

FDG'S COMPLETE SOLUTION FOR SPRINKLER SYSTEMS

FDG provides the complete solution for Pump House pipe work supports plus fire sprinkler bracketry and bracing. We have a unique approach to assist you from the design of your project through to the consolidation of your product supply. By assisting contractors to navigate the compliance challenges, we help ensure projects can be delivered cost effectively and on time.

TECHNICAL NOTE TN-20-45 – Seismic design for pumphouse pipe work supports

In November 2020 AON issued technical note TN-20-45. This increased the design requirements for pump rooms with a 'highest rated design flow' that exceed a flow rate of 3,500 l/min.

FDG worked with AON, BVT Engineering and respected sprinkler installers to develop an industry first approach to pump house design. This design allows contractors to meet certifications requirements without incurring the full cost of a structural engineer. FDG engaged BVT (a NZ registered engineer) to prepare a set of standardised designs and engineering tables. These give the contractor the ability to design the pump room pipe work supports using ModFrame, FDG's modular heavy-duty pipe work support system.

Using this unique engineering approach and our modular product offering, ensures the contractor has complete control of the design and build process, mitigating project risks and delays. At FDG our goal is to save you time and enhance efficiencies on your projects through reduced installation time and compliance workload.

The collage features several key documents:

- SEISMIC APPROVAL FOR MODFRAME 100 DOUBLE GOALPOST FRAME:** A large table with columns for 'Nominal pipe size of pump room pipe' (10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100) and rows for 'Nominal pipe size of support pipe' (10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100). The table contains numerical values representing seismic ratings.
- AON SPRINKLER CERTIFICATION:** A red and white certificate for 'AON Sprinkler Certification Technical Note' with 'Issue: 1.1' and 'Date: 19 August 2020'. The subject is 'Pump House Pipe Work'. It includes the Aon New Zealand logo and contact information for their fire protection services.
- Technical Diagrams and Notes:** On the left, there are diagrams of the ModFrame support system and a list of 'ALL OF THE DETAILS' including:
 - 1. AON Sprinkler Certification approval
 - 2. BVT Engineering approval
 - 3. FDG approval
 - 4. AON Fire Protection approval
 - 5. AON Fire Protection approval
 - 6. AON Fire Protection approval
 - 7. AON Fire Protection approval
 - 8. AON Fire Protection approval
 - 9. AON Fire Protection approval
 - 10. AON Fire Protection approval
- BVT Logo:** Located at the bottom right of the collage, indicating the engineering firm involved.

HOW TO USE FDG'S DESIGN PROCESS DOCUMENT

STEP 1

Using your pump room design showing the pipe work layout and elevations, select the frame type suitable for the job.

STEP 2

Calculate the seismic co-efficient for the specific area using NZS4541:2020 or NZS4219:2009. The seismic co-efficient may be provided in the job specific tender documents.

STEP 3

Select the appropriate co-efficient, height and width on the table for the chosen frame type. This will give you the de-rated capacity in kgs of the frame. It has been calculated by a registered NZ engineer accounting for gravity, seismic forces, uplift, C2 anchor capacities and spacings in accordance with all AON requirements.

STEP 4

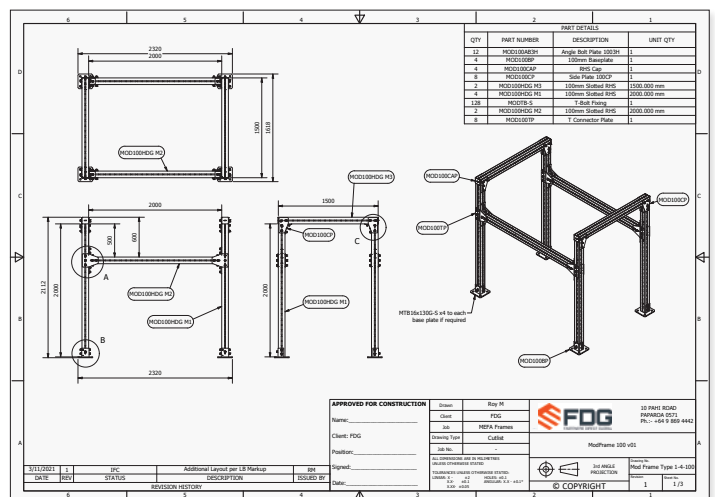
With this information you can calculate frame spacings and layouts allowing you to complete your pump room design.

STEP 5

Tables can be provided in technical submissions to AON to ensure compliance with TN20-45 and NZS4541:2020.

PROJECT SPECIFIC SEISMIC DESIGN

FDG has gained experience with industry partners including AON, which has lead to us creating a unique site-specific seismic design package for your sprinkler and pump house project. This package helps you to meet the compliance requirements for the new 2020 standard and provides a one stop shop offering. FDG will work with your design team to produce a buildable compliant seismic design making it simple for your on-site team. This package looks after the whole process including standard details, brace calculations, PS1 & PS4 documentation and layout plans as well as final product delivery to site.



SEISMIC ANCHORING UNDER 2020 FIRE STANDARD

To comply with technical Note 21-57 AON requires all "post-installed" masonry fixings to be C2 rated. This is due to the high seismic activity levels in New Zealand. FDG carries a full range of C2 Rated masonry fixings to help you comply with these regulations. Full testing results and compliance certification is supplied to ensure ease of compliance and technical submission.



TN21-57

All "post-installed" masonry fixings for gravity hangers and seismic bracing attachments must be C2 rated.

WHY NOT CONSOLIDATE YOUR ORDER

Under NZS4541:2020, bracketry and bracing components require extra compliance documentation and listing with AON. This includes both the gravity and seismic components. These products are outlined in TN21-53. FDG can help consolidate the supply of these products to save you time and ensure compliance on your jobs.

 <p>MODFRAME</p>	 <p>SEISMIC ANCHORS</p>	 <p>STRUT & CABLE TRAY</p>	 <p>PIPE CLAMPS & U BOLTS</p>
 <p>SPRINKLERS & VALVES</p>	 <p>THREADED ROD</p>	 <p>GENERAL FASTENERS</p>	 <p>ENGINEERING SUPPLIES</p>