

EQUIPMENT MANUAL

— FOR —

SUPPORTING PRODUCTS



Global **Refractory** Solutions



ABOUT ALLIED

Allied Mineral Products is a world leader in the design and manufacture of monolithic refractories and precast shapes. With strong sales and service teams in the foundry, aluminum, steel, heat treat/forge and industrial markets, our success is based on our dedication to *Being There Worldwide with Refractory Solutions*.

Producing quality, consistent products is top priority at Allied and we have the products to meet your refractory needs. Our extensive product line includes innovative refractory technology and longstanding refractory alternatives.

Allied's focus on quality at every stage in the production process is unparalleled. A stringent raw material standard and global quality control testing before and after each batch is produced, provides customers with consistent products. We provide quick response times to any urgent request through flexible manufacturing systems at all our manufacturing facilities.

Global Refractory Solutions



13 MANUFACTURING FACILITIES
OVER 145 INTERNATIONAL SALES REPRESENTATIVES
3 RESEARCH AND TECHNOLOGY FACILITIES
SALES ACTIVITY IN MORE THAN 100 COUNTRIES
6 PRECAST SHAPES FACILITIES



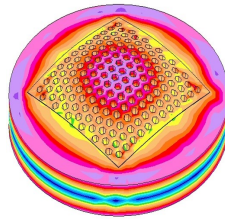
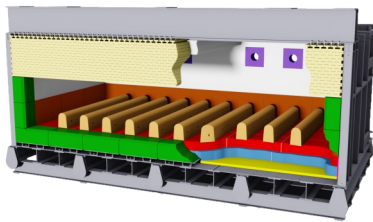
RESEARCH & ENGINEERING

After gaining a detailed understanding of your specific needs, our team evaluates operating criteria and physical design parameters to create a detailed engineered design encompassing:

- Patented technologies
- Optimized product zoning
- Thermal models to optimize and validate designs
- Proven safety lining system designs
- Unique installation properties and techniques
- Leading edge refractory system designs

We're focused on developing new products, improving existing products and perfecting installation techniques. Our product development and testing is conducted in our state of the art research and technology center. We have an on-site gunning and shotcreting lab allowing extensive testing of installation properties.

As an innovative, technology-driven supplier we're devoted to providing customized refractory solutions for various industry operations. We offer a wide variety of high performance refractory products with superior raw material quality.



FEA Thermal Analysis



Flow Testing



Contact Tests



Strength Tests





IDEAL AIR RAMMERS

Air rammers are a rotating air driven device used on the walls or floor of DRI-VIBE® installation materials.

MINI AIR RAMMERS

AIRM1 AIR 2-ARM WALL RAMMER 13"-20"

TWO ARM AIR RAMMERS

5AIR1 AIR 2-ARM WALL RAMMER 15"-24"

5AIR2 AIR 2-ARM WALL RAMMER 19"-28"

5AIR3 AIR 2-ARM WALL RAMMER 20"-35"

5AIR4 AIR 2-ARM WALL RAMMER 24"-39"

THREE ARM AIR RAMMERS

5AIR5 AIR 3-ARM WALL RAMMER 20"-35"

5AIR6 AIR 3-ARM WALL RAMMER 20"-35"

5AIR7 AIR 3-ARM WALL RAMMER 28"-43"

5AIR8 AIR 3-ARM WALL RAMMER 32"-47"

5AIR9 AIR 3-ARM WALL RAMMER 36"-51"

5AIR10 AIR 3-ARM WALL RAMMER 40"-55"

5AIR11 AIR 3-ARM WALL RAMMER 44"-59"

FIVE ARM AIR RAMMERS

5AIR12 AIR 5-ARM WALL RAMMER 36"-51"

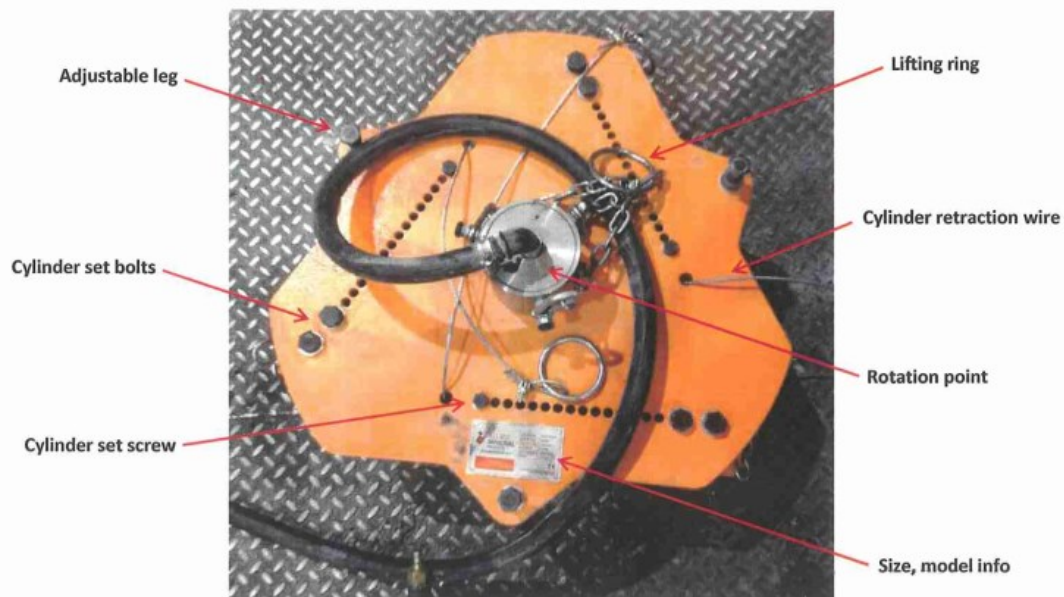
5AIR13 AIR 5-ARM WALL RAMMER 40"-55"

5AIR14 AIR 5-ARM WALL RAMMER 44"-59"

5AIR15 AIR 5-ARM WALL RAMMER 48"-63"

5AIR16 AIR 5-ARM WALL RAMMER 52"-67"

5AIR17 AIR 5-ARM WALL RAMMER 56"-71"

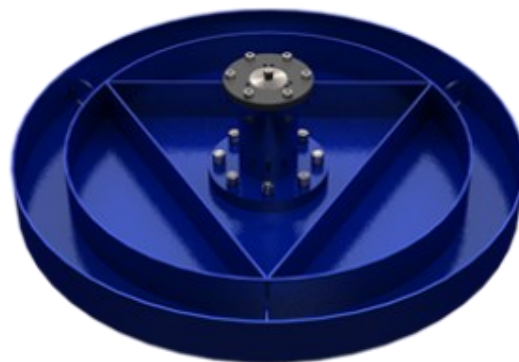




BOTTOM RAMMERS

Bottom rammers help to compact refractory to an equal density, while also extending the life of the refractory. This allows manpower to become more efficient and economic – helps save time and reduce risk.

ITEM CODE	DESCRIPTION
5AIRBRM1	AIR BOTTOM RAMMER 12" DIAMETER
5AIRBR1	AIR BOTTOM RAMMER 16" DIAMETER
5AIRBR2	AIR BOTTOM RAMMER 20" DIAMETER
5AIRBR3	AIR BOTTOM RAMMER 24" DIAMETER
5AIRBR4	AIR BOTTOM RAMMER 28" DIAMETER
5AIRBR5	AIR BOTTOM RAMMER 32" DIAMETER
5AIRBR6	AIR BOTTOM RAMMER 35" DIAMETER
5AIRBR10	AIR BOTTOM RAMMER 51" DIAMETER
5AIRBR11	AIR BOTTOM RAMMER 55" DIAMETER
5AIRBR12	AIR BOTTOM RAMMER 59" DIAMETER
5AIRBR13	AIR BOTTOM RAMMER 63" DIAMETER
5AIRBR14	AIR BOTTOM RAMMER 67" DIAMETER
5AIRBR15	AIR BOTTOM RAMMER 26" DIAMETER





AIR RAMMERS REPLACEMENT PARTS

ITEM CODE	DESCRIPTION
5AIRWR.SP.S01	PISTON/THRUSTPLATE SO1-SO17
5AIRWR.SP.S02	PISTON SLOT(BODY) SO1-SO17
5AIRWR.SP.S03	THRUST PLATE SO1-SO17
5AIRWR.SP.S05	THRUST SPRING FOR 12.5" PISTON
5AIRWR.SP.S05B	THRUST SPRING FOR 10" PISTON
5AIRWR.SP.S06	PISTONSLOT CONNECTOR BOLTS (3)
5AIRWR.SP.007	(1) SUPPORT LEG SO1-SO17
5AIRWR.SP.008	10" COMPLETE PISTON ASSEMBLY
5AIRWR.SP.009	12.5" COMPLETE PISTON ASSEMBLY
5AIRWR.SP.010	WALL RAMMER PISTON ONLY
5AIRWR.SP.011	EA PISTON ONLY W/TP FOR MO1
5AIRWR.SP.012	EA PISTON SLOT FOR MO1
5AIRWR.SP.013	EA PISTON THRUST PLATE FOR MO1
5AIRWR.SP.014	COMPLETE PISTON ASSEMBLY-MO1
5AIRWR.SP.015	CENTER ROTATION UNIT 3-ARM
5AIRWR.SP.016	CENTER ROTATION UNIT-TWO ARM
5AIRWR.SP.017	BEARINGS FOR ARM ROTATION UNIT
5AIRWR.SP.019	AIR RAMMER CHAIN+RING+EYEBOLTS





WYCO PENCIL VIBRATORS

994 ELECTRIC MOTOR VIBRATOR

The 994 electric motor vibrator is ready tackle your toughest consolidation jobs. Whip cords available in lengths of 7 or 14 feet and square head sizes of 1' to 2.25'

Features:

- Drives any head and shaft combination—one motor for all your consolidation needs
- Conforms to current UL and OSHA regulations for safety
- Lightweight with ergonomic hand grip and shoulder strap
- Powers through your most challenging concrete applications

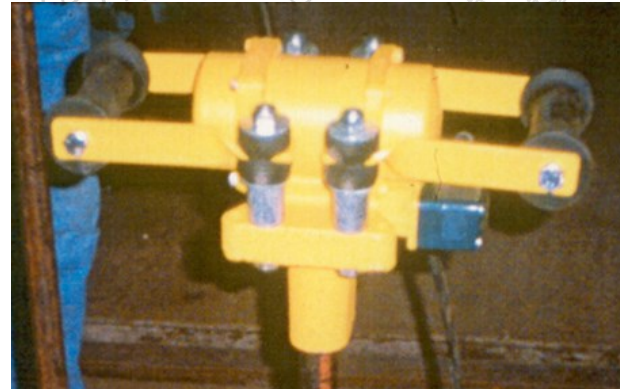
ITEM CODE	DESCRIPTION
5WYCO10	WYCO PENCIL VIB 994/7'/1.50"SQ
5WYCO11	WYCO PENCIL VIB 994/14'/2"SQHD
5WYCO4	WYCO PENCIL VIB 994/7'/2.25"SQ HD
5WYCO8	WYCO PENCIL VIB 994/7'/2"SQ HD
5WYCO9	WYCO PENCIL VIB 994/14'/2.25"





BRECON BOSCH VIBRATORS

The BRECON Tamper is the ideal handheld tool for powerful compaction of any material. It is made to fulfill the highest requirements when it comes to precise compaction combined with durability in rough work places like foundries. The Tamper is light and easy to handle. The proven design assures a powerful compaction while reducing transmission of the vibration to the operator. The quick tool change combined with various accessories provides a very flexible and accurate work result.



ITEM CODE	DESCRIPTION	CENTIFUGAL FORCE (lbf)	FREQUENCY (Hz)	VOLTAGE (V)	PHASE	WEIGHT (lbs)
5BOSCH	BOSCH/BRECON TAMPER 18902-60HZ	315 lbf	3600	220-265 380-460	3	25
5BOSCH50HZ	BOSCH/BRECON TAMPER 18902-50HZ	315 lbf	3000	220-260 380-440	3	25

BOSCH VIBRATOR ATTACHMENTS

ITEM CODE	DESCRIPTION
5FOOT1	EACH BOSCH FOOT #1 10X5
5FOOT2	EACH BOSCH FOOT #2 10X4
5FOOT3	EACH BOSCH FOOT #3 8X3
5FOOT4	EACH BOSCH FOOT #4 6X2
5FOOT5	EACH BOSCH FOOT #5 6" ROUND
5FOOT6	EACH BRECON FOOT 100X80 MM
5FOOT7	EA BOSCH SIDEWALL FOOT 6"X1.5"
5FOOT8	EA BOSCH SPADE TOOL 4"WIDE
5FORK1	EACH FORKING TOOL #1
5FORK2	EACH SMALL FORKING TOOL (1.5")

Dimensions without accessories: Height 9.4" x Width 17.0" x Depth 7.2" All models include 12.8 ft power cable without plug.



HIGH FREQUENCY PNEUMATIC VIBRATORS

This simple, long-lasting High-Frequency Pneumatic Vibrator provides effective high-frequency vibration at an economical price. Apply to hoppers, bins, railcars, chutes, molds, screens, and tables to keep materials flowing as they should. Also great for use in pre-cast concrete applications. These vibrators offer many benefits which include, multiple vibrations on each orbit, a bearing free design which eliminates wear problems and extends service life.

ITEM CODE	DESCRIPTION
5CCR2600	EACH MARTIN VIBRATOR CCR-2600
5CCR4400	EACH MARTIN VIBRATOR CCR-4400
5CCR6500	EACH MARTIN VIBRATOR CCR-6500



BRUTE VIBRATORS CCV SERIES

With an integral clamp foot, these powerful vibrators suit portable applications like railcar unloading. Also available for hydraulic power.

ITEM CODE	DESCRIPTION
5CCV4-2A	EA MARTIN VIBTR CCV4-2A BRUTE
5CCV6-6A	EA MARTIN VIBTR CCV6-6A BRUTE



CCV Series

1. High-Grade Ductile Iron Case provides maximum durability.
2. Low-Maintenance Bearings require lubrication after 500 hours of service.
3. Integral Clamp Foot on CCV Series provides portability and positive mounting.
4. Powerful, Efficient Motor for long service life, minimal power consumption.
5. Tapped Exhaust Port allows muffler installation to reduce operating noise.
6. Adjustable Eccentrics allow tuning of force output of most models to match applications.



ELECTRIC VIBRATION SYSTEM

The Allied Electric Vibration System (EVS) is a patent pending refractory installation system. The EVS is designed to eliminate air pressure and air quality problems experienced when operating pneumatic or air piston vibrators. These problems cause poor refractory installations resulting in inconsistent refractory campaign life. The patented installation method for induction furnace applications using our DRI-VIBE® products increased productivity and lowered installation costs.

FEATURES OF CONTROL PANEL

- Operations in manual or automatic mode.
- Programmable unit that can be preset with seven process timers to operate at multiple frequencies (vpm).
- Can be mounted for easy usage.

FEATURES OF ELECTRIC VIBRATOR

- Vibrator can be operated for 240 or 280 voltages.
- Vibrator is supplied 60 Hz compatible but can be used in 50 Hz applications with the control panel.
- Life expectancy is 2x longer than pneumatic vibrators.

480 VOLT KIT

ITEM CODE	DESCRIPTION
5EVS2010/480A	EA EVS SYSTEM 480V W/G4 PANEL

Each Kit contains (1) of the following items:

ITEM CODE	DESCRIPTION
5BRACKET	EA WELD-ON BRACKET FOR EVS
5EVC480A/G4	EA EVS GEN4 CONTROL PANEL 480V
5MVR2010	EA ELECTRIC VIB/MOTOR FOR EVS
5SIRO	SIROMETER VIBRATION TACHOMETER

Optional item:

5BRACKETCO	EACH CLAMP-ON BRACKET-EVS
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MUDHOG MIXERS

MODEL	RMH 9	RMH 12	RMH 12HD	RMH 20	RMH 29
ITEM CODE	5MUDHOG4	5MUDHOG	5MUDHOGHD	5MUDHOG2	5MUDHOG3
DIMENSIONS (L x W x H)	75" x 36" x 46"	82" x 42" x 49"	88" x 42" x 49"	122" x 44" x 56"	137" x 44" x 56"
DRUM CAPACITY	300 lb. (114 kg)	500 lb. (227 kg)	750 lb. (340 kg)	1000 lb. (454 kg)	2000 lb. (907 kg)
HYDAULIC RESERVOIR	15-gallon	15-gallon	15-gallon	30-gallon	60-gallon
POWER SOURCE					
WILL MIX AGGREGATE SIZE UP TO	3/4" (1.9 cm)	3/4" (1.9 cm)	3/4" (1.9 cm)	3/4" (1.9 cm)	3/4" (1.9 cm)
EMPTY WEIGHT	1500 lbs. (681 kg)	2000 lbs. (909 kg)	2200 lbs. (998 kg)	3600 lbs. (1632 kg)	4600 lbs. (2090 kg)
AXLE KIT (FOR PORTABILITY AND TOWING)	✓	✓	✓		
HYDRAULIC DUMP SYSTEM	✓	✓	✓	✓	✓
HYDRALUIC DRIVE SYSTEM	✓	✓	✓	✓	✓
CUSTOM MODIFICATIONS AVAILABLE	✓	✓	✓	✓	✓
BOLT-IN ABRASION RESISTANT DRUM LINERS	✓	✓	✓	✓	✓



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