Acoustic Measurement Plan

Date: 5/22/2026 Report No: 2026-07

Factory Test Location: [ ] 21 Great Hollow Dr. [X] 71 Heater Rd.

Product Model No: 528161

Product Description: CARTRIDGE: HYAMP MECHANIZED CUTTING

The system to be measured shall be operated within the parameters recorded in the conditions section of this report and measured for acoustic sound pressure levels to determine reference sound pressure data to report in the instruction manual and/or for internal use per the direction of the project team.

Document any data printouts, engineering notes, photo's, etc., on a separate page and attach to the report.

This measurement plan is primarily based on the Hypertherm ES1380 Instruction for Sound Pressure Level Measurement.

The measurement site shall be free from all equipment, personnel, or objects not directly involved with the measurement as far as practical. A sketch of the measurement site showing equipment, personnel and objects and the position of the microphone relative to the plasma arc shall be provided with the data sheet.

CAUTION: Heat and spatter associated with the arc process may damage the measuring equipment. It is recommended that the microphone be protected by a calibrated windscreen (foam cover over microphone) and the equipment be covered.

Testing Performed by: Todd Doody (Printed) Todd Doody (Signature) Date: 5/22/2026

Testing Witness by: _____ (Printed) _____ (Signature) Date: _____

Testing Approved by: Greg Corban (Printed) _____ (Signature) Date: 6/10/2026

Classified as Hypertherm Inc. - Business Use - This document contains information that is proprietary or confidential to Hypertherm, Inc.

Acoustic Measurement Procedure and Data

Reference Document: ES1380

1. Complete the test condition section and set-up the equipment accordingly.

2. Set up the sound pressure meter parameters as described in ES1380.

3. Perform a confidence check of the measuring instrument using the external calibration device provided (see ES1380 for instructions). Record the calibration level and calibration factor below:

Calibration Level:	94	Calibration Factor:	1.8

4. For mechanized/machine/robotic torches, position the sound pressure meter at 1 meter (39.4 inches) from the plasma arc, and on a horizontal plane 340 mm (13 1/4" inches) above the plasma arc. For manual/handheld torches, position the sound pressure meter at 0.5 meter (19.7 inches) from the plasma arc, and on a horizontal plane 340 mm (13 1/4" inches) above the plasma arc. All distances will be referenced to the approximate midpoint of the plasma arc.

5. Measure the sound pressure with all equipment operating, but with plasma arc off. This may require relocation or shutting down of some equipment outside the test site. The purpose of this measurement is to determine the noise generated by the equipment which is essential to the arc process and which cannot be readily placed in a position remote to the test site. Measurement time is 1 minute. Record the measurement and attach the printout to this report, mark the printout as sound pressure measurement with no arc (see ES1380 for record storage and printout instructions).

6. Measure the sound pressure with the equipment operating under the conditions described in the test condition section. Measurement time is 1 minute. Start the sound pressure meter first then start the operating condition. Record the measurement and attach the printout to this report. Mark the printout as sound pressure measurement in operating condition and note the microphone position (see ES1380 for record storage and printout instructions).

7. Reposition the sound pressure meter 90^{o} from the original measurement position where possible. Repeat item 6.

8. Reposition the sound pressure meter 270^{o} from the original measurement position where possible. Repeat item 6.

9. For mechanized/machine/robotic torches, where the operator station is known to be closer than 1 meter, take additional measurements at locations that best simulate actual operator positions at 1.2 meters (47.2 inches) from the ground for seated operators and at 1.5 meters (59.0 inches) from the ground for standing operators. Repeat item 6.

10. Where feasible continue to repeat measurements, in any direction from the plasma arc, until no hazard exits; thereby determining the safe zone without noise protection.

    10a. At 2 meters. Repeat item 6 to determine if hazard exits.
    10b. At 3 meters. Repeat item 6 to determine if hazard exits.
    10c. At 5 meters. Repeat item 6 to determine if hazard exits.

11. Following the measurements perform a confidence check. Record the calibration level and calibration factor below:

Calibration Level:	94	Calibration Factor:	1.8

Classified as Hypertherm Inc. - Business Use - This document contains information that is proprietary or confidential to Hypertherm, Inc.

Test Condition:

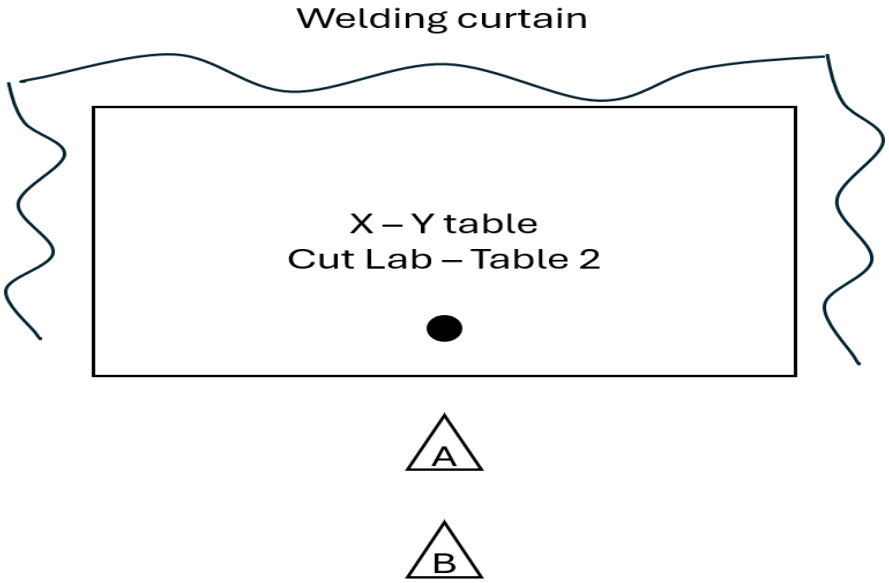
Torch Part Number:	059830	Power Source Model Name:	PMX125 480V CSA	Power Source Part Number:	059489
Maximum Current :	125A	Minimum Current :	NA	Arc Voltage at Maximum Amps:	183V
Work Piece Material:	Mild Steel	Work Piece Thickness:	1.5”	Arc Voltage at Minimum Amps:	NA
Operating Condition:	☐ Piercing ☐ Gouging ☒ Cutting ☐ Bevel Cutting ☐ Marking				
Table Parameters:	☐ Dry ☒ Wet Water Level (above/below work piece) inches:				6
Plasma Gas:	Air	Shield Gas:	Air	Cut Flow Pres.(psi) (Plasma/Shield):	79
Cartridge P/N:	528161				
Cut Speed IPM:	12	Torch Height:	0.18”	Cut Coupon:	Strip Cut

Sketch Keys

● Arc location at start

▷ Sound Meter

Identify all sound meter positions where measurements were performed and mark each location with the step used as described in the procedure and show the ID in summary table below.



Summary of Measurements

Sound Meter Position ID:	A – 0.5 meters ambient	A – 0.5 meters MAX	B – 1 meter - MAX
Max Peak dB:	100.5	125.0	118.9
LAV5 dB:	73.1	110.7	102.6

Classified as Hypertherm Inc. - Business Use - This document contains information that is proprietary or confidential to Hypertherm, Inc.

Comments: Cutting at minimum current was not tested as maximum output is considered worst case. No measurements made after 1 meter distance as no hazard exists. See Attachment 1 for all measured results.



Test Technician: Date: 5/22/2026

Equipment Used:

Bruel & Kjaer Type 2236 Sound Level Meter
Bruel & Kjaer Type 4231 Acoustical Calibrator

Classified as Hypertherm Inc. - Business Use - This document contains information that is proprietary or confidential to Hypertherm, Inc.

Attachment 1

Bruel & Kjaer
SLM Type 2236

SETTINGS:

S 60-140 dB
RMS: A Peak: C

Ambient - 0.5 meters
---
21 May 2026 11:51:00
Elapsed Time 0000:01:01
Pauses 0
Overload 0.0 %

MaxP 100.5 dB
MaxL 75.2 dB
MinL 72.2 dB

Lav5 73.1 dB
SEL N.A. dB
LEPd (Te= 0h01) N.A. dB

L10 73.5 dB
L50 73.0 dB
L90 72.0 dB

Bruel & Kjaer
SLM Type 2236

SETTINGS:

S 60-140 dB
RMS: A Peak: C

125A Cutting @ 0.5 meters
---
21 May 2026 11:53:17
Elapsed Time 0000:01:01
Pauses 0
Overload 0.0 %

MaxP 125.0 dB
MaxL 113.7 dB
MinL 104.5 dB

Lav5 110.7 dB
SEL N.A. dB
LEPd (Te= 0h01) N.A. dB

L10 113.0 dB
L50 110.0 dB

Classified as Hypertherm Inc. - Business Use - This document contains information that is proprietary or confidential to Hypertherm, Inc.

L90 108.0 dB

Bruel & Kjaer
SLM Type 2236

SETTINGS:

S 60-140 dB
RMS: A Peak: C

125A Cutting @ 1.0 meters
---
21 May 2026 11:57:10
Elapsed Time 0000:01:03
Pauses 0
Overload 0.0 %

MaxP 118.9 dB
MaxL 106.0 dB
MinL 89.6 dB

Lav5 102.6 dB
SEL N.A. dB
LEPd (Te= 0h01) N.A. dB

L10 104.5 dB
L50 102.0 dB
L90 101.0 dB

Classified as Hypertherm Inc. - Business Use - This document contains information that is proprietary or confidential to Hypertherm, Inc.