

Engineering Corner

NEMA Ratings

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If your system requires the use of an SVF electric actuator, limit switch, solenoid and/or positioner you are bound to run into NEMA rating(s). NEMA (National Electrical Manufacturers Association) is an American organization that publishes standards for performance of electrical enclosures. Its standards provide information of an enclosure's ability to withstand impact, corrosion resistance and waterproofing, among other things.

All SVF electric enclosures have a minimum NEMA 4 rating with some having the option of NEMA 4X and NEMA 7.

A **NEMA 4** rated enclosure is constructed for indoor or outdoor use and to provide a degree of protection to people against incidental contact with the enclosed equipment. It also provides a degree of protection against falling dirt, rain, sleet, snow, windblown dust, splashing water and hose-directed water and will be undamaged by the external formation of ice.

When your specific application requires protection against corrosive agents, a NEMA 4X rated enclosure is needed.

A **NEMA 4X** rating specifies that the external parts attached to these enclosures shall be manufactured of 304 Stainless steel, polymers, or materials with equivalent corrosion resistance.

Some applications are said to be in hazardous locations. Those environments may, for example, contain acetylene, hydrogen, manufactured gas, diethyl ether, ethylene, cyclopropane, gasoline, hexane, butane, naphtha, propane, acetone, toluene and/or isoprene. For those hazardous locations a NEMA 7 rated enclosure would be needed.

A **NEMA 7** enclosure is only for indoor use and it is constructed such that it provides added protection for hazardous locations. The NEMA 7 enclosures are designed to contain an internal explosion without causing an external hazard. They are constructed so that explosive fumes are prevented from entering the enclosure and designed to contain an internal explosion without igniting the explosive vapors present in the hazardous location.

For more information on our NEMA rated products contact the Engineering Department at SVF Flow Controls, Inc. - Engineering@SVF.net