

# 3form® CABLE+ROD™

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Engineered and designed specifically for 3form ecoresin, 3form cable + rod brings you all the hardware you need to suspend your panel in a variety of configurations and applications.



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For more information, please visit [www.3form.eu](http://www.3form.eu) or email [info@3form.eu](mailto:info@3form.eu) or call +31 (0) 88 336 576 00

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## CABLE SYSTEM OVERVIEW

3form Cable consists of specifying the desired number of cable assemblies, panel mounting hardware, and required anchor types. See overview below.

### 1. CHOOSE YOUR TOP ANCHOR CONDITION



### 2. CHOOSE FROM AN ASSORTMENT OF COMPONENTS FOR YOUR APPLICATION AND PANEL GAUGE



### 3. CHOOSE YOUR BOTTOM ANCHOR CONDITION



## CABLE SOLUTIONS

3form cable is useful in a wide number of situations and applications. Five common solutions are presented below, completed with photos, diagrams, parts required, and abbreviated installation instructions. Following these solutions is a complete catalog of the parts involved. Use the solutions as a template for your installation or design your own.

## SOLUTION 1: FLOOR TO CEILING PARTITION W/PANEL CONNECTORS

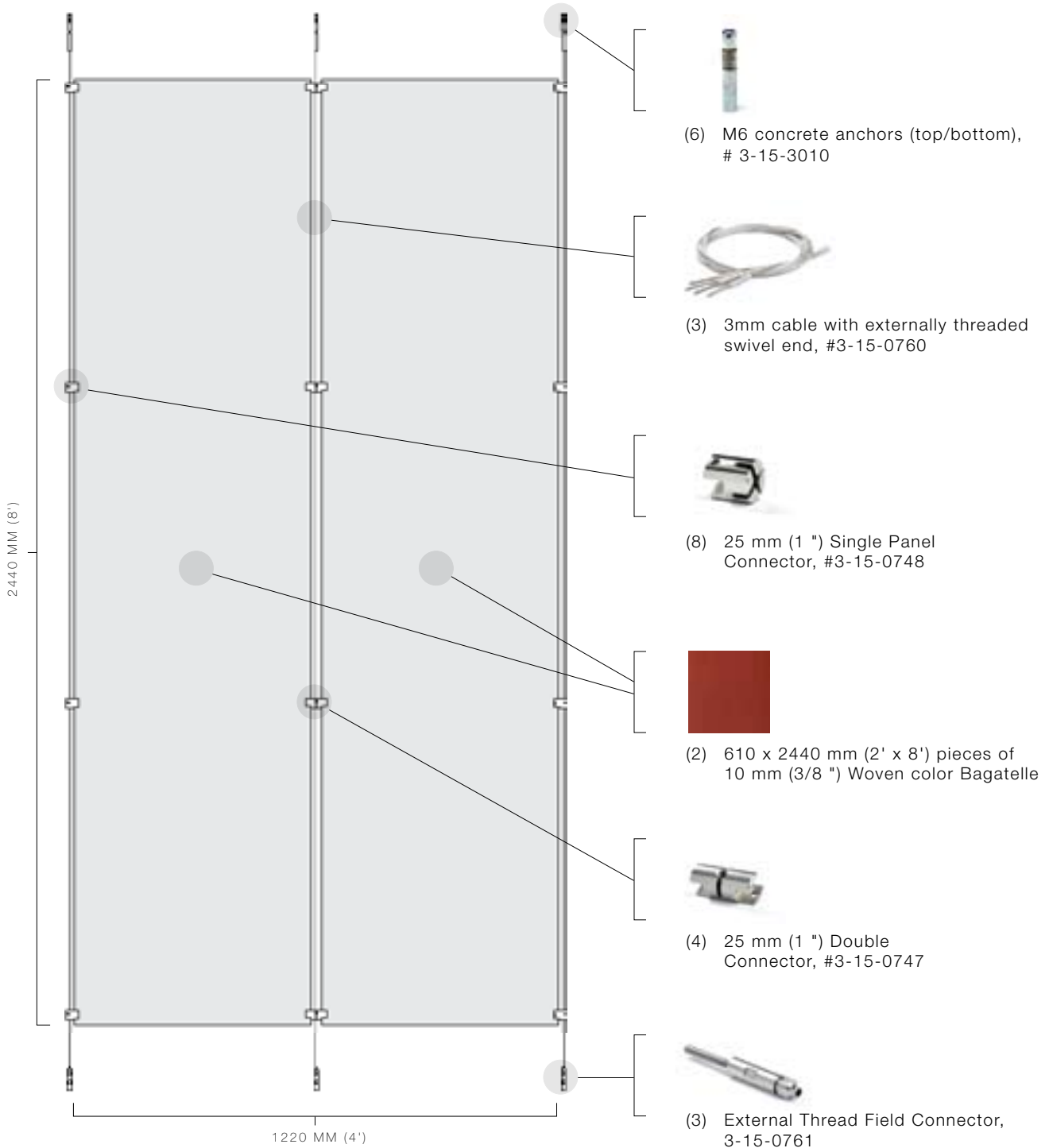
The simplest and most common installation is a floor to ceiling suspension of the cable holding a vertical panel between them. Review the installation instructions below in conjunction with the diagram on the following page.

### Installation Instructions

1. Pre-Drill floor and ceiling concrete with 8mm bit for anchors.
2. Install Concrete Anchors.
3. Attach swaged/swiveling end of cables to the ceiling.
4. Cut cable to length, attach field installed piece, and secure to floor concrete anchor drawing cable taut.
5. Attach single and double panel connectors to pre-determined locations on cable, tighten with set screw.
6. Hold panel in place between cables, and secure to cable with at least two panel connectors before allowing the panel to freely suspend from attachment points.
7. Secure remaining attachment points.



## SOLUTION 1: FLOOR TO CEILING PARTITION W/PANEL CONNECTORS DIAGRAM



## SOLUTION 2: FLOOR TO CEILING PARTITION W/SWIVEL CONNECTORS

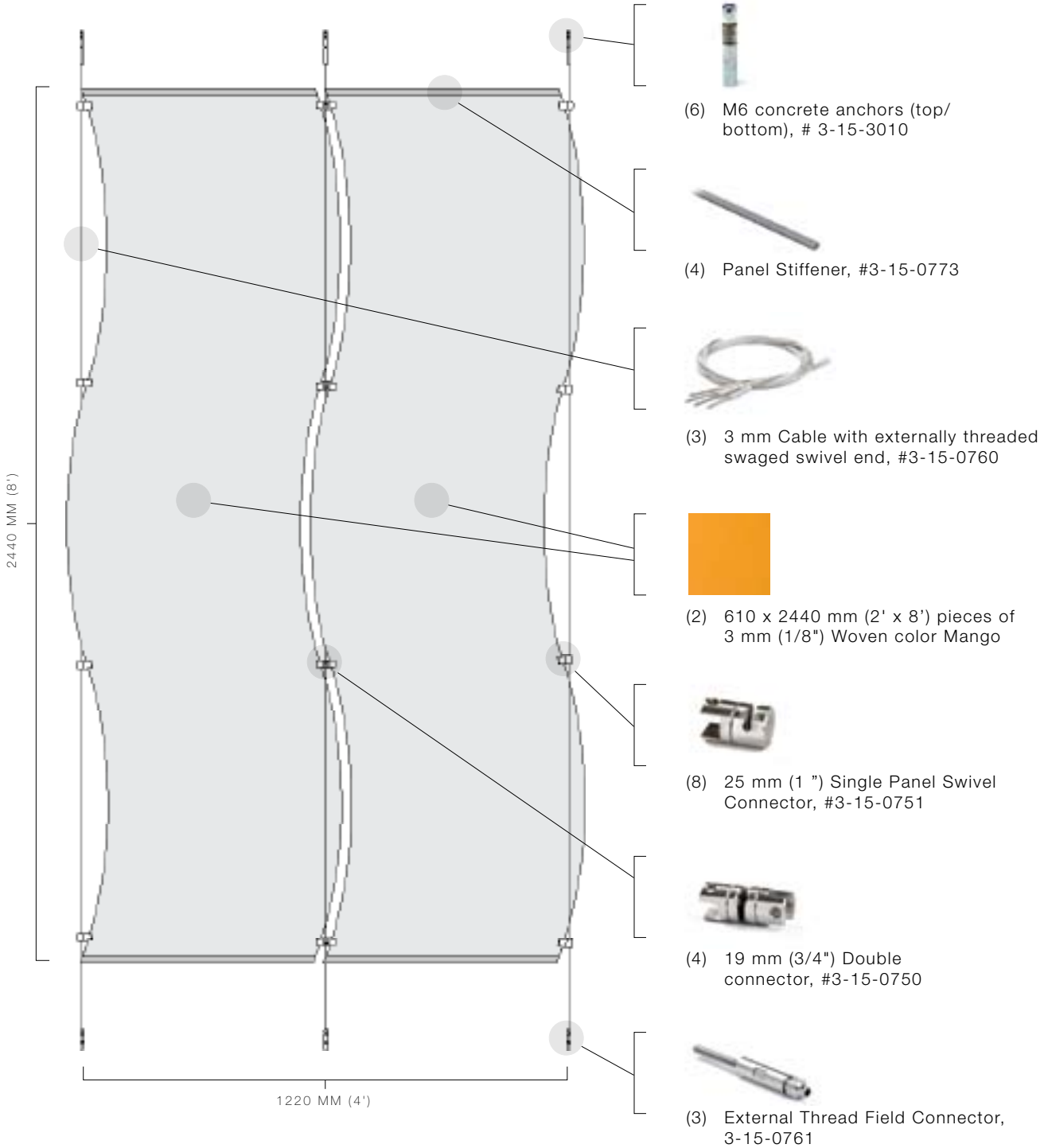
The second floor to ceiling installation depicted below takes advantage of the natural flexibility of thin gauge (3mm or 1/8") ecoresin and the freely rotating swivel holders for dramatic effect. To create the flexing of the material, approximately 813 mm (32") of ecoresin was "squeezed" between 762 mm (30") of cable. Additionally, after the panel is in place the undulation of the panels can easily be switched by simply "pushing" on the convex portion and "pulling" on the concave portion. The panel will flip between the two. The more subtle the curving, the easier it flips between the two positions.



### Installation Instructions

1. Pre-Drill floor and ceiling concrete with 8mm bit for anchors.
2. Install Concrete Anchors.
3. Attach swaged/swiveling end of cables to the ceiling.
4. Cut cable to length, attach field installed piece, and secure to floor concrete anchor drawing cable taut.
5. Attach top single and double swivel connectors to desired height on the cable, secure in place by tightening cable set screw.
6. Tighten panel set screws of top connectors against the panel.
7. Attach remaining single and double swivel connections to the panel. Position connectors to desired location on the panel and secure to panel with set screw. The cable set screw should enclose the cable, but not be tightened down. They will need to freely slide up and down the cable while staying fastened to the panel.
8. With the top connections securely holding the panel and cable, lift up on the panel at a point below the next connection point. As you lift and the top stays secure, the material will buckle and bow out. When you have reached the desired amount of bowing, fasten next swivel connectors against the cable.
9. Repeat with remaining segments of the panel.

## SOLUTION 2: FLOOR TO CEILING PARTITION W/SWIVEL CONNECTORS DIAGRAM



## SOLUTION 3: SHELVING W/PANEL CONNECTOR

3form Cable + Rod also provides a great solution for shelving applications. To counter the natural flex of eco-resin, a line bend or radius edge must be introduced along the edge to prevent deflection. Similarly, the span should be limited. Please consult your rep for more information on designing a suitable shelf system for your project.

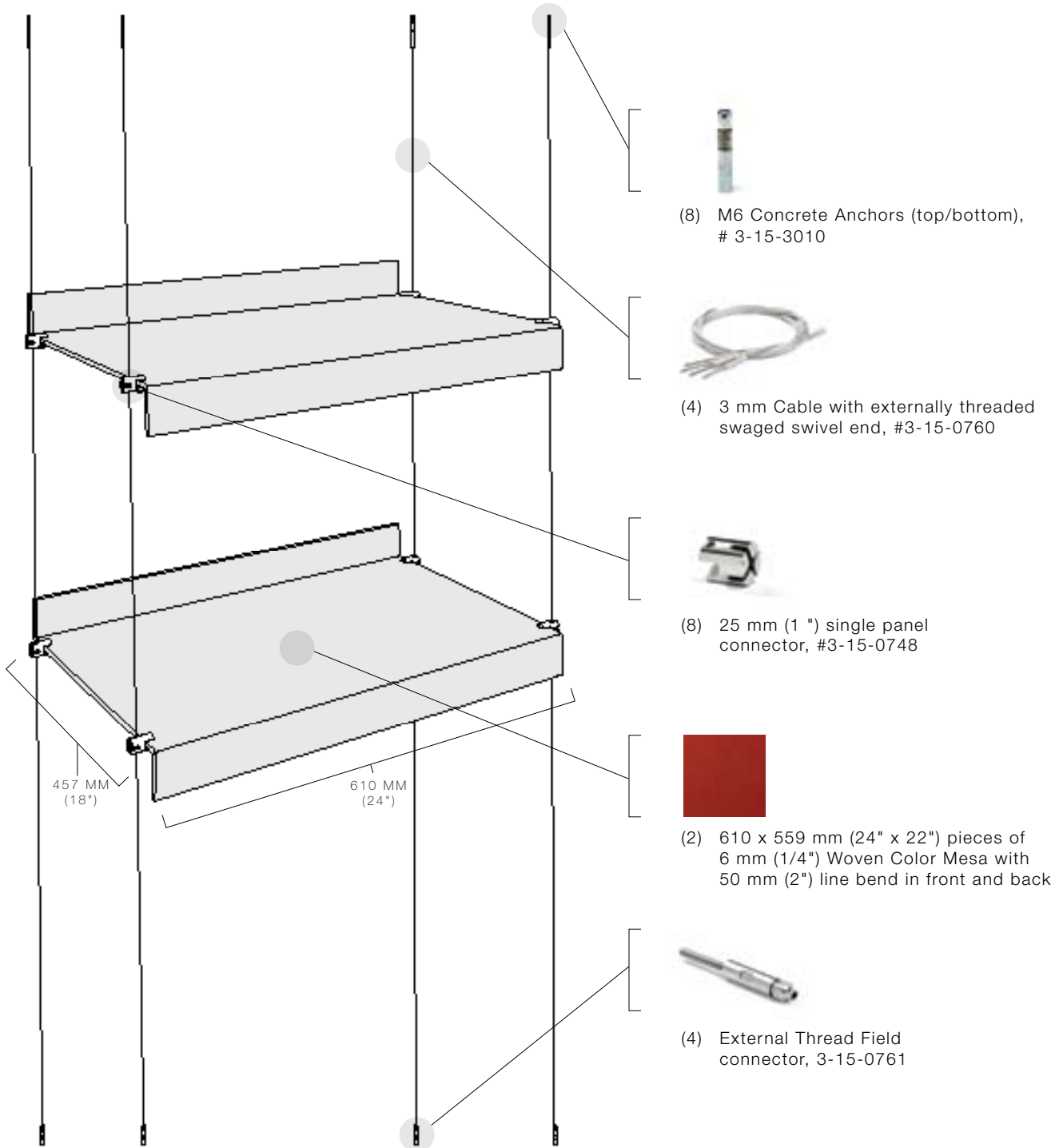
### Installation Instructions

1. Pre-Drill concrete with 8mm bit for concrete anchors at pre-determined locations.
2. Install Concrete Anchors, ensuring matching floor and ceiling locations are plumb with one another.
3. Attach swaged/swiveling end of cables to the ceiling.
4. Cut cable to length.
5. Attach Field Installed connectors to end of cable and secure to floor concrete anchors.
6. Holding panel in approximate location, secure to cable with single panel connectors. With a level, adjust each corner as needed.



Alternate shelf installation using the shelf holder, part #3-15-0754

## SOLUTION 3: SHELVING W/PANEL CONNECTOR DIAGRAM



## SOLUTION 4: TOP GRIPPER/CABLE LOOP APPLICATION

Because of the lightweight nature of ecoresin, as well as its resistance to shattering, cracking, or hazing, it can be gripped from above without damaging the panel using our top gripper piece. The top gripper can be used to freely suspend panels, as depicted below, or in conjunction with a panel attachment bracket to secure the bottom edge of the piece.

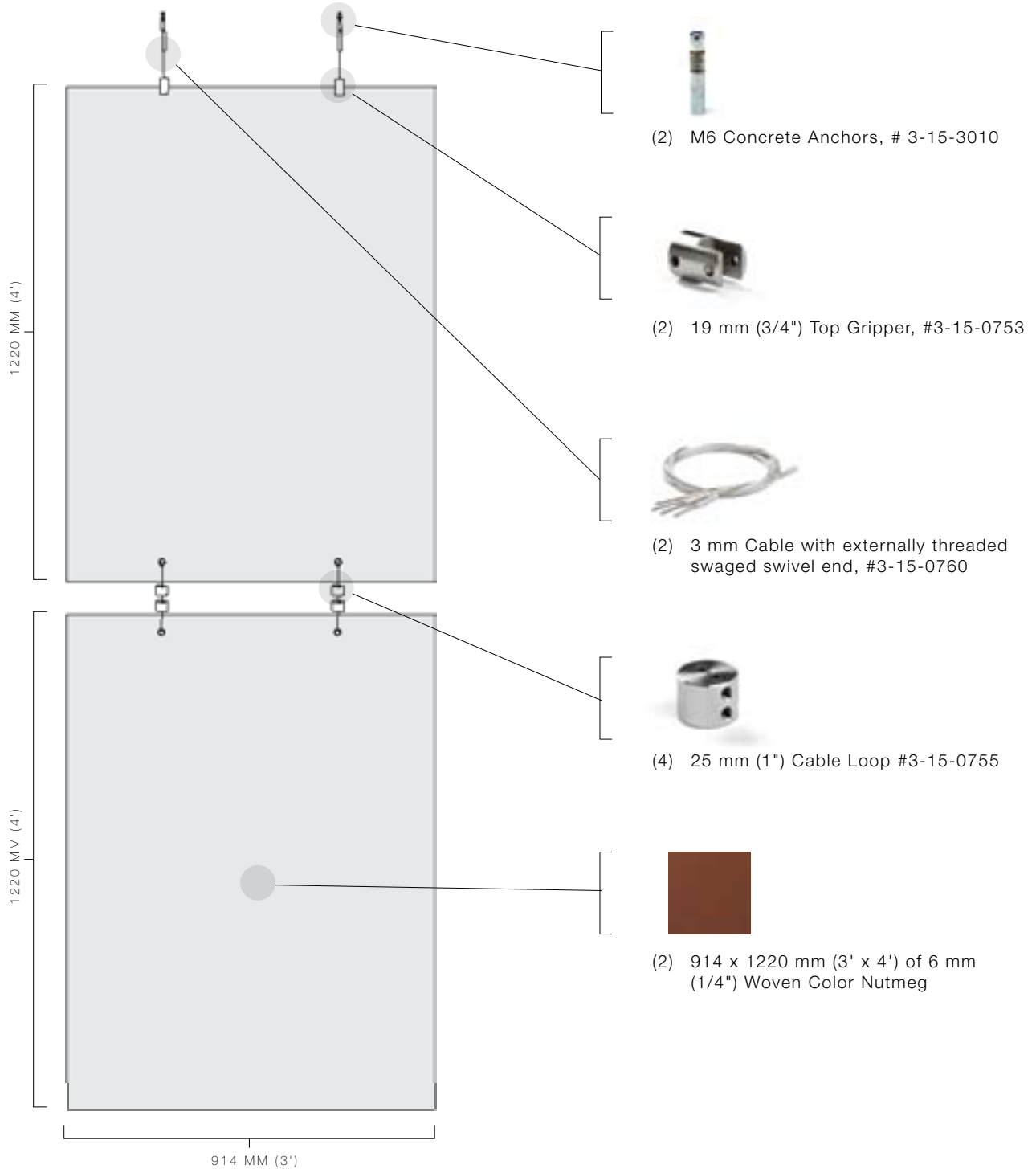
### Installation Instructions

1. Pre-drill ceiling concrete with 8mm bit for concrete anchors.
2. Install ceiling concrete anchors.
3. Attach swivel end of cables to the ceiling.
4. Slide top gripper onto cable and position as desired.
5. Cut cable to length, and tighten top gripper set screw.
6. Attach pre-assembled panels\* to top grippers.

\* Panel Assembly Instructions: Pre-drill (2) 12 mm (1/2") (or other desired diameter) holes in the bottom of the upper panel and the top of the bottom panel. If desired, place optional 12 mm (1/2") OD, 6 mm (1/4") thick grommets into holes. Using a short section of cable (approximately 305 mm or 12"), and two cable loops for each attachment assembly, attach the top and the bottom panels together.



## SOLUTION 4: TOP GRIPPER/CABLE LOOP APPLICATION DIAGRAM



## SOLUTION 5: SHAPES

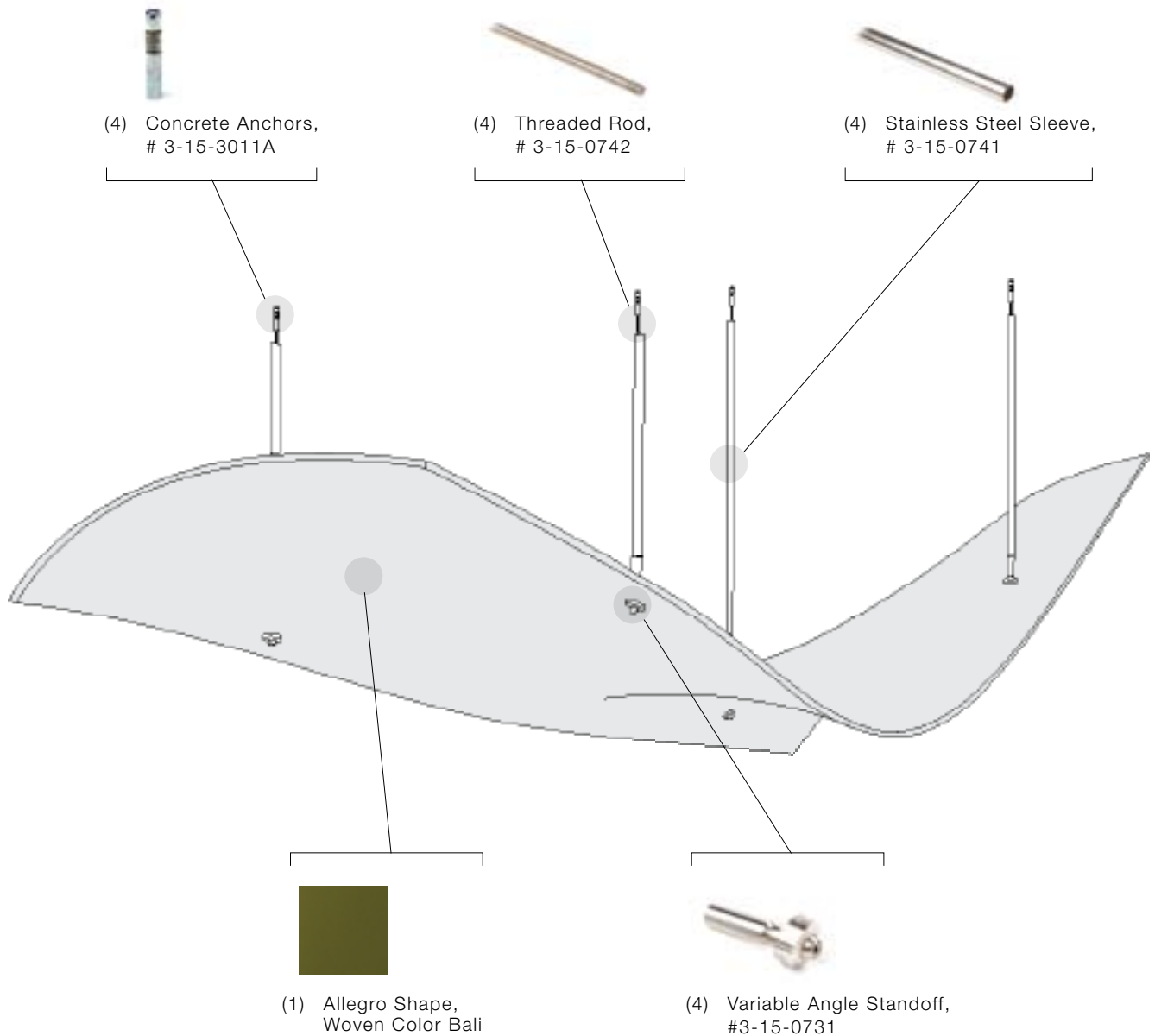
As a last solution, 3form Cable + Rod also makes it easy to suspend shaped or flat horizontal panels.



### Installation Instructions

1. Pre-Drill concrete with 10mm bit for concrete anchors at pre-determined locations.
2. Install Concrete Anchors.
3. Drill panel at pre-determined locations.
4. Suspend cut lengths of threaded rod from concrete anchors and slide the stainless steel sleeve over the bar.
5. Clamp the threaded rod below the sleeve to keep the tube in place while the panel is attached.
6. Attach the barrel portion of the variable angle standoff to the end of the threaded rod.
7. Hold panel up in the correct orientation and finish installing with caps of variable angle standoffs.

## SOLUTION 5: SHAPES DIAGRAM



## SOLUTION 6: SURFACE BRACKETS

Designed primarily for securing the bottom edge of a suspended panel resting on the floor, the brackets can also be secured to side walls or ceilings, in addition to floors. Available in both a variable and fixed configuration, the brackets firmly hold the edge of the panel with a set screw or thru pin while the bracket is fastened to an underlying anchor via a countersunk bolt through the bottom of the piece. They fit panels up to 12 mm (1/2") in gauge.



## CABLE AND COMPONENTS

The system starts with 3 mm (1/8") aircraft cable. The cable is available in standard 4570 mm (15') lengths. It arrives with one end swaged with an externally threaded swivel connection, and one free end, allowing it to be cut to length in the field.

To complete the cable installation, 3form offers two different end connections for the free end, externally and internally threaded end pieces. These easily connect to the end of the cable to complete the assembly.



### EXTERNAL THREAD SWIVEL END

PRODUCT ID	3-15-0760
THREADS	M6
MAX LOAD / TENSION	1000 LBS FORCE
END LENGTH	88 MM (3 1/2 IN)
THREAD LENGTH	30 MM (1 3/16 IN)
DIAMETER	8 MM (5/16 IN)



### EXTERNAL THREAD FIELD CONNECTOR

PRODUCT ID	3-15-0761
THREADS	M6
MAX LOAD / TENSION	1000 LBS FORCE
LENGTH	85 MM (3 5/16 IN)
THREAD LENGTH	30 MM (1 3/16 IN)
DIAMETER	13 MM (1/2 IN)
WRENCH SIZE	11 MM



### INTERNAL THREAD FIELD CONNECTOR

PRODUCT ID	3-15-0764
THREADS	M6
MAX LOAD / TENSION	1000 LBS FORCE
LENGTH	55 MM (2 1/8 IN)
INTERNAL THREAD LENGTH	18 MM (3/4 IN)
DIAMETER	13 MM (1/2 IN)
WRENCH SIZE	11 MM



### SINGLE PANEL CONNECTOR

<b>PRODUCT ID</b>	3-15-0748-K	3-15-0752-K
<b>DIAMETER</b>	19 MM (3/4 IN)	25 MM (1 IN)
<b>LENGTH</b>	31 MM (1.225 IN)	29 MM (1.150 IN)
<b>CABLE TO PANEL</b>	10 MM (.375 IN)	10 MM (.375 IN)
<b>MAX LOAD</b>	22,7 KG (50 LBS)	22,7 KG (50 LBS)
<b>PANEL GAUGE</b>	3 MM (1/8 IN) & 6 MM (1/4 IN)	10 MM (3/8 IN) & 12 MM (1/2 IN)
<b>MATERIAL</b>	STAINLESS	STAINLESS
<b>INCLUDES</b>	M8 SET SCREW (CABLE) & M6 SET SCREW (PANEL)	



### DOUBLE PANEL CONNECTORS

<b>PRODUCT ID</b>	3-15-0747-K (VER)	3-15-1514-K (HOR)
<b>DIAMETER</b>	25 MM (1 IN)	25 MM (1 IN)
<b>LENGTH</b>	45 MM (1.770 IN)	45 MM (1.770 IN)
<b>CABLE TO PANEL</b>	10 MM (.375 IN)	10 MM (.375 IN)
<b>MAX LOAD</b>	22,7 KG (50 LBS)	22,7 KG (50 LBS)
<b>PANEL GAUGE</b>	6 MM (1/4 IN) TO 12 MM (1/2 IN)	6 MM (1/4 IN) TO 12 MM (1/2 IN)
<b>MATERIAL</b>	STAINLESS	STAINLESS
<b>INCLUDES</b>	M6 SET SCREWS FOR CABLE AND PANEL	



### SWIVEL CONNECTORS

<b>PRODUCT ID</b>	3-15-0751-K (SINGLE)	3-15-0750-K (DOUBLE)
<b>DIAMETER</b>	19 MM (3/4 IN)	19 MM (3/4 IN)
<b>LENGTH</b>	30 MM (1.2 IN)	46 MM (1.8 IN)
<b>CABLE TO PANEL</b>	12 MM (1/2 IN)	12 MM (1/2 IN)
<b>MAX LOAD</b>	18 KG (40 LBS)	18 KG (40 LBS)
<b>PANEL GAUGE</b>	3 MM (1/8 IN) TO 6 MM (1/4 IN)	3 MM (1/8 IN) TO 6 MM (1/4 IN)
<b>MATERIAL</b>	STAINLESS	STAINLESS
<b>INCLUDES</b>	M6 SET SCREWS FOR CABLE AND PANEL	



### DRILL THRU CONNECTORS

<b>PRODUCT ID</b>	3-15-0756-K (12 MM CAP)	3-15-0769-K (18MM CAP)
<b>DIAMETER</b>	19 MM (3/4 IN)	19 MM (3/4 IN)
<b>LENGTH</b>	19 MM (3/4 IN)	19 MM (3/4 IN)
<b>CAP THREADS</b>	M8 X 12 MM	M8 X 12 MM
<b>MAX LOAD</b>	22,7 KG (50 LBS)	22,7 KG (50 LBS)
<b>PANEL GAUGE</b>	UP TO 6 MM (1/4 IN)	UP TO 12 MM (1/2 IN)
<b>MATERIAL</b>	STAINLESS	STAINLESS
<b>INCLUDES</b>	M8 SET SCREW FOR CABLE	



### TOP GRIPPERS

<b>PRODUCT ID</b>	3-15-0749-K	3-15-0753-K
<b>DIAMETER</b>	25 MM (1 IN)	19 MM (3/4 IN)
<b>LENGTH</b>	34 MM (1.35 IN)	34 MM (1.35 IN)
<b>PANEL ENGAGEMENT</b>	12 MM (1/2 IN)	12 MM (1/2 IN)
<b>MAX LOAD</b>	22,7 KG (50 LBS) 45 KG W/PLN (100 LBS W/PIN)	22,7 KG (50 LBS)
<b>PANEL GAUGE</b>	UP TO 12 MM (1/2 IN)	UP TO 6 MM (1/4 IN)
<b>MATERIAL</b>	STAINLESS	STAINLESS
<b>INCLUDES</b>	M6 SET SCREW AND PIN (-0749 ONLY)	



### SHELF HOLDER

<b>PRODUCT ID</b>	3-15-0754
<b>OUTER DIAMETER</b>	25 MM (1 IN)
<b>INNER DIAMETER</b>	10 MM (.375 IN)
<b>INNER HEIGHT</b>	6 MM (1/4 IN)
<b>MAX LOAD</b>	22,7 KG (50 LBS)
<b>MATERIAL</b>	STAINLESS
<b>INCLUDES</b>	M6 SET SCREW FOR CABLE



### CABLE LOOP

<b>PRODUCT ID</b>	3-15-0755
<b>DIAMETER</b>	25 MM (1 IN)
<b>HEIGHT</b>	19 MM (3/4 IN)
<b>MAX LOAD</b>	22,7 KG (50 LBS)
<b>MATERIAL</b>	STAINLESS
<b>INCLUDES</b>	M6 SET SCREW FOR CABLE



### SURFACE BRACKETS

<b>PRODUCT ID</b>	3-15-0758	3-15-0757
<b>BASE DIAMETER</b>	44 MM (1 3/4 IN)	44 MM (1 3/4 IN)
<b>FLOOR TO PIVOT</b>	N/A	17 MM (.66 IN)
<b>PIVOT TO PANEL</b>	N/A	14 MM (.55 IN)
<b>HEIGHT</b>	25 MM (1 IN)	N/A
<b>MAX LOAD</b>	22,7 KG (50 LBS)	22,7 KG (50 LBS)
<b>MATERIAL</b>	STAINLESS	STAINLESS
<b>INCLUDES</b>	PIN, SET SCREW, AND COUNTERSUNK FASTENER	



#### COVER DISK

**PRODUCT ID** 3-15-3050  
**DIAMETER** 35 MM (1 3/8 IN)  
**THICKNESS** 5 MM (1/4 IN)  
**THREADS** M6  
**MATERIAL** STAINLESS



#### COVER DISK

**PRODUCT ID** 3-15-0731  
**BARREL DIAMETER** 12 MM (1/2 IN)  
**INTERNAL THREADS** M8  
**MAX ANGLE** 30 DEGREES  
**MATERIAL** STAINLESS



#### STAINLESS TUBING

**PRODUCT ID** 3-15-0741  
**OUTER DIAMETER** 12 MM (1/2 IN)  
**LENGTH** 2 M (6 1/2 FT)



#### THREADED ROD

**PRODUCT ID** 3-15-0742  
**THREADS** M8  
**LENGTH** 2 M (6 1/2 FT)



#### CONCRETE ANCHOR

<b>PRODUCT ID</b>	3-15-3010
<b>THREADS</b>	M6
<b>MAX LOAD</b>	400 KG (900 LBS) FORCE
<b>PRE-DRILL</b>	8 MM
<b>MIN CONCRETE THICK</b>	135 MM (5 3/16 IN)
<b>DIAMETER</b>	8 MM (5/16 IN)
<b>INTERNAL THREADS</b>	15 MM (.60 IN)
<b>OVERALL LENGTH</b>	45 MM (1 3/4 IN)



#### WOOD ANCHOR (RAMPA SCREW)

<b>PRODUCT ID</b>	3-15-0762
<b>THREADS</b>	M6
<b>PRE DRILL</b>	10.4 MM (13/32 IN)
<b>LENGTH</b>	25 MM (1 IN)
<b>MAX LOAD</b>	VARIES ACCORDING TO WOOD HARDNESS



#### THREADED ROD

<b>PRODUCT ID</b>	3-15-3050
<b>THREADS</b>	M6
<b>LENGTH</b>	50 MM (2 IN)



**M6 THREADED ROD**

**PRODUCT ID** 3-15-3030  
**THREADS** M6  
**LENGTH** 50 MM (2 IN)



**COVER DISC**

**PRODUCT ID** 3-15-3050  
**THREADS** M6  
**DIAMETER** 35 MM (1 3/8 IN)  
**THICKNESS** 5 MM (1/4 IN)