

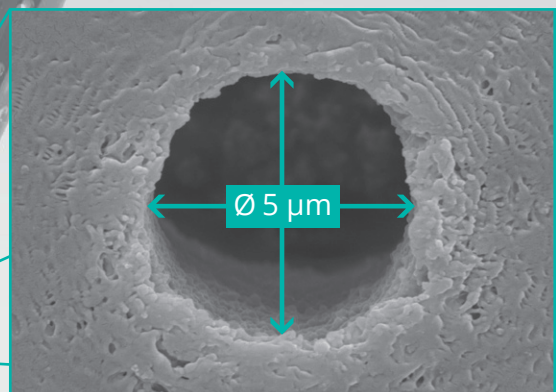


## MICROHOLES

For Drug Delivery Balloon Catheters (DDB)

### We Laser Drill your Balloon

- ✓ Drilled diameters down to 2  $\mu\text{m}$
- ✓ Adjustable hole sizes in steps of 1  $\mu\text{m}$
- ✓ Any desired hole distribution on the balloon
- ✓ All kind of balloons: peripheral and coronary
- ✓ No limitations in the balloon function: expansion, pressure (NP, RBP) ...

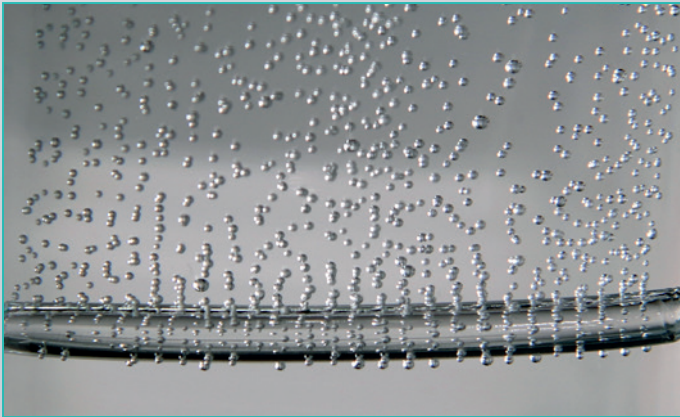


### Drug Delivery Balloon Catheters (DDB)

Micro-drilled drug delivery balloon catheters (DDB) are an alternative to drug-coated balloons (DCB). DDBs only release medication when they are dilated – in the exact locations where the active drugs are required to do their job. DCBs, on the other hand, lose some of their medication before they reach the lesion.

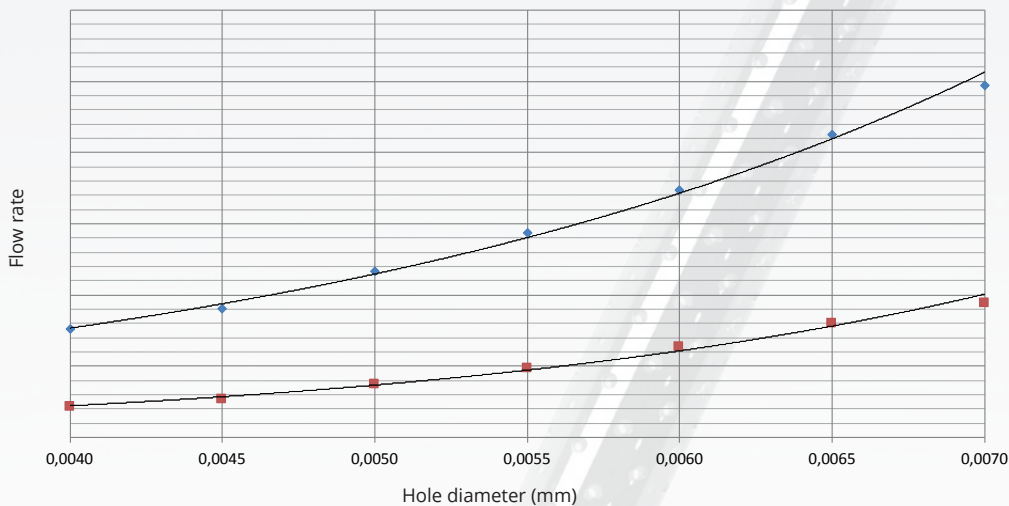
## Microholes for Drug Delivery Balloon Catheters

DDBs can release medication multiple times by repeated dilation of the balloon. This means a single DDB can be used to treat multiple lesions consecutively. The delivered dose of medication depends on the duration of dilation, the pressure and the number of holes in the balloon. The drugs are blended into the contrast medium which is filled into the balloon catheter just in the moment of intervention. So the drilled balloon catheter itself does not face drug expiry limitations. Drilled balloon catheters can also be used as "standard" balloon catheters without the addition of medication.



### Quality Assurance

- ✓ Inspection of hole sizes via on-site SEM
- ✓ Measurement of liquid release versus balloon pressure
- ✓ Alternatively: measurement of gas flow rate (non-destructive, 100 % inspection)
- ✓ Full traceability of laser-drilled balloons



Flow rates at various hole diameters and pressures

### Professional Production Capabilities

- ✓ We can handle your solitary balloons or complete catheter systems.
- ✓ Customized balloon fixtures are used to ensure the best reproducible quality.
- ✓ Experience with different balloon materials, such as polyamide (Nylon), PET, polyurethane ...

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