



Hybrid-Wet[®] Shotcrete Carrier

Technical Data Sheet



Multicrete Systems Inc.
555 Kapelus Drive
West St. Paul, MB R4A 5A4
www.multicretesystems.com



HYBRID WET SHOTCRETE CARRIER (HW-12)

Technical Data Sheet

Hybrid-wet Shotcrete Carrier & Spraying Machine

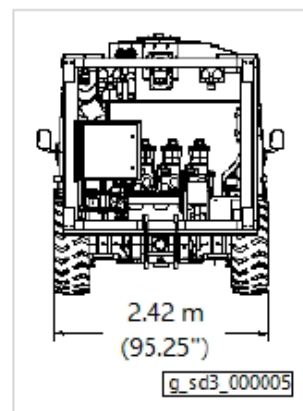
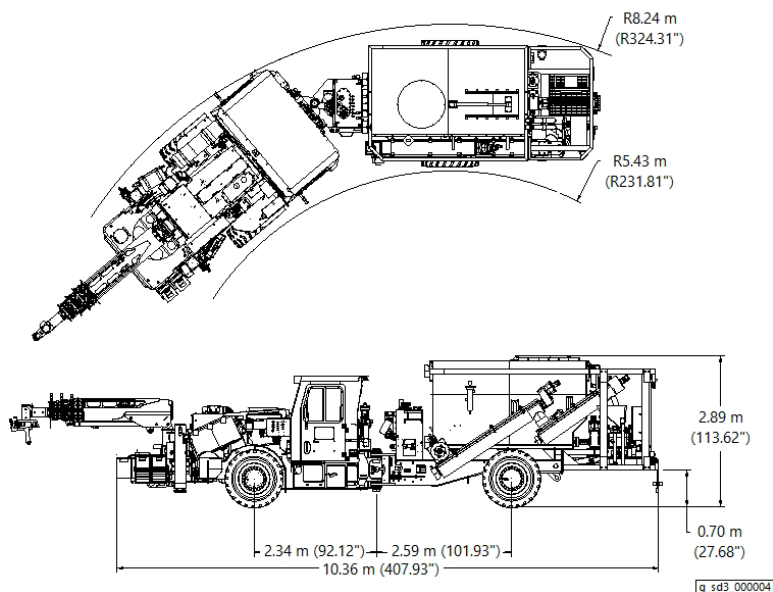
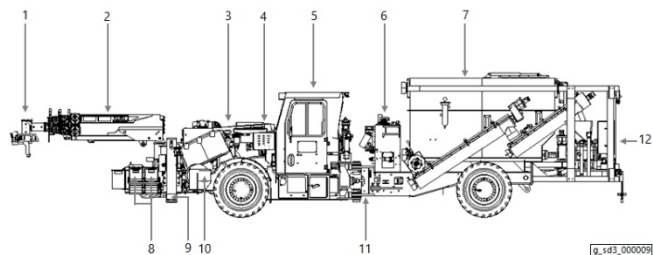
Equipment Description

The HW-12 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 is pumped 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:

- 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

Vehicle Configuration





HYBRID WET SHOTCRETE CARRIER (HW-12)

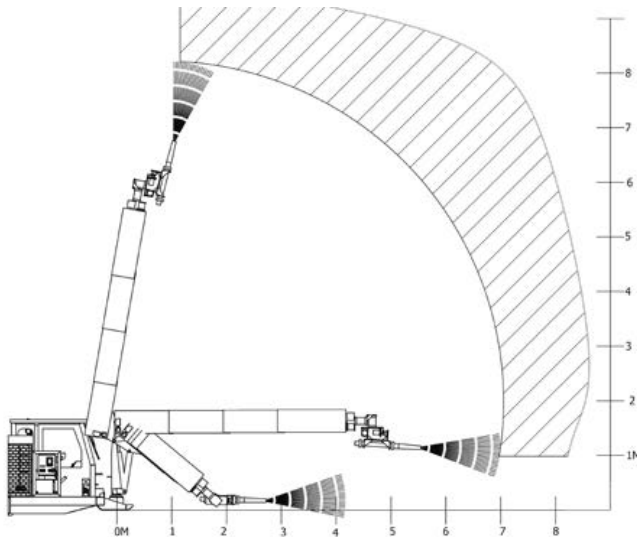
Technical Data Sheet

Hybrid-wet Shotcrete Carrier & Spraying Machine

Shotcrete Boom and Spray Head Overview

- Heavy-duty 4 stage spray boom / 4.1 m (160 in.) extension apparatus
- Diamond shaped boom and replaceable plastic guarding prevents material backup. Protects wear pads and guides for less maintenance, and deflects debris and falling material
- Ride control system provides a dampening system for the boom during tramming to protect components from stress and provide more comfort to the operator
- Spraying head provides high degrees of freedom for the nozzle, and oscillation functionality to best suit spraying needs
- Shooting rate of 6 – 9 m³/hour

Boom Reach (Lateral)	7.5 m (295 in.)
Boom Reach (Vertical)	8 m (315 in.)
Horizontal Boom Swing	180°
Nozzle Head Rotation	360°
Nozzle Swing	240°



Spraying Reach Diagram

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.

Engine & Transmission

Volvo TAD572VE Engine – Tier 4F

- Four cylinder, turbocharged, four-stroke (electronically controlled)
- Rated Power: 218 HP (160kW) @ 2300 RPM
- Rated Torque: 671 LB-FT (910 N-m) @ 1450 RPM

Dana T14 Powershift Transmission

- Three gear, forward & reverse directions
- Electronic Shift Control
- Low pressure and high temperature indication

Axles and Brakes

- Dana 113 / 114 Axles, engine & load end respectively
- Oscillation on power-end axle +/- 10°
- Independent front/rear hydraulically operated internal wet disc service brakes
- Spring-applied; hydraulically released (SAHR) emergency/park brakes
- Automatic Brake Application (ABA) with manual reset



HYBRID WET SHOTCRETE CARRIER (HW-12)

Technical Data Sheet

Hybrid-wet Shotcrete Carrier & Spraying Machine

Wheels & Tires

- 45-16 x 20 foam fill tires
- Lugged tread design with 36-ply

Frame & Steering

- Heavy-duty plate construction with modular tear-down capabilities
- Grouped grease fitting for articulation joint, steering pins and oscillating axle
- Articulation lock bar
- Articulated frame steer, dual cylinders

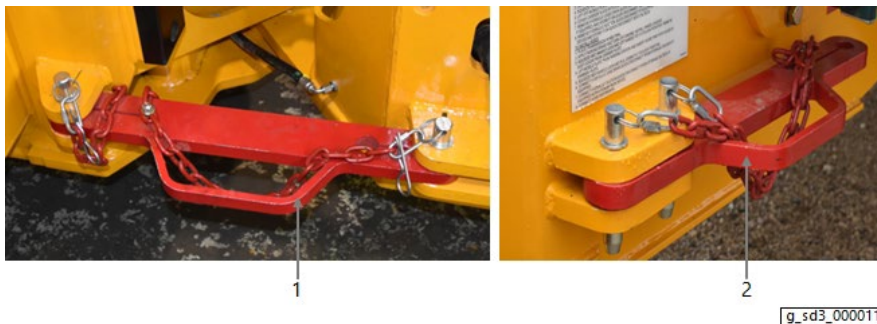
Speed Ranges

Loaded on 0% Grade

- 1st Gear @ 4.4 km/h (2.73 mph)
- 2nd Gear @ 8.9 km/h (5.53 mph)

Loaded on 15% Grade

- 1st Gear @ 3.6 km/h (2.23 mph)
- 2nd Gear @ 4.1 km/h (2.54 mph)



Articulation lock showcasing vehicles articulation area in the locked and storage position

HOW DOES HYBRID-WET® SHOTCRETE TECHNOLOGY BENEFIT YOU?

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

