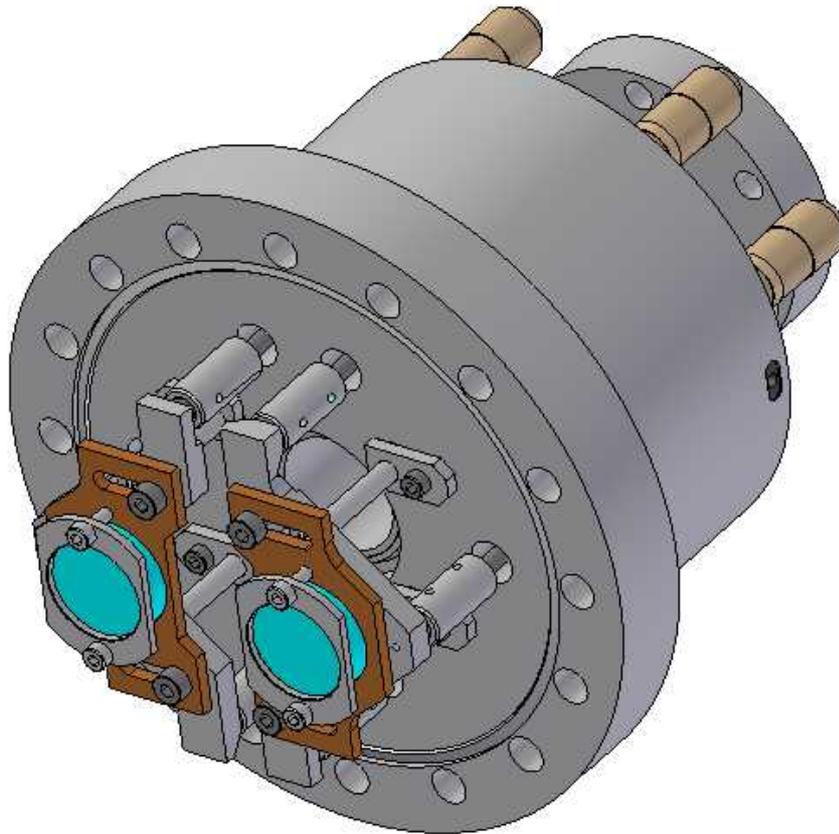


Multi-purpose flange mounted manipulators

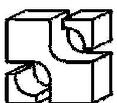


Features:

- ϕ , θ and z manipulation;
- UHV and HV versions;
- high stability and accuracy;
- compact design, up to two stages on CF(LF)100 flange;
- base flange sizes CF(LF) 100, 80 and 63
- CF(KF)40, 25, 16 and 10 extension port option;

Application examples:

- beam steering and focussing;
- sample manipulation.



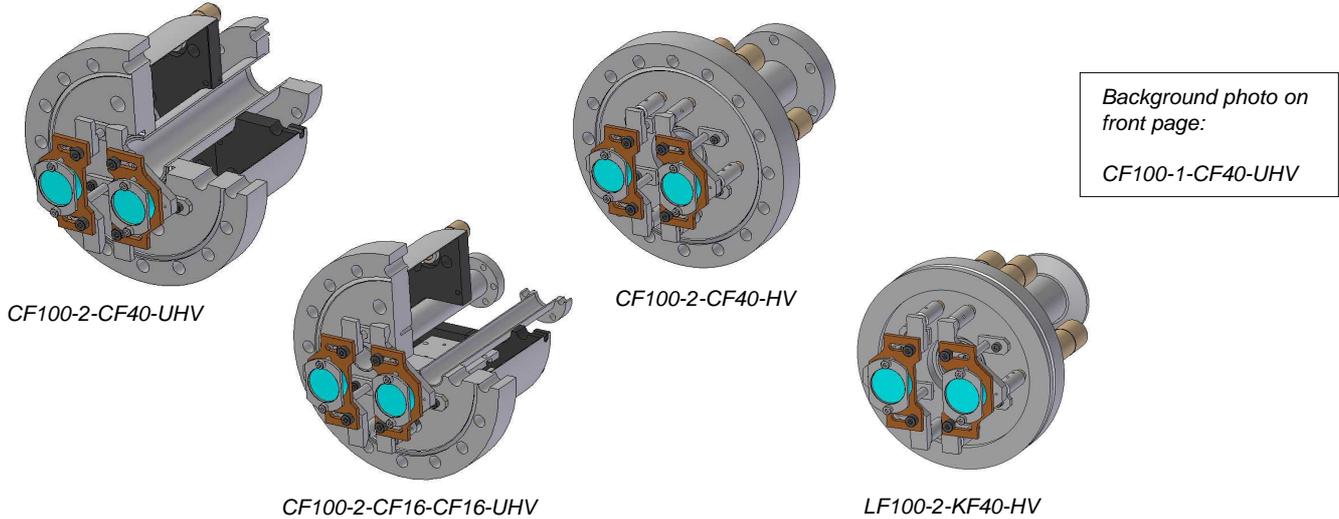
SCIENTEC ENGINEERING

Description:

These precision manipulators feature up to two independent ϕ , θ and z tilt stages build on a CF(LF)100 vacuum flange or one stage on a CF(LF)63 flange. Tilt and translation are controlled by three micrometers per stage. The UHV versions are fitted with vacuum force compensating double membrane bellows feedthroughs, guided by maintenance free recirculating ball linear guideways. The vacuum force compensation ensures that the stage maintains its set position regardless the pressure. The feedthrough mechanism is protected with a cover. Stage kinematic design ensures a playfree and stable operation. Standard sizes mirrors and lenses can be mounted directly in the optics holders. Holders can be modified to suit customer specific sizes or other objects at no extra costs. Diaphragm plates can be ordered separately. The manipulators can also be motorized.

Extension ports:

- CF(LF)100 base flange: one CF(KF)40 or KF25 port. One or two CF(KF)16 or KF10 ports. The size 16 and 10 ports can be placed in-line with the optics holder nominal centre line.
- CF(LF)80 or 63 base flange: one CF(KF)16 or KF10 port.

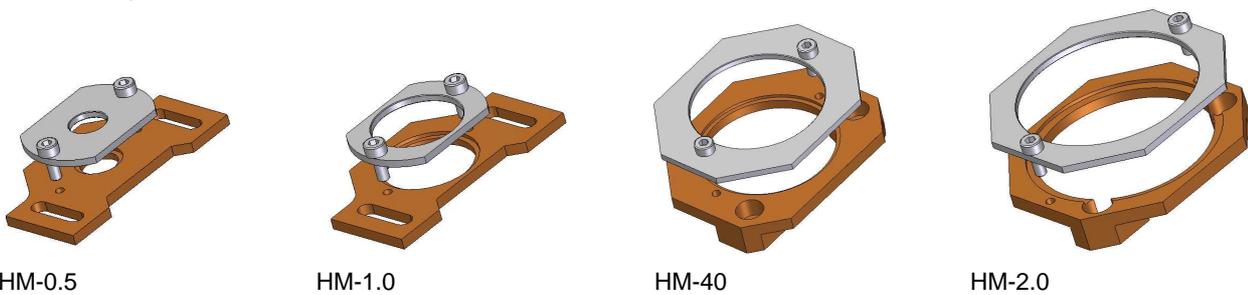


Optic holders:

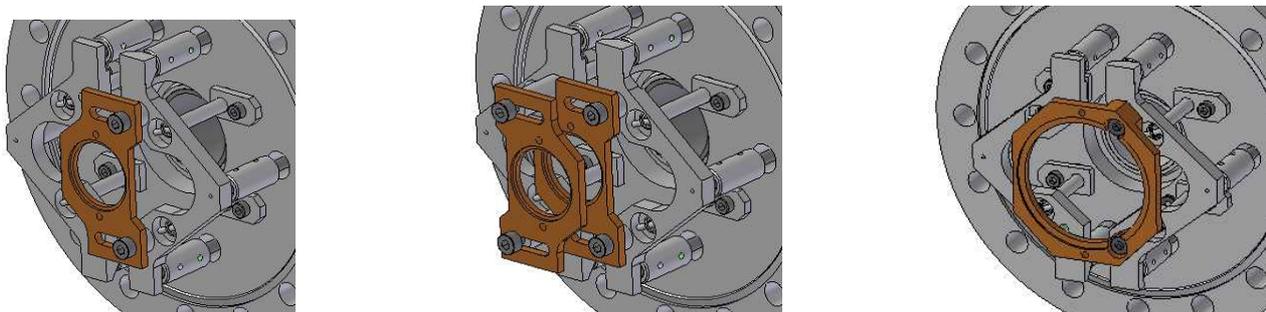
A variety of optics holders is available:

- Ø1/2" holder
- Ø1" holder
- Ø40 mm holder
- Ø50 mm / 2" holder
- universal mount (ferromagnetic)
- customer specific mount

- HM-0.5
- HM-1.0
- HM-40
- HM-2.0
- HU
- (not shown)



0.5" and 1" optics holders have slotted mounting holes to place them in any desired radial position. With spacers the holders can be centred and even stacked centred.

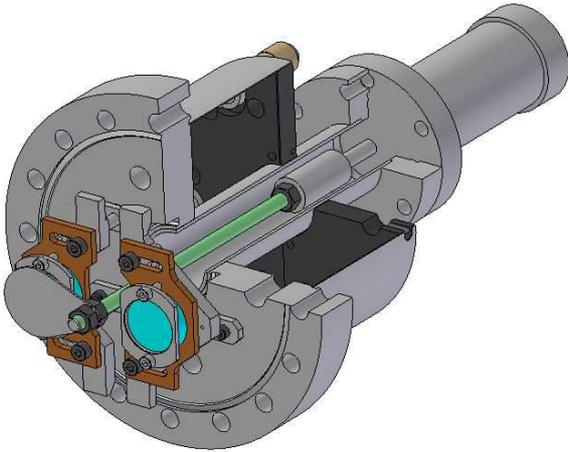


Centred holder

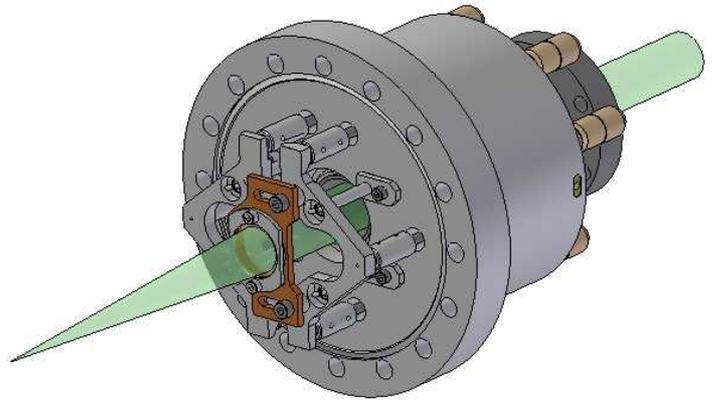
Stacked centred holders

40 mm and 2" optics holders can be mounted centred to the baseflange.

Application examples:

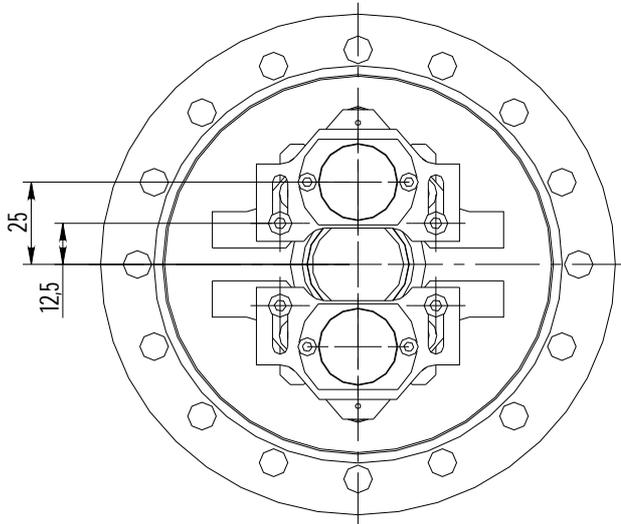


Rotary drive with shutter mounted at extension port



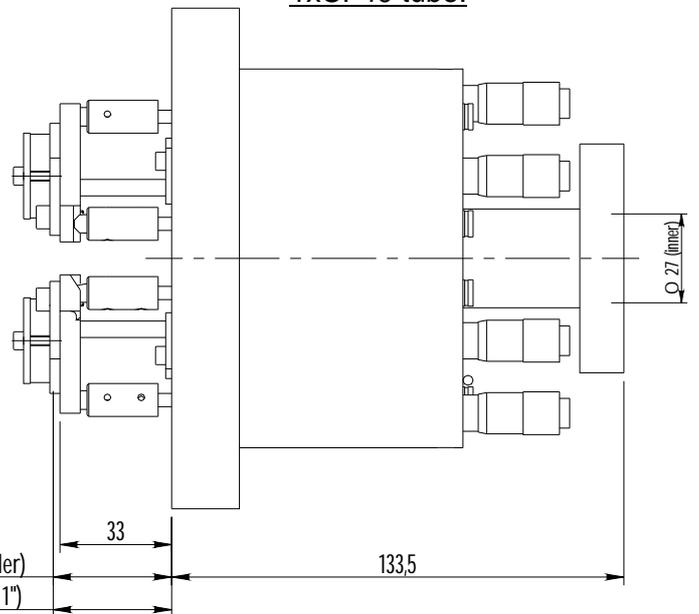
Laser beam focussing

Dimensions UHV CF100 base flange model:

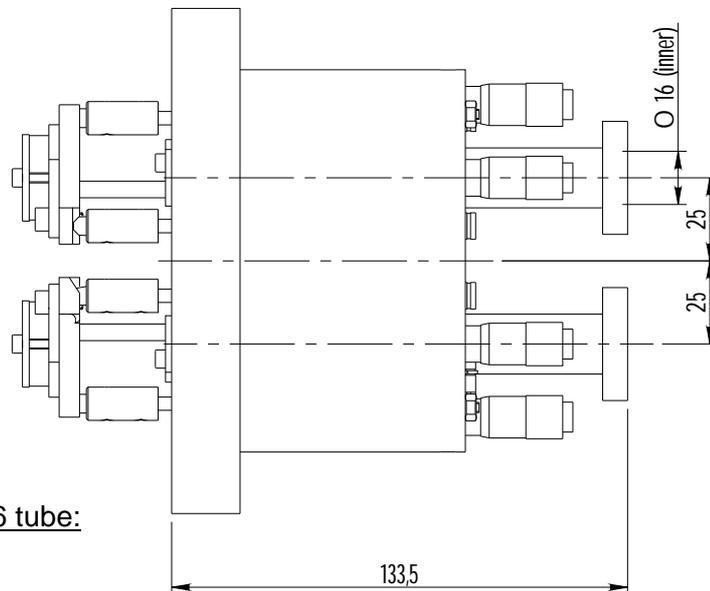


35 (ref plane optic holder 1" and smaller)
42 (ref plane optic holder larger than 1")

1xCF40 tube:



2xCF16 tube:



Specifications:

- z-stroke	+4,5 / -4,5 mm (0,01 mm res)
- φ, θ angle	+5° / -5° (0,01° res)
- bakeout	150°C (UHV version)
- weight	UHV approx 5 kg (CF100 base flange) N-UHV approx 4 kg (CF100 base flange)

Ordering information:

Product code:

Base flange size/type - number of stages – extension port size type - UHV/HV type.

Example 1:

CF100-2-CF16-CF16-UHV is a two stage UHV manipulator (edge welded bellows motion feedthrough) on a CF100 base flange with two CF16 extension ports.

Example 2:

CF63-1-KF16-HV is a one stage HV manipulator (O-ring sealed motion feedthrough) on a CF 63 base flange with one KF16 extension port.

Base flange size options:

-CF100; CF63; LF100; LF80; LF63

Number of stages options:

-2 or 1 stages for size 100 base flange; 1 stage for size 63 and 80 base flange.

Extension port options:

-None; CF40; CF16; KF40; KF25; KF16; KF10

On a size 100 base flange 1 x size 40, 1 x size 25, 2 x size 16 or 2 x size 10 ports can be added.

On a size 80 or 63 base flange 1 x size 16 or 10 ports can be added.

Environment options:

-UHV; HV.

Micrometers can be replaced by electrical actuators.

Special executions can be made on request, please inquire.

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