CONCRETE FASTENING SYSTEMS™ INC

1231 E. 26th Street
Cleveland, OH 44114

CONFAST®

CONCRETE FASTENERS
PRODUCT CATALOG

216-357-7431

www.concretefasteners.com

CONCRETE FASTENING SYSTEMS™ INC

ZINC PLATED

The CONFAST® Wedge Anchor Zinc Plated is made up of two pieces: anchor body and expansion clip. The anchor body is threaded for a portion of its length and is manufactured from carbon steel and zinc plated. The threaded end has a bull nose to protect the threads from being damaged during installation. The expansion clip is one piece with tangs that are permanently attached to the anchor body. The expansion clip is made from the same type of steel as the anchor body and is also zinc plated. The opposite end from the threads is the necked down where the expansion clip is attached. The necked down portion gradually tapers outward to equal the full diameter of the anchor body. Every box of CONFAST® wedge anchors comes packaged with the correct number and size of nuts and washers.

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode and a carbide bit meeting ANSI standards, drill a hole in the concrete the same diameter as the diameter of wedge anchor being installed. Drill the hole to a depth of 1/2” deeper than the wedge anchor will be embedded in the concrete.
2. Using a wire brush and vacuum, clean the hole of all debris and dust.
3. Thread a nut on the end of the anchor and insert the wedge anchor into the hole, anchor clip end first.
4. Using a hammer of sufficient weight, strike the end of the anchor flush and straight until a minimum of 3 to 4 threads are below the surface. Make sure that the anchor is embedded in the concrete equal to or past the minimum embedment for the anchor diameter being installed.
5. By hand, turn the nut clockwise until snug.
6. Using a wrench, tighten approximately three to four full turns to the minimum torque value for the anchor diameter being used. Make sure not to over torque

ANCHOR LENGTH

The minimum length of anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture plus space for the nut and washer.

ANCHOR SPACING

The CONFAST® Wedge Anchor Zinc Plated is an expansion anchor, and the expansion of the anchor creates outward forces against the walls of the hole in the concrete. It is critical that the anchors are spaced far enough away from one another so that the forces do not overlap; the overlapping of these forces will decrease the holding values. The generally accepted guide lines in the anchoring industry is to require a minimum of ten (10) anchor diameter spacing between anchors and a minimum of five (5) anchor diameters away from any unsupported edge.

CONFAST®

ZINC PLATED

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	TORQUE	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1-1/8"	5 - 10 ft./lbs.	1/4"	877	1082
5/16"	1-1/8"	15 - 20 ft./lbs.	5/16"	892	1156
3/8"	1-1/2"	25 - 30 ft./lbs.	3/8"	1525	3238
1/2"	2-1/4"	50 - 60 ft./lbs.	1/2"	2999	5564
5/8"	2-3/4"	75 - 90 ft./lbs.	5/8"	3749	6198
3/4"	3-1/4"	150 - 175 ft./lbs.	3/4"	4978	9378
7/8"	3-7/8"	200 - 250 ft./lbs.	7/8"	6294	13687
1"	4-1/2"	250 - 300 ft./lbs.	1"	7329	17712
1-1/4"	5-1/2"	400 - 450 ft./lbs.	1-1/4"	13162	24206

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and offered as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ANCHOR MATERIAL COMPOSITION

PART OF ANCHOR	ZINC PLATED CARBON STEEL
Body	AISI C 12L14
Clip	AISI C1010-1081037
Nut	AISI C1010-1018
Washer	Low Carbon ASTM A 563 Grade A
Plating	Zinc QQ-Z325C

ANCHOR PART INFORMATION

PART OF ANCHOR	INFORMATION
Body	Length measured as overall from end to end
Nut	Finished hex nut, grade2, National Coarse Threads
Washer	SAE flat washer, low carbon, zinc plated

PRODUCT IDENTIFICATION

STAMP ON ANCHOR	FROM	LESS THAN
A	1 1/2"	2"
B	2"	2 1/2"
C	2 1/2"	3"
D	3"	3 1/2"
E	3 1/2"	4"
F	4"	4 1/2"
G	4 1/2"	5"
H	5"	5 1/2"
I	5 1/2"	6"
J	6"	6 1/2"
K	6 1/2"	7"
L	7"	7 1/2"
M	7 1/2"	8"
N	8"	8 1/2"
O	8 1/2"	9"
P	9"	9 1/2"
Q	9 1/2"	10"
R	10"	11"
S	11"	12"
T	12"	13"
U	13"	14"
V	14"	15"
W	15"	16"
X	16"	17"
Y	17"	18"
Z	18"	19"

GALVANIZED

The CONFAST® Wedge Anchor Galvanized is made up of two pieces: anchor body and expansion clip. The anchor body is threaded for a portion of its length and is manufactured from carbon steel and zinc plated. The threaded end has a bull nose to protect the threads from being damaged during installation. The expansion clip is one piece with tangs that are permanently attached to the anchor body and made from 304 stainless steel. The opposite end from the threads is the necked down where the expansion clip is attached. The necked down portion gradually tapers outward to equal the full diameter of the anchor body. Every box of CONFAST® Wedge Anchor Galvanized comes packaged with the correct number, type and size of nuts and washers.

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode and a carbide bit meeting ANSI standards, drill a hole in the concrete the same diameter as the diameter of wedge anchor being installed. Drill the hole to a depth of 1/2” deeper than the wedge anchor will be embedded in the concrete.
2. Using a wire brush and vacuum, clean the hole of all debris and dust.
3. Thread a nut on the end of the anchor and insert the wedge anchor into the hole, anchor clip end first.
4. Using a hammer of sufficient weight, strike the end of the anchor flush and straight until a minimum of 3 to 4 threads are below the surface. Make sure that the anchor is embedded in the concrete equal to or past the minimum embedment for the anchor diameter being installed.
5. By hand, turn the nut clockwise until snug.
6. Using a wrench, tighten approximately three to four full turns to the minimum torque value for the anchor diameter being used. Make sure not to over torque

ANCHOR LENGTH

The minimum length of anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture plus space for the nut and washer.

ANCHOR SPACING

The CONFAST® Wedge Anchor Galvanized is an expansion anchor, and the expansion of the anchor creates outward forces against the walls of the hole in the concrete. It is critical that the anchors are spaced far enough away from one another so that the forces do not overlap; the overlapping of these forces will decrease the holding values. The generally accepted guide lines in the anchoring industry is to require a minimum of ten (10) anchor diameter spacing between anchors and a minimum of five (5) anchor diameters away from any unsupported edge.

CONFAST®

GALVANIZED

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1-1/8"	1/4"	877	1082
5/16"	1-1/8"	5/16"	892	1156
3/8"	1-1/2"	3/8"	1525	3238
1/2"	2-1/4"	1/2"	2999	5564
5/8"	2-3/4"	5/8"	3749	6198
3/4"	3-1/4"	3/4"	4978	9378
7/8"	3-7/8"	7/8"	6294	13687
1"	4-1/2"	1"	7329	17712
1-1/4"	5-1/2"	1-1/4"	13162	24206

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and offered as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ANCHOR MATERIAL COMPOSITION

PART OF ANCHOR	GALVANIZED
Body	AISI C 12L14
Clip	304 stainless Steel
Nut	Galvanized
Washer	Galvanized
Plating	Galvanized

ANCHOR PART INFORMATION

PART OF ANCHOR	INFORMATION
Body	Length measured as overall from end to end
Nut	Finished hex nut, galvanized, National Coarse Threads
Washer	SAE flat washer, galvanized

PRODUCT IDENTIFICATION

STAMP ON ANCHOR	FROM	LESS THAN
A	1 1/2"	2"
B	2"	2 1/2"
C	2 1/2"	3"
D	3"	3 1/2"
E	3 1/2"	4"
F	4"	4 1/2"
G	4 1/2"	5"
H	5"	5 1/2"
I	5 1/2"	6"
J	6"	6 1/2"
K	6 1/2"	7"
L	7"	7 1/2"
M	7 1/2"	8"
N	8"	8 1/2"
O	8 1/2"	9"
P	9"	9 1/2"
Q	9 1/2"	10"
R	10"	11"
S	11"	12"
T	12"	13"
U	13"	14"
V	14"	15"
W	15"	16"
X	16"	17"
Y	17"	18"
Z	18"	19"

304 STAINLESS STEEL

The CONFAST® Wedge Anchor 304 Stainless Steel is made up of two pieces: anchor body and expansion clip. The anchor body is threaded for a portion of its length and is manufactured from 304 stainless steel. The threaded end has a bull nose to protect the threads from being damaged during installation. The expansion clip is one piece with tangs that are permanently attached to the anchor body and made from 304 stainless. The opposite end from the threads is the necked down where the expansion clip is attached. The necked down portion gradually tapers outward to equal the full diameter of the anchor body. Every box of CONFAST® Wedge Anchor 304 Stainless Steel comes packaged with the correct number, type and size of nuts and washers.

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode and a carbide bit meeting ANSI standards, drill a hole in the concrete the same diameter as the diameter of wedge anchor being installed. Drill the hole to a depth of 1/2” deeper than the wedge anchor will be embedded in the concrete.
2. Using a wire brush and vacuum, clean the hole of all debris and dust.
3. Thread a nut on the end of the anchor and insert the wedge anchor into the hole, anchor clip end first.
4. Using a hammer of sufficient weight, strike the end of the anchor flush and straight until a minimum of 3 to 4 threads are below the surface. Make sure that the anchor is embedded in the concrete equal to or past the minimum embedment for the anchor diameter being installed.
5. By hand, turn the nut clockwise until snug.
6. Using a wrench, tighten approximately three to four full turns to the minimum torque value for the anchor diameter being used. Make sure not to over torque

ANCHOR LENGTH

The minimum length of anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture plus space for the nut and washer.

ANCHOR SPACING

The CONFAST® Wedge Anchor 304 Stainless Steel is an expansion anchor, and the expansion of the anchor creates outward forces against the walls of the hole in the concrete. It is critical that the anchors are spaced far enough away from one another so that the forces do not overlap; the overlapping of these forces will decrease the holding values. The generally accepted guide lines in the anchoring industry is to require a minimum of ten (10) anchor diameter spacing between anchors and a minimum of five (5) anchor diameters away from any unsupported edge.

CONFAST®

WEDGE ANCHOR

304 STAINLESS STEEL

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1-1/8"	1/4"	877	1082
5/16"	1-1/8"	5/16"	892	1156
3/8"	1-1/2"	3/8"	1525	3238
1/2"	2-1/4"	1/2"	2999	5564
5/8"	2-3/4"	5/8"	3749	6198
3/4"	3-1/4"	3/4"	4978	9378
7/8"	3-7/8"	7/8"	6294	13687
1"	4-1/2"	1"	7329	17712
1-1/4"	5-1/2"	1-1/4"	13162	24206

Ultimate Load Values in 2000 PSI Concrete
Values shown are average ultimate values and offered as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ANCHOR MATERIAL COMPOSITION

PART OF ANCHOR	304 STAINLESS STEEL
Body	304 Stainless Steel
Clip	304 Stainless Steel
Nut	18-8
Washer	18-8
Plating	Type 4, Class 1 Passivated

ANCHOR PART INFORMATION

PART OF ANCHOR	INFORMATION
Body	Length measured as overall from end to end
Nut	Finished hex nut, 304 stainless steel, National Coarse Threads
Washer	SAE flat washer, 304 stainless steel

PRODUCT IDENTIFICATION

STAMP ON ANCHOR	FROM	LESS THAN
A	1 1/2"	2"
B	2"	2 1/2"
C	2 1/2"	3"
D	3"	3 1/2"
E	3 1/2"	4"
F	4"	4 1/2"
G	4 1/2"	5"
H	5"	5 1/2"
I	5 1/2"	6"
J	6"	6 1/2"
K	6 1/2"	7"
L	7"	7 1/2"
M	7 1/2"	8"
N	8"	8 1/2"
O	8 1/2"	9"
P	9"	9 1/2"
Q	9 1/2"	10"
R	10"	11"
S	11"	12"
T	12"	13"
U	13"	14"
V	14"	15"
W	15"	16"
X	16"	17"
Y	17"	18"
Z	18"	19"

316 STAINLESS STEEL

The CONFAST® Wedge Anchor 316 Stainless Steel is made up of two pieces: anchor body and expansion clip. The anchor body is threaded for a portion of its length and is manufactured from 316 stainless steel. The threaded end has a bull nose to protect the threads from being damaged during installation. The expansion clip is one piece with tangs that are permanently attached to the anchor body and made from 316 stainless steel. The opposite end from the threads is the necked down where the expansion clip is attached. The necked down portion gradually tapers outward to equal the full diameter of the anchor body. Every box of CONFAST® Wedge Anchor 316 Stainless Steel comes packaged with the correct number, type and size of nuts and washers.

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode and a carbide bit meeting ANSI standards, drill a hole in the concrete the same diameter as the diameter of wedge anchor being installed. Drill the hole to a depth of 1/2” deeper than the wedge anchor will be embedded in the concrete.
2. Using a wire brush and vacuum, clean the hole of all debris and dust.
3. Thread a nut on the end of the anchor and insert the wedge anchor into the hole, anchor clip end first.
4. Using a hammer of sufficient weight, strike the end of the anchor flush and straight until a minimum of 3 to 4 threads are below the surface. Make sure that the anchor is embedded in the concrete equal to or past the minimum embedment for the anchor diameter being installed.
5. By hand, turn the nut clockwise until snug.
6. Using a wrench, tighten approximately three to four full turns to the minimum torque value for the anchor diameter being used. Make sure not to over torque

ANCHOR LENGTH

The minimum length of anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture plus space for the nut and washer.

ANCHOR SPACING

The CONFAST® Wedge Anchor 316 Stainless Steel is an expansion anchor, and the expansion of the anchor creates outward forces against the walls of the hole in the concrete. It is critical that the anchors are spaced far enough away from one another so that the forces do not overlap; the overlapping of these forces will decrease the holding values. The generally accepted guide lines in the anchoring industry is to require a minimum of ten (10) anchor diameter spacing between anchors and a minimum of five (5) anchor diameters away from any unsupported edge.

CONFAST®

316 STAINLESS STEEL

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1-1/8"	1/4"	877	1082
5/16"	1-1/8"	5/16"	892	1156
3/8"	1-1/2"	3/8"	1525	3238
1/2"	2-1/4"	1/2"	2999	5564
5/8"	2-3/4"	5/8"	3749	6198
3/4"	3-1/4"	3/4"	4978	9378
7/8"	3-7/8"	7/8"	6294	13687
1"	4-1/2"	1"	7329	17712
1-1/4"	5-1/2"	1-1/4"	13162	24206

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and offered as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ANCHOR MATERIAL COMPOSITION

PART OF ANCHOR	316 STAINLESS STEEL
Body	316 stainless Steel
Clip	316 stainless Steel
Nut	316 stainless Steel
Washer	316 stainless Steel
Plating	Type 4, Class 1 Passivated

ANCHOR PART INFORMATION

PART OF ANCHOR	INFORMATION
Body	Length measured as overall from end to end
Nut	Finished hex nut, 316 stainless steel, National Coarse Threads
Washer	SAE flat washer, 316 stainless steel

PRODUCT IDENTIFICATION

STAMP ON ANCHOR	FROM	LESS THAN
A	1 1/2"	2"
B	2"	2 1/2"
C	2 1/2"	3"
D	3"	3 1/2"
E	3 1/2"	4"
F	4"	4 1/2"
G	4 1/2"	5"
H	5"	5 1/2"
I	5 1/2"	6"
J	6"	6 1/2"
K	6 1/2"	7"
L	7"	7 1/2"
M	7 1/2"	8"
N	8"	8 1/2"
O	8 1/2"	9"
P	9"	9 1/2"
Q	9 1/2"	10"
R	10"	11"
S	11"	12"
T	12"	13"
U	13"	14"
V	14"	15"
W	15"	16"
X	16"	17"
Y	17"	18"
Z	18"	19"

ZINC PLATED - AMERICAN MADE

The ThunderStud® Wedge Anchor Zinc Plated is made up of two pieces: anchor body and expansion clip. The anchor body is threaded for a portion of its length and is manufactured from carbon steel and zinc plated. The threaded end has a bull nose to protect the threads from being damaged during installation. The expansion clip is one piece with tangs that are permanently attached to the anchor body. The expansion clip is made from the same type of steel as the anchor body and is also zinc plated. The opposite end from the threads is the necked down where the expansion clip is attached. The necked down portion gradually tapers outward to equal the full diameter of the anchor body. Every box of ThunderStud® Wedge Anchor Zinc Plated comes packaged with the correct number and size of nuts and washers.

APPROVALS

Meets or exceeds U.S. Government G.S.A. Specifications FF-S-325 Group 11, Type 4, Class 1

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode and a carbide bit meeting ANSI standards, drill a hole in the concrete the same diameter as the diameter of wedge anchor being installed. Drill the hole to a depth of 1/2" deeper than the wedge anchor will be embedded in the concrete.
2. Using a wire brush and vacuum, clean the hole of all debris and dust.
3. Thread a nut on the end of the anchor and insert the wedge anchor into the hole, anchor clip end first.
4. Using a hammer of sufficient weight, strike the end of the anchor flush and straight until a minimum of 3 to 4 threads are below the surface. Make sure that the anchor is embedded in the concrete equal to or past the minimum embedment for the anchor diameter being installed.
5. By hand, turn the nut clockwise until snug.
6. Using a wrench, tighten approximately three to four full turns to the minimum torque value for the anchor diameter being used. Make sure not to over torque

ANCHOR LENGTH

The minimum length of anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture plus space for the nut and washer.

ANCHOR SPACING

The ThunderStud® Wedge Anchor Zinc Plated is an expansion anchor, and the expansion of the anchor creates outward forces against the walls of the hole in the concrete. It is critical that the anchors are spaced far enough away from one another so that the forces do not overlap; the overlapping of these forces will decrease the holding values. The generally accepted guide lines in the anchoring industry is to require a minimum of ten (10) anchor diameter spacing between anchors and a minimum of five (5) anchor diameters away from any unsupported edge.

AMERICAN MADE - ZINC PLATED

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	TORQUE	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1-1/8"	5 - 10 ft./lbs.	1/4"	1170	1443
5/16"	1-1/8"	15 - 20 ft./lbs.	5/16"	1285	1585
3/8"	1-1/2"	25 - 30 ft./lbs.	3/8"	1631	4318
1/2"	2-1/4"	50 - 60 ft./lbs.	1/2"	3999	7419
5/8"	2-3/4"	75 - 90 ft./lbs.	5/8"	4999	8264
3/4"	3-1/4"	150 - 175 ft./lbs.	3/4"	6638	12504
7/8"	3-7/8"	200 - 250 ft./lbs.	7/8"	8392	18250
1"	4-1/2"	250 - 300 ft./lbs.	1"	9773	23617
1-1/4"	5-1/2"	400 - 450 ft./lbs.	1-1/4"	17550	32275

Ultimate Load Values in 2000 PSI Concrete
Values shown are average ultimate values and offered only as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ANCHOR MATERIAL COMPOSITION

PART OF ANCHOR	ZINC PLATED CARBON STEEL
Body	AISI C 12L14
Clip	AISI C1010-1081037
Nut	AISI C1010-1018
Washer	Low Carbon ASTM A 563 Grade A
Plating	Zinc QQ-Z325C

ANCHOR PART INFORMATION

PART OF ANCHOR	INFORMATION
Body	Length measured as overall from end to end
Nut	Finished hex nut, grade2, National Coarse Threads
Washer	SAE flat washer, low carbon, zinc plated

PRODUCT IDENTIFICATION

STAMP ON ANCHOR	FROM	LESS THAN
A	1 1/2"	2"
B	2"	2 1/2"
C	2 1/2"	3"
D	3"	3 1/2"
E	3 1/2"	4"
F	4"	4 1/2"
G	4 1/2"	5"
H	5"	5 1/2"
I	5 1/2"	6"
J	6"	6 1/2"
K	6 1/2"	7"
L	7"	7 1/2"
M	7 1/2"	8"
N	8"	8 1/2"
O	8 1/2"	9"
P	9"	9 1/2"
Q	9 1/2"	10"
R	10"	11"
S	11"	12"
T	12"	13"
U	13"	14"
V	14"	15"
W	15"	16"
X	16"	17"
Y	17"	18"
Z	18"	19"

HOT-DIPPED GALVANIZED - AMERICAN MADE

The ThunderStud® Wedge Anchor Hot-Dipped Galvanized is made up of two pieces: anchor body and expansion clip. The anchor body is threaded for a portion of its length and is manufactured from carbon steel and zinc plated. The threaded end has a bull nose to protect the threads from being damaged during installation. The expansion clip is one piece with tangs that are permanently attached to the anchor body and made from 304 stainless steel. The opposite end from the threads is the necked down where the expansion clip is attached. The necked down portion gradually tapers outward to equal the full diameter of the anchor body. Every box of ThunderStud® Wedge Anchor Hot-Dipped Galvanized comes packaged with the correct number, type and size of nuts and washers.

APPROVALS

Meets or exceeds U.S. Government G.S.A. Specifications FF-S-325 Group 11, Type 4, Class 1

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode and a carbide bit meeting ANSI standards, drill a hole in the concrete the same diameter as the diameter of wedge anchor being installed. Drill the hole to a depth of 1/2" deeper than the wedge anchor will be embedded in the concrete.
2. Using a wire brush and vacuum, clean the hole of all debris and dust.
3. Thread a nut on the end of the anchor and insert the wedge anchor into the hole, anchor clip end first.
4. Using a hammer of sufficient weight, strike the end of the anchor flush and straight until a minimum of 3 to 4 threads are below the surface. Make sure that the anchor is embedded in the concrete equal to or past the minimum embedment for the anchor diameter being installed.
5. By hand, turn the nut clockwise until snug.
6. Using a wrench, tighten approximately three to four full turns to the minimum torque value for the anchor diameter being used. Make sure not to over torque

ANCHOR LENGTH

The minimum length of anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture plus space for the nut and washer.

ANCHOR SPACING

The ThunderStud® Wedge Anchor Hot-Dipped Galvanized is an expansion anchor, and the expansion of the anchor creates outward forces against the walls of the hole in the concrete. It is critical that the anchors are spaced far enough away from one another so that the forces do not overlap; the overlapping of these forces will decrease the holding values. The generally accepted guide lines in the anchoring industry is to require a minimum of ten (10) anchor diameter spacing between anchors and a minimum of five (5) anchor diameters away from any unsupported edge.

AMERICAN MADE - HOT-DIPPED GALVANIZED

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	TORQUE	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1-1/8"	5 - 10 ft./lbs.	1/4"	1170	1443
5/16"	1-1/8"	15 - 20 ft./lbs.	5/16"	1285	1585
3/8"	1-1/2"	25 - 30 ft./lbs.	3/8"	1631	4318
1/2"	2-1/4"	50 - 60 ft./lbs.	1/2"	3999	7419
5/8"	2-3/4"	75 - 90 ft./lbs.	5/8"	4999	8264
3/4"	3-1/4"	150 - 175 ft./lbs.	3/4"	6638	12504
7/8"	3-7/8"	200 - 250 ft./lbs.	7/8"	8392	18250
1"	4-1/2"	250 - 300 ft./lbs.	1"	9773	23617
1-1/4"	5-1/2"	400 - 450 ft./lbs.	1-1/4"	17550	32275

Ultimate Load Values in 2000 PSI Concrete
Values shown are average ultimate values and offered only as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ANCHOR MATERIAL COMPOSITION

PART OF ANCHOR	GALVANIZED
Body	AISI C 12L14
Clip	304 stainless Steel
Nut	Hot-Dipped Galvanized
Washer	Hot-Dipped Galvanized
Plating	Hot-Dipped Galvanized

ANCHOR PART INFORMATION

PART OF ANCHOR	INFORMATION
Body	Length measured as overall from end to end
Nut	Finished hex nut, hot-dipped galvanized, National Coarse Threads
Washer	SAE flat washer, low carbon, zinc plated

PRODUCT IDENTIFICATION

STAMP ON ANCHOR	FROM	LESS THAN
A	1 1/2"	2"
B	2"	2 1/2"
C	2 1/2"	3"
D	3"	3 1/2"
E	3 1/2"	4"
F	4"	4 1/2"
G	4 1/2"	5"
H	5"	5 1/2"
I	5 1/2"	6"
J	6"	6 1/2"
K	6 1/2"	7"
L	7"	7 1/2"
M	7 1/2"	8"
N	8"	8 1/2"
O	8 1/2"	9"
P	9"	9 1/2"
Q	9 1/2"	10"
R	10"	11"
S	11"	12"
T	12"	13"
U	13"	14"
V	14"	15"
W	15"	16"
X	16"	17"
Y	17"	18"
Z	18"	19"

304 STAINLESS STEEL - AMERICAN MADE

The ThunderStud® Wedge Anchor 304 Stainless Steel is made up of two pieces: anchor body and expansion clip. The anchor body is threaded for a portion of its length and is manufactured from 304 stainless steel. The threaded end has a bull nose to protect the threads from being damaged during installation. The expansion clip is one piece with tangs that are permanently attached to the anchor body and made from 304 stainless. The opposite end from the threads is the necked down where the expansion clip is attached. The necked down portion gradually tapers outward to equal the full diameter of the anchor body. Every box of ThunderStud® Wedge Anchor 304 Stainless Steel comes packaged with the correct number, type and size of nuts and washers.

APPROVALS

Meets or exceeds U.S. Government G.S.A. Specifications FF-S-325 Group 11, Type 4, Class 1

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode and a carbide bit meeting ANSI standards, drill a hole in the concrete the same diameter as the diameter of wedge anchor being installed. Drill the hole to a depth of 1/2" deeper than the wedge anchor will be embedded in the concrete.
2. Using a wire brush and vacuum, clean the hole of all debris and dust.
3. Thread a nut on the end of the anchor and insert the wedge anchor into the hole, anchor clip end first.
4. Using a hammer of sufficient weight, strike the end of the anchor flush and straight until a minimum of 3 to 4 threads are below the surface. Make sure that the anchor is embedded in the concrete equal to or past the minimum embedment for the anchor diameter being installed.
5. By hand, turn the nut clockwise until snug.
6. Using a wrench, tighten approximately three to four full turns to the minimum torque value for the anchor diameter being used. Make sure not to over torque

ANCHOR LENGTH

The minimum length of anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture plus space for the nut and washer.

ANCHOR SPACING

The ThunderStud® Wedge Anchor 304 Stainless Steel is an expansion anchor, and the expansion of the anchor creates outward forces against the walls of the hole in the concrete. It is critical that the anchors are spaced far enough away from one another so that the forces do not overlap; the overlapping of these forces will decrease the holding values. The generally accepted guide lines in the anchoring industry is to require a minimum of ten (10) anchor diameter spacing between anchors and a minimum of five (5) anchor diameters away from any unsupported edge.

AMERICAN MADE - 304 STAINLESS STEEL

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	TORQUE	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1-1/8"	5 - 10 ft./lbs.	1/4"	1170	1443
5/16"	1-1/8"	15 - 20 ft./lbs.	5/16"	1285	1585
3/8"	1-1/2"	25 - 30 ft./lbs.	3/8"	1631	4318
1/2"	2-1/4"	50 - 60 ft./lbs.	1/2"	3999	7419
5/8"	2-3/4"	75 - 90 ft./lbs.	5/8"	4999	8264
3/4"	3-1/4"	150 - 175 ft./lbs.	3/4"	6638	12504
7/8"	3-7/8"	200 - 250 ft./lbs.	7/8"	8392	18250
1"	4-1/2"	250 - 300 ft./lbs.	1"	9773	23617
1-1/4"	5-1/2"	400 - 450 ft./lbs.	1-1/4"	17550	32275

Ultimate Load Values in 2000 PSI Concrete
Values shown are average ultimate values and offered only as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ANCHOR MATERIAL COMPOSITION

PART OF ANCHOR	304 STAINLESS STEEL
Body	304
Clip	304
Nut	18-8
Washer	18-8
Plating	Type 4, Class 1 Passivated

ANCHOR PART INFORMATION

PART OF ANCHOR	INFORMATION
Body	Length measured as overall from end to end
Nut	Finished hex nut, 304 stainless steel, National Coarse Threads
Washer	SAE flat washer, 304 stainless steel

PRODUCT IDENTIFICATION

STAMP ON ANCHOR	FROM	LESS THAN
A	1 1/2"	2"
B	2"	2 1/2"
C	2 1/2"	3"
D	3"	3 1/2"
E	3 1/2"	4"
F	4"	4 1/2"
G	4 1/2"	5"
H	5"	5 1/2"
I	5 1/2"	6"
J	6"	6 1/2"
K	6 1/2"	7"
L	7"	7 1/2"
M	7 1/2"	8"
N	8"	8 1/2"
O	8 1/2"	9"
P	9"	9 1/2"
Q	9 1/2"	10"
R	10"	11"
S	11"	12"
T	12"	13"
U	13"	14"
V	14"	15"
W	15"	16"
X	16"	17"
Y	17"	18"
Z	18"	19"

316 STAINLESS STEEL - AMERICAN MADE

The ThunderStud® Wedge Anchor 316 Stainless Steel is made up of two pieces: anchor body and expansion clip. The anchor body is threaded for a portion of its length and is manufactured from 316 stainless steel. The threaded end has a bull nose to protect the threads from being damaged during installation. The expansion clip is one piece with tangs that are permanently attached to the anchor body and made from 316 stainless steel. The opposite end from the threads is the necked down where the expansion clip is attached. The necked down portion gradually tapers outward to equal the full diameter of the anchor body. Every box of ThunderStud® Wedge Anchor 316 Stainless Steel comes packaged with the correct number, type and size of nuts and washers.

APPROVALS

Meets or exceeds U.S. Government G.S.A. Specifications FF-S-325 Group 11, Type 4, Class 1

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode and a carbide bit meeting ANSI standards, drill a hole in the concrete the same diameter as the diameter of wedge anchor being installed. Drill the hole to a depth of 1/2" deeper than the wedge anchor will be embedded in the concrete.
2. Using a wire brush and vacuum, clean the hole of all debris and dust.
3. Thread a nut on the end of the anchor and insert the wedge anchor into the hole, anchor clip end first.
4. Using a hammer of sufficient weight, strike the end of the anchor flush and straight until a minimum of 3 to 4 threads are below the surface. Make sure that the anchor is embedded in the concrete equal to or past the minimum embedment for the anchor diameter being installed.
5. By hand, turn the nut clockwise until snug.
6. Using a wrench, tighten approximately three to four full turns to the minimum torque value for the anchor diameter being used. Make sure not to over torque

ANCHOR LENGTH

The minimum length of anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture plus space for the nut and washer.

ANCHOR SPACING

The ThunderStud® Wedge Anchor 316 Stainless Steel is an expansion anchor, and the expansion of the anchor creates outward forces against the walls of the hole in the concrete. It is critical that the anchors are spaced far enough away from one another so that the forces do not overlap; the overlapping of these forces will decrease the holding values. The generally accepted guide lines in the anchoring industry is to require a minimum of ten (10) anchor diameter spacing between anchors and a minimum of five (5) anchor diameters away from any unsupported edge.

AMERICAN MADE - 316 STAINLESS STEEL

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	TORQUE	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1-1/8"	5 - 10 ft./lbs.	1/4"	1170	1443
5/16"	1-1/8"	15 - 20 ft./lbs.	5/16"	1285	1585
3/8"	1-1/2"	25 - 30 ft./lbs.	3/8"	1631	4318
1/2"	2-1/4"	50 - 60 ft./lbs.	1/2"	3999	7419
5/8"	2-3/4"	75 - 90 ft./lbs.	5/8"	4999	8264
3/4"	3-1/4"	150 - 175 ft./lbs.	3/4"	6638	12504
7/8"	3-7/8"	200 - 250 ft./lbs.	7/8"	8392	18250
1"	4-1/2"	250 - 300 ft./lbs.	1"	9773	23617
1-1/4"	5-1/2"	400 - 450 ft./lbs.	1-1/4"	17550	32275

Ultimate Load Values in 2000 PSI Concrete
Values shown are average ultimate values and offered only as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ANCHOR MATERIAL COMPOSITION

PART OF ANCHOR	316 STAINLESS STEEL
Body	316
Clip	316
Nut	316
Washer	316
Plating	Type 4, Class 1 Passivated

ANCHOR PART INFORMATION

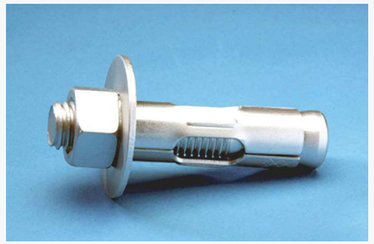
PART OF ANCHOR	INFORMATION
Body	Length measured as overall from end to end
Nut	Finished hex nut, 316 stainless steel, National Coarse Threads
Washer	SAE flat washer, 304 stainless steel

PRODUCT IDENTIFICATION

STAMP ON ANCHOR	FROM	LESS THAN
A	1 1/2"	2"
B	2"	2 1/2"
C	2 1/2"	3"
D	3"	3 1/2"
E	3 1/2"	4"
F	4"	4 1/2"
G	4 1/2"	5"
H	5"	5 1/2"
I	5 1/2"	6"
J	6"	6 1/2"
K	6 1/2"	7"
L	7"	7 1/2"
M	7 1/2"	8"
N	8"	8 1/2"
O	8 1/2"	9"
P	9"	9 1/2"
Q	9 1/2"	10"
R	10"	11"
S	11"	12"
T	12"	13"
U	13"	14"
V	14"	15"
W	15"	16"
X	16"	17"
Y	17"	18"
Z	18"	19"

ZINC PLATED

The CONFAST® Sleeve Anchor is constructed of high quality steel parts. Each part is made from carbon steel that is zinc plated and assembled into a complete ready-to-use anchor. The anchor consists of a threaded stud with an outwardly flared cone-shaped end. A tubular expander sleeve is assembled over the stud and butted against the small diameter of the cone. A washer and hex nut are then assembled on the stud to complete the anchor. The anchor works on a true expansion principle: tightening of the nut pulls the cone-shaped stud end into the expander sleeve, wedging it outward and locking the anchor into the base material.



INSTALLATION

1. Drill hole through mounting holes in fixture or directly through material to be fastened and into the base material, using a carbide bit conforming to ANSI B212.15-1994 with the same size bit as anchor diameter.
2. Clean hole with wire brush.
3. Make sure nut is flush with the top threaded part of anchor. Insert anchor assembly through mounting holes in fixture and into the base material. Push anchor assembly until washer is snug against the fixture.
4. Turn nut by hand until snugged up. Tighten the nut with a wrench (use a screwdriver for flat/round heads) approximately three or four full turns, or until anchor is tightly secured to the base material.

ANCHOR LENGTH

The minimum length of anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture. The CONFAST® Sleeve Anchor requires no maximum hole depth.

ANCHOR SPACING

The forces on a CONFAST® Sleeve Anchor are transferred to the material that it is installed in. If the anchors are installed too close together, it can cause an interaction of the forces, thus reducing the holding power of the anchor. As a rule of thumb, the expansion anchor industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from an unsupported edge.

ZINC PLATED

TECHNICAL INFORMATION

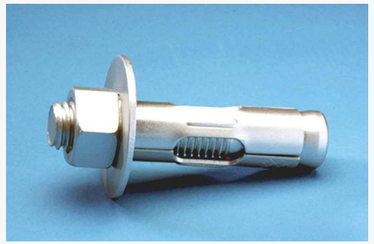
SIZE	MIN. EMBEDMENT	TORQUE	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1/2"	2 - 6 ft/lbs	1/4"	168	750
1/4"	1"	2 - 6 ft/lbs	1/4"	682	840
5/16"	1"	8 - 12 ft/lbs	5/16"	903	1770
3/8"	1-1/4"	15 - 18 ft/lbs	3/8"	1406	3082
1/2"	1-1/2"	18 - 26 ft/lbs	1/2"	1676	3645
5/8"	2"	30 - 40 ft/lbs	5/8"	3652	4218
3/4"	2-1/4"	60 - 90 ft/lbs	3/4"	3783	7059

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and offered as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

304 STAINLESS STEEL

The CONFAST® Sleeve Anchor is constructed of high quality stainless steel parts. Each part is made from 304 stainless steel and assembled into a completed, ready-to-use anchor. The anchor consists of a threaded stud with an outwardly flared cone-shaped end. A tubular expander sleeve is assembled over the stud and butted against the small diameter of the cone. A washer and hex nut are then assembled on the stud to complete the anchor. The anchor works on a true expansion principle: tightening of the nut pulls the cone-shaped stud end into the expander sleeve, wedging it outward and locking the anchor into the base material.



INSTALLATION

1. Drill hole through mounting holes in fixture or directly through material to be fastened and into the base material, using a carbide bit conforming to ANSI B212.15-1994 with the same size bit as anchor diameter.
2. Clean hole with wire brush.
3. Make sure nut is flush with the top threaded part of anchor. Insert anchor assembly through mounting holes in fixture and into the base material. Push anchor assembly until washer is snug against the fixture.
4. Turn nut by hand until snugged up. Tighten the nut with a wrench (use a screwdriver for flat/round heads) approximately three or four full turns, or until anchor is tightly secured to the base material.

ANCHOR LENGTH

The minimum length of anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture. The CONFAST® Sleeve Anchor requires no maximum hole depth.

ANCHOR SPACING

The forces on a CONFAST® Sleeve Anchor are transferred to the material that it is installed in. If the anchors are installed too close together, it can cause an interaction of the forces, thus reducing the holding power of the anchor. As a rule of thumb, the expansion anchor industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from an unsupported edge.

CONFAST®

SLEEVE ANCHOR

304 STAINLESS STEEL

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	TORQUE	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1/2"	2 - 6 ft/lbs	1/4"	168	750
1/4"	1"	2 - 6 ft/lbs	1/4"	682	840
5/16"	1"	8 - 12 ft/lbs	5/16"	903	1770
3/8"	1-1/4"	15 - 18 ft/lbs	3/8"	1406	3082
1/2"	1-1/2"	18 - 26 ft/lbs	1/2"	1676	3645
5/8"	2"	30 - 40 ft/lbs	5/8"	3652	4218
3/4"	2-1/4"	60 - 90 ft/lbs	3/4"	3783	7059

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and offered as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

www.concretefasteners.com 216-357-7431 1231 E. 26th Street, Cleveland, Ohio 44114 CONCRETE FASTENING SYSTEMS INC

ZINC PLATED

The CONFAST® Drop-In Anchors are internally threaded, and are made from carbon steel and zinc plated. The designated diameter of the drop-in anchor is the diameter of the internal threads and not the external diameter of the anchor body. The expander plug located internally at the expansion end of the anchor is cone shaped, case hardened and tempered to prevent any type of binding or galling during the expansion process. The expansion end of the drop-in anchor has four slots that run a portion of the length. The outside anchor body is smooth; the open end is internally threaded for about one half the anchor length, with national coarse threads. Drop-in anchors require the use of a proper setting tool to insure full expansion. The setting tool designated size is equal to the designated diameter of the drop-in anchor being installed.

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode, with a carbide tipped drill bit meeting ANSI standards (bit diameter equal to the outside diameter of the drop-in anchor being installed) drill hole in the concrete. Hole depth should equal anchor length to insure that the anchor sits flush with the surface of the concrete.
2. Clean out the hole of all dust and debris using a wire bush, vacuum or compressed air.
3. Insert drop-in anchor into the hole with the threaded or open end up towards the surface of the concrete.
4. Take the proper size setting tool and insert the necked down end into the drop-in anchors. Strike the end of the setting tool with a hammer until the anchor is set.
5. Move item to be fastened over anchor and thread bolt into CONFAST® Drop-In Anchor.

BOLT LENGTH

CONFAST® Drop-In Anchor are mainly used with threaded rod. If a bolt is to be used in conjunction with the drop-in anchor then the minimum length of the bolt is equal to the thickness of the material being fastened plus the thread length of the anchor diameter being installed.

ANCHOR SPACING

The expansion of the CONFAST® Drop-In Anchor creates forces that are transferred to the solid concrete that they are installed in. Spacing between anchors is critical; anchors installed too close to one another may cause an interaction of the transferred forces and reduce the holding values. The expansion anchor industry recommends that the anchor should be placed at a minimum distance from each other of ten (10) anchor diameters and a minimum of five (5) anchor diameters away from any unsupported edge of concrete.

ZINC PLATED

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)
1/4"	1"	5 ft/lbs	3/8"	704
3/8"	1-9/16"	10 ft/lbs	1/2"	1170
1/2"	2"	20 ft/lbs	5/8"	2328
5/8"	2-1/2"	30 ft/lbs	7/8"	2492
3/4"	3-3/16"	40 ft/lbs	1"	5008

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and offered as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

304 STAINLESS STEEL

The CONFAST® Drop-In Anchors are internally threaded, and are made from 304 stainless steel. The designated diameter of the drop-in anchor is the diameter of the internal threads and not the external diameter of the anchor body. The expander plug located internally at the expansion end of the anchor is cone shaped, case hardened and tempered to prevent any type of binding or galling during the expansion process. The expansion end of the drop-in anchor has four slots that run a portion of the length. The outside anchor body is smooth; the open end is internally threaded for about one half the anchor length, with national coarse threads. Drop-in anchors require the use of a proper setting tool to insure full expansion. The setting tool designated size is equal to the designated diameter of the drop-in anchor being installed.

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode, with a carbide tipped drill bit meeting ANSI standards (bit diameter equal to the outside diameter of the drop-in anchor being installed) drill hole in the concrete. Hole depth should equal anchor length to insure that the anchor sits flush with the surface of the concrete.
2. Clean out the hole of all dust and debris using a wire bush, vacuum or compressed air.
3. Insert drop-in anchor into the hole with the threaded or open end up towards the surface of the concrete.
4. Take the proper size setting tool and insert the necked down end into the drop-in anchors. Strike the end of the setting tool with a hammer until the anchor is set.
5. Move item to be fastened over anchor and thread bolt into CONFAST® Drop-In Anchor.

BOLT LENGTH

CONFAST® Drop-In Anchor are mainly used with threaded rod. If a bolt is to be used in conjunction with the drop-in anchor then the minimum length of the bolt is equal to the thickness of the material being fastened plus the thread length of the anchor diameter being installed.

ANCHOR SPACING

The expansion of the CONFAST® Drop-In Anchor creates forces that are transferred to the solid concrete that they are installed in. Spacing between anchors is critical; anchors installed too close to one another may cause an interaction of the transferred forces and reduce the holding values. The expansion anchor industry recommends that the anchor should be placed at a minimum distance from each other of ten (10) anchor diameters and a minimum of five (5) anchor diameters away from any unsupported edge of concrete.

304 STAINLESS STEEL

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)
1/4"	1"	5 ft/lbs	3/8"	704
3/8"	1-9/16"	10 ft/lbs	1/2"	1170
1/2"	2"	20 ft/lbs	5/8"	2328
5/8"	2-1/2"	30 ft/lbs	7/8"	2492
3/4"	3-3/16"	40 ft/lbs	1"	5008

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and offered as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

316 STAINLESS STEEL

The CONFAST® Drop-In Anchors are internally threaded, and are made from 316 stainless steel. The designated diameter of the drop-in anchor is the diameter of the internal threads and not the external diameter of the anchor body. The expander plug located internally at the expansion end of the anchor is cone shaped, case hardened and tempered to prevent any type of binding or galling during the expansion process. The expansion end of the drop-in anchor has four slots that run a portion of the length. The outside anchor body is smooth; the open end is internally threaded for about one half the anchor length, with national coarse threads. Drop-in anchors require the use of a proper setting tool to insure full expansion. The setting tool designated size is equal to the designated diameter of the drop-in anchor being installed.

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode, with a carbide tipped drill bit meeting ANSI standards (bit diameter equal to the outside diameter of the drop-in anchor being installed) drill hole in the concrete. Hole depth should equal anchor length to insure that the anchor sits flush with the surface of the concrete.
2. Clean out the hole of all dust and debris using a wire bush, vacuum or compressed air.
3. Insert drop-in anchor into the hole with the threaded or open end up towards the surface of the concrete.
4. Take the proper size setting tool and insert the necked down end into the drop-in anchors. Strike the end of the setting tool with a hammer until the anchor is set.
5. Move item to be fastened over anchor and thread bolt into CONFAST® Drop-In Anchor.

BOLT LENGTH

CONFAST® Drop-In Anchor are mainly used with threaded rod. If a bolt is to be used in conjunction with the drop-in anchor then the minimum length of the bolt is equal to the thickness of the material being fastened plus the thread length of the anchor diameter being installed.

ANCHOR SPACING

The expansion of the CONFAST® Drop-In Anchor creates forces that are transferred to the solid concrete that they are installed in. Spacing between anchors is critical; anchors installed too close to one another may cause an interaction of the transferred forces and reduce the holding values. The expansion anchor industry recommends that the anchor should be placed at a minimum distance from each other of ten (10) anchor diameters and a minimum of five (5) anchor diameters away from any unsupported edge of concrete.

316 STAINLESS STEEL

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)
1/4"	1"	5 ft/lbs	3/8"	704
3/8"	1-9/16"	10 ft/lbs	1/2"	1170
1/2"	2"	20 ft/lbs	5/8"	2328
5/8"	2-1/2"	30 ft/lbs	7/8"	2492
3/4"	3-3/16"	40 ft/lbs	1"	5008

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and offered as a guide, and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ZINC PLATED - AMERICAN MADE

The ThunderDrop® Drop-In Anchors are internally threaded, and are made from carbon steel and zinc plated. The designated diameter of the drop-in anchor is the diameter of the internal threads and not the external diameter of the anchor body. The expander plug located internally at the expansion end of the anchor is cone shaped, case hardened and tempered to prevent any type of binding or galling during the expansion process. The expansion end of the drop-in anchor has four slots that run a portion of the length. The outside anchor body is smooth; the open end is internally threaded for about one half the anchor length, with national coarse threads. ThunderDrop® Drop-in anchors require the use of a proper setting tool to insure full expansion. The setting tool designated size is equal to the designated diameter of the drop-in anchor being installed.

APPROVALS / APPLICATIONS

Meets or exceeds U.S. government G.S.A. Specification FF-S-325 Group VIII, type 1. Use in light to medium duty into solid concrete only: should never be used in brick or block base materials.

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode, with a carbide tipped drill bit meeting ANSI standards (bit diameter equal to the outside diameter of the drop-in anchor being installed) drill hole in the concrete. Hole depth should equal anchor length to insure that the anchor sits flush with the surface of the concrete.
2. Clean out the hole of all dust and debris using a wire bush, vacuum or compressed air.
3. Insert drop-in anchor into the hole with the threaded or open end up towards the surface of the concrete.
4. Take the proper size setting tool and insert the necked down end into the drop-in anchors. Strike the end of the setting tool with a hammer until the anchor is set.
5. Move item to be fastened over anchor and thread bolt into ThunderDrop® Drop-In Anchor.

BOLT LENGTH

ThunderDrop® Drop-In Anchor are mainly used with threaded rod. If a bolt is to be used in conjunction with the drop-in anchor then the minimum length of the bolt is equal to the thickness of the material being fastened plus the thread length of the anchor diameter being installed.

ANCHOR SPACING

The expansion of the ThunderDrop® Drop-In Anchor creates forces that are transferred to the solid concrete that they are installed in. Spacing between anchors is critical; anchors installed too close to one another may cause an interaction of the transferred forces and reduce the holding values. The expansion anchor industry recommends that the anchor should be placed at a minimum distance from each other of ten (10) anchor diameters and a minimum of five (5) anchor diameters away from any unsupported edge of concrete.

AMERICAN MADE - ZINC PLATED

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)
1/4"	1"	5 ft/lbs	3/8"	939
3/8"	1-9/16"	10 ft/lbs	1/2"	1560
1/2"	2"	20 ft/lbs	5/8"	3105
5/8"	2-1/2"	30 ft/lbs	7/8"	3323
3/4"	3-3/16"	40 ft/lbs	1"	6678

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio. Minimum embedment for satisfactory anchor performance is 4-1/2 bolt diameters. Deeper embedments will yield higher tension and shear capacity.

304 STAINLESS STEEL - AMERICAN MADE

The ThunderDrop® Drop-In Anchors are internally threaded, and are made from 304 stainless steel. The designated diameter of the drop-in anchor is the diameter of the internal threads and not the external diameter of the anchor body. The expander plug located internally at the expansion end of the anchor is cone shaped, case hardened and tempered to prevent any type of binding or galling during the expansion process. The expansion end of the drop-in anchor has four slots that run a portion of the length. The outside anchor body is smooth; the open end is internally threaded for about one half the anchor length, with national coarse threads. ThunderDrop® Drop-in anchors require the use of a proper setting tool to insure full expansion. The setting tool designated size is equal to the designated diameter of the drop-in anchor being installed.

APPROVALS / APPLICATIONS

Meets or exceeds U.S. government G.S.A. Specification FF-S-325 Group VIII, type 1. Use in light to medium duty into solid concrete only: should never be used in brick or block base materials.

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode, with a carbide tipped drill bit meeting ANSI standards (bit diameter equal to the outside diameter of the drop-in anchor being installed) drill hole in the concrete. Hole depth should equal anchor length to insure that the anchor sits flush with the surface of the concrete.
2. Clean out the hole of all dust and debris using a wire bush, vacuum or compressed air.
3. Insert drop-in anchor into the hole with the threaded or open end up towards the surface of the concrete.
4. Take the proper size setting tool and insert the necked down end into the drop-in anchors. Strike the end of the setting tool with a hammer until the anchor is set.
5. Move item to be fastened over anchor and thread bolt into ThunderDrop® Drop-In Anchor.

BOLT LENGTH

ThunderDrop® Drop-In Anchor are mainly used with threaded rod. If a bolt is to be used in conjunction with the drop-in anchor then the minimum length of the bolt is equal to the thickness of the material being fastened plus the thread length of the anchor diameter being installed.

ANCHOR SPACING

The expansion of the ThunderDrop® Drop-In Anchor creates forces that are transferred to the solid concrete that they are installed in. Spacing between anchors is critical; anchors installed too close to one another may cause an interaction of the transferred forces and reduce the holding values. The expansion anchor industry recommends that the anchor should be placed at a minimum distance from each other of ten (10) anchor diameters and a minimum of five (5) anchor diameters away from any unsupported edge of concrete.

AMERICAN MADE - 304 STAINLESS STEEL

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)
1/4"	1"	5 ft/lbs	3/8"	939
3/8"	1-9/16"	10 ft/lbs	1/2"	1560
1/2"	2"	20 ft/lbs	5/8"	3105
5/8"	2-1/2"	30 ft/lbs	7/8"	3323
3/4"	3-3/16"	40 ft/lbs	1"	6678

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio. Minimum embedment for satisfactory anchor performance is 4-1/2 bolt diameters. Deeper embedments will yield higher tension and shear capacity.

316 STAINLESS STEEL - AMERICAN MADE

The ThunderDrop® Drop-In Anchors are internally threaded, and are made from 316 stainless steel. The designated diameter of the drop-in anchor is the diameter of the internal threads and not the external diameter of the anchor body. The expander plug located internally at the expansion end of the anchor is cone shaped, case hardened and tempered to prevent any type of binding or galling during the expansion process. The expansion end of the drop-in anchor has four slots that run a portion of the length. The outside anchor body is smooth; the open end is internally threaded for about one half the anchor length, with national coarse threads. ThunderDrop® Drop-in anchors require the use of a proper setting tool to insure full expansion. The setting tool designated size is equal to the designated diameter of the drop-in anchor being installed.

APPROVALS / APPLICATIONS

Meets or exceeds U.S. government G.S.A. Specification FF-S-325 Group VIII, type 1. Use in light to medium duty into solid concrete only: should never be used in brick or block base materials.

INSTALLATION

1. Using a hammer drill set in the hammer and rotation mode, with a carbide tipped drill bit meeting ANSI standards (bit diameter equal to the outside diameter of the drop-in anchor being installed) drill hole in the concrete. Hole depth should equal anchor length to insure that the anchor sits flush with the surface of the concrete.
2. Clean out the hole of all dust and debris using a wire bush, vacuum or compressed air.
3. Insert drop-in anchor into the hole with the threaded or open end up towards the surface of the concrete.
4. Take the proper size setting tool and insert the necked down end into the drop-in anchors. Strike the end of the setting tool with a hammer until the anchor is set.
5. Move item to be fastened over anchor and thread bolt into ThunderDrop® Drop-In Anchor.

BOLT LENGTH

ThunderDrop® Drop-In Anchor are mainly used with threaded rod. If a bolt is to be used in conjunction with the drop-in anchor then the minimum length of the bolt is equal to the thickness of the material being fastened plus the thread length of the anchor diameter being installed.

ANCHOR SPACING

The expansion of the ThunderDrop® Drop-In Anchor creates forces that are transferred to the solid concrete that they are installed in. Spacing between anchors is critical; anchors installed too close to one another may cause an interaction of the transferred forces and reduce the holding values. The expansion anchor industry recommends that the anchor should be placed at a minimum distance from each other of ten (10) anchor diameters and a minimum of five (5) anchor diameters away from any unsupported edge of concrete.

AMERICAN MADE - 316 STAINLESS STEEL

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)
1/4"	1"	5 ft/lbs	3/8"	939
3/8"	1-9/16"	10 ft/lbs	1/2"	1560
1/2"	2"	20 ft/lbs	5/8"	3105
5/8"	2-1/2"	30 ft/lbs	7/8"	3323
3/4"	3-3/16"	40 ft/lbs	1"	6678

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio. Minimum embedment for satisfactory anchor performance is 4-1/2 bolt diameters. Deeper embedments will yield higher tension and shear capacity.

ZAMAC

The CONFAST® Machine Screw Anchor is made up of an antimonial lead alloy sleeve and a zinc alloy (Zamac 5) internally threaded cone with a series of integral ribs or lugs. The ribs prevent the cone shaped nut from turning in the sleeve. All size anchors are preassembled into a single self-contained unit. All units are made of 100% rust proof material.

INSTALLATION

1. Drill hole of recommended diameter (see chart below) into the base material to a depth equal to the length of the anchor. Place the CONFAST® Machine Screw Anchor, base end of the conical nut first, into the hole. The anchor should be flush or slightly deeper than the surface of the base material. A deeper hole should be used when making attachments to poor masonry or when additional holding power is needed.
2. Position the pilot end of the setting tool into the threaded bore of the anchor and press firmly against the lead alloy sleeve of the anchor. Using a hand hammer, strike the end of the setting tool with repeated sharp blows. Anchor is set when the sleeve cannot be further tamped or caulked down around the conical nut.
3. Position the object to be fastened over the anchor and bolt into place.

BOLT LENGTH

Thickness of material to be fastened plus anchor length equals bolt length required.

ANCHOR SPACING

The forces on a CONFAST® Machine Screw Anchor are transferred to the base material that it is installed in. If the anchors are installed too close together, it can cause an interaction of the forces, thus reducing the holding power of the anchor. As a rule of thumb, the expansion industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from the edge.

CONFAST®

MACHINE SCREW ANCHOR

ZAMAC

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)
#8	1/2"	15 ft/lbs	5/16"	251
#10	5/8"	20 ft/lbs	3/8"	573
1/4"	7/8"	60 ft/lbs	1/2"	879
5/16"	1"	7 ft/lbs	5/8"	1177
3/8"	1-1/4"	10 ft/lbs	3/4"	1488
1/2"	1-1/2"	15 ft/lbs	7/8"	2096
5/8"	1-3/4"	18 ft/lbs	1-1/8"	2132
3/4"	2-1/4"	20 ft/lbs	1-1/4"	2310

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

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ZAMAC

The cavity of the CONFAST® Leadwood Screw Anchor tapers and is designed to facilitate proper expansion in masonry. The anchor is split from the bottom up for most of its length and has longitudinal ribs for a portion of its length. The top end of the anchor tapers outward from the anchor diameter into a tubular thin section cone. The tapered diameter at the outer end of the anchor, in combination with the longitudinal split, facilitates ease of initial expansion and prevents the anchor from turning in the masonry. As the screw progresses deeper into the anchor, the longitudinal ribs bite into the masonry, preventing the anchor from twisting and allowing the screw to form its own threads.

INSTALLATION

1. Drill hole into the base material (see chart below for recommended hole size) to a depth equal to the anchor length, plus one-quarter inch (1/4") or more.
2. Clean out hole of all dust and cuttings.
3. Place anchor into hole and with light hammer blows, tap anchor flush with surface of base material.
4. Insert screw through fixture into anchor and tighten.

SCREW LENGTH

Thickness of material to be fastened plus anchor length equals length of screw required.

ANCHOR SPACING

The forces on a CONFAST® Leadwood Screw Anchor are transferred to the material that it is installed in. If the anchors are installed too close together, it can cause an interaction of the forces, thus reducing the holding power of the anchor. As a rule of thumb, the expansion industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from an unsupported edge.

ZAMAC

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	DRILL BIT	SCREW SIZE	PULL-OUT (LBS)
6-8 x 3/4"	3/4"	1/4"	1/8" - 3/16"	137
6-8 x 1"	1"	1/4"	1/8" - 3/16"	137
6-8 x 1-1/2"	1-1/2"	1/4"	1/8" - 3/16"	137
10-14 x 3/4"	3/4"	5/16"	3/16" - 1/4"	232
10-14 x 1"	1"	5/16"	3/16" - 1/4"	232
10-14 x 1-1/2"	1-1/2"	5/16"	3/16" - 1/4"	232
16-18 x 1"	1"	3/8"	5/16"	311
16-18 x 1-1/2"	1-1/2"	3/8"	5/16"	311

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ZAMAC

The CONFAST® Single Expansion Anchor consists of a nut, a cone and a tubular shield preassembled as a single unit. The two piece tubular shield is bound together with one spring band. It contains a wedge shaped nut at one end. Integral lugs on the nut and cone keep the wedges from turning in the tubular shield during expansion. The anchor is manufactured of precision die-cast zinc alloy commonly known as Zamac 5. The expansion action at one end of the anchor distributes the anchored load throughout the length of the anchor. This expansion anchor is recommended for shear loads or where the bolt is subjected to side pressure or vibration. Once fastened, the object may be unbolted, removed, and/or refastened.

INSTALLATION

1. Drill hole of recommended diameter, see chart below, into the base material to a depth equal to, or slightly deeper than the length of the expansion shield.
2. Clean out the hole of all dust and cuttings.
3. Place the Single Expansion anchor, nut end first, into the hole. The top end of the anchor should be flush or slightly below the base material surface.
4. Place the object to be fastened over the anchor in the base material and bolt into place. The bolt should engage 2/3 of the threads of the anchor.

SCREW LENGTH

Thickness of material to be fastened plus length of anchor equals bolt length required.

ANCHOR SPACING

The forces on a CONFAST® Single Expansion Anchor are transferred to the material that it is installed in. If the anchors are installed too close together, it can cause an interaction of the forces, thus reducing the holding power of the anchor. As a rule of thumb, the expansion industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from an unsupported edge.

ZAMAC

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)
1/4"	1-3/8"	5 ft/lbs	1/2"	132
5/16"	1-1/2"	7 ft/lbs	5/8"	622
3/8"	2"	10 ft/lbs	3/4"	870
1/2"	2-1/2"	20 ft/lbs	7/8"	1121
5/8"	2-5/8"	30 ft/lbs	1"	1672
3/4"	3-15/16"	40 ft/lbs	1-1/4"	1882

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ZAMAC

The CONFAST® Double Expansion Anchor consists of a nut, a cone and a tubular shield preassembled as a single unit. The two-piece tubular shield is bound together with two spring bands. It contains a wedge shaped nut at one end and a wedge shaped hollow cone at the other end. Integral lugs on the nut and cone keep the wedges from turning in the tubular shield during expansion. The anchors are of precision die-cast zinc alloy commonly known as Zamac 5. The expansion action at both ends of the shield distributes the anchored load throughout the length of the shield. This expansion anchor is recommended for shear loads or where the bolt is subjected to side pressure or vibration. Once fastened, the object may be unbolted, removed, and/or fastened.

INSTALLATION

1. Drill hole of recommended diameter, see chart below, into the base material to a depth equal to, or slightly deeper than the length of the expansion anchor.
2. Clean out the hole of all dust and cuttings.
3. Place the CONFAST® Double Expansion Anchor, nut end first, into the hole. The top end of the anchor should be flush or slightly below the base material surface.
4. Place the object to be fastened over the anchor in the base material and bolt into place.

BOLT LENGTH

Thickness of material to be fastened plus length of anchor equals bolt length required.

ANCHOR SPACING

The forces on a CONFAST® Double Expansion Anchor are transferred to the material that it is installed in. If the anchors are installed too close together, it can cause an interaction of the forces, thus reducing the holding power of the anchor. As a rule of thumb, the expansion industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from an unsupported edge.

CONFAST® DOUBLE EXPANSION ANCHOR

ZAMAC

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)
1/4"	1-3/8"	5 ft/lbs	1/2"	532
5/16"	1-1/2"	7 ft/lbs	5/8"	847
3/8"	2"	10 ft/lbs	3/4"	1023
1/2"	2-1/2"	20 ft/lbs	7/8"	1942
5/8"	2-5/8"	30 ft/lbs	1"	3217
3/4"	3-15/16"	40 ft/lbs	1-1/4"	4487

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

410 STAINLESS STEEL

The 410 Stainless Steel CONFAST® brand concrete screw cuts threads in a predrilled hole in concrete, brick or block. The screw has alternating raised and lowered threads with diamond cut notches that provide exceptional holding power and stability. The 410 Stainless Steel CONFAST® brand concrete screw is available in either 3/16" or 1/4" diameters with either a flat phillips #2 or #3 countersunk or a 1/4" or 5/16" hex washer head. All screws are plated which provides extended life and additional lubricity for ease of installation.

APPLICATIONS

Use for light to medium duty into concrete, block and brick.

INSTALLATION

1. Drill hole into base material using the drill bit provided with the screws. The depth of the hole must be at least 1/4" deeper than the CONFAST® embedment.
2. Place object to be fastened over hole.
3. Insert point of CONFAST® into hole and drive screw in using a nut drive or bit tip. Do not over torque the screw.

SCREW LENGTH

The length of the CONFAST® screw to be used is determined by combining the thickness of the material to be attached with the desired depth of embedment in the base material.

SCREW SPACING

As a rule of thumb, the expansion industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from an unsupported edge. Where vibration or sudden impact is part of the load condition, anchor spacing should be increased.

CONFAST®

CONCRETE SCREW

410 STAINLESS STEEL

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
3/16"	1"	5/32"	450	540
1/4"	1"	3/16"	562	675

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working.

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
3/16"	1"	5/32"	165	300
1/4"	1"	3/16"	187	465

Ultimate Load Values in Light Weight Block

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working.

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
3/16"	1"	5/32"	255	547
1/4"	1"	3/16"	375	750

Ultimate Load Values in Medium Weight Block

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working.

ZAMAC

This two-part expansion CONFAST® Lag Shield anchor is preassembled into a self-contained single unit. The shell-like unit has tapered internal threads for a portion of its length. The outside of the anchor has a series of circumferential ribs starting at the bottom and running for a major portion of its length. The back end of the anchor has two equally spaced ribs that protrude beyond its diameter and run for a portion of its length. Precision internal threads permit easy turning of the lag screw without lubrication. Once fastened, an object may be easily unbolted and removed. All parts of the completed unit are made of zinc alloy commonly known as Zamac 5, a rust- roof material. The anchor comes in two lengths: short or long. The short lag shield is for anchoring in high grade concrete or where thickness of base material prohibits the use of a longer length shield. The long Lag shield is for use in lower grade base material or where extra anchoring strength is required.

INSTALLATION

1. Drill hole of recommended diameter, into the base material equal to the length of the expansion anchor plus one half inch (1/2") or more.
2. Clean out the hole of all dust and cuttings.
3. Place the expansion anchor, ribbed end first, into hole. Tap with a hammer until flush with the surface of base material.
4. Position the material to be fastened over the shield in the base material and screw in the lag screw.
5. If the lag screw begins to torque-up or tighten before the head of the lag screw mates up against the object being fastened, the shield should be driven deeper into the hole by hand hammering the head of the lag screw until flush to the object being fastened. Retighten the lag screw to complete the expansion of the shield and to secure the material being fastened.

SCREW LENGTH

Thickness of material to be fastened plus CONFAST® Lag Shield anchor length equals lag screw length required.

ANCHOR SPACING

The forces on the CONFAST® Lag Shield anchor are transferred to the material that it is installed in. If the anchors are installed too close together, it can cause an interaction of the forces, thus reducing the holding power of the anchor. As a rule of thumb, the expansion industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from an unsupported edge.

CONFAST®

LAG SHIELD ANCHOR

ZAMAC

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)
1/4" Short	1"	5 ft/lbs	1/2"	150
5/16" Short	1-1/4"	7 ft/lbs	1/2"	236
3/8" Short	1-3/4"	10 ft/lbs	5/8"	442
1/2" Short	2"	20 ft/lbs	3/4"	600
5/8" Short	2"	30 ft/lbs	7/8"	641
3/4" Short	2"	40 ft/lbs	1"	697
1/4" Long	1-1/2"	5 ft/lbs	1/2"	225
5/16" Long	1-3/4"	7 ft/lbs	1/2"	281
3/8" Long	2-1/2"	10 ft/lbs	5/8"	555
1/2" Long	3"	20 ft/lbs	3/4"	1095
5/8" Long	3-1/2"	30 ft/lbs	7/8"	1297

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

BLUE

The CONFAST® brand concrete screw cuts threads in a predrilled hole in concrete, brick or block. The screw has alternating raised and lowered threads with diamond cut notches that provide exceptional holding power and stability. The CONFAST® brand concrete screw is available in either 3/16" or 1/4" diameters with either a flat phillips #2 or #3 countersunk or a 1/4" or 5/16" hex washer head. All screws are plated, which provides extended life and additional lubricity for ease of installation.

APPLICATIONS

Use for light to medium duty into concrete, block and brick.

INSTALLATION

1. Drill hole into base material using the drill bit provided with the screws. The depth of the hole must be at least 1/4" deeper than the CONFAST® embedment.
2. Place object to be fastened over hole.
3. Insert point of CONFAST® into hole and drive screw in using a nut drive or bit tip. Do not over torque the screw.

SCREW LENGTH

The length of the CONFAST® screw to be used is determined by combining the thickness of the material to be attached with the desired depth of embedment in the base material.

SCREW SPACING

As a rule of thumb, the expansion industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from an unsupported edge. Where vibration or sudden impact is part of the load condition, anchor spacing should be increased.

BLUE

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
3/16"	1"	5/32"	450	540
1/4"	1"	3/16"	562	675

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working.

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
3/16"	1"	5/32"	165	300
1/4"	1"	3/16"	187	465

Ultimate Load Values in Light Weight Block

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working.

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
3/16"	1"	5/32"	255	547
1/4"	1"	3/16"	375	750

Ultimate Load Values in Medium Weight Block

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working.

ZAMAC

The CONFAST® Hammer Drive Anchor is a precision die-cast, light-duty concrete anchor combining unusual toughness and remarkable strength. The CONFAST® Hammer Drive anchor consists of a cylindrical zinc alloy body and a zinc plated steel pin expander. The shank, from the bottom up, is split a major portion of its length. The anchor body has a bore that runs through the head thickness and into the shank for a depth just beyond the point where the slot terminates in the body. The steel pin expander is made of high carbon steel, properly heat-treated and heavily zinc plated for maximum corrosion resistance.

INSTALLATION

1. Drill hole in base material equal to diameter of anchor being used. Hole depth should be at least 1/4” deeper than the anchor embedment.
2. Clean out hole of all dust and shavings.
3. Insert Hammer Drive Anchor, slit end first through material to be fastened and into hole. The bottom of the head must be sitting flush with the fixture plate.
4. Hammer nail flush into head of anchor body. The CONFAST® Hammer Drive Anchor is now set.

ANCHOR LENGTH

Thickness of material to be fastened plus minimum embedment for the diameter of the anchor being installed.

ANCHOR SPACING

The forces on a CONFAST® Hammer Drive Anchor are transferred to the material that it is installed. If the anchors are installed too close together, it can cause an interaction of the forces, thus reducing the holding power of the anchor. As a rule of thumb, the expansion industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from an unsupported edge.

ZAMAC

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
3/16" x 7/8"	3/4"	3/16"	214	311
1/4" x 3/4"	3/4"	3/16"	307	330
1/4" x 1"	5/8"	1/4"	405	450
1/4" x 1-1/4"	3/4"	1/4"	405	450
1/4" x 1-1/2"	3/4"	1/4"	405	450
1/4" x 2"	3/4"	1/4"	405	450
1/4" x 2-1/2"	3/4"	1/4"	405	450
1/4" x 3"	3/4"	1/4"	405	450

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ZINC

CONFAST® Split Drive anchors are a one-piece, all steel concrete anchor. Split drive anchors are manufactured with throughly hardened, heat-treated carbon steel. The anchor has two sheared, pre-expanded halves at the base. When driven into the concrete hole, these halves are compressed. Once an anchor is set, the two halves will continually try to regain their original shape. This exerts tremendous force upon the inside walls of the hole, resulting in low “slip” rates and increased vibration resistance. The positive expansion compensates for poor grade or old concrete. CONFAST® Split Drive Anchor are manufactured with either a flat counter sunk head or a round head.

INSTALLATION

1. Drill hole in concrete with carbide tipped bit meeting ANSI standards. Hole should be drilled minimum embedment or deeper, plus 1/4"
2. Clean dust out of hole.
3. Insert anchor through fixture and into hole.
4. Hammer anchor into hole flush with the top of fixture.

ANCHOR LENGTH

Minimum anchor length is equal to the thickness of material to be fastened plus minimum embedment of 1-1/8".

ANCHOR SPACING

The forces on a CONFAST® Split Drive Anchor are transferred to the material that it is installed. If the anchors are installed too close together, it can cause an interaction of the forces, thus reducing the holding power of the anchor. As a rule of thumb, the expansion industry has established a minimum standard of ten (10) anchor diameters for spacing between anchors and five (5) anchor diameters from an unsupported edge.

ZINC

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4" x 1-1/4"	1-1/8"	1/4"	990	1248
1/4" x 1-1/2"	1-1/8"	1/4"	990	1248
1/4" x 2"	1-1/8"	1/4"	990	1248
1/4" x 2-1/2"	1-1/8"	1/4"	990	1248
1/4" x 3"	1-1/8"	1/4"	990	1248
1/4" x 3-1/2"	1-1/8"	1/4"	990	1248
1/4" x 4"	1-1/8"	1/4"	990	1248

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

ZINC

The CONFAST® Strike Anchor is an impact-expansion type concrete anchor. The body of the anchor is carbon steel with an interior hole extending the length of the anchor. The hardened drive pin comes inserted in the interior hole of the anchor. The anchor is threaded on the top end where the drive pin is inserted. The other end of the anchor has four equally spaced slots for a portion of its length, with ribs extending the circumference of the anchor for a portion of its length. The entire anchor is yellow dichromate over zinc plating.

APPLICATIONS

Used for light heavy in concrete.

INSTALLATION

1. Drill hole of sufficient depth using carbide bit the same diameter as the anchor being installed.
2. Place washer and nut on anchor, turning nut on to anchor as required. It may be flush with top, or turned on fully to provide stud finish.
3. With nut, washer, and set-pin in place, insert anchor through the material to be fastened and in to the concrete base material.
4. Using a proper sized hammer, set pin with several sharp and square strikes on head of pin until pin is flush with top of anchor. Anchor is now set.
5. No need to torque nut to set anchor.

ANCHOR LENGTH

The minimum length of CONFAST® Strike Anchor to use for any application is determined by adding the minimum embedment for the diameter of anchor being used to the thickness of the fixture plus space for the nut and washer.

ANCHOR SPACING

The CONFAST® Strike Anchor is an expansion anchor, and the expansion of the anchor creates outward forces against the walls of the hole in the concrete. It is critical that the anchors are spaced far enough away from one another so that the forces do not overlap; the overlapping of these forces will decrease the holding values. The generally accepted guide lines in the anchoring industry is to require a minimum of ten (10) anchor diameter spacing between anchors and a minimum of five (5) anchor diameters away from any unsupported edge.

STRIKE ANCHOR

ZINC

TECHNICAL INFORMATION

SIZE	MIN. EMBEDMENT	MAX. TORQUE	DRILL BIT	PULL-OUT (LBS)	SHEAR (LBS)
1/4"	1"	5 ft/lbs	1/4"	675	1200
5/16"	1-1/4"	7 ft/lbs	5/16"	1050	2250
3/8"	1-1/2"	10 ft/lbs	3/8"	1650	2550
1/2"	2"	20 ft/lbs	1/2"	2700	5400
5/8"	2-1/2"	30 ft/lbs	5/8"	4050	4950
3/4"	3"	40 ft/lbs	3/4"	5625	10125

Ultimate Load Values in 2000 PSI Concrete

Values shown are average ultimate values and are offered only as a guide and are not guaranteed. A safety factor of 4:1 or 25% is generally accepted as a safe working load. Reference should be made to applicable codes for the specific working ratio.

www.concretefasteners.com 216-357-7431 1231 E. 26th Street, Cleveland, Ohio 44114 CONCRETE FASTENING SYSTEMS INC

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PAYMENT

Terms are credit card or if approved net 30 days from date of invoice. The customer shall pay all taxes, assessments or any other charges imposed by any Governmental authority. A 1-1/2% interest charge per month (18% per year on all balances 30 days from date of invoice) will be assessed.

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Material may only be returned after obtaining a Return Authorization Number. Product returns must be made within 30 days of the date of shipment, and will be accepted only after the material has been verified undamaged and in resalable condition. There are no returns on special order or custom merchandise. A minimum 20% Handling Charge will be imposed on all materials returned. Credit Memos will be issued for all material returns and will be applied against future purchases.

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All shipments or deliveries will be F.O.B. Cleveland. Any and all claims for shortages, defective, or improper materials must be made in writing within ten days of receipt of shipment, so that they can be investigated promptly: otherwise any and all such claims are to be deemed waived and released. Minimum order is box quantities.

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