



HW10H

Technical Data Sheet

Hybrid-wet Shotcrete Carrier & Spraying Machine

Equipment Description

The HW10H Hybrid-Wet Shotcrete Carrier is a self-contained shotcrete machine that carries its own supply of dry, pre-mixed shotcrete which 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.

Some examples include:

- Capable of higher output volumes compared to dry mix
- Reduced water demand and higher strengths
- One unit compared to numerous shotcrete equipment applications
- Self contained mine services
- Reduced dust and rebound
- Cost of wet mixes (admixtures required)
- Reduced daily maintenance compared to conventional wet mix equipment
- Frequent stop and start (during application)
- Quicker cycle times

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 with 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 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.



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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 aluminum 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 SPRAY

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 options are also 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 litres max capacity and 189 litres 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.



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HW10H Equipment Features

Chassis and Axles

HEAVY DUTY, DURABLE AND DEPENDABLE

The HW10H chassis is engineered by ARVA Industries, 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 turbo-diesel power plant, capable of producing 160 HP.

Configuration & Integration

FLEXIBLE DESIGN CONFIGURATION AND INTEGRATION

The HW10H 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 stations.

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, onboard PLC controlled system designed to provide consistent feed rate and synchronized accelerator dosing



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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/3.3m)
Number of Arm Extensions	4 Section (3 telescopic) Proportional hydraulic drive
Telescopic Stroke	13.25' (4m)
Number of Axles/Degree of Freedom	6
Maximum Arm Dangle	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 m³/hr.
Transport Cylinder	12 liters/cylinder
Hose Size Requirements	2"-2.5" (50-65mm)
Max Aggregate Size	12-16mm
Wear Plates	Steel

HOPPER

Full Hopper Capacity	10 ton
Fill Material	Dry pre-mixed

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	½

VEHICLE INFORMATION

Engine	Mercedes 906
Engine Power	201 HP
Engine Emissions	
Transmission	Dana model T14, 3 Speed Power-Shift
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 with solenoid
Drive Cabin	ROPS/FOPS Certified
Oil Tank	227 Liters
Fuel Tank	227 Liters

FIRE SUPPRESSION SYSTEM

Ansul 4 Nozzle Manual Fire Extinguisher System

FULL WHEELS FOR MINING

Tires	12.00.24 – 12 x 24
Cushion Type	Non-air soft core (no air required)

DIESEL EXHAUST MUFFLER/PURIFIER

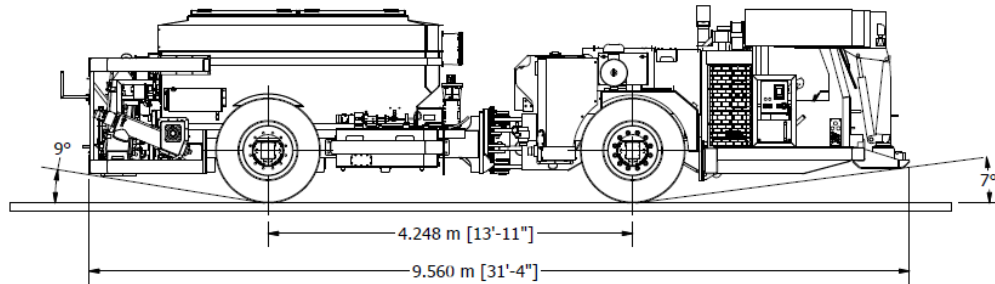
Maximum Reduction	CO – 90%; HC – 80%, HCHO – 85%. PM – 30%
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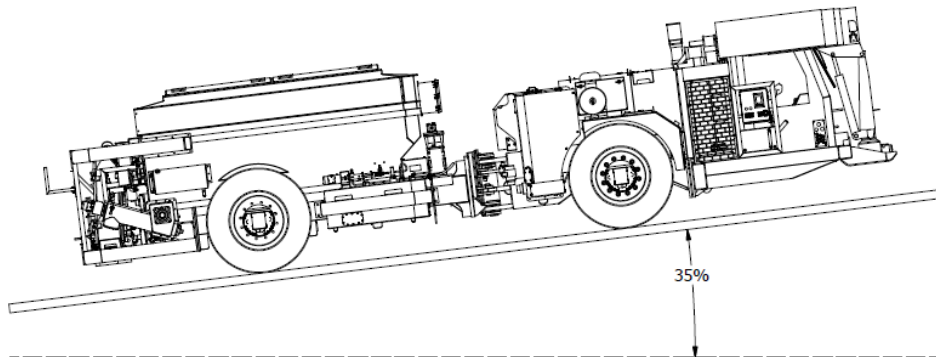
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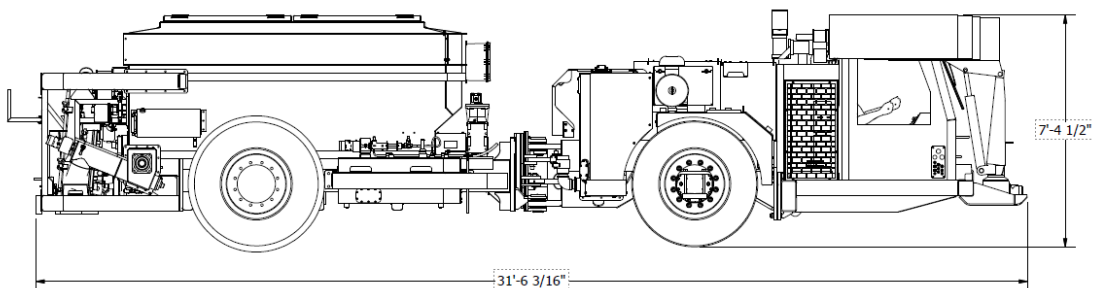
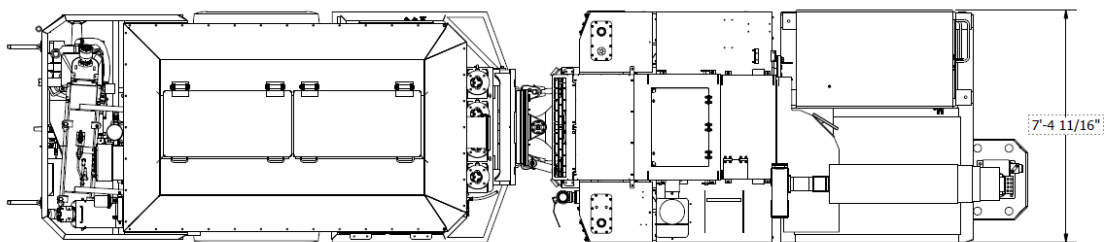
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TRANSPORT DIMENSIONS



MAXIMUM LONGITUDINAL
GRADIENT WHILE DRIVING

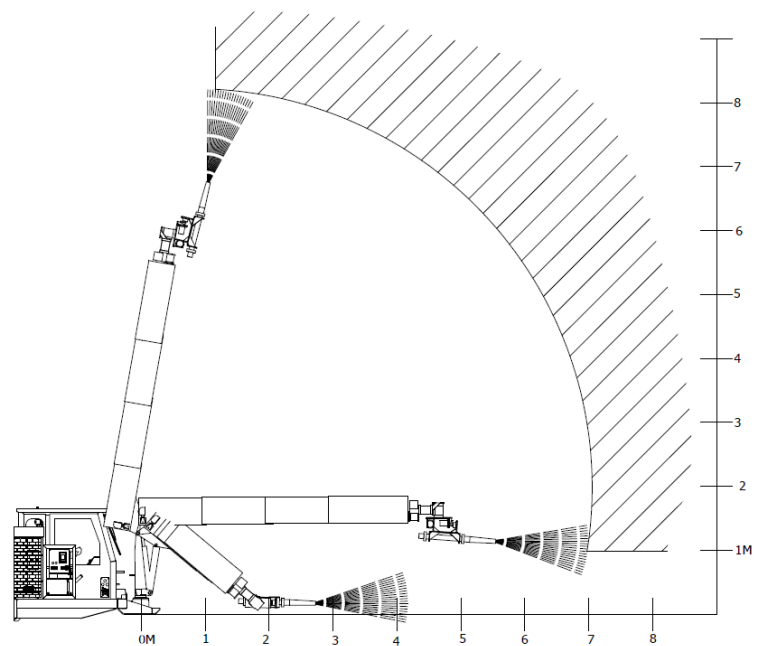
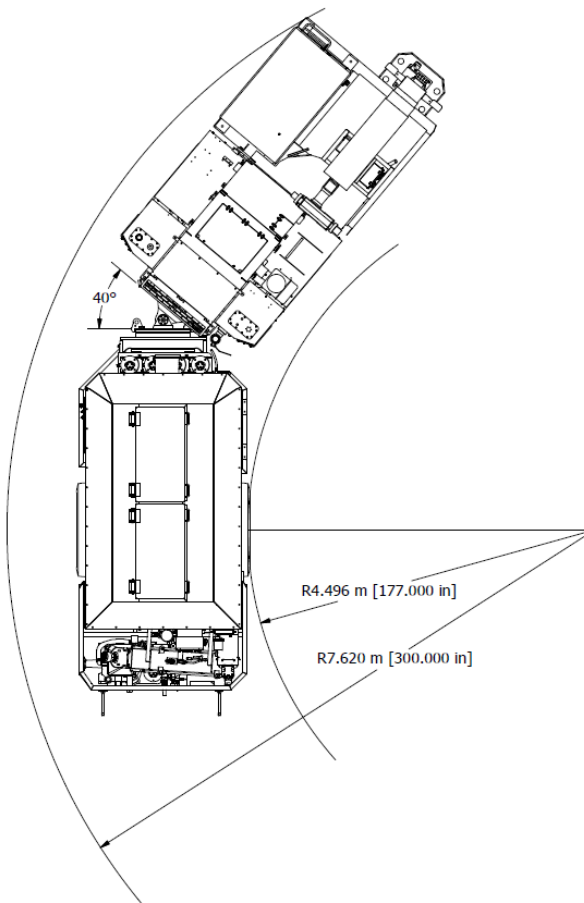
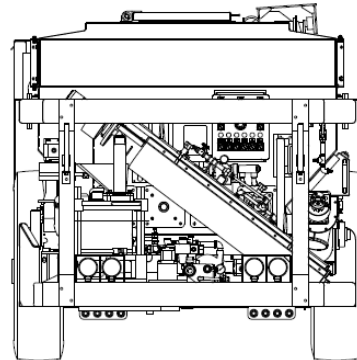
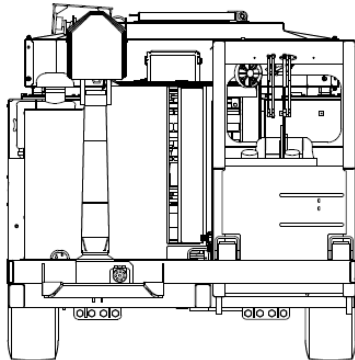




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Key Benefits Include:

- ❖ 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 without Support Solutions Including:
 - Bulk Shotcrete Handling Solutions
 - Shotcrete Transportation Solutions
 - Loading and Mixing Station Solutions