StiFlex™

FORWARD
SOLUTIONS

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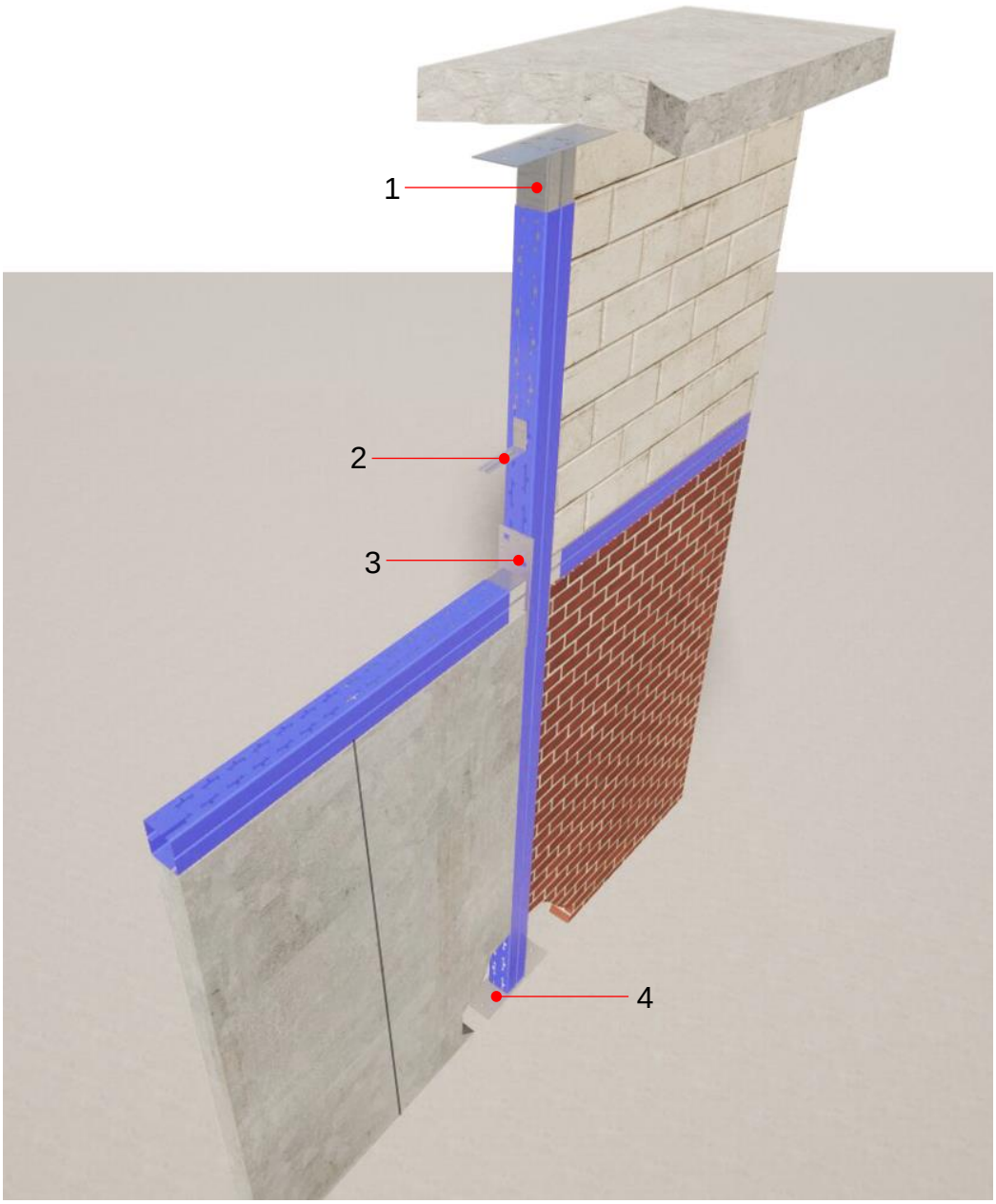
Dyntek

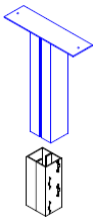
StiFlex Steel Stiffener System

Dyntek presents **StiFlex**, a modular system of steel profiles, connectors and wall ties, designed to stiffen and strengthen both internal and external walls, of masonry materials such as lightweight concrete, cement or clay in any form, whether brick, block or panel including dry walls using gypsum or calcium silicate boards.

Manufactured from steel, **StiFlex** stiffener system directly replaces traditional cast-in-situ reinforced concrete stiffeners. **StiFlex** is quicker and easier to install, providing savings in time and manpower without compromising on any expected relevant conformance.

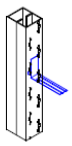


1



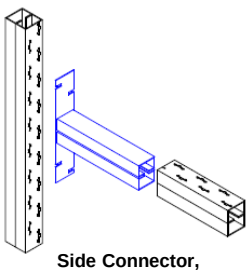
End Connector, STR (top)

2



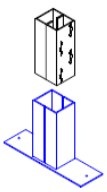
StiFlex Wall Tie, SAG/T

3



Side Connector, STS (non-load)

4



End Connector, STR (base)

WHY StiFlex™ WALL STIFFENERS?

E ECONOMISATION

Lightened System
Manufactured using thinner but stronger steel, being lightweight, thus StiFlex reduces fatigue of installers.

Reduced Workforce
Designed for east of installation, fewer workers are required to fasten our fully modular and adjustable StiFlex system.

Minimized Administration
StiFlex promotes fully efficient product usage, providing clients AutoCAD plotted, quantified with cost per location on spreadsheet.

P PERFORMANCE

Easy Ordering
No site measurements required as our AutoCAD plotted StiFlex sizes and positions are based on client's drawings, ahead of ordering.

Rapid Installation
Quicker fastening with nails to concrete or even steel, with StiFlex wall ties and connectors simply slid into positions.

Adjustable Lengths And Positions
StiFlex system allows up to 150mm tolerance and variable positioning against typical site variances or even unforeseen obstacles.

I INTEGRATION

Masonry Adaptability
There are many options for masonry and our StiFlex system is compatible with all, by merely adapting its attachment process.

Drywall Flexibility
Suitable in cases when gypsum board wall construction adjoints masonry wall since StiFlex system allows such integration.

Plaster Friendly
StiFlex assures with its time proven method statements for plaster and skim coat, using the right mesh and procedure.
Plastered StiFlex profiles meet with minimum 0.3N/mm^2 mortar adhesion strength, expected with concrete/masonry substrates, using pull-off test EN1015-12.

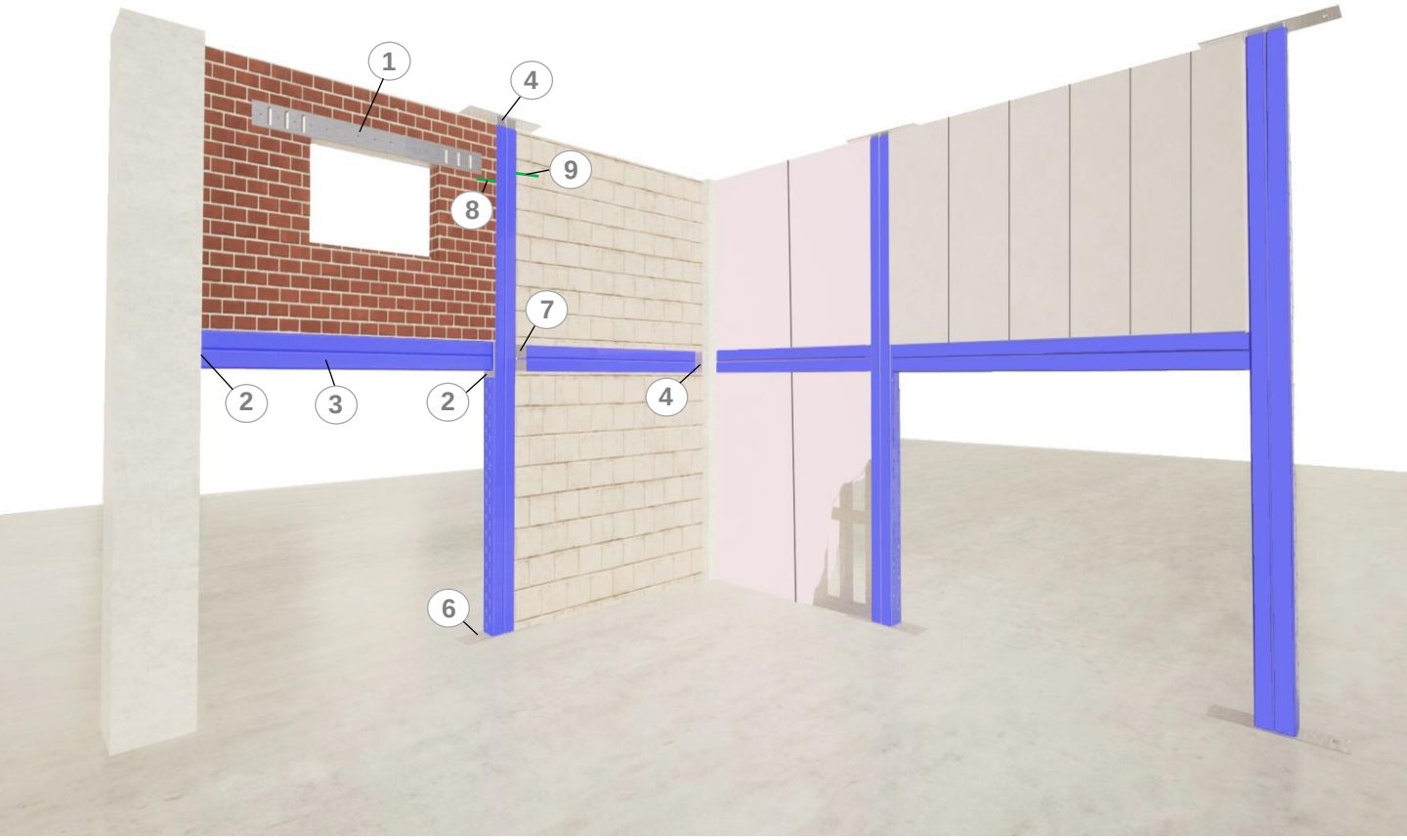
C CONFORMANCE

Designed To Meet Relevant Safety Standard For Partition Wall
Practicing due diligence, for the interest of all, StiFlex adopts applicable and established standard for safe wall spans.

Tested And Assessed for 1-hour, 2-hour and 4-hour Fire Resistance Fire Rating
Tested and meeting Building Regulations UK Class 0 material classification, StiFlex is assessed/fire tested to BS476/BS EN 1364 for its fire resistance ratings.

Superior To Conventional For Sound, Thermal And Moisture Insulation
StiFlex, being a direct replacement to conventional concrete stiffeners, was tested and/or assessed and results surpass concrete's.

StiFlex Components in Use



1

StiFlex Channel Lintel
(load bearing)

2

CB Bracket
(load bearing)

3

StiFlex Box Lintel, LSC
(load bearing)

4

End Connector, STR
(top/side)

5

StiFlex Member, SC

6

End Connector, STR
(base)

7

Side Connector, STS
(non-load)

8

StiFlex Wall Tie,
SAG/T (mortar bedding)

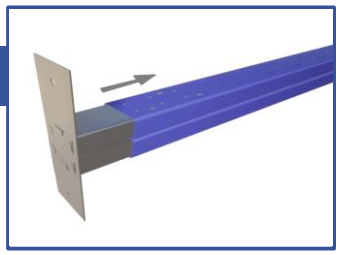
9

StiFlex Wall Tie,
SAG/TA (thinner bedding)

StiFlex Installation Method for

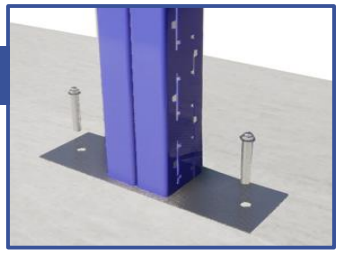
Non-loadbearing
Horizontal

1



Insert End Connectors (STR) into both ends of vertical member and then lift upright at intended position of stiffener.

2



Fasten 1 mechanical anchor, on each side of the End Connector (base). Slide Top Connector sleeve out to beam/slab soffit. Upon verticality check, similarly fasten End Connector(top).

3

At 400mm (or less) intervals, slot StiFlex wall tie (SAG/T) into vertical member, embedding firmly in mortar bed above masonry. StiFlex wall tie (SAG/T) can be positioned indefinitely along member.

4

Install horizontal member with pre-inserted Side Connector, STS extending its sleeve/s to slot into [as with StiFlex wall tie (SAG/T)] vertical member. Sufficient space to be catered for below and above connection area.

When necessary, invert Side Connector, STS of horizontal member to allow indefinite positioning, meeting designed position and ensuring horizontal members rests securely on mortar bed of masonry below.

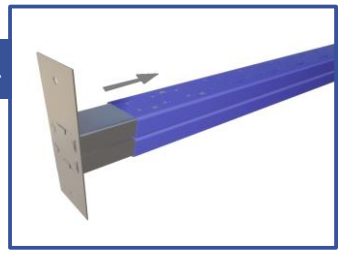
5

Continue masonry work and where plaster is required on stiffener, apply StiFlex Plaster Lath (PL07/PL20) to control plaster cracks caused by thermal differential movement between dissimilar surfaces.

StiFlex Installation Method for

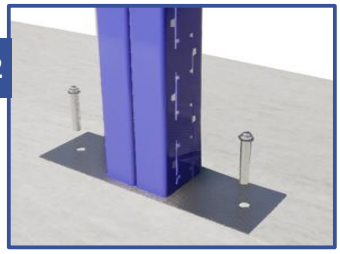
Loadbearing
Horizontal

1



Insert End Connectors (STR) into both ends of vertical member and then lift upright at intended position of stiffener.

2



Fasten 1 mechanical anchor, on each side of the End Connector (base). Slide Top Connector sleeve out to beam/slab soffit. Upon verticality check, similarly fasten End Connector(top).

3

To concrete end, at desired (leveled) position, install loadbearing CB Bracket. Fasten 2 mechanical anchors, 1 above top flange and 1 below bottom flange of bracket.

To StiFlex vertical member end, at desired (leveled) position, install loadbearing CB Bracket. Fasten 2 mechanical anchors, 1 above top flange and 1 below bottom flange of bracket. Alternatively, fasten 4 self-drilling screws, 2 below top flange and 2 below bottom flange of bracket.

4

Lay StiFlex horizontal member on CB Bracket, ensuring its levelness. Fasten 2 self-drilling screws at top flange and 2 self-drilling screws at bottom flange, to secure StiFlex horizontal member to CB Bracket.

5

At 400mm (or less) intervals, slot StiFlex wall tie (SAG/T) into vertical member, embedding firmly in mortar bed above masonry. StiFlex wall tie (SAG/T) can be positioned indefinitely along member.

6

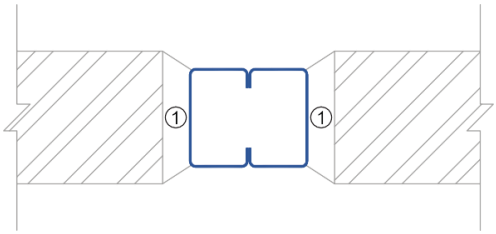
Continue masonry work and where plaster is required on stiffener, apply StiFlex Plaster Lath (PL07/PL20) to control plaster cracks caused by thermal differential movement between dissimilar surfaces.

StiFlex
Method Statement
With Plaster Finish

Verticals and Horizontals I Smaller width than wall

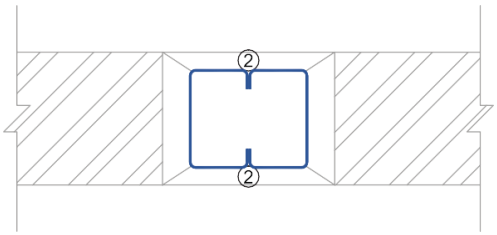
With plaster 1, 2, 3, 4

1



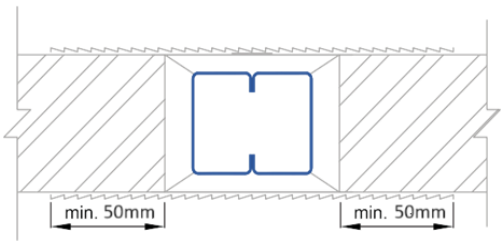
Location (1), on both left and right side of StiFlex profile, to be completely filled with cement mortar after installation of StiFlex stiffener but during the course of brick, block or panel laying.

2



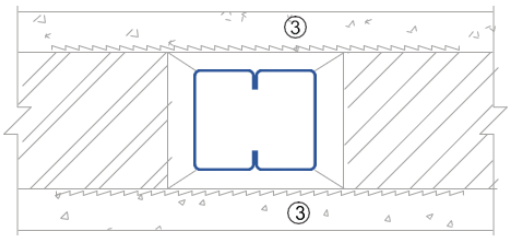
Location (2), on both back and front side of StiFlex profile, to be plastered flushed with adjoining brick / block / panel wall.

3



With selected StiFlex Plaster Lath (PL07 / PL20), affix StiFlex Plaster Lath centrally across StiFlex profile with minimum 50mm overlap on both ends as shown. Repeat on other side.

4



Location (3), apply plaster coatings to required thickness according to good practices.

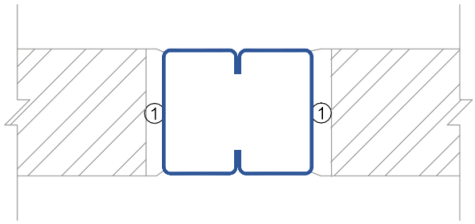
Note: Please refer to StiFlex Lath Literature for more information.

StiFlex
Method Statement
With Plaster Finish

Verticals and Horizontals I Same width as wall

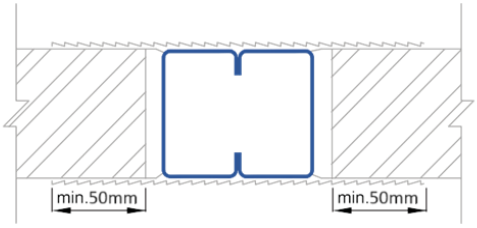
With plaster 1, 2, 3

1



Location (1), on both left and right side of StiFlex profile, to be completely filled with cement mortar after installation of StiFlex stiffener but during the course of brick, block or panel laying.

2



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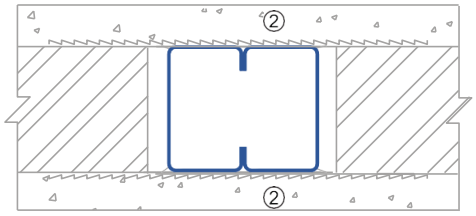

Location (2), apply plaster coatings to required thickness according to good practices.

Note: Please refer to StiFlex Lath Literature for more information.

G2.5 | 05/2024 | v1.0| EN | AP | RPAT

Head office
Dyntek Pte Ltd
100 Pasir Panjang Road, #06-06,
Singapore 118518

Website : www.stiflex.com
Email : mail.sg@stiflex.com
Telephone : +(65) 6362 6000
Facsimile : +(65) 6362 9000

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