



Qualityguard™ Calibration Contracts and Extended Warranties For Inhalation Pharmaceutical Equipment

You need consistent, reliable, and accurate data from your high-standard inhalation pharmaceutical equipment. Protect your investment with regular cleaning and calibrations performed by MSP™, a Division of TSI®.

Why is Regular Mensuration & Calibration Important?

Mensuration is recommended by the United States Pharmacopeia (USP) prior to first use and periodically thereafter to make sure the equipment continues to operate within the proper in-use margins. Likewise, Good Manufacturing Practices (GMP) recommends periodic mensuration for any equipment being used to generate data, and encourages creating established procedures to ensure the equipment remains in proper operation.

There are many benefits that come with regular and consistent mensuration/calibration. Not only does it conform to FDA, USP, and GMP standards, but it also reduces the risk of inaccuracies, incorrect data, and equipment drift. Mensuration helps to extend the life of your equipment, and avoid costly and time-consuming bridging studies (or other validation methods) if the equipment is out of tolerance.

MSP™ is your destination for mensuration/calibration. As the original builder, we have replacement parts on-hand and can trouble-shoot potential problems.

What is a Calibration Contract?

The MSP/TSI Calibration Contracts are a convenient way to plan ahead while going easy on your budget. The contracts provide calibration services at a fixed, upfront cost and are available for new and pre-owned instruments. Additionally, at time of sale, it is also possible to purchase an extended warranty in parallel with a calibration contract. This provides an additional year of warranty coverage for a nominal fee.

Warranties

| | Standard with Purchase | Extended Warranty Option | Calibration Contract Option | B2B (Bumper to Bumper) Option |
|------------------------|--|---|---|---|
| Warranty period | 1 year | 2 years | 1 year | 2 years |
| Calibrations | Purchased separately | Purchased separately | 2 standard calibrations | 2 standard calibrations |
| What is it? | Unlimited repair of defects in material and workmanship for 1 year | Unlimited repair of defects in material and workmanship for 2 years | 2 calibrations to be used during a 2 year period Unlimited repair of defects in material and workmanship for 1 year (over a 10% savings over 2 years) | 2 calibrations to be used during a 2 year period and extended warranty coverage of unlimited repair of defects in material and workmanship for 2 years (over a 20% savings over 2 years) |

What's Done During a Calibration?

The content of the calibration service varies by instrument model. Find the details for each instrument on the back.

Generally, Each Calibration Service Includes:

- As found exam
- In case of failure, cease activity, contact for clarification/instruction
- Minor repair, replacement, and cleaning
- As left exam
- ISO 9001:2015 certified
- Tweaks to calibrate to better tolerance for in-use margins
- As found/as left calibration report and certificate

Calibration Services Do Not Include:

- Large consequential repairs and replacements
- Deep cleaning cost

To Order

Calibration contracts and extended warranties are available for numerous instruments. To learn whether your instrument – or an instrument you're considering purchasing – has a calibration contract or extended warranty available for it, please see the back side of this document, talk to your sales representative, or email sales@mspcorp.com.

Expedited Service

We now offer a FAST TRACK option. These requests are moved to front of line and typically take less than 5 days to process. Opt for expedited service when requesting service on the TSI® website or by emailing sales@mspcorp.com.

Eligible MSP™ Equipment

| Part No. | Description | 2023 Calibration List Price | 2-year Calibration Contract Availability (10% discounted price) | Ext War/B2B Availability |
|--|---|-----------------------------|---|--------------------------|
| Next Generation Impactor (NGI) & Next Generation Impactor Plus (NGI+) | | | | |
| 0170-01-5016 | Next Generation Impactor (NGI) (Includes visual inspection, optical inspection of every nozzle of stages 1-7, leak test, flow resistance and stage protrusion measurement for every stage) | \$1,720 | Yes | Yes |
| 0170-01-5014 | NGI Induction Port (Surface roughness measurement) | \$420 | Yes | Yes |
| 0170-01-5019 | NGI Pre-Separator (Includes visual inspection of the entire pre-separator assembly and pin-gauge inspection of all insert nozzle diameters) | \$420 | Yes | Yes |
| 0170-01-5018 | Standard mensuration of the NGI plus optical inspection of every nozzle of the micro-orifice collector (MOC) | \$2,340 | | |
| 0170-01-5013 | Full dimensional inspection of the NGI Induction Port | \$835 | | |
| 0170-01-5017 | Flow resistance measurement of the NGI | \$560 | | |
| 0001-01-9716 | Alberta Idealized Throat Mensuration | \$700 | Yes | Yes |
| 0170-01-5025 | Cleaning and re-mensuration of NGI stages, NTE \$1,000 per impactor | \$355 | | |
| Andersen-Type Impactor (ACI) | | | | |
| 0001-01-9972 | Standard 28.3 L/min Andersen Cascade Impactor (ACI) (Includes visual inspection, optical inspection of every nozzle of stages 0-7, leak test and flow resistance measurement) | \$1,720 | Yes | Yes |
| 0001-01-9980 | ACI Induction Port (Surface roughness measurement) | \$420 | Yes | Yes |
| 0001-01-9969 | ACI Pre-Separator (Includes visual inspection of the entire pre-separator assembly, surface roughness measurement and pin-gauge inspection of the nozzle diameter) | \$420 | Yes | Yes |
| 0001-01-9981 | Full dimensional inspection of the ACI Induction Port | \$835 | | |
| 0001-01-9979 | Full dimensional inspection of the ACI Pre-Separator | \$835 | | |
| 0001-01-9971 | Flow resistance measurement of the Andersen Impactor | \$560 | | |
| 0001-01-9970 | ACI Conversion Kit (60 L/min or 90 L/min) (Includes visual inspection, optical inspection of every nozzle of stages -2, -1 and -0) | \$570 | | |
| 0001-01-9945 | Cleaning and re-mensuration of ACI stages, NTE \$1,000 per impactor | \$355 | | |
| Fast-Screening Impactor (FSI) | | | | |
| 0185-01-5019 | FSI Insert qualification; including pin-gauge inspection of all insert nozzles | \$420 | | |
| Multi-Stage Liquid Impinger | | | | |
| 0001-01-9924 | Mensuration of the MSLI; includes visual inspection and measurement of all critical dimensions of every stage | \$1,790 | Yes | |
| Leak Testing And Flow Control/Measurement Equipment | | | | |
| 0001-01-9948 | Critical flow controller calibration (Copley model TPK, TPK-R, TPK2000, TPK2000-R, TPK2100, TPK2100-R, BAC2000, BAC2000-R, BAC2100, BAC2100-R); includes visual inspection, leak test, calibration of the differential and absolute pressure transducers, timer calibration and functional verification | \$1,185 | Yes | Yes |
| 0001-01-9991 | Flow meter calibration (Copley model DFM3, DFM4, DFM2000) | \$605 | | |
| 0001-01-9989 | Flow meter calibration (TSI® model 4143/4043) | \$605 | Yes | Yes |
| 0001-01-9990 | Flow meter calibration (TSI® model 4040) | \$605 | | |
| 0001-01-9929 | Leak tester (Copley model LTK) calibration; includes visual inspection, leak test, calibration of the differential pressure transducer and display | \$805 | | |
| 0001-01-9944 | Leak tester (MSP™ model 171) calibration; includes visual inspection, leak test and calibration of the differential pressure gauge | \$805 | | |
| 0001-01-9908 | Spray force tester (Copley model SFT) inspection/calibration | \$1,040 | | |
| 0001-01-9827 | Re-calibration of BRS Qualification Kit (Flow Verifier, stop watch, inclinometer, temp/%RH sensor) | \$2,120 | Yes | Yes |



MSP - Visit our website www.tsi.com/msp for more information.

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