



# Cavro<sup>®</sup> Liquid

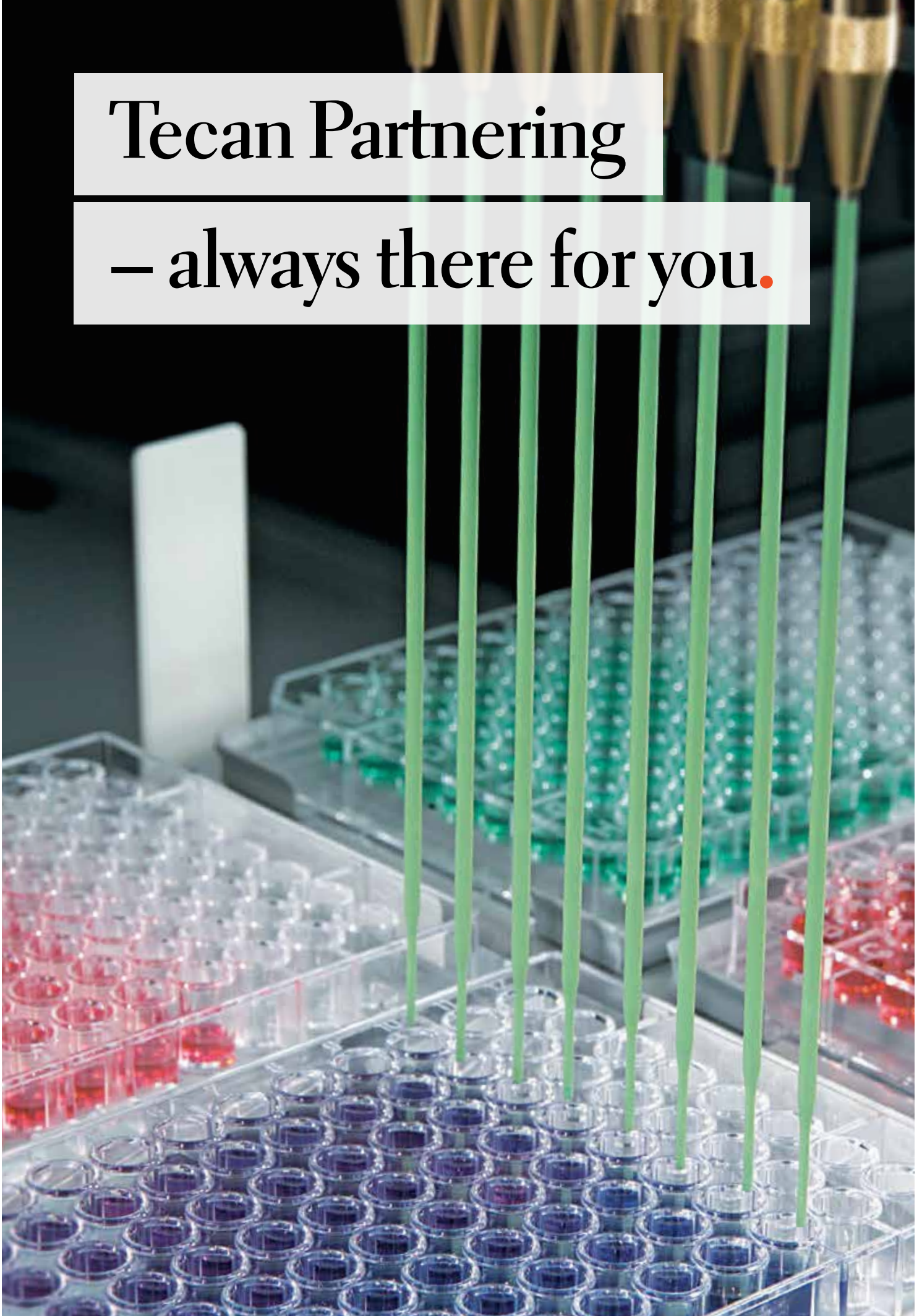
# Handling Probes.

EMPOWERING OEM INSTRUMENT DESIGN



**Tecan Partnering**

**– always there for you.**



**Fixed probes offer a number of advantages for automated liquid handling workstations, minimizing consumables costs and freeing up additional deck space for samples, labware and processing devices. The liquid displacement pipetting offered by washable fixed probes also allows more complex, multi-step protocols and minimizes aerosol generation. This enables high precision, accurate low volume dispensing with minimal risk of cross-contamination.\***

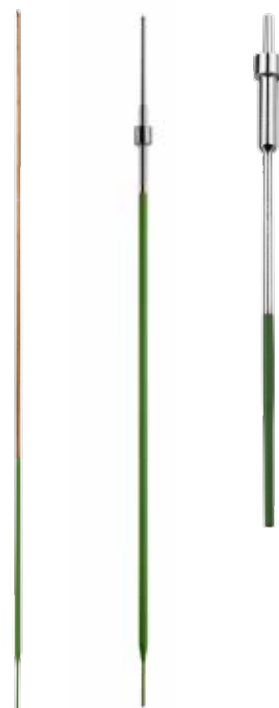
Our broad portfolio of Cavro® liquid handling probes ensures we can provide the right solution to suit your needs, offering easy integration, simplifying product development and accelerating time to market. Key benefits include:



- **Cost savings** – Reduces recurring consumables costs compared to disposable tips
- **Deck space optimization** – freeing up more labware space and reducing the need for user intervention
- **Effective tip washing** – Wash station minimizes carry-over of reagents or samples by washing the inside and outside of the probes
- **Liquid Level Detection** – Capacitance-based liquid detection ensures effective aspiration and minimizes carry-over
- **Application flexibility** – Reliable pipetting for a wide range of liquids used in clinical diagnostics, life sciences and analytical chemistry
- **Reduced project risk** – Designed specifically to work with Cavro® Omni, RSP and MSP robotic products

## PROBE DIMENSIONS

We offer a variety of probe sizes to match the broad dynamic range of our liquid handling modules and the needs of your application. Options include:



- **High capacity** – For maximum throughput, large volume probes allow multi-dispensing of liquids to several destinations following a single aspiration. Ideal for bulk dispensing
- **Low volume** – Offering optimal accuracy and precision, these probes ensure reliable and reproducible liquid transfers down to less than 1 µl
- **Choice of probe lengths** – A number of length/volume combinations is available, ensuring we can offer a solution where labware access or space is restricted
- **Variable bores** – Multiple options to ensure consistent performance for dispensing of, for example, non-homogeneous or highly viscous samples, as well as the use of high density plate formats

\* Frégeau et al. JALA, 2007, 12(6), 339-354

\* Weibel et al. JALA, 2010, 15:369-78

\* Iten et al. JALA, 2010, 15:379-89

## COATINGS

To maximize service life and ensure exceptional chemical resistance, Cavro® probes are available with a number of external and internal finishes:



- **Uncoated** - Offering excellent value for most applications
- **Ceramic** - Compatible with applications using harsh chemicals or slurry suspensions
- **PTFE** (polytetrafluoroethylene) - Hydrophobic, non-stick coating to minimize the risk of carry-over and improve pipetting performance for viscous fluids, as well as improved DMSO-resistance

## ATTACHMENT

Depending on the robot, there are different methods for attaching the probe to the holder: Omni robotic systems require a locking nut and RSP/MSP robotic systems require attachment via a set screw.






## SPECIALIZED APPLICATIONS







Specialized probes are available to suit a number of common applications, including:



- **Cap piercing** - These probes have a modified, narrower geometry for improved septum piercing, as well as a thicker wall to ensure rigidity; also available coated to reduce friction
- **NMR needles** - Ceramic-coated probes allowing direct injection of samples into NMR spectrometers
- **8-channel** - Offers access to common labware formats, such as 96-well microplates
- **384-channel** - High precision, low volume probes for dispensing into high density microplates

## SPECIFICATIONS AND ORDERING INFORMATION

| DESCRIPTION  | PART NO.*  | EXTERIOR COATING                            | INTERIOR COATING                            | OVERALL LENGTH (MM) | OD BODY (MM) | ID BODY (MM) | TIP LENGTH (MM) | OD POINT (MM) | ID POINT (MM) |
|--|--|---|---|---------------------|--------------|--------------|-----------------|---------------|---------------|
| <b>PROBES FOR OMNI ROBOTIC SYSTEM</b>  |  |   |   |                     |              |              |                 |               |               |
| <b>Standard Probe</b>  | 30055895<br>(without locknut)*<br><br>30055731<br>(with locknut)** | Light green PTFE coated (thickness < 20 µm) | None  | 155                 | 2.0          | 1.50         | 12.0            | 1.1           | 0.50          |
|    |  |   |   |                     |              |              |                 |               |               |
| <b>Short Probe</b>   | 10290079   | Light green PTFE coated (thickness < 20 µm) | None  | 145                 | 2.0          | 1.50         | 12.0            | 1.1           | 0.50          |
| <b>Uncoated Probe</b>  | 30032172   | None  | None  | 155                 | 2.0          | 1.50         | 12.0            | 1.1           | 0.50          |
|    |  |   |   |                     |              |              |                 |               |               |
| <b>Short Probe</b>   | 10290160   | Light green PTFE coated (thickness < 20 µm) | None  | 115                 | 2.0          | 1.50         | 12.0            | 1.1           | 0.50          |
|     |  |   |   |                     |              |              |                 |               |               |
| <b>Short, Low Volume Probe</b><br><b>DMSO-resistant</b>                              | 20734723   | Black hard PTFE (thickness < 20 µm)         | None  | 89.2                | 2.0          | 0.40         | 10.0            | 0.7           | 0.40          |
|     |  |   |   |                     |              |              |                 |               |               |
| <b>Wide Bore Uncoated Probe</b>  | 30039708   | None  | None  | 155                 | 2.0          | 1.50         | 12.0            | 1.3           | 0.80          |
|    |  |   |   |                     |              |              |                 |               |               |
| <b>Wide Bore Probe</b>   | 20734743   | Black hard PTFE coated (thickness < 20 µm)  | Superfinished                               | 155                 | 2.0          | 1.50         | 12.0            | 1.4           | 0.80          |
|  |  |   |   |                     |              |              |                 |               |               |
| <b>Cap Piercing Probe</b>  | 10290859   | None  | None  | 154.5               | 2.0          | 1.50         | 12.0            | 1.1           | 0.50          |
|  |  |   |   |                     |              |              |                 |               |               |
| <b>Standard NMR Probe</b>  | 30079428   | Light green PTFE coated (thickness < 20 µm) | None  | 225                 | 1.0          | 0.50         | 195.9           | 1.0           | 0.50          |
|  |  |   |   |                     |              |              |                 |               |               |
| <b>Uncoated NMR Probe</b>  | 30058353   | None  | None  | 150                 | 0.5          | 0.25         | 121.3           | 0.5           | 0.25          |
|  |  |   |   |                     |              |              |                 |               |               |
| <b>Inner Coated NMR Probe</b>  | 10290778   | Light green PTFE coated (thickness < 20 µm) | Light green PTFE coated (thickness < 20 µm) | 225                 | 2.0          | 1.50         | 12.0            | 1.1           | 0.50          |
|  |  |   |   |                     |              |              |                 |               |               |
| <b>Long, Ceramic Coated NMR Probe</b>  | 30021412   | Ceramic                                     | Ceramic                                     | 225                 | 2.0          | 1.50         | 12.0            | 1.1           | 0.50          |
|  |  |   |   |                     |              |              |                 |               |               |
| <b>Low Volume Probe</b>  | 30084741<br>(with locknut)**                                       | Light green PTFE coated (thickness < 20 µm) | None  | 155                 | 2.0          | 0.40         | 10.0            | 0.7           | 0.40          |
|  |  |   |   |                     |              |              |                 |               |               |
| <b>Low Volume Probe</b><br><b>DMSO-resistant</b>                                     | 10612804   | Light green PTFE coated (thickness < 20 µm) | None  | 155                 | 2.0          | 0.40         | 10.0            | 0.7           | 0.40          |
|  |  |   |   |                     |              |              |                 |               |               |

| DESCRIPTION  | PART NO.*                 | EXTERIOR COATING                                     | INTERIOR COATING                              | OVERALL LENGTH (MM) | OD BODY (MM) | ID BODY (MM) | TIP LENGTH (MM) | OD POINT (MM) | ID POINT (MM) |
|--|---------------------------|--|---|---------------------|--------------|--------------|-----------------|---------------|---------------|
| <b>Standard Ceramic Coated Probe</b>   | 30055733 (with locknut)** | Transparent Ceramic coated (thickness 1-3 µm)        | Transparent Ceramic coated (thickness 1-3 µm) | 155                 | 2.0          | 1.50         | 12.0            | 1.1           | 0.50          |
|    |                           |  |   |                     |              |              |                 |               |               |
| <b>Short 8-Channel Probe</b>   | 20728027                  | Light green PTFE coated (thickness < 25.4 µm)        | None  | 63.5                | 0.9          | 0.30         | 12.7            | 1.1           | 0.30          |
|     |                           |  |   |                     |              |              |                 |               |               |
| <b>PROBES FOR RSP/MSP ROBOTIC SYSTEM</b>   |                           |  |   |                     |              |              |                 |               |               |
| <b>STANDARD PROBE</b>  | 20738819                  | Light green PTFE coated (thickness < 20 µm)          | None  | 130                 | 2.0          | 1.50         | 12.0            | 1.0           | 0.50          |
|     |                           |  |   |                     |              |              |                 |               |               |
| <b>Long Probe</b>  | 20728072                  | PTFE coated (thickness < 20 µm)                      | None  | 193.5               | 2.0          | 1.50         | 12.0            | 1.0           | 0.50          |
|    |                           |  |   |                     |              |              |                 |               |               |
| <b>Long Probe</b>  | 20728170                  | Light green PTFE coated (thickness < 20 µm)          | None  | 340                 | 2.0          | 1.50         | 12.0            | 1.0           | 0.50          |
|     |                           |  |   |                     |              |              |                 |               |               |
| <b>Cap Piercing Probe</b>  | 20725877                  | Black hard PTFE coated (thickness 50 µm) pass collar | None  | 150                 | 1.6          | 1.10         | 12.0            | 0.7           | 0.50          |
|  |                           |  |   |                     |              |              |                 |               |               |

\* Part No. listed come without the locknut for attachment to Omni robotic system unless specified.

The standard non-adjustable locknut (Part No. 10619548) can be purchased separately.

\*\* Contact us to inquire Part No. without locknut.

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