

## Metal Pump Housing Test Results

Pump is a feed table pump to a large CNC machine located within a "Machine cell" in the manufacturing facility.

Pump is only accessible from two sides, the operator's station approximately 12-15 feet away with the desk area only 8-10 feet away.

Pump was covered with a 3" thick acoustical blanket. The blanket was draped over a steel frame made of 2" angle iron. Approximate cost of blanket: \$3200.00

Blanket was custom fit to the frame and was attached with Velcro.

Frame size: 60"L x 40"W x 40"H

Silent Running was applied to 18 gauge sheet steel to a final thickness of approximately 50 mils one side. The panels were cut on site to fit the frame and allow for cutouts for the hoses.

The panels were attached to the frame with Velcro and corners duct taped.

Approximate cost of Silent Running : \$120.00

Part of the concern was being in an environment with oil and metal shavings, the blanket had absorbed oil and could constitute a fire hazard.

Sound readings were taken with the blanket in place, time and locations noted.

The blanket was removed and the panels with Silent Running installed and the sound readings re-taken from the same location at the same time of day.

Condition	Time	dBA	Distance	Location	500Hz	1K-Hz	2K-Hz	4K-Hz	8K-Hz	Comments	Average
Blanket / Silent Running in place over 5 sides of pump while pump is running	9:15	74	6 - 10 inches	Top	73.5	67.8	68.1	63.2	58		66.12
		77.2			70.7	73.8	70.5	65	60.4		68.08
Blanket / Silent Running in place over 5 sides of pump while pump is running	9:15	75	2 ft	Front	74.2	71.8	70.5	65.6	58.8		68.18
		75.7			70.5	69.5	69.6	65.8	60.3		67.14
Blanket / Silent Running in place over 5 sides of pump while pump is running	9:15	75	2 ft	Right	73.2	78.5	70	68.4	62.5	Right side of pump as you face it....over shuttle system of machine	70.52
		73.5			69.9	70.8	66.7	64.3	59.9		66.32
Blanket / Silent Running in place over 5 sides of pump while pump is running	9:15	75	2 ft	Left	72.7	68.7	66.1	65	59.7	Left side of pump as you face it is approx. 10 ft from wall and desk	66.44
		72.5			70	69	66.3	62.8	57.8		65.18
Blanket / Silent Running in place over 5 sides of pump while pump is running	9:15	73.4		At Desk area	71.6	72	65.6	62.5	58.1		65.96
		73			66.7	67.3	64.4	61.5	57.8		63.54

Red type is the acoustical blanket results.

Note: Blue type is Silent Running result readings.