OMNIMAX® DOME THEATER

With a five-story domed screen and 30-degree stadium seating, the OMNIMAX Dome Theater launches viewers into the midst of a cinematic experience unlike any other theater in the Portland metropolitan area. Images are projected onto the 79-foot wide, 10,000 square foot screen with a fish-eye lens, surrounding the audience and covering most of the viewer’s peripheral vision with breathtaking views of unsurpassed size and powerful impact.

The theater’s IMAX® projection system uses the largest film frame in the motion picture industry. Each frame is ten times the size of standard 35mm film. The large image places the audience in the center of the action, producing a sensation much closer to real-life than a conventional movie theater.

With the advent of IMAX DMR™ (digital re-mastering) technology, OMSI purchased new projection equipment, which now allows the theater to show feature-length films; previously films of only up to one hour in length were possible. Feature-length film reels measure nearly seven miles in length, and weigh over 400 pounds!

Before the innovation of IMAX DMR, there was no way to project a standard-sized film to the scale of an IMAX movie and still maintain a quality performance. IMAX theaters were built for 70mm film format; smaller film formats are comprised of a fine grain structure that would be magnified and detract from the underlying picture, creating a soft, unfocused and poor image. IMAX DMR digitally removes the grain and preserves the quality of the image, allowing it to be projected with precision clarity onto IMAX screens.

The brightness and clarity of the image on the IMAX screen is also due in part to the projector’s light source. The xenon gas arc lamp requires 15,000 watts and burns with a 6,000° Kelvin intensity, the equivalent of the sun. Because of its high-pressure interior, a ballistic face shield must be worn during replacement as protection against possible explosion.

The theater’s audio system was also enhanced to include 15,000 watts of uncompressed digital sound to match the intensity of the visuals. Six channels of audio are brought to life through 22 amplifiers producing over 15,000 watts of power. Behind the screen, six clusters of speakers transfer that energy to sound waves you can hear, and sometimes feel. The audio system is designed to move the audience across the theater in sync with the action in the film.

The OMNIMAX Dome Theater can be rented for a private screening of the numerous films we have retained on our library.

COMPONENTS:
- 305 seats
- 70 mm Rolling Loop horizontal projector
- 5-story, 79 foot-wide, 10,000 square foot domed screen
- 15,000-watt digital sound system
- 44 speakers
- 22 amplifiers