**HYDRAULIC INSTALLATION TEST PROCEDURE-ITP**

 HCAA-020 WARM WATER SYSTEM

V2021.01 - April 2021

**GENERAL NOTES:** *This form is to be used by* ***the hydraulic contractor*** *for the purposes of testing the Plumbing Installation. Completion of all applicable sections is mandatory. This form must be submitted to the sites project manager and hydraulic certifier/consultant within 10 business days of testing the service.*

***Notes:*** *This series of Installation Test Procedures have been designed to assist the Plumbing Contractor to carry out suitable testing during a project. Each set of procedures details an industry accepted, list of objectives, that the Plumbing Contractor should carry out to fulfil their commission. The series of procedures will offer the client security in the knowledge that the objectives identified have been based on an Industry standard, endorsed by the HCAA (National), which represents the Professional Industry of Hydraulic Services Consultants.*

|  |  |  |  |
| --- | --- | --- | --- |
| Project: |  | Project Number: |  |
| Prepared By: |  | **Report Date:** |  |
| Date of Test/Inspection: |  | **Drawing Revision:** |  |
| Plumbing Company: |  | **Builder / Company:** |  |
| Plumbers Name: |  | **Builders name:** |  |
| Plumbers license number: |  | **Builders license number:** |  |
| Equipment |
| Backflow Test Kit Serial Number |  | Backflow Test Kit Verification Date |  |
| Flow and Pressure Test Kit Serial Number |  | Flow and Pressure Test Kit Verification Date: |  |

The hydraulic services elements of the Project have been tested in accordance with:

|  |  |
| --- | --- |
| Number | Title  |
| NCC Volume 1 | Building Code of Australia 2019 |
| PCA 2019  | Plumbing Code of Australia 2019 |
| AS/NZS 3500.4-2018  | Plumbing and Drainage -Part 4: Heated Water Services |
| Performance Solution | This installation is considered a performance solution and a suitable performance solution will need to be prepared |

|  |  |
| --- | --- |
| Comments/Remarks/Action: |  |
| Plumbers Declaration | I hereby state that that the information provided in this form is a true and accurate record. |
| **Signature:** | **Date:** |
| Builders Declaration | I hereby state that that the information provided in this form is a true and accurate record. |
| **Signature:** | **Date:** |

|  |  |  |
| --- | --- | --- |
| Description: | Yes | No |
| Installation conforms with AS/NZS3500.4 and manufacturers guidelines |  |  |
| Pressure Testing at 1500kpa for not less than 30mins |  |  |
| Water runs and fittings square and true / installed in tradesmen like manner |  |  |
| Pipe sizes match the design drawings |  |  |
| Dimensions from plan checked and pipework runs match design drawings |  |  |
| Installation according to SWMS |  |  |
| Suitable pipework supports/brackets have been installed at the correct distances  |  |  |
| Compliant Separation from other services has been provided  |  |  |
| Allowance for expansion provided where required |  |  |
| Mixers and 19bp’s square and true |  |  |
| Sleeving and acoustic treatment where required |  |  |
| Inspection by authority if required |  |  |
| Fire rating of walls, floors, photographic evidence |  |  |
| Test hold point witnessed |  |  |
| Pipes and fittings adequately protected for duration of construction |  |  |
| Removal of rubbish |  |  |

**HEATED WATER SERVICES**

|  |
| --- |
| WATER QUALITY GENERALLY Yes No |
| Water quality generally in relation to microbial growth and AS3666 |  |  |
| Water quality in relation to NSW Health and other drinking water requirements |  |  |
| Water quality in relation to legionella |  |  |
| WATER FLUSHING AND STERILISATION |
| Water flushing velocity calculations ensuring velocity is in excess of 0.75m/sec for all pipes |  |  |
| Sterilisation as required  |  |  |
| Consideration given to DVGW 551 |  |  |
| DEAD LEGS |
| Measure dead leg capacity and validate against design and statutory requirements |  |  |
| VALIDATION OF DESIGN |
| Flow test pumps and demonstrate pressure and flow is equal to the design |  |  |
| Demonstrate that all flow rates do not exceed the safe design velocity |  |  |
| HOT WATER TANKS |
| Validate water tanks are installed in an equal flow manifold |  |  |
| TPR valve action |  |  |
| Peak hour flow test and validate against the design (prob not needed for Westmead as they store the peak hour) |  |  |
| Validate overheat safety features |  |  |
| BALANCING VALVES |
| Flow rate through the balancing valve validated against the design |  |  |
| Demonstrate that all flow rates do not exceed the safe design velocity |  |  |
| Temperature at the outlet of the balance valve validated against the other valve within the system |  |  |
| BMCS OUTPUTS |
| Water metre validation data |  |  |
| Pump fails |  |  |
| System flow and return temperature |  |  |