S2.8 Vibration Isolation Requirements

All vibration isolation equipment shall be selected in accordance with this Schedule.

Item	Equipment	Vibration Isolation Requirements
1	All pumps with motor above 5kW	Unhoused type steel springs in series with 2 layers of 8mm thick, 40 durometer neoprene waffle pads with 1mm thick steel shim, of 38mm minimum total static deflection. Inertia block/equipment mass ratio minimum 2:1 required. Thickness of the inertia block shall be 150mm minimum and need not exceed 300mm. The inertia blocks shall support the pipework up to and including the first elbows. For floor supported elbows, isolate with similar type support of similar static deflection as for pumps. There shall be no rigid ties to the structure, all connections shall be looped or flexible. The 1st three pipe hangers from the pump shall be of minimum 20mm static deflection steel springs in series with min. 5mm deflection neoprene in shear hangers or supports.
2	All pumps with motor below 5kW	Unhoused type steel springs in series with 2 layers of 8mm thick, 40 durometer neoprene waffle pads with 1mm thick steel shim, of 25mm minimum total static deflection. Inertia block/equipment mass ratio minimum 2:1 required. Thickness of the inertia block shall be 150mm minimum and need not exceed 300mm. The inertia blocks shall support the pipework up to and including the first elbows. For floor supported elbows, isolate with similar type support of similar static deflection as for pumps. There shall be no rigid ties to the structure, all connections shall be looped or flexible. The 1st three pipe hangers from the pump shall be of minimum 20mm static deflection steel springs in series with min. 5mm deflection neoprene in shear hangers or supports.
3	All horizontal pipework beyond the 1st three spring hangers and within up to 100 pipe diameter length from the pumps or equipment	Double deflection neoprene in shear hangers or supports of minimum 6mm total static deflection. All isolator metal springs and fittings located outdoors are to be galvanised or epoxy coated.
4	All vertical riser and dropper pipework	Resilient pipe guides or mounts with neoprene in shear mounts in angle or channel steel frames of minimum 5mm static deflection.

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Item	Equipment	Vibration Isolation Requirements
5	All pipework unless otherwise specified	One layer 8mm thick neoprene waffle pad sleeve between pipe and clamp or supports.
6	Penetrations of all pipework and ducts	One layer 25mm thick 120 kg/cu.m firbreglass in 0.8mm sheet steel sleeve with nom. 25mm clearance and caulked from both sides with a non-setting resilient caulking compound e.g. Bostik Fireban or equivalent. Pipes shall be supported on both sides of penetration to maintain min. 25mm clearance between pipe/duct and structure.
7	All water tanks, reservoirs and pressure tanks	One layer neoprene impregnated duck pads min. 12mm thick, loaded to max. 5,000 kPa. For loads between 200 to 400 kPa, use 50 durometer neoprene ribbed or waffle pad.

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