# **RED HEAD** ADHESIVE ANCHORS

# **EXAMPLE**<br/> **EXAMPLE**<br/

VERSATILE ADHESIVE ANCHORS FOR CONCRETE AND MASONRY APPLICATIONS

# SIMPLE CERTAINTY

# IN THE SELECTION AND INSTALLATION OF ADHESIVE ANCHORS

# ANCHOR SPECIFICATION, SIMPLIFIED.

Red Head reduces complexity by covering all your anchoring needs with fewer products. Backed by ICC-ES evaluation reports, this versatile offering simplifies specification work and provides added assurance that chemical anchors will perform to design expectations.

# ANCHOR INSTALLATION, CERTAINTY.

Selecting the wrong adhesive for the job is a key concern and common cause of anchor failure on the job site. The simplicity and versatility of Red Head's adhesive line minimizes the risk of picking the wrong adhesive for the anchoring application and job site conditions at hand.



# **RED HEAD ADHESIVE ANCHORING SYSTEMS ARE DESIGNED FOR:**

### RELIABLE PERFORMANCE

Red Head adhesives were formulated to go above-and-beyond industry standards. The performance of all of our adhesives is backed by ICC-ES evaluation reports and 55+ state DOT listings.

### BROAD APPLICATION COVERAGE

Whether its light-duty or heavy-duty, concrete or masonry, deep embedment holes or core-drilled holes, wet conditions or extreme temperatures, Red Head has an adhesive anchor solution.

### JOBSITE PRODUCTIVITY

Red Head knows that time = money, and our adhesives are here to help save some of both. No need to reschedule labor when the rain arrives, keep installing Red Head adhesives! The versatility of the Red Head product line means fewer products to train a crew on and fewer products to purchase and stock.





THE MOST VERSATILE QUICK-CURE

FOR THE MOST DEMANDING JOBS

**G5**+ EVERYDAY EPOXY

# SIMPLIFIED CHOICES MINIMIZE THE RISK OF INSTALLATION ERROR

Red Head products are engineered to provide the most versatility when it comes to providing superior bond strength across many material types and installation conditions, while meeting a wide array of code requirements.

	ністі	DEWALT	SIMPSON Strong Tie
<b>A7</b> +	HY 200-A HY 200-R HY 100 HY 70 HIT-ICE HY-10 PLUS	AC200+™ AC100+ GOLD <sup>®</sup> AC50™	AT-XP° AT
<b>C6</b> +	RE 500 V3	Pure110+*	SET-XP*
<b>G5</b> +	RE 100 HTE 50	Pure50+™ PE1000+° PURE GP	SET" ET-HP" EDOT







# THE MOST VERSATILE QUICK-CURE

# MORE TYPES

### OF CONCRETE AND MASONRY



Saturated Concrete



Water-Filled and Submerged Holes



Install from 14° to 110°F



Seismic Zones A-F

### WIDER RANGE

### **OF ENVIRONMENTAL CONDITIONS**

Normal, Lightweight, and High-Strength Concrete



Cracked and Uncracked



Brick, Stone, and Structural Clay Tile

### BROADER VARIETY OF ANCHORING APPLICATIONS

Rebar Dowelling	Concrete Block Reinforcement
Structural Steel Framing	Seismic Retrofitting
Railings and Architectural Metal	Traffic Barriers and Guardrails
Brick Pinning	Machinery

### Anchoring

# **HOW VERSATILITY BENEFITS YOU**

### INSTALL WITH CERTAINTY

Less risk of anchor failure from installers choosing the wrong adhesive for the substrate or application.

Less risk of anchor failure and rework from chemical anchors being installed in improper environmental conditions.

### **BOOST** PRODUCTIVITY

Eliminate delays and schedule disruptions caused by adverse weather conditions.

Speed up installation work since no time is required for drying holes in wet conditions.

### SIMPLIFY THE JOBSITE

Fewer products to manage in inventory and on the job site.

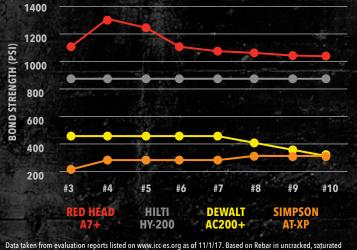
Using one versatile product minimizes timeconsuming training and oversight.

# ONE QUICK-CURE PRODUCT NOW DOES THE WORK OF MULTIPLE PRODUCTS

Red Head A7+ replaces the need for separate adhesive anchors for light, medium, and heavy-duty anchoring applications.

	HILTI	DEWALT	SIMPSON Strong Tie
	HY200A (Accelerated)		
<b>A7</b> +	HY200R (Regular)	AC200+	AT-XP
	HY100	AC100+	
	HY70 (Masonry)	Gold	
	HIT ICE (Cold Weather)	AC50	AT
	HY-10 Plus	Silver	

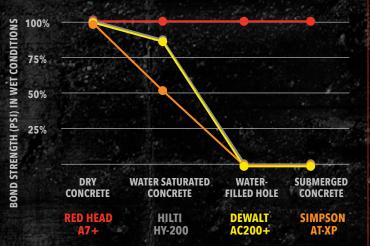
### A7+ DELIVERS SUPERIOR BOND STRENGTH IN SATURATED CONCRETE...



concrete with periodic inspection.

of 11/1/17. Based on Rebar in Uncracked, sa

# ...AND MAINTAINS ITS STRENGTH EVEN IN WATER-FILLED AND SUBMERGED HOLES



Data taken from evaluation reports listed on www.icc-es.org as of 11/1/17. Based on #6 rebar for uncracked concrete with periodic inspection. The bond strength for each product in wet conditions is represented above as a percentage of the performance of the same product in dry conditions.

# RIGOROUSLY TESTED. WIDELY APPROVED

### COMMON TECHNICAL SPECIFICATIONS

VISIT WWW.ITW-REDHEAD.COM FOR MORE INFORMATION

VARIABLE	SPEC
PRODUCT DESCRIPTION	High-strength, quick-cure structural concrete and masonry adhesive anchoring system
ADHESIVE TYPE	2-part injectable hybrid epoxy (10:1 ratio)
CARTRIDGE TYPES & SIZES	Durable and resealable cartridges available in 3 sizes: - 9.5oz coaxial cartridge (standard caulking tube) - 28oz. dual cartridge - 5oz coaxial cartridge
APPROVALS	<ul> <li>ICC-ES ESR 3903 (Concrete Report)</li> <li>ICC-ES ESR 3951 (Masonry Report)</li> <li>2015, 2012, 2009, 2006 International Building Code (IBC) Compliant</li> <li>Florida Building Code (FBC)</li> <li>City of Los Angeles (COLA)</li> <li>Extensive Department of Transportation (DOT) Listing</li> <li>NSF/ANSI 61 Approval for use in drinking water system components</li> <li>ASTM C881, Types I, II, IV, and V, Grade 3, Classes A, B &amp; C (meets Type III except elongation)</li> </ul>
ANCHOR SIZES AND TYPES	- Threaded Rod: ¼" – 1·1/2" - Rebar: #3·#11
WATER RESISTANCE	100% hydrophobic, suitable for use in saturated concrete and water-filled or submerged holes
APPLICATION TEMPERATURES	14° through 110°F (-10° through 43°C)
IN-SERVICE TEMPERATURES	-41° through 176°F (-41° through 80°C)
STORAGE LIFE & TEMPERATURE	18 months from date of manufacture when stored in 32° through 95°F (0° through 35°C)
COUNTRY OF ORIGIN	Made in France (28oz & 5oz kits packaged in the US)

# **GEL & CURE TIMES FOR A7+**

BAS	E MATERIAL	CURE TIME	GELTIME	BASE MATERIAL
	$\bigcirc$			$\frown$
	110	45 min	1.5 min	43
	90	45 min	2.5 min	32
a la	70	45 min	5 min	21
Citra.	-50	90 min	16 min	10
. Carbon Pr	32	4 hrs	35 min	0
N.C.	14	24 hrs	35 min	-10
(	•	S. S.		
			A transmitter	







# FOR THE MOST DEMANDING JOBS

### ENGINEERED FOR HARSH ENVIRONMENTS



- The Strongest Adhesive in Red Head History
- At Least 10 Minutes of Gel Time, Even in 110°F



Cures in Just 2 Hours at 110°F, in 2.75 Hours at 90°F

### TESTED TO THE EXTREME

Cracked Concrete and Seismic Zones A-F



Core-Drilled Holes, no Roughening Tool Required

Post-Installed Structural Rebar Dowelling FOR THE MOST DEMANDING APPLICATIONS

Seismic Retrofitting Core-Drilled Holes Structural Rebar

Dowelling

Structural Anchoring Oversized

Holes Overhead, Sustained Loads

# **HOW PERFORMANCE BENEFITS YOU**

### **PERFECT SOLUTION** FOR IMPERFECT CONDITIONS

Whether a user needs to core out a misplaced anchor, accidentally drilled an oversized hole, or picked a rainy day to start your job, Red Head C6+ has the has the performance needed to help conquer job site obstacles.

### SAME-SHIFT PRODUCTIVITY

With a 6.5 hour cure at 70°F, and just a 2 hour cure at 110°F, there is no need to wait until the next day to apply the load to the anchors.

There is no need for roughening when using C6+ in core-drilled holes, saving time and effort.

### **SUPPORTING** THE U.S. ECONOMY

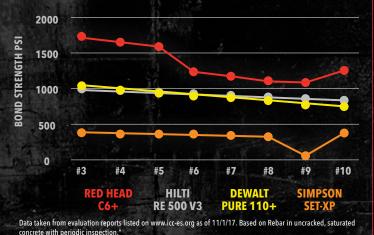
Formulated, blended, and packaged in the US, by an American company.

Fully complies with the Buy American Act, and the Federal American Recovery & Reinvestment Act.

Domestic manufacturing and local distribution ensures quick availability.

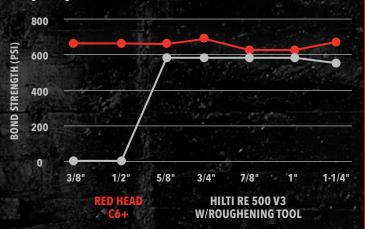
### MAXIMUM BOND STRENGTH, EVEN IN WET CONDITIONS

The high strength of Red Head C6+ helps insure anchor reliability.



### PERFORMS BETTER IN CORE DRILLED HOLES, EVEN IN CRACKED CONCRETE

Need proof that Red Head C6+ works in even the most demanding jobs? Red Head C6+ is the first adhesive to be approved by ICC-ES for use in core-drilled holes in cracked concrete without the need for a roughening tool.



Data taken from evaluation reports listed on www.icc-es.org as of 11/1/17. Based on threaded rod in a coredrilled hole in cracked, saturated concrete, with periodic inspection.

# THE MOST APPROVALS OF ANY ADHESIVE IN RED HEAD'S HISTORY

### COMMON TECHNICAL SPECIFICATIONS

VISIT WWW.ITW-REDHEAD.COM FOR MORE INFORMATION

VARIABLE	SPEC
PRODUCT DESCRIPTION	High-strength structural concrete and masonry adhesive anchoring system
ADHESIVE TYPE	2-part injectable epoxy (2:1 ratio)
CARTRIDGE TYPES & SIZES	Durable and resealable cartridges available in 2 sizes:
	- 15.2oz. dual cartridge
	- 30.4oz. dual cartridge
APPROVALS	- ICC-ES ESR 4046 (Concrete Report)
	- ICC-ES ESR 4109 (Masonry Report)
R. C. Standard	- 2015, 2012, 2009, 2006 International Building Code (IBC) Compliant
	- Florida Building Code (FBC)
	- City of Los Angeles (COLA)
	- Extensive Department of Transportation (DOT) Listings
	- NSF/ANSI 61 Approval for use in drinking water system components
C. C	- ASTM C881, Types I, II, IV, and V, Grade 3, Classes B & C
ANCHOR SIZES AND TYPES	- Threaded Rod: 3/8" - 1-1/2"
	- Rebar: #3-#11
WATER RESISTANCE	Suitable for use in saturated concrete and water- filled or submerged holes
APPLICATION TEMPERATURES	40° through 110°F (4° through 43°C)
IN-SERVICE TEMPERATURES	-41° through 176°F (-41° through 80°C)
STORAGE LIFE & TEMPERATURE	24 months from date of manufacture when stored in 50° through 95°F (10° through 35°C)
COUNTRY OF ORIGIN	Made in USA with U.S. and global materials
and the second se	The second s

# GEL & CURE TIMES FOR C6+

BASE	MATERIAL	CURE TIME	GELTIME	BASE MATERIAI
	110	2 hrs	10 min	43
	90	2.75 hrs	14 min	32
	70	6.5 hrs	16 min	21
	50	24 hrs	30 min	13
	40	48 hrs	46 min	7



MADE IN USA WITH U.S. AND GLOBAL MATERIALS









### **MORE CLIMATE** COVERAGE

(		(
	5	I

Cures in Concrete Temperatures Down to 40°F

At Least 10 Minutes of Gel Time, even in 110°F

Cures in Just 4 Hours at 110°F and 6 Hours at 90°F

# **EVERYDAY EPOXY**

### **3RD PARTY** APPROVED

Cracked Concrete and Seismic Zones A-F



**Tested Based on ICC-ES** AC-308 and ACI-355.4

20+ State DOT Approvals

### **MEDIUM-DUTY APPLICATIONS**

On-Grade Dowelling

**Traffic Barriers** and Guardrails

Railings and Architectural Metal Oversized

Machinery Anchoring

Overhead, Sustained Loads

Holes

# **HOW OUR USABILITY BENEFITS YOU**

### **MORE OPPORTUNITIES TO USE THE PRODUCT**

The new Red Head G5+ cures 3 times faster than the legacy, general-purpose Epcon G5 formula, and works in concrete in temperatures 30° lower than before.

With a gel time of 10 minutes or more, G5+ can be used in deep embedment holes and hot temperatures.

### **BEST-IN-CLASS BOND STRENGTH**

The bond strength of G5+ in cracked concrete is at least 20% higher than other general-purpose epoxies\*:

Red Head G5+: 820 psi

Dewalt Pure50+: 658 psi

Hilti RE 100: 592 psi

Simpson ET-HP: 535 psi

\*Data taken from evaluation reports listed on www.lcc-es.Org as of 11/1/17. Based on 1/2" threaded rod in dry concrete.

### **SUPPORTING** THE US ECONOMY

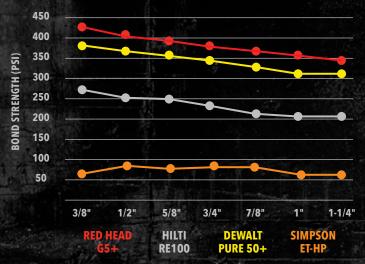
Formulated, blended, and packaged in the US, by an American company.

Fully complies with the Buy American Act and the Federal American Recovery & Reinvestment Act.

Domestic manufacturing and local distribution ensures quick availability.

### **BEST-IN-CLASS BOND STRENGTH**

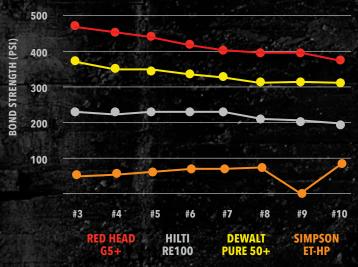
G5+ outperforms the competition when anchoring threaded rod.



Data taken from evaluation reports listed on www.icces.org as of 11/1/17. Based on threaded rod in cracked, saturated concrete with seismic conditions and periodic inspection.

### RAISING THE (RE)BAR FOR EVERYDAY EPOXIES

G5+ also performs better in rebar dowelling (40% better than the legacy Epcon G5!).



Data taken from evaluation reports listed on www.icc-es.org as of 11/1/17. Based on Rebar in cracked, saturated concrete with periodic inspection.

# RIGOROUSLY TESTED. WIDELY APPROVED

### COMMON TECHNICAL SPECIFICATIONS

**/ISIT WWW.ITW-REDHEAD.COM FOR MORE INFORMATION** 

VARIABLE	SPEC
PRODUCT DESCRIPTION	Medium-strength structural concrete adhesive anchoring system
ADHESIVE TYPE	2-part injectable epoxy (2:1 ratio)
CARTRIDGE TYPES & SIZES	Durable and resealable cartridges available in 2 sizes:
	- 15.20z. Dual cartridge
	- 30.40z. Dual cartridge
APPROVALS	- ICC-ES ESR 4138 (Concrete Report)
Contra	- 2015, 2012, 2009, 2006 International Building Code (IBC) Compliant
	- Florida Building Code (FBC)
	- City of Los Angeles (COLA)
	Extensive Department of Transportation (DOT)     Listings
	- NSF/ANSI 61 approval for use in drinking water system components
4	- ASTM C881, Types I, II, IV, And V, Grade 3, Classe: B & C
ANCHOR SIZES AND TYPES	- Threaded rod: 3/8" - 1-1/2"
The second s	- Rebar: #3-#11
WATER RESISTANCE	Suitable for use in saturated concrete and water- filled or submerged holes
APPLICATION TEMPERATURES	40° through 110°F (4° through 43°C)
IN-SERVICE TEMPERATURES	-41° through 176°F (-41° through 80°C)
STORAGE LIFE & TEMPERATURE	24 months from date of manufacture when stored in 50° through 95°F (10° through 35°C)
COUNTRY OF ORIGIN	Made in Usa with U.S. and global materials

# GEL & CURE TIMES FOR G5+

BAS	E MATERIAL	CURE TIME	GELTIME	BASE MATERIAL
	110	4 hrs	10 min	43
	90	6 hrs	14 min	32
-	70	8 hrs	16 min	21
	50	30 hrs	30 min	13
Courses.	40	48 hrs	46 min	7





# **ORDERING INFORMATION**

FOR RED HEAD ADHESIVES AND ACCESSORIES



### **RED HEAD A7+ ADHESIVE ANCHORS**

PART NO.	DESCRIPTION	BOX QTY.
A7P-10	Red Head A7+ 9.5oz Cartridge w/ Nozzle	6
A7P-28	Red Head A7+ 28oz Cartridge w/ Nozzle	4
A7P-500KIT	Red Head A7 + 5oz Kit w/ Hand Crank & Nozzle	8
A7P-501 KIT	Red Head A7+ 5oz Kit w/ Reuse Piston & Nozzle	8



### **RED HEAD A7+ DISPENSING TOOLS**

PART NO.	DESCRIPTION	
A100	10oz. Manual Tool (A7P-10)	
A102-V3	28oz HD Manual Tool (A7P-28)	
A200	28oz Pneumatic Tool (A7P-28)	
A300	28oz/30oz Battery Tool (A7P-28, C6P-30, G5P-30)	



### **DISPENSING ACCESSORIES**

PART NO.	DESCRIPTION	BOX QTY.
A245	Short Nozzle	24
S55	Standard Nozzle	24
E55	Long Nozzle	24
S75	High-Flow Nozzle	24
S75EXT	Extension for High-Flow Nozzle	24
E25-6	6' Extension Tube	5
E916-6	Heavy Duty 6' Extension Tube (Fits Piston Plugs)	5
PL-5834	Piston Plug for 5/8" and 3/4" diameter anchors	10
PL-7810	Piston Plug for 7/8" and 1" diameter anchors	10
PL-1250	Piston Plug for 1-1/4" diameter anchors	10



### **RED HEAD C6+ ADHESIVE ANCHORS**

PART NO.	DESCRIPTION	BOX QTY.
C6P-15	Red Head C6+ 15.2oz Cartridge w/ Nozzle	6
C6P-30	Red Head C6+ 30.4oz Cartridge w/ Nozzle	4



### **RED HEAD G5+ ADHESIVE ANCHORS**

PART NO.	DESCRIPTION	BOX QTY.
G5P-15	Red Head G5+ 15.2oz Cartridge w/ Nozzle	6
G5P-30	Red Head G5+ 30.4oz Cartridge w/ Nozzle	4



### **RED HEAD C6+/G5+ DISPENSING TOOLS**

PART NO.	DESCRIPTION	PART NO.	DESCRIPTION	
D100	15.2oz HD Manual Tool (C6P-15 and G5P-15)	D202	30.4oz Pneumatic Tool (C6P-30 and G5P-30)	
D102	30.4oz HD Manual Tool (C6P-30 and G5P-30)	D300	15.2oz Battery Tool (C6P-15 and G5P-15)	
D200	15.2oz Ergonomic Pneumatic Tool (C6P-15 and G5P-15)	A300	28oz/30oz Battery Tool (A7P-28, C6P-30, G5P-30)	



### **HOLE CLEANING ACCESSORIES**

PART NO.	DESCRIPTION	BOX QTY.
BP-10	Manual Blow Pump	1
WB-038	Wire Brush for 3/8" Anchors	10
WB-012	Wire Brush for 1/2" Anchors	10
WB-058	Wire Brush for 5/8" Anchors	10
WB-034	Wire Brush for 3/4" Anchors	10
WB-078	Wire Brush for 7/8" Anchors	10
WB-100	Wire Brush for 1" Anchors	10
WB-125	Wire Brush for 1-1/4" Anchors	10
B012	Nylon Brush 1/2" Diameter (soft enough for Masonry)	1
ESDS-38	Wire Brush 12" Usable Extension with SDS+ Adaptor	1
EHAN-38	Wire Brush 12" Usable Extension w ith T-Handle	1



### **MASONRY ACCESSORIES**

D200

PART NO.	DESCRIPTION	BOXQTY.
HBU-38	Umbrella Anchor for Hollow Block	20
HBP 38-8	3/8" Diameter by 8" length Nylon screen	25
HB 34-8	3/4" Diameter by 8" length Stainless Steel Screen	20
HB38-312	3/8" Diameter by 3.5" length Stainless Steel Screen	100
HB12-312	1/2" Diameter by 3.5" length Stainless Steel Screen	50
HB58-412	5/8" Diameter by 4.5" length Stainless Steel Screen	50

# **OSHA** SILICA DUST REGULATION

### ITW RED HEAD® RECOMMENDS USING MILWAUKEE® SILICA DUST EXTRACTION SYSTEMS WHEN INSTALLING RED HEAD ANCHORS

While Red Head anchors can be safely used with most hammer drills and dust extraction systems, we recommend the Milwaukee® tools because of their superior performance and value. The options below help customers to stay in compliance with the new OSHA® regulation on respirable crystalline silica dust (29 CFR 1926.1153). Each customer should consult with its company's safety team or OSHA authority to determine the best solution. Visit www.itwredhead.com or www.milwaukeetool. com/silica-dust-extraction-solutions for more information.



### **DUST EXTRACTION SOLUTIONS AVAILABLE FROM MILWAUKEE® DISTRIBUTORS:**

	DRILL TYPE	ATTACHMENT	EXTRACTION SYSTEM	OSHA COMPLIANCE METHOD 29 CFR 1926.1153 TABLE 1 OBJECTIVE DATA	
	ALL SDS PLUS ROTARY HAMMERS	M12™ HAMMERVAC™ UNIVERSAL DUST EXTRACTOR (2306-22)	INTEGRATED		
11.11.14		SDS PLUS VACUUM BITS	8 GALLON	•	
		VACUUM ASSISTED DUST EXTRACTOR (5261-DE)			
34 - 181	ALL SDS MAX ROTARY HAMMERS	SDS MAX DUST EXTRACTION ATTACHMENT (5317-DE)	DUST EXTRACTOR (8960-20)	•	
		SDS MAX VACUUM BITS		•	3 ×

### **VACUUM DRILL BITS AVAILABLE FROM MILWAUKEE® DISTRIBUTORS:**

ANCHOR DIAMETER	MILWAUKEE ITEM#	MILWAUKEE PRODUCT NAME	DIAMETER (IN)	USABLE LENGTH (IN)	OVERALL LENGTH (IN)
3/8" or #3	48-20-2102	SDS+ VACUUM DRILL BIT 7/16X7-7/8X13	7/16	7-7/8	13
	48-20-2106	SDS+ VACUUM DRILL BIT 1/2X7-7/8X13	1/2	7-7/8	13
1/2″	48-20-2110	SDS+ VACUUM DRILL BIT 9/16X9-1/2X14	9/16	9-1/2	14
#4	48-20-2114	SDS+ VACUUM DRILL BIT 5/8X9-1/2X14	5/8	9-1/2	14
5/8″ or #5	48-20-2118	SDS+ VACUUM DRILL BIT 3/4X9-1/2X14	3/4	9-1/2	14
	48-20-2100	SDS+ VACUUM DRILL BIT REPLACEMENT ADAPTER		the second	
#4	48-20-2152	SDSMAX VACUUM DRILL BIT 5/8X15.75X23	5/8	15-3/4	23
5/8″ or #5	48-20-2156	SDSMAX VACUUM DRILL BIT 3/4X15.75X23	3/4	15-3/4	23
3/4" or #6	48-20-2160	SDSMAX VACUUM DRILL BIT 7/8X15.75X23	7/8	15-3/4	23
7/8" or #7	48-20-2164	SDSMAX VACUUM DRILL BIT 1X17.5X25	1	17-1/2	25
1″ or #8	48-20-2168	SDSMAX VACUUM DRILL BIT 1-1/8X27X35	1-1/8	27	35
1-1/4" or #10	48-20-2172	SDSMAX VACUUM DRILL BIT 1-3/8X27X35	1-3/8	27	35
	48-20-2150	SDSMAX VACUUM DRILL BIT REPLACEMENT ADAPTER	Sal Sheet State	Mark Astronomy	and the state



### **ONLINE RESOURCES FOR DESIGNERS**

Red Head provides you with free software for designing concrete connections in compliance with ACI 318 Appendix D/ Chapter 17.

### VISIT ITWREDHEAD.COM/TRUSPEC TO DOWNLOAD OR USE TRUSPEC 2.0 ONLINE

- Design concrete anchoring connections in minutes
  - Calculate critical values for total strength design of anchor connections
- Predict mode of failure for anchor connections
- Model attachment with single or multiple anchor points, minimum edge distance, and minimum spacing distance



# MOBILE RESOURCES FOR CONTRACTORS

Curious how many cartridges to order for the next job? Looking for an easier way to create submittals? The Red Head app is here with an expanding set of mobile calculators and resources to simplify the jobsite.

### AVAILABLE NOW AT ITWCCNA.COM/CALCULATOR AND ON THE APP STORE

- Adhesive cartridge calculator
- Product selector
- Submittal generator
- Competitive Cross Reference



### FOR MORE INFORMATION VISIT ITWREDHEAD, COM

© 2017 ILLINOIS TOOL WORKS, INC. RED HEAD IS A REGISTERED TRADEMARK OF ILLINOIS TOOL WORKS, INC. SIMPSON \*, ATXP\*, AND AT\* ARE REGISTERED TRADEMARKS OF SIMPSON STRONG-TIE COMPANY, INC. HILTI\*, HY2004\*, HY2007\*, HY100\*, HY100\*, HIT ICE\*, AND HY 10 PLUS\* ARE REGISTERED TRADEMARKS OF HILTI CORPORATION. POWERS\*, ACSO SILVER\*, AND AC2004\* ARE REGISTERED TRADEMARKS OF POWERS FASTENERS MILWAUKEE\* IS REGISTERED TRADEMARK OF MILWAUKEE TOOL. OSHA IS A TRADEMARK OF THE OCCUPATIONAL SAFETY AND HEALTH ASSOCIATION. AC\* I IS A REGISTERED TRADEMARK OF HIE AND CONCRETE INSTITUTE.