

**SEKISUI**

**Thermal Expansion  
Fire-Resistant Material**

# Fi-Block™

**Through-Penetration Fire-Stop  
For Insulation Pipe**

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# Fi-Block™

**Through-Penetration Fire-Stop  
For Insulation Pipe**

**Code : ST30, ST40, DC20**

**Installation Manual**

**Field of Application**

“Fi-Block” fire-stop systems have **up to 4 hours fire-ratings(Integrity)** performance in accordance with BS 476 Part 20/AS 1530.4 and AS 4072.1.

Supporting Material	Structure	Dry Wall <sup>1</sup> Rigid Wall	Solid Wall	Concrete Floor
	Thickness (mm)	≥128	≥110	≥120
	Void Gap (mm)	Approx. 5 – 25		Approx. 25 – 120
Penetrant Metal Pipe	Material	Copper, Iron, Steel		
	Diameter (mm)	Nom. 13 – 102		
	Wall Thickness (mm)	Nom. 0.71 – 1.22		
Insulation Tube	Material	THERMOBREAK, ARMAFLEX, K-FLEX, AEROFREX		
	Wall Thickness (mm)	Approx. 15 - 40	Approx. 15 - 50	
Fire Stop	Fi-Block	ST (Strips)	2 Units per 1 penetration	1 Unit
		DC (Disk)	-	Optional <sup>2</sup>
	Others	Foam Tape	-	Required <sup>3</sup>
		Filling Material	Sealant <sup>4</sup>	M3/M4 Mortar <sup>5</sup>

- 1) 16 mm gypsum board – 2 per side
- 2) More than 30 mm insulation thick
- 3) Nom. 3 mm thick and 50 mm width
- 4) Fire-rating sealant (Up to 4 hours fire-ratings performance)
- 5) Both normal and fire-rated mortars are acceptable

**Technical Data**

Configuration	ST : Flexible 2 layers per unit DC : Sheet
Density	1.7±0.1 g/cm <sup>3</sup>

**Benefit**

- Flexible
- Quick and easy to install
- 3 products adapt to many variations

**Test Certificate / Approval**

- BS 476 Part 20
- AS 1530.4 and AS 4072.1

**Size**

ST30: 4.2mm(2Layers x 2.1 mm)(T) x 50mm(W) x Length  
ST40: 5.2mm(2Layers x 2.6 mm)(T) x 50mm(W) x Length  
DC20: 2.6 mm thick Disk

**Product Warranty**

“Fi-Block” ST30/ST40/DC20 have 25 years warranty on the intumescent performance.

**Caution**

**Handling**

- Follow the procedure for the installation
- Use caution to avoid injures

**Storage**

- Store in the original box to keep the product qualities
- Store in cool and dry conditions

**Safety**

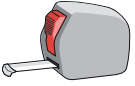
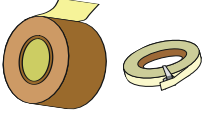

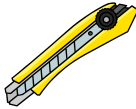
- Keep out of reach of children
- Avoid contact with food and beverages
- Please refer to the safety data sheet for additional advice

**Matrix of Conditions, Performances and Combinations of Materials**

Condition	Supporting Materials	Dry Wall/Solid Wall		Solid Wall		Concrete Floor	
	Wall Thickness of Insulation	≤ 30 mm	≤ 40 mm	≤ 30 mm	50 mm	≤ 30 mm	≤ 50 mm
FRL Performance (Fire-ratings of integrity)		-/120/- <sup>1</sup> (2.0 Hours)	-/90/- (1.5 Hours)	-/120/- <sup>2</sup> (2.0 Hours)	-/120/- <sup>2</sup> (2.0 Hours)	-/120/- (2.0 Hours)	-/120/- (2.0 Hours)
Products	ST30	2 units		2 units		1 unit	
	ST40		2 units		2 units		1 unit
	DC20						1 Sheet
Sub-materials	Tape(Ex. Craft, Vinyl, Aluminum etc.)	○	○	○	○	○	○
	Foam Tape (Nom. 3 mm thick)			○	○		
	Fire rating Sealant	○	○				
	M3/M4 Mortar			○	○	○	○

- 1) FRL -/180-(3.0 Hours) when using 13 mm metal pipe and the insulation tube less than 30 mm thick
- 2) FRL -/240-(4.0 Hours) when using 13 mm metal pipe and the insulation tube less than 50 mm thick

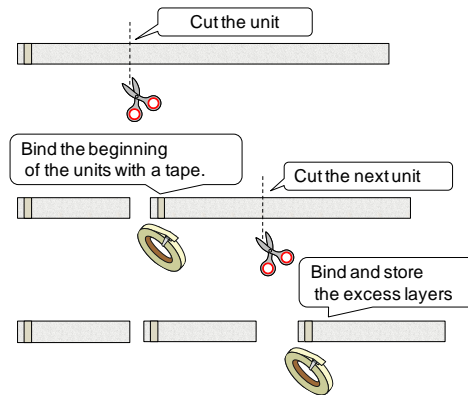
## Preparation of Installation Tools

Tools	Performance
 <p>Measuring tape</p>	Measure the circle of the "THERMOBREAK"
 <p>Tape (Craft, Vinyl, Aluminum etc.)</p>	Wrap and Joint the sets Bind the left strips after cutting
 <p>Scissors</p>	Cut the strips and sheet
 <p>Cutter knife</p>	Cut the "THERMOBREAK"

## Attentions

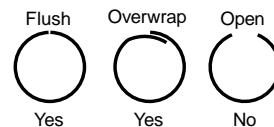
### - Cut of the unit

- **Bind the left layers** after cutting of a unit not to separate them. Keep the direction of aluminum face of layers when binding.



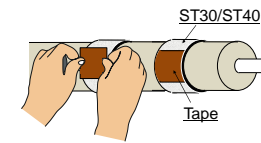
### - Wrap of the unit

- **Check the outside of unit** by their indications. Keep the direction of unit when wrapping.
- Fix the unit to flush/overwrapping. **Don't open** both end.

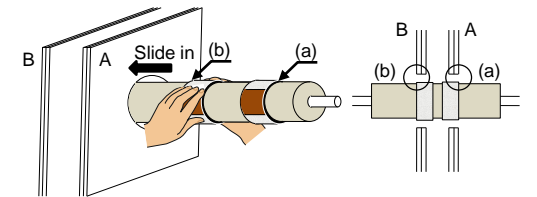


## Installation ; Dry Walls and Solid Walls (Gypsum board wall, Concrete wall, Brick wall, Holed block wall)

1. **Check the conditions** and the materials according to the front page of this sheet
2. **Measure** the length and cut the unit
3. **Wrap** the 2 units around the insulation pipe **and joint** them **with a tape**

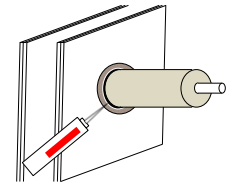


4. **Slide the wraps into the flush positions**((a) and (b)).



5. **Fill** the void **with a sealant**

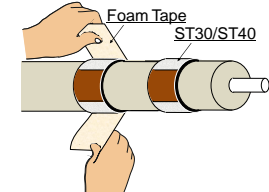
- You may insert the backup material for sealant when you need.



## Installation ; Rigid Walls (Concrete wall, Brick wall)

1. **Check the conditions** and the materials according to the front page of this sheet
2. **Measure** the length and cut the unit
3. **Wrap** the 2 units around the insulation pipe **and joint** them **with a tape**

4. **Wrap the "Foam Tape" additionally** around the wraps



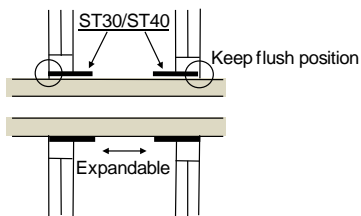
5. **Slide the wraps into the flush positions**((a) and (b)).

6. **Fill** the void with **a mortar**

## Additional Tips

### - Thicker Walls

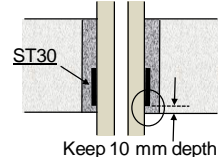
- Wraps must be kept at the 'flush position' as shown.



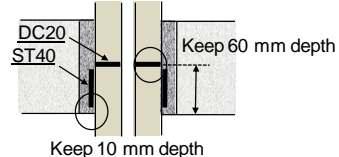
### - Thicker Floors

- Wraps must be kept at '10 mm depth' upwards from the bottom of the void as shown
- Disk must be kept at '60 mm depth' upwards from the bottom of the void as shown

#### - 30 mm thick and less

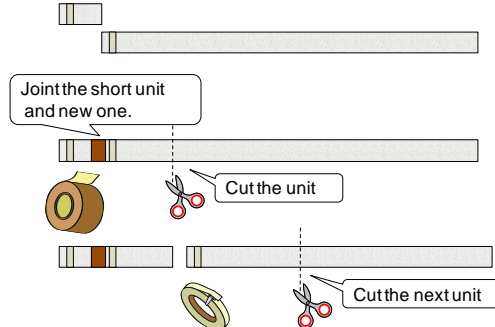


#### - 50 mm thick and less



### - Using short strips

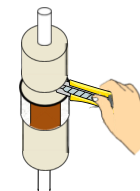
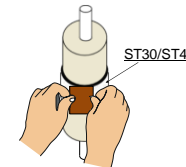
- Can use using short units by jointing them with new ones.



- The shortest units should be more than 100 mm length.
- Each joints should be overlapped by 25 mm.

## Installation ; Concrete Floors (Concrete slab)

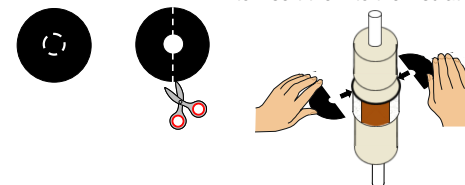
1. **Check the conditions** and the materials according to the front page of this sheet
2. **Wrap** the unit around the insulation pipe
3. **30 mm thick and less - Skip to No. 6**  
**Thicker than 30 mm thick - Cut the insulation horizontally**



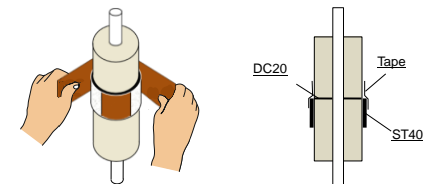
4. **Cut the "DC20" sheet to the disk and insert** it into the insulation

- Please cut "DC20" to the disk to fit to metal pipe and insulation tube.

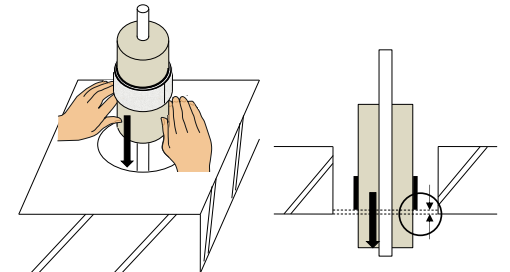
- Please cut the disk to 2 halves to insert them to the insulation tube.



5. **Joint the insulations** with a tape



6. **Slide the insulation** with Fi-Block wrap down to **10 mm depth** from the bottom face



7. **Fill** the void **with a mortar**

