

UTILITY STATIONS



POINT-OF-USE CONNECTIONS FOR UTILITIES IN A CLEANROOM ENVIRONMENT

MATERIALS

- 304L and 316L stainless steel
- AL-6XN® and Hastelloy® C-22® Super Alloys™

MOUNTING OPTIONS

- Wall mount — sleeve or clips
- Floor mount
- Ceiling mount
- Flush mount
- Recessed
- Removable legs with base plates

APPLICATIONS

- Pharmaceutical, Biotech, and Chemical industries
- Active Pharmaceutical Ingredients (API)
- Bulk pharmaceuticals
- Processes and products that require BPE compliance
- Finished products
- Chemical processes
- Liquid source gases
- CIP/SIP routing
- Power and data

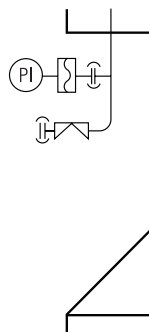


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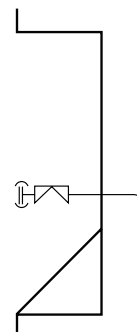
PANEL LINE TYPES

These P&ID diagrams represent typical configurations for each type of service in a recessed panel without a drip pan.

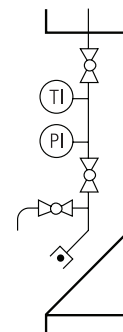
CSI can meet most customer-specified needs concerning line type configurations, panel design, and custom components.



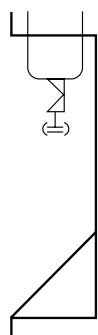
CIP SUPPLY



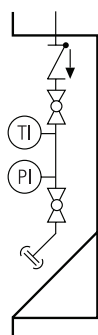
CIP RETURN



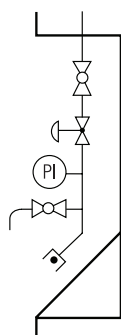
GLYCOL SUPPLY/
RETURN



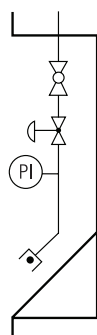
WFI



PROCESS
WATER



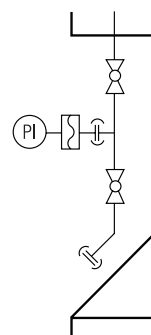
GAS/AIR
SUPPLY



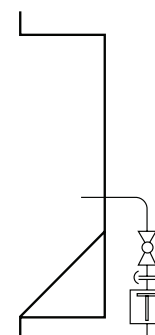
VACUUM



WASTE



STEAM



CONDENSATE

PANEL STRUCTURE OPTIONS

- Flush mount (Fig. 1, 4)
- Ceiling mount (Fig. 4, 5)
- Recessed (Fig. 2, 6)

PANEL DRAINAGE OPTIONS

- No drainage (Fig. 1, 3, 4, 5)
- Sloped bottom (Fig. 3)
- Drip pan (Fig. 2, 6)

PANEL MOUNTING OPTIONS

- Wall sleeve (Fig. 1)
- Wall clips (Fig. 6)
- Ceiling flat (Fig. 4)
- Ceiling pendant (Fig. 5)

PANEL DOOR OPTIONS

- Open front / No door (Fig. 2, 3)
- Access door (Fig. 3, 5)
- Partial door with latch (Fig. 6)

POWER AND DATA OPTIONS

- Fig. 1, 3, 4, 5

TAGGING OPTIONS

- Phenolic (for panel, line type, and instruments)
- Electroetch (for panel and line type)
- Stainless steel (for instruments)

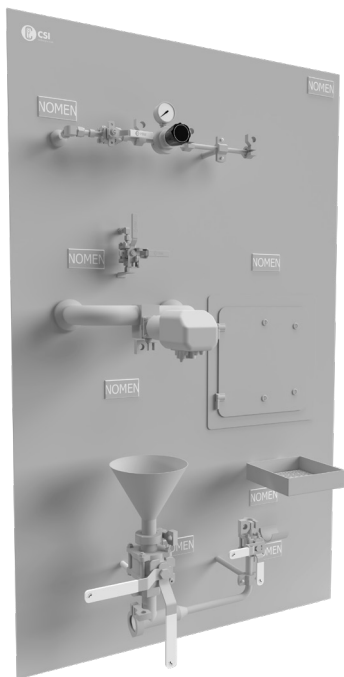


FIG. 1

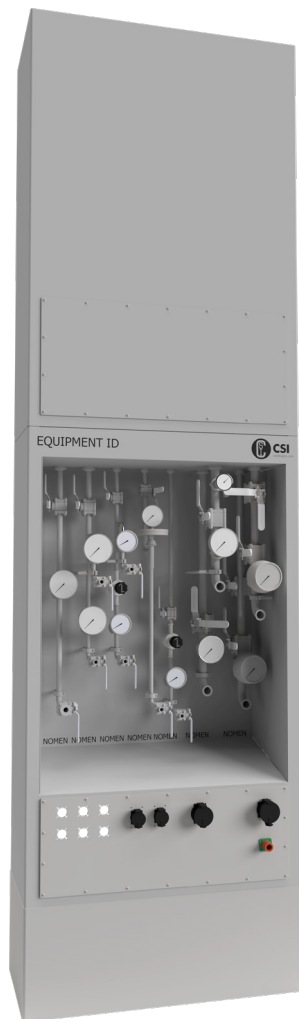


FIG. 3

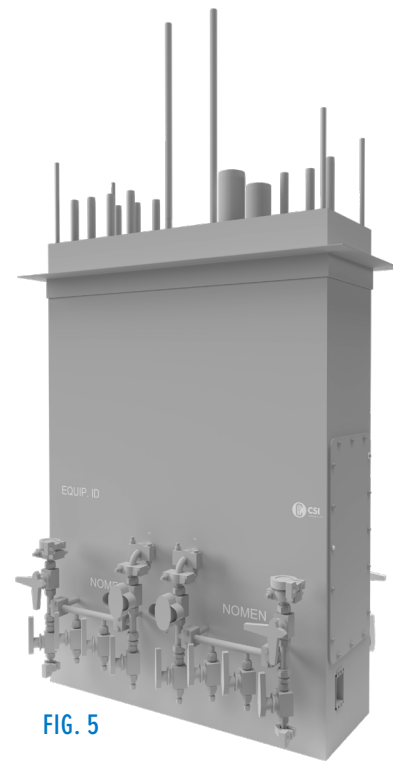


FIG. 5



FIG. 2

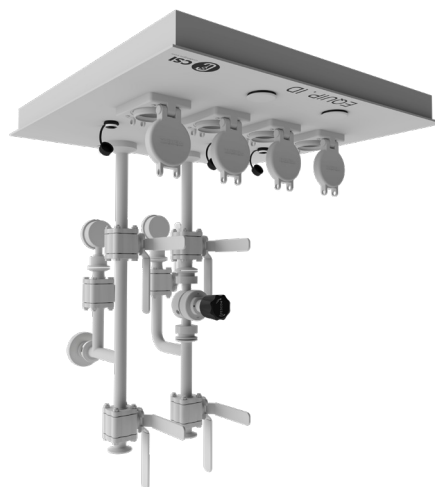


FIG. 4



FIG. 6

UTILITY STATIONS

DOCUMENTATION

- QA/QC documentation meets installation, operation, and performance qualifications for government regulations.
- Turn Over Package includes binder with material test certificates, as-built drawings, weld logs, material examination reports, welder certifications, and digital copies on a USB flash drive.

AVAILABLE UPON REQUEST

- Additional market-appropriate documents to support the validation of your process piping system
- Weld coupons
- Video recordings of borescopic examination



MEASUREMENT AND EXAMINATION EQUIPMENT

All utility panels endure a rigorous quality examination process conducted by trained professionals using only calibrated instruments for optimal efficiency.

- X-ray fluorescence equipment verifies material type for Positive Material Identification (PMI).
- High-resolution videoscopes assist trained examiners in assessing weld compliance with relevant standards.
- Calibrated profilometers verify Ra during surface finish examinations.
- Digital levels verify tube slope to determine drainability and optimize cleanability.



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