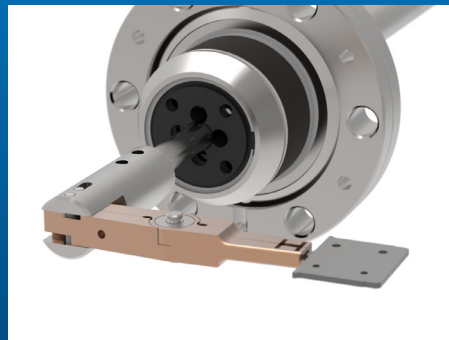




Wobble Sticks

Precise Manual Sample Transfer



Wobble Sticks





**The UHV Design wobble stick range offers
ultimate versatility for your bespoke applications.**

**Our slimline modular concept benefits from
UHV Design's cutting-edge high power magnetic coupling
technology. Plus, each series is offered with a choice of stroke
lengths and optional end effectors to suit your requirements.**



Why choose our Wobble Stick?

The UHV Design wobble stick is a slimline modular concept benefiting from UHV Design's high power magnetic coupling technology.

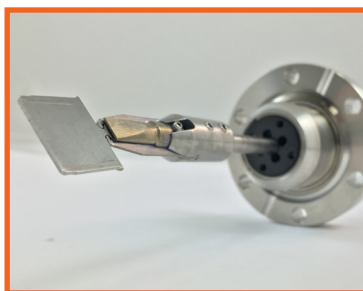
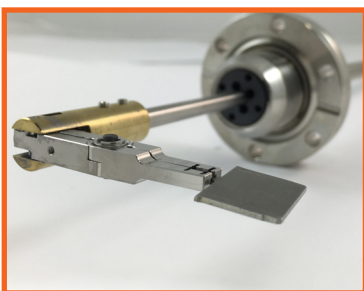
The coupling eliminates the need for long edge-welded bellows stacks, typically employed with conventional wobble stick designs. This reduces the risk of leaks, particularly for deposition applications such as MBE where particulates or deposition between bellows convolutions can reduce lifetimes or cause rapid and catastrophic failure. Also, unlike a bellows-sealed device, the wobble stick is not subject to the thrust due to vacuum, resulting in smooth, free-moving operation. In addition to the standard WS40 and WSG40 ranges of wobble sticks, for deep UHV applications the XWS40 and XWSG40 ranges utilise only ceramic and metal parts which provides exceptionally low outgassing.

The WS40 & XWS40 wobble stick ranges are available with a range of end effectors while the WSG40 & XWSG40 ranges include an additional hand-operated trigger mechanism to activate the end gripper. In-line and right-angle versions are available with end effector options for flag, puck and the ESCA stub.



KEY ADVANTAGES

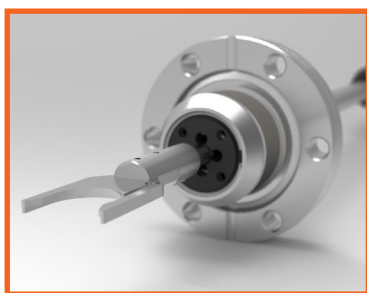
- » In-line and right-angled versions
- » +/-22° tilt
- » 100-350mm stroke range (available in 50mm increments)
Note: longer strokes are available upon request. Contact us for details.
- » Bakeout to 250°C without the need to remove the outer magnet assembly
- » Available with or without end-effector
- » Choice of end effectors for flag, puck and ESCA stub



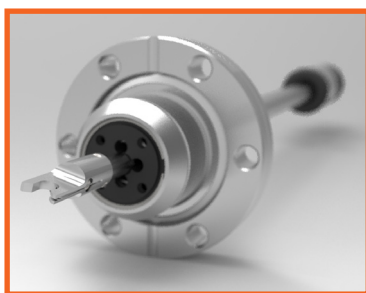
THE WS40 & XWS40 Range

The WS40 & XWS40 range of wobble sticks have been designed to offer precise manual manipulation of various sample holders using UHV Design's high power magnetic coupling technology.

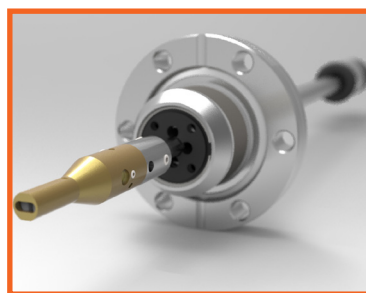
- 100-350mm stroke range (available in 50mm increments)
Note: longer stroke lengths are available upon request. Contact us for details.
- +/-22° tilt
- Bakeout to 250°C without the need to remove the outer magnetic assembly
- Choice of in-line and right-angled end-effector options for Flag, Puck and ESCA stub
- Linear breakaway thrust: 40N
- Rotary breakaway torque: 0.4Nm
- The XWS40 range uses only ceramic and metal parts which offers exceptionally low outgassing.



WS40 with in-line Puck Style end effector option.

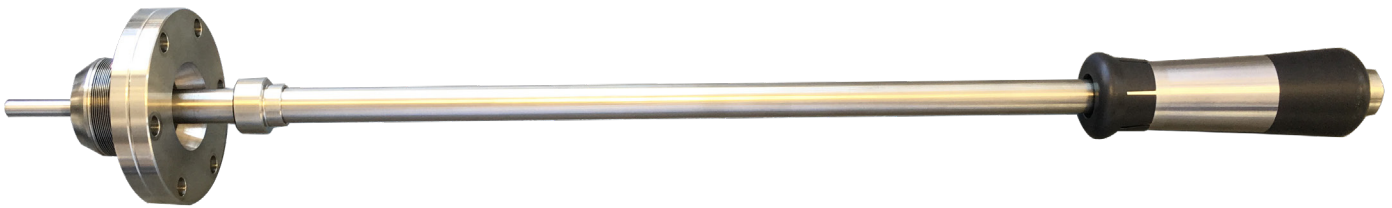


WS40 with in-line ESCA Stub end effector option.



WS40 with in-line Flag Toggle end effector option.

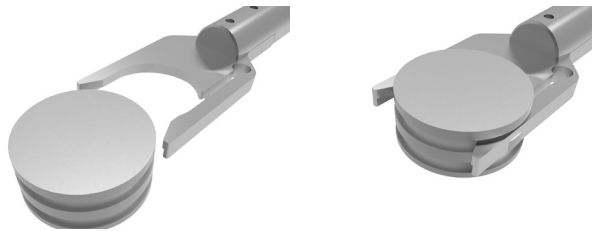
Standard WS40 supplied without end-effector



WS40 & XWS40 end-effector options

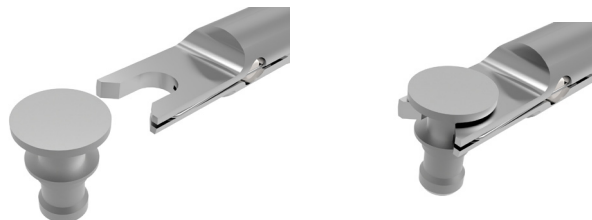
Puck Style

In-line or right angled fork to transport Puck style sample holders for WS40 wobble sticks.



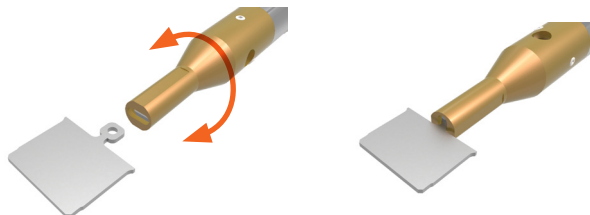
ESCA Stub Style

In-line or right angled fork to transport ESCA Stub style sample holders for WS40 wobble sticks



Flag Toggle

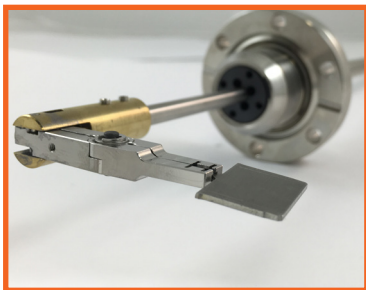
In-line 90° 'twist and lock' mechanism for flag style sample holders for WS40 wobble sticks.



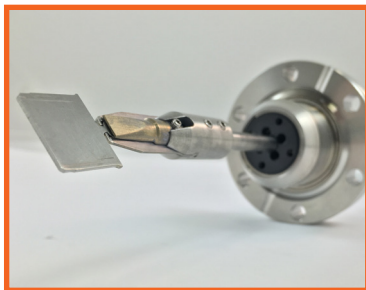
THE WSG40 SERIES

The WSG40 range of wobble sticks include an inner shaft that provides 5mm of independent linear motion when the trigger grip is actuated. In addition, a choice of end effector options is available.

- Integrated trigger grip with spring loaded action
- 100-350mm stroke range (available in 50mm increments).
Note: longer stroke lengths are available upon request. Contact us for details.
- +/-22° tilt
- Bakeout to 250°C without the need to remove the outer magnetic assembly
- Choice of in-line and right angle Flag end-effector options
- Linear breakaway thrust: 40N
- Rotary breakaway torque: 0.4Nm
- The XWS40 range uses only ceramic and metal parts which offers exceptionally low outgassing.



WSG40 with right-angle Flag Jaws end effector option.

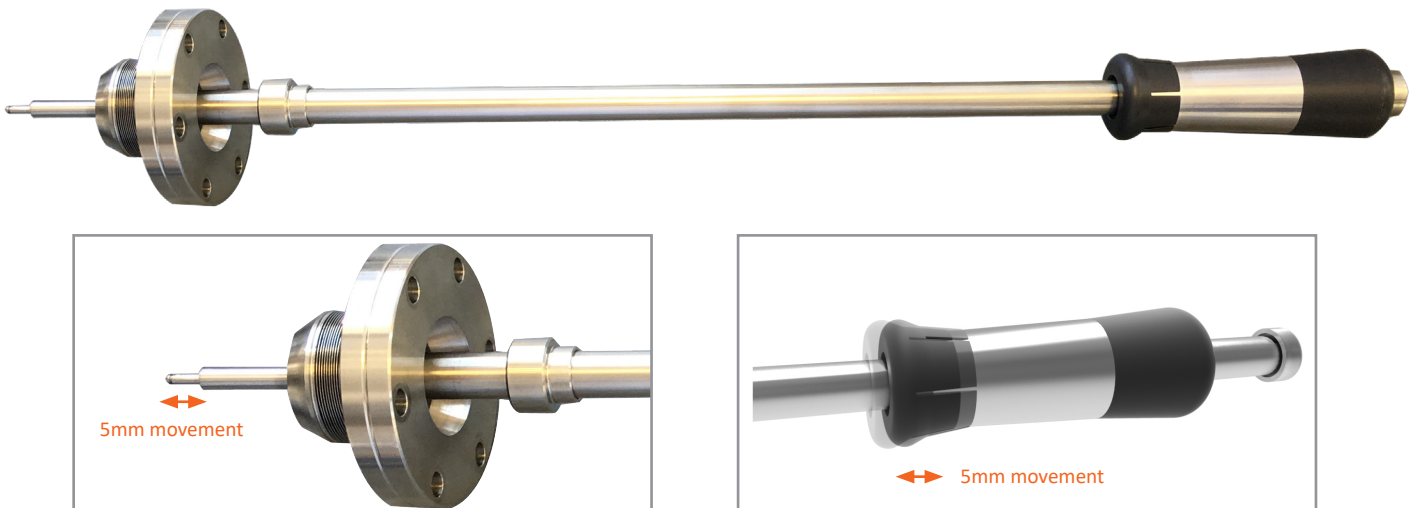


WSG40 with in-line Flag Blade end effector option.



WSG40 with in-line Flag Blade end effector option.

Standard WSG40 supplied without end-effector

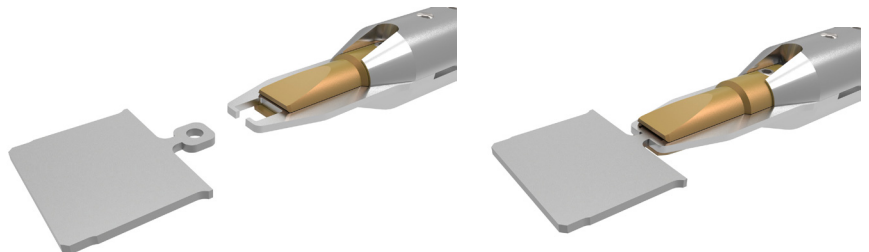


The WSG40 series of wobble sticks provides 5mm of independent linear motion of an inner shaft when the trigger grip is actuated. This can be used to actuate a custom built end effector or can be supplied preconfigured with a standard WSG40 end effector.

WSG40 end-effector options

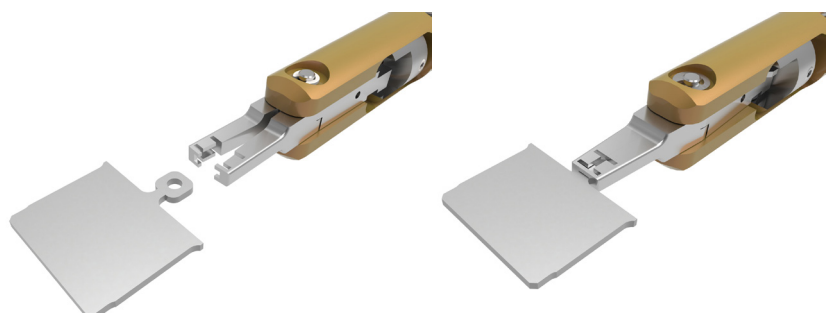
In-line Flag Blade

In-line clamping option for flag style sample holders for WSG40 wobble sticks.



Flag Jaws

In-line and right-angle jaws option for flag style sample holders for WSG40 wobble sticks.

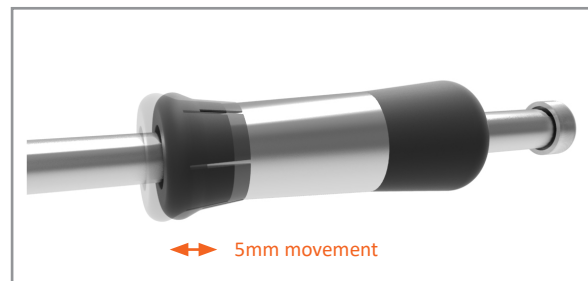
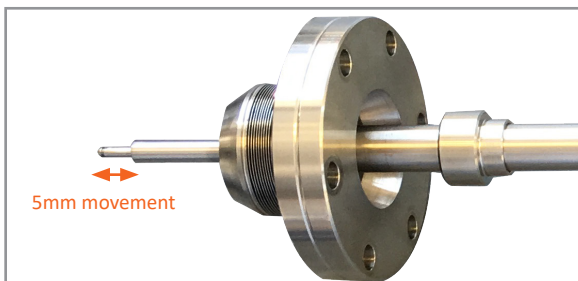


WS40 & XWS40 TECHNICAL SPECIFICATIONS



WS40 & XWS40 SPECIFICATIONS	VALUE
Mounting flange	FC38 (2 3/4") with clear holes
Angular sweep	+/-22°
Magnetic rotary breakaway torque	0.4Nm
Magnetic linear breakaway thrust	40N
Available stroke range	100mm to 350mm (50mm increments) Note: longer stroke lengths are available upon request. Contact us for more details.
Bakeout temperature	250°C
Shaft radial runout	1mm
Maximum cantilevered moment	0.5Nm
Maximum axial load	25N
Trigger Axial stroke	Not applicable
Default configuration	Supplied without end effector
End Effector options	Flag, Puck, and ESCA stub sample holders

WSG40 & XWSG40 TECHNICAL SPECIFICATIONS



WSG40 & XWSG40 SPECIFICATIONS	VALUE
Mounting flange	FC38 (2 3/4") with clear holes
Angular sweep	+/-22°
Magnetic rotary breakaway torque	0.4Nm
Magnetic linear breakaway thrust	40N
Available stroke range	100mm to 350mm (50mm increments) Note: longer stroke lengths are available upon request. Contact us for more details.
Bakeout temperature	250°C
Shaft radial runout	1mm
Maximum cantilevered moment	0.5Nm
Maximum axial load	25N
Trigger Axial stroke	5mm
Default configuration	Supplied without end effector
Gripper options	Blade type and Jaws type for Flag stye sample holders



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www.uhvdesign.com and click 'Contact'.