



HW10H

Hybrid-Wet Shotcrete® Carrier

by Multicrete Systems Inc.



Shotcrete Carrier & Spraying Machine



***The Latest in
Shotcrete Technology***



HM10H

Hybrid-Wet Shotcrete® Carrier



TELESCOPIC SPRAYING ARM

REACH, MOBILITY AND ERGONOMIC DESIGN

The Aliva 302.1 Spray Boom has a modular concept that is designed to provide maneuverable handling of the boom with minimal size and weight requirements for ease of transport and operation. The Aliva 302.1 Spray Boom is supplied hydraulics from the carrier steering hydraulic system.

The Aliva 302.1 provides the operator with high-speed reaction and precision in telescopic, turning, and raising movements. Precision spraying equates to higher quality coverage in less time with less waste.

All of the hydraulics driving the spraying arm are fitted externally and covered for maximum protection and easy maintenance care.

With a vertical spraying reach of 8m, the telescope spraying arm AL-302 has been designed especially for mines and small tunnels.

SHOTCRETE SPRAYING MACHINE

DURABLE, RELIABLE AND LOW MAINTENANCE

With its unbelievable output capacity range from 0.7– 9.6 m³/h, the machine works on small concrete renovation work as efficiently as on big slope protection or in mines. Less maintenance and wear cost makes it the ideal shotcrete machine for all applications.

With the newly developed, universal AL-257, dry, wet, and Hybrid-Wet Shotcrete® are equally possible. No changing is required on the machine from dry to wet shotcrete.

The machine is equipped with rotors made of high tech aluminium and is operating with steel on steel wear and rotor plates.

Experience has shown up to 10 times less wear on the steel plates, depending on material, output capacity, hose diameter and compressed air supply! This again leads to less standstill time and wear cost and therefore the result is more economical spraying operation.

Concrete renovation with sprayed concrete in the dry-shotcrete method guarantees for good bond strength and impeccable compaction.

REMOTE CONTROL SYSTEM

EASY TO USE, SAFE FOR PRECISION SPRAYING

The umbilical corded Hetronic remote electrically controls the spray boom, allowing for mobility during operation. Operators are free to position themselves inside a safe zone without relying on hand signals or two-way radios. The smooth proportionality allows operators precision control of the spray boom. Wireless option available.

ACCELERATOR DOSING SYSTEM

OUTPUT SYNCHRONIZATION, LESS WASTE

The Multicrete Hybrid-Wet Shotcrete® Carrier is equipped with an accelerator pump and tank. The accelerator tank is constructed of stainless steel with a mild steel protective mounting frame. The tank has a volume of 210 liters max capacity and 189 liters at 90 % fill rate. The tank can be filled from the Cam Lock fittings or the vent cap filler spout. The onboard liquid accelerator system is synchronized to the shotcrete machine.

CHASSIS & AXLES

HEAVY DUTY, DURABLE AND DEPENDABLE

The HW10H chassis is engineered by ARVA Industries, a company renowned for their attention to producing tough, reliable equipment that is designed to meet the harshest working conditions.

Central articulated turning, innovative state-of-the-art axles, four driving wheels, and four-wheel braking system allows excellent maneuverability in difficult terrain. Exceptional climbing capacity and great ground clearance facilitates operation in all types of locations.

ENGINE

EFFICIENT AND POWER ON DEMAND

The HW10H Hybrid-Wet Shotcrete® Carrier is equipped with a Cummins turbo-diesel power plant, capable of producing 160 hp.

SPECIAL FEATURES

STANDARD FOR EASE OF OPERATION

Some of the features included with the HW10H Hybrid-Wet Shotcrete® Carrier are:

- Backup camera
- Ample lighting
- Water booster pump
- Onboard form release system
- Pressure washer for easy cleanup
- 10 ton material capacity hopper
- Shooting rate of up to 9 m³ per hour
- Robust, on-board PLC controlled system designed to provide consistent feed rate and synchronized accelerator dosing

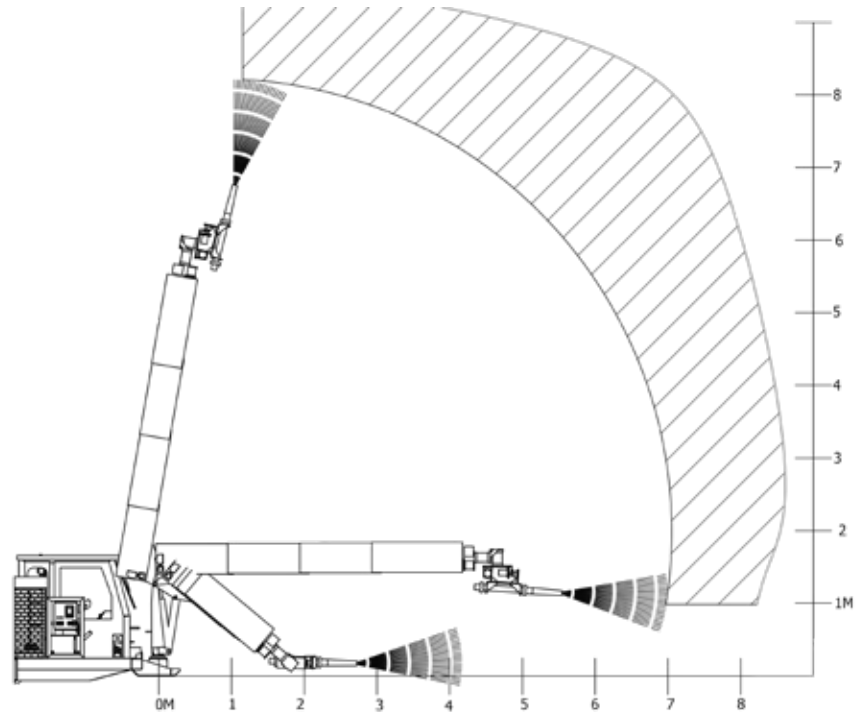
CONFIGURATION & INTEGRATION

FLEXIBLE DESIGN CONFIGURATION AND INTEGRATION

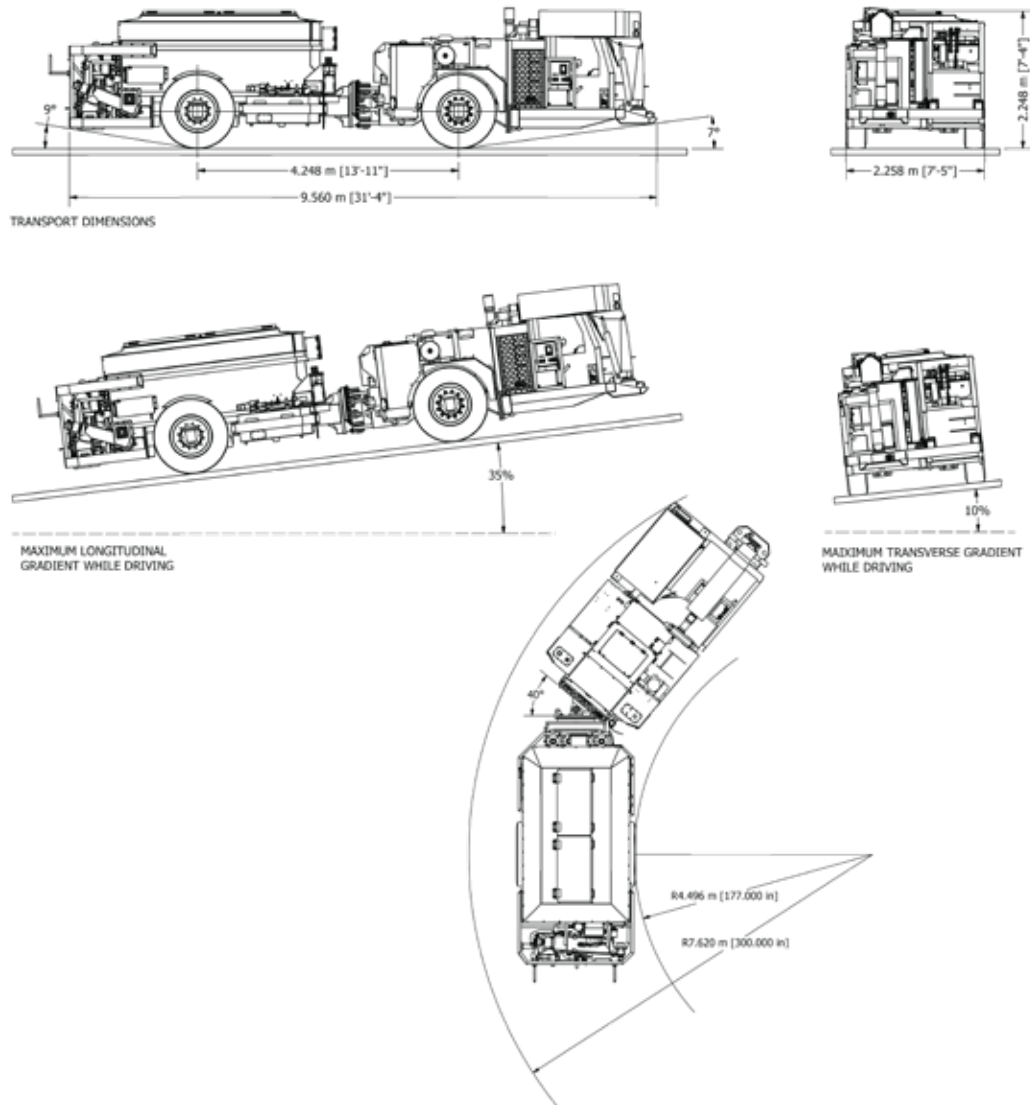
The HW10H Hybrid-Wet Shotcrete® Carrier is offered to the customer with several options allowing for the flexibility of configuration to suit their work environment.

The carrier integrates nicely with several Multicrete-designed bulk handling, transportation, loading and mixing solutions.

SPRAYING ARM REACH DIAGRAM



DIMENSIONS AND TURNING RADIUS





**ALIVA 257 Wet/Dry
Shotcrete Pump**



**ALIVA 302.1 Telescopic
Spraying Arm**



**Operator Drive Compartment
ROPS / FOPS Certified**



**Hybrid-Wet Shotcrete®
Easy-Clean Mixing Chamber**



**Liquid Accelerator Tank
and Dosing System**



**High Pressure Cleanup
Hose and Wand**

MULTICRETE HW10H

Hybrid-Wet Shotcrete® Carrier and Spray Unit Technology

Multicrete Systems has created a new technology for a shotcrete carrier based on simplicity.

The HW10H Hybrid-Wet Shotcrete® Carrier is a self-contained shotcrete machine that carries its own supply of dry, premixed shotcrete which it converts into wet shotcrete and pumps it to the front mounted spray boom – all on a single carrier.

The carrier permits the application of shotcrete according to a hybrid wet process, incorporating some elements from both the wet and dry mix processes. However, it is designed to overcome numerous disadvantages associated with both prior methods.

Multicrete Systems has over 25 years in the underground mining and tunneling shotcrete application processes. Through ongoing dedicated research and development, Multicrete Systems has become a leader in these fields of application. Hybrid-Wet Shotcrete® technology is an example of revolutionary process ideology.



How does Hybrid-Wet Shotcrete[®] Technology **BENEFIT** you?

- ✓ **SINGLE** Carrier
 - ✓ **UNLIMITED** Pot-Life
 - ✓ **REDUCED** Accelerator
 - ✓ **RAPID** Setting
 - ✓ **NO** Admixtures
 - ✓ **LOWER** Slump
 - ✓ **SAFE** Operation
 - ✓ **LOW** Rebound
 - ✓ **MINIMAL** Manpower
 - ✓ **AVAILABLE** 24/7
 - ✓ **MITIGATION** of Dust
 - ✓ **EASY** Cleanup
 - ✓ **EASY** Maintenance
 - ✓ **LESS** Material Waste
- ✓ **INTEGRATES** with our Support Solutions* including:
- Bulk Shotcrete Handling Solutions
 - Shotcrete Transportation Solutions
 - Loading and Mixing Station Solutions

*See Multicrete's Shotcrete Support Solutions Brochure



DATA SHEET- HW10H HYBRID-WET

Aliva 302.1 Telescoping Spray Arm

Maximum spraying reach vertical / horizontal	26' /23' (8m/7m)
Maximum unfolding section vertical / horizontal	8.25'/11' (2.5m / 3.3 m)
Number of arm extensions	4 Sections (3 telescopic) proportional hydraulic drive
Telescopic stroke	13.25' (4m)
Number of axles / degrees of freedom	6
Maximum arm angle	+65°/ -40°

Spraying Head

Rotation	360°
Inclination	240°
Nozzle	DN40
Lights	4 x 48w LED 2880 Lm spotlights

Aliva Remote Control

Drive	Electric
Cable length	49' (15m)

Aliva 257 Shotcrete Machine

Type	Rotary Cylinder Wet/Dry
Max. flow (theor.)	9.6 m ³ / hr (theor.)
Transport cylinder	12 lit. cylinder
Hose size requirements	2"-2.5" (50mm-65mm) 12-16 mm
Max. aggregate size	Steel wear plates
Wear Plates	

Hopper

Full hopper capacity	10 ton
Fill material	Dry pre-mixed product

Accelerator Pump Synchronization

Adjustment range	0.4-3.5 LPM
Maximum working pressure	175 psi
Additive tank	210 liters
Control system	PLC controlled

High Pressure Water Pump for Cleaning

Maximum pressure	2500 psi
Flow	7.5 GPM US
Hose	1/2"

MSI-ARVA Articulated Vehicle

Engine	Cummins QSB 4.5-160
Engine power	160 HP
Engine Emissions	Tier 3
Transmission	Funk R2000 6 speed forward/3 reverse
Steering	Central articulating
Speed	18 kph/11kph

Braking system

Service:	Pedal activated hydraulic wet disc front/rear
Parking:	Failsafe spring applied, hyd.released int. wet disc in axle
Parking Brake Control:	2 position push/pull w/solenoid

Driver cabin	ROPS / FOPS Certified
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Oil tank	227 liters
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Fuel tank	227 liters
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Fire Suppression System

Ansul 4 Nozzle Manual Fire Extinguisher System

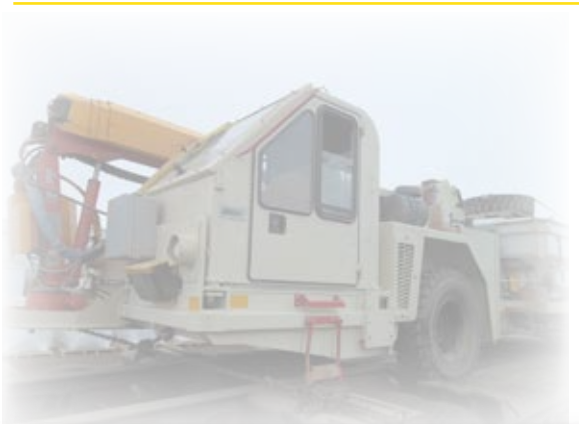
Full Wheels for Mining

Tires	12.00.24 12x24
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Cushion Type	Non-air soft core (No air required)
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Diesel Exhaust Muffler/Purifier

Maximum reduction	CO - 90%; HC - 80%; HCHO - 85%; PM - 30%
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Support YOU can count on!



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