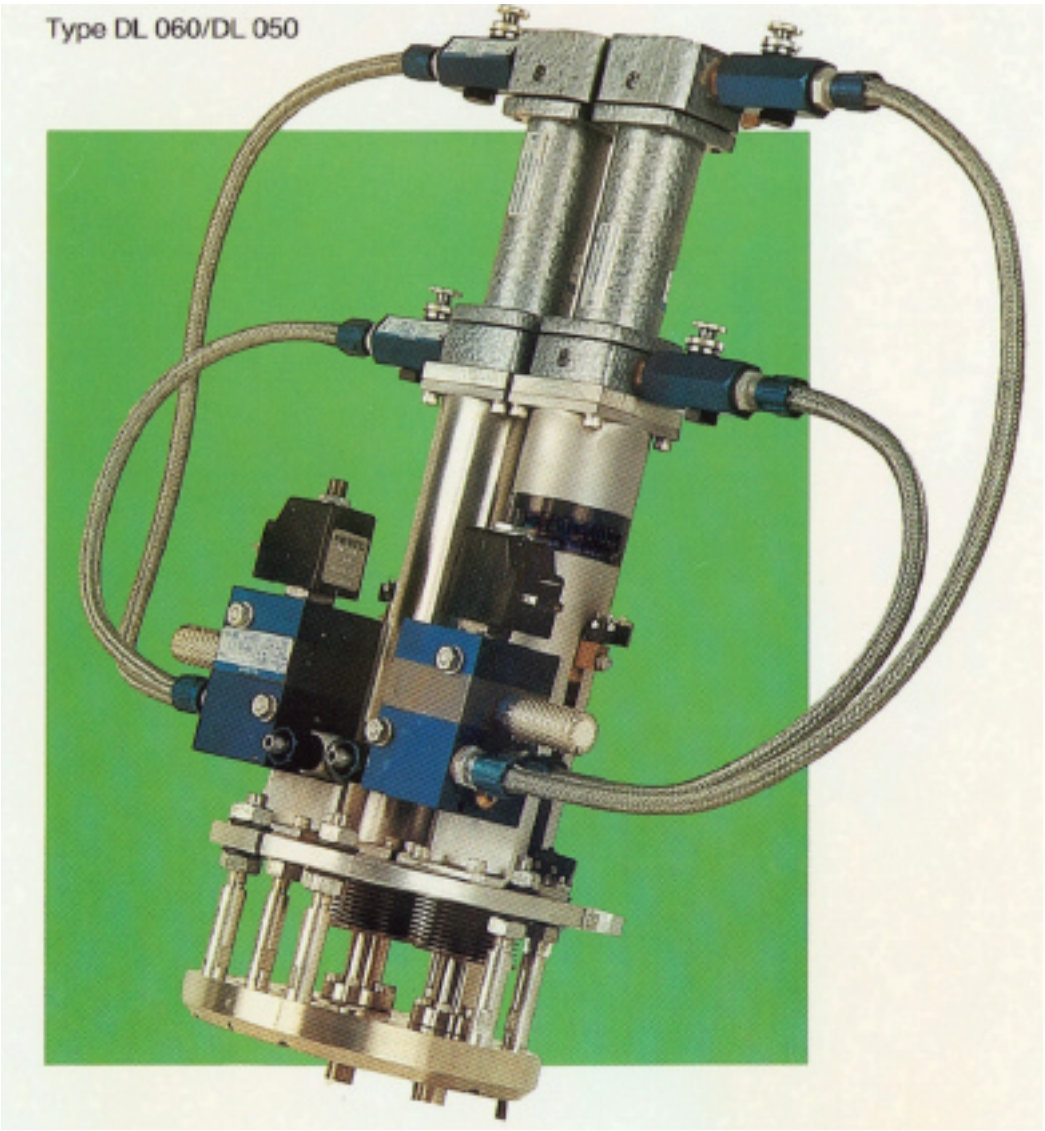
Compressed Air Actuated
High Vacuum Feedthrough
(single or double version)



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COMPRESSED AIR ACTUATED HIGH VACUUM FEEDTHROUGH
(Single and Double Version)

Application:

Feedthroughs provide for the 'in' and ‘out’ movement of elements, i.e., beam diagnostic components such as faraday cups, targets, viewing screens, harps, beam attenuators, capacitive pick-up probes, etc. The feedthrough is compatible with every standard diagnostic chamber. (Adaptations to special requirements are generally feasible.)

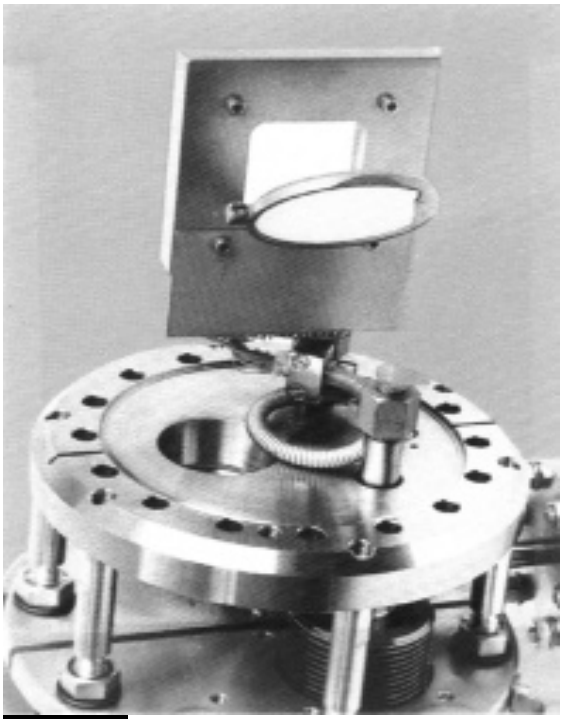


Fig. 1.

This photograph shows the vacuum side of a twin version feedthrough with a viewing screen and a profile grid (harp) provided for beam measurement.

A spindle with a standardized connector for connection of elements is driven by a compressed air cylinder. A membrane bellow is provided for vacuum sealing of all moveable elements within the flange area.

Cover Photograph: *Double compressed air actuated high vacuum feedthrough. Both cylinders are visible, with soleoid control valves, membrane bellows, and mounting plate with adjustment provisions of drive units.*

Technical Specifications:

Materials:		
Inside vacuum	:	Stainless steel
Outside vacuum	:	Nickel-plated mild steel
Supporting flange	:	6 inches O.D. (CF-100)
Stroke (standard)	:	3.15 ± 0.01 inches
Pressure	:	60 - 90 psi
Pressure control	:	Solenoid valve 24 V (0.5 A)
Locking	:	In event of pressure failure, the elements remain clear of beam line.
Damping of 'in' and 'out' movement	:	Adjustable
Adjustment of actuator spindle	:	Variable tilt of mounting plate.
Vacuum sealing	:	conflat; membrane bellow
Maximum leakrate	:	10^{-9} Torrs x liters/second

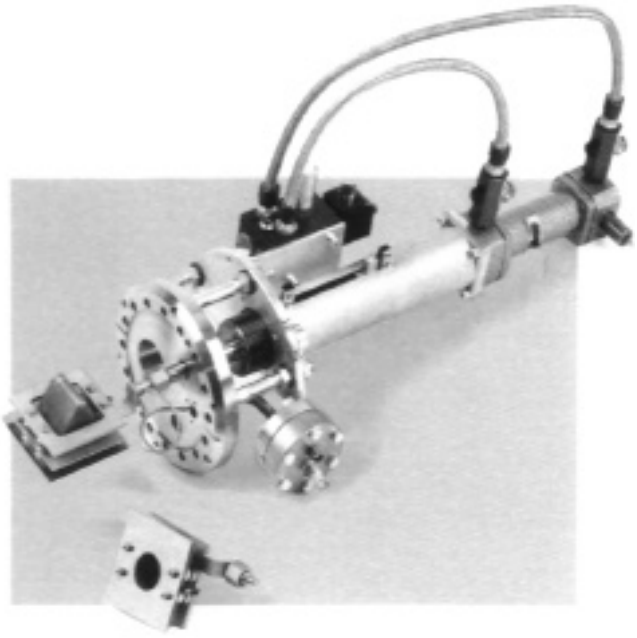


Fig. 2.

Picture shows single unit with uncooled Faraday cup attached to actuator.

It is feasible to mount one or two actuator units onto a 6" O.D. flange. For diverse applications, it is possible to mount current feedthroughs (32-pins for harps), BNC feedthroughs (normal BNC and HV - BNC for faraday cups), and miniflange with viewing window and mirror (for observation of viewing screen) onto 6" O.D. (CF-100) flange. Air cylinder pistons are equipped with adjustable end switches!

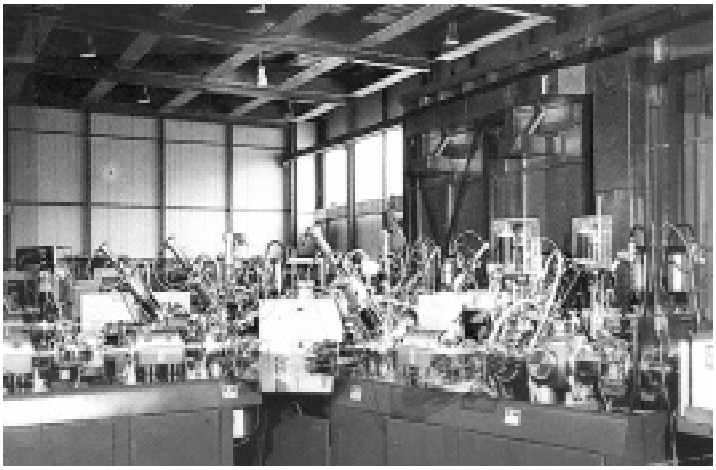
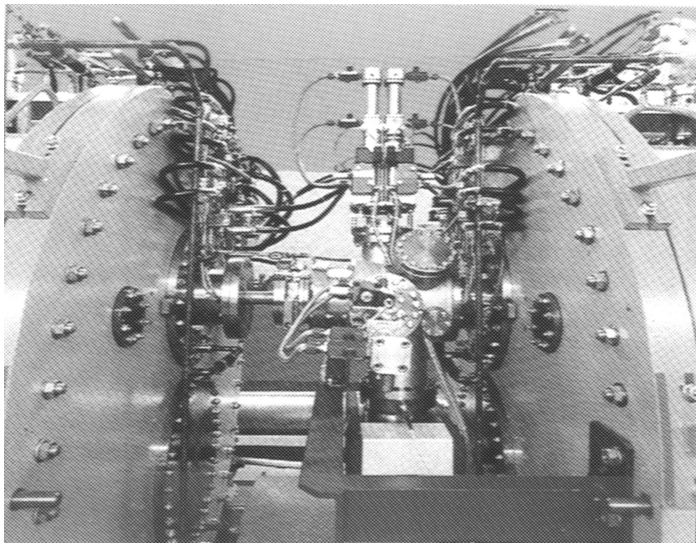


Fig. 3. Diagnostic element in injection area of UNILAC.

Fig. 4.

Beam diagnostic elements between two Wideroe tanks (UNILAC).



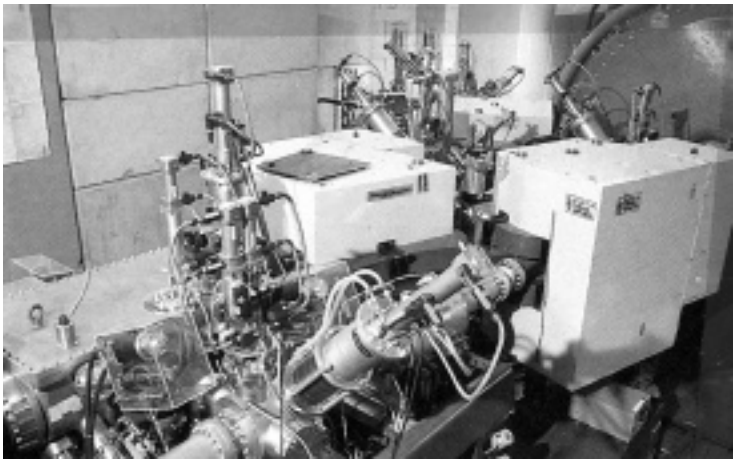


Fig . 5

Beam diagnostic elements at high energy end of UNILAC.