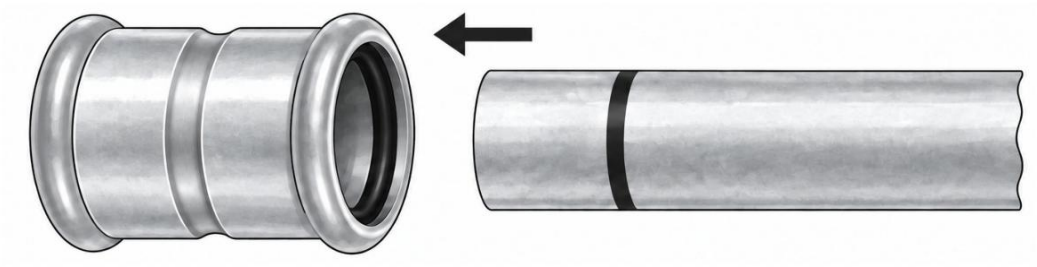
E = distance from the pipe end to the insertion mark. When assembled, the fitting edge must reach the mark (page 4).

Joining the pipe and fitting

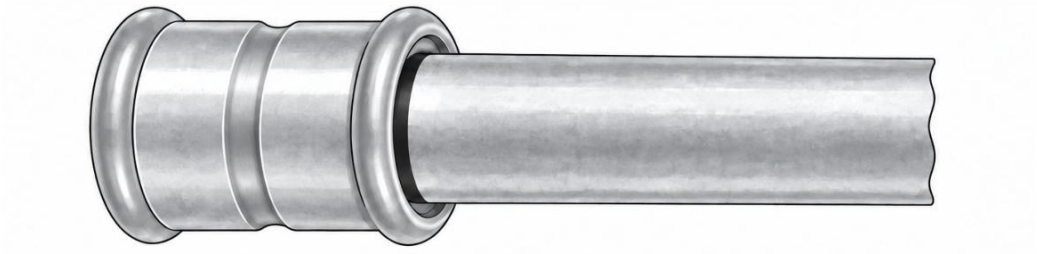
5. Join the pipe and fitting

Insert the pipe into the fitting to the marked depth. Keep the pipe and fitting aligned on the same axis. If insertion is difficult due to permitted dimensional tolerances, water or soapy water may be used to lubricate the O-ring.

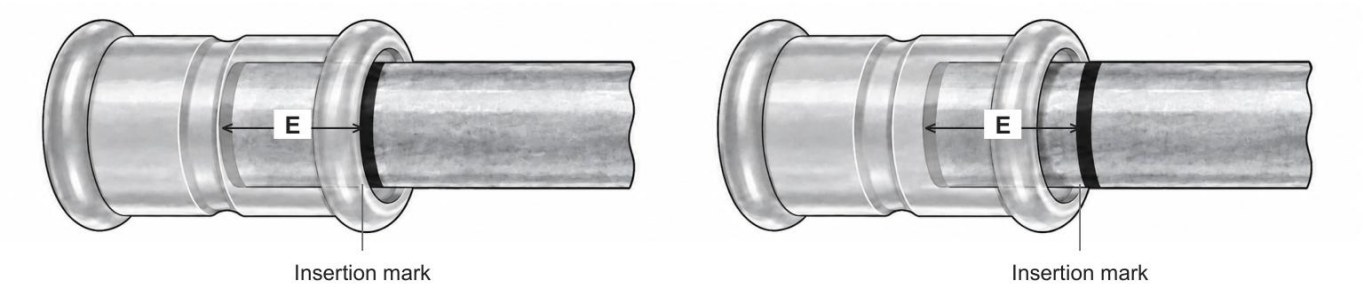
BEFORE INSERTION



AFTER INSERTION



CHECKING INSERTION DEPTH



✓ **Correct insertion depth** ✗ **Insufficient insertion depth**

Check that the fitting edge aligns with the insertion mark. For insertion depth E values, see page 3.

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Before pressing

Check these conditions before step 6.

THREADED FITTING

Tighten the threaded fitting before pressing. Tightening the threaded connection afterwards may loosen the pressed joint and cause leakage.

UNSECURED VERTICAL PIPE

If the pipe is not secured to the wall with pipe clamps, press the upper fitting onto the pipe at ground level before lifting the pipe into a vertical position. This prevents the pipe from slipping down and being inadequately pressed.

PRESS JAW INSPECTION

Once the press jaws have been in use for more than six months, check them with a dedicated gauge before every use to prevent leakage caused by inadequate pressing.

PIPE POSITION AND WORKING SPACE

☐ Check the pipe insertion position against the mark (page 4).

☐ Check the minimum spacing between fittings (page 9).

☐ Check the clearance required for the pressing tool (page 10).

☐ Maximum pipe clamp spacing is listed in the table on page 11.

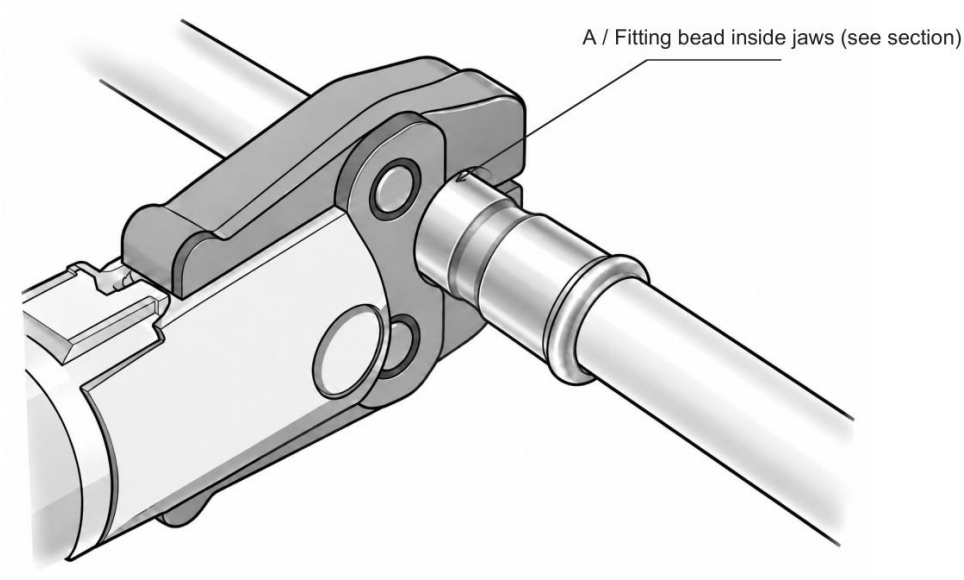
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Pressing

Before starting, meet the conditions on page 5.

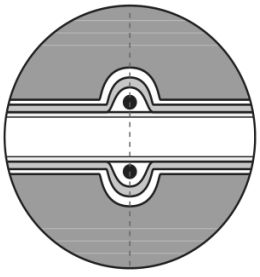
6. Press the joint

Make sure the press jaw groove engages the fitting bead and the jaws are perpendicular to the pipe. Press and hold the switch until the pressing cycle ends automatically. Release the jaws and inspect the joint. The indicator film may come off by itself; if any remains, remove it completely by hand (page 7).

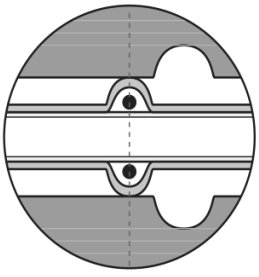


A / PRESSING SECTION / GROOVE POSITION

Grey: press jaws. Thin profile: fitting. Centre: pipe.



✓ **Groove aligned with fitting bead**



✕ **Groove offset from fitting bead**

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Inspection after pressing

7. Check the pressed joint

1. Inspect the pressed joint

Check for abnormal deformation caused by incorrect positioning of the press jaws or press ring.

2. Correct any defect affecting performance

If a defect affects performance, remove the faulty part to prevent further use and replace it with a new fitting.

3. Remove the indicator film completely

After pressing, the indicator film on the outside of the fitting may come off by itself. If any film or fragments remain on the pressed area, remove them by hand after inspecting the joint. No indicator film may remain on the pressed area.

BEFORE PRESSURE TESTING

Before pressure testing, check that no indicator film or fragments remain on any pressed area. Remove any remaining film by hand. See the checklist on page 8.

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Installation checklist

Tick each box when the condition is met. Check conditional items where applicable.

☐ Installers have the required training and certification.

☐ Steel pipes and fittings are free from deformation.

☐ The inside and outside edges of the pipe end have been deburred.

☐ The O-ring has been checked before inserting the pipe.

☐ The insertion depth has been marked on the pipe.

☐ The upper fitting of an unsecured vertical pipe has been pressed at ground level before lifting the pipe.

☐ Threaded fittings have been tightened before pressing.

☐ The pipe insertion position has been checked before pressing.

☐ Press jaws that have been in use for at least six months have been checked with a dedicated gauge before use.

☐ No indicator film or fragments remain on the pressed areas. Any remaining film has been removed by hand; this has been checked before pressure testing.

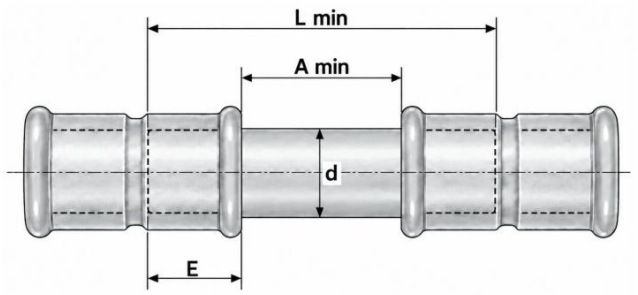
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Minimum fitting spacing

The pipe and fitting deform during pressing. The minimum spacing shown below must therefore be maintained between fittings. All table dimensions are in millimetres.

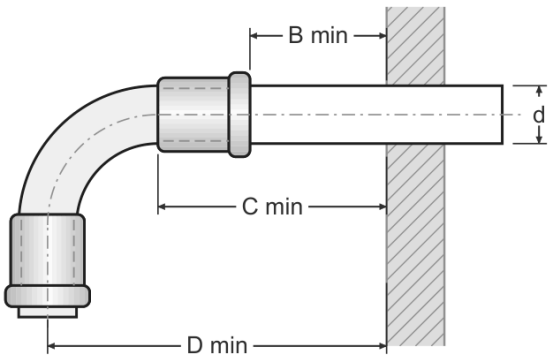
d = pipe diameter; E = insertion depth (see also page 3). A min = gap between fitting edges; L min = minimum pipe section length.

STRAIGHT CONNECTION



d	A min	L min	E
18	20	62	21
22	20	64	22
28	20	68	24
35	25	79	27
42	25	89	32
54	25	99	37
76.1	43	150	53
88.9	44	165	60
108	47	200	75

ELBOW FITTING / B, C AND D MEASUREMENT POINTS SHOWN



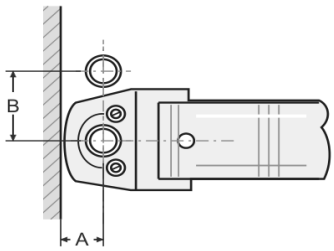
d	B min	C min	D min
18	35	56	106
22	35	57	114
28	35	59	127
35	35	62	143
42	35	67	161.6
54	35	72	187
76.1	35	88	246
88.9	35	95	277
108	35	110	334

Installation clearances

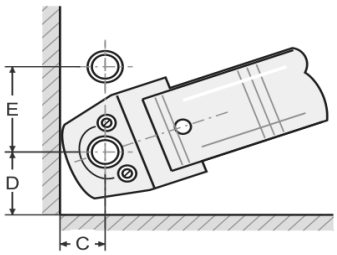
Allow the required clearance for the pressing tool. All dimensions are in millimetres.

FITTING SIZE 18-35 MM

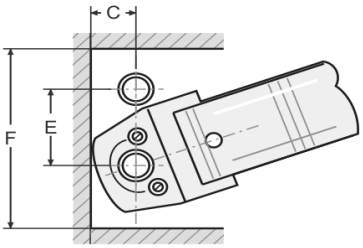
NEAR A WALL



NEAR A WALL AND FLOOR



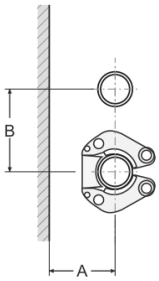
IN A CONFINED OPENING



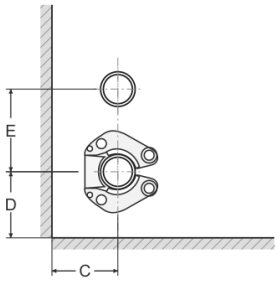
d	A	B	C	D	E	F
18	25	55	35	30	70	110
22	25	60	35	30	75	120
28	25	65	35	30	80	125
35	75	95	75	75	95	245

FITTING SIZE 42–108 MM / DRAWINGS 42–54 MM

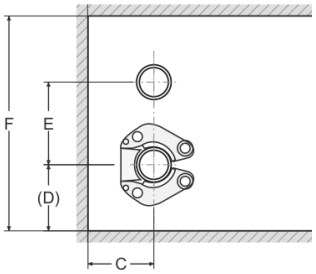
NEAR A WALL



NEAR A WALL AND FLOOR



IN A CONFINED OPENING

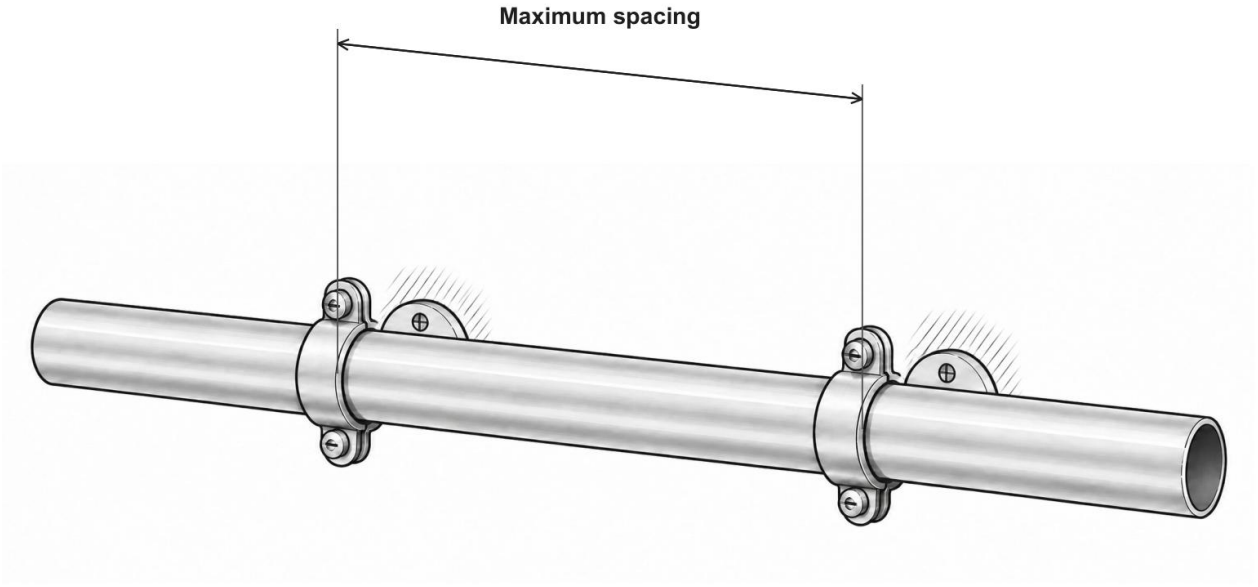


d	A	B	C	D	E	F
42	80	100	80	80	100	260
54	95	110	95	95	110	300
76.1	170	200	170	190	200	210
88.9	170	250	170	210	250	245
108	170	250	170	210	250	326

d = pipe diameter. A, C: wall to pipe centreline. B, E: distance between pipe centrelines. D: floor to lower pipe centreline. F (18–54 mm): clear opening height. (D) repeats the middle diagram dimension. E here is not insertion depth (page 3).
F (76.1–108 mm): minimum clearance required to open and position the manufacturer's press ring around the pipe. The F height dimension shown in the drawing does not apply to these sizes.

Pipe clamp spacing

Maximum spacing between clamps according to pipe diameter.



Pipe diameter (mm)	Maximum support spacing (m)
12	1.5
15	1.5
18	1.5
22	2.0
28	2.5
35	2.5
42	3.0
54	3.5
76.1	4.0
88.9	4.5
108	5.0

Problems and prevention

Causes, preventive actions and references to checks.

1 Defective pressed joint

CAUSE	ACTION / PREVENTION
Tool wear or uneven construction can produce a defective joint that may leak later.	Check that the press jaws are undamaged before every pressing operation. For a joint defect affecting performance, follow the replacement instructions on page 7.

2 Pipe deformation

CAUSE	ACTION / PREVENTION
The pipe has been deformed by incorrect transport or storage.	Do not use deformed pipe. Follow the storage and transport requirements to prevent recurrence (page 1).

3 Vertical pipe drops during pressure testing

CAUSE	ACTION / PREVENTION
A pipe not secured with clamps slips down under gravity before pressing, resulting in inadequate pressing.	Press an unsecured vertical pipe at ground level. Connect it to the upper horizontal fitting only after pressing is complete. Check the insertion mark position before pressing.

4 Steel pipes move during pressure testing

CAUSE	ACTION / PREVENTION
1. The insertion depth was not marked and the pipe was not inserted far enough. 2. The joint was left unpressed. In either case, the pipe may move under pressure.	Mark the insertion depth on the pipe end. Check insertion depth when pressing. After pressing, remove any remaining indicator film completely by hand (page 7).