

Vakuové ventily

Dělení podle různých principů

Podle funkčnosti

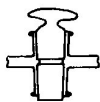
- oddělovací
- napouštěcí
- zavzdušňovací
- omezení čerpací rychlosti

Ovladání

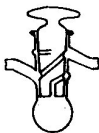
- ruční
- pneumatický
- elektromagnetický

Oblast použití

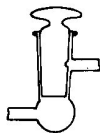
- hrubé vakuum
- HV vakuum
- UHV, XHV vakuum



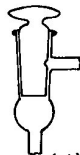
(a)



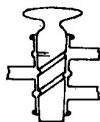
(b)



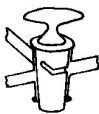
(c)



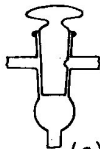
(d)



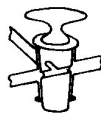
(e)



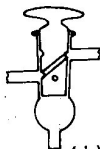
(f)



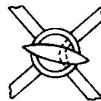
(g)



(h)

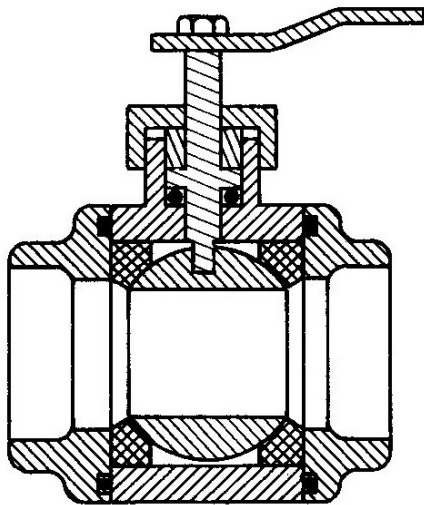


(i)

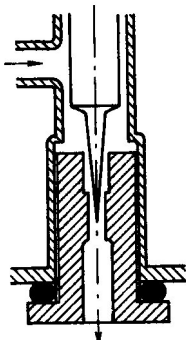


(j)

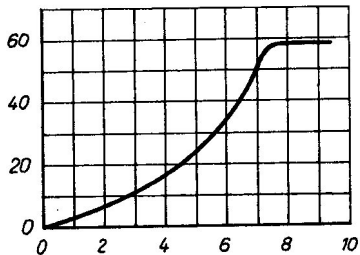
Kulový ventil



Jehlový ventil

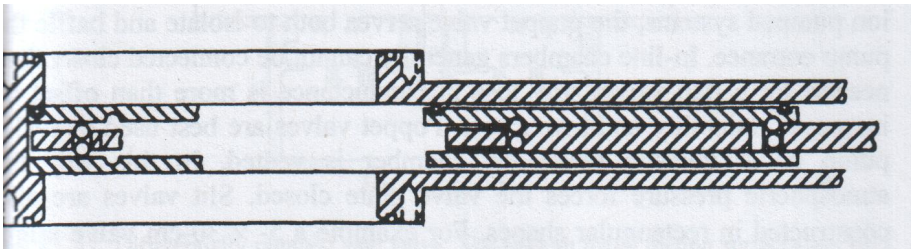


$I_N (\text{cm}^3(\text{NTP})\text{s}^{-1})$



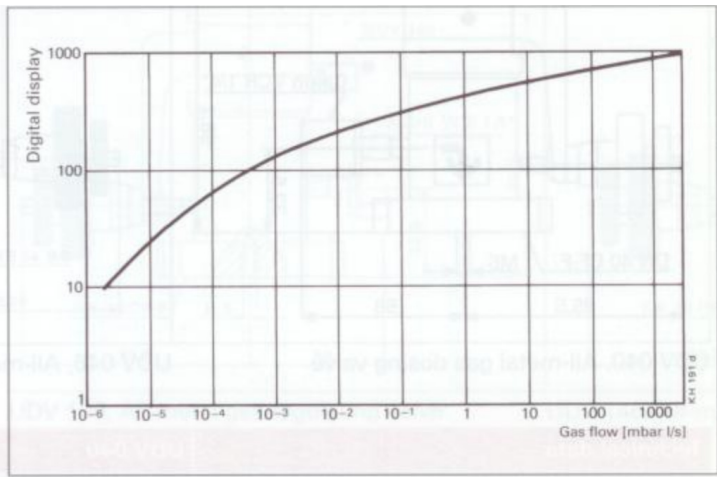
J. Groszkowski: Technika vysokého vakua, SNTL, Praha 1981

Deskový ventil



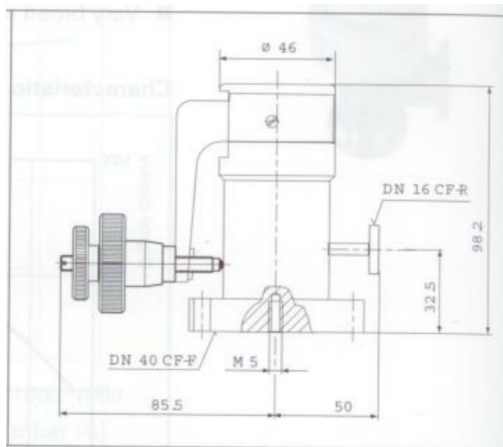
F.OHanlon: A Users Guide to Vacuum Technology, Wiley (2003)

EVN-116



firemní mat. Pfeiffer

UDV-046



UDV 046, All-metal gas dosing valve

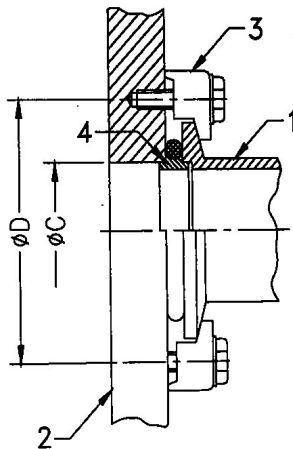
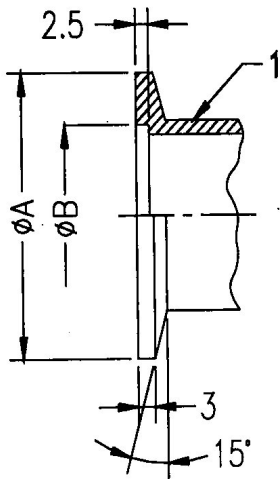
firemní mat. Pfeiffer min. 1×10^{-9} hPa/s

- deskové ventily - při otevírání dif.tlak menší než ~ 30 hPa
- ventily s kovovým těsněním - omezený počet cyklů
- jehlové ventily - nedotahovat silou
- zábrusové ventily - dobře namazat

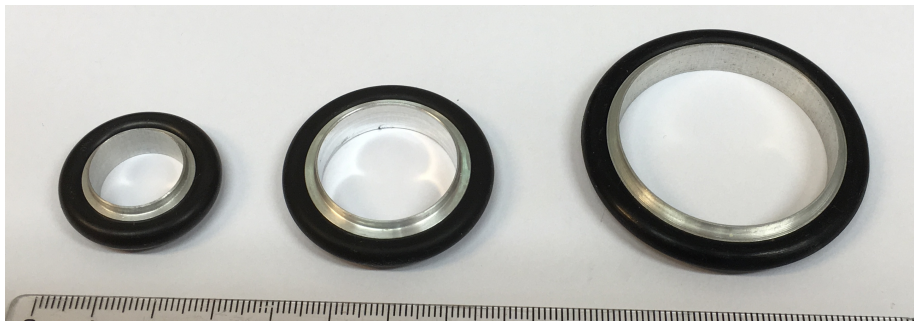
Rozebiratelné spoje

- zábrusy - zejména skleněné aparatury
- ISO-KF, (NW)
- ISO-K, ISO-F
- CF

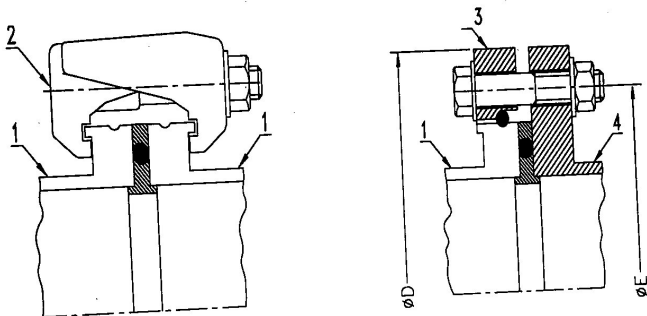
ISO-KF



firemní materiály firmy Pfeiffer

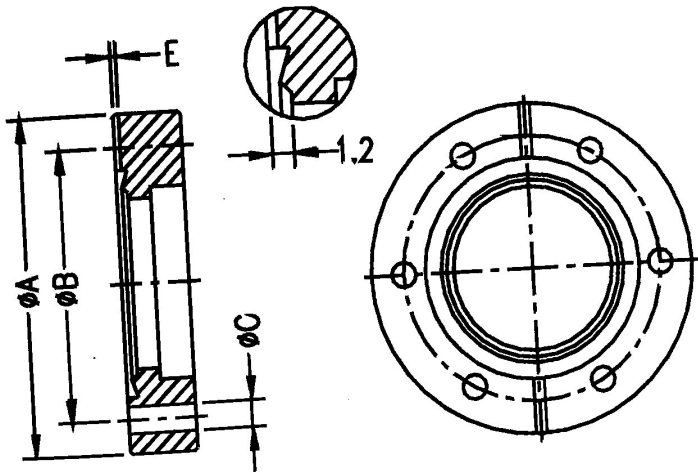


ISO-K, ISO-F



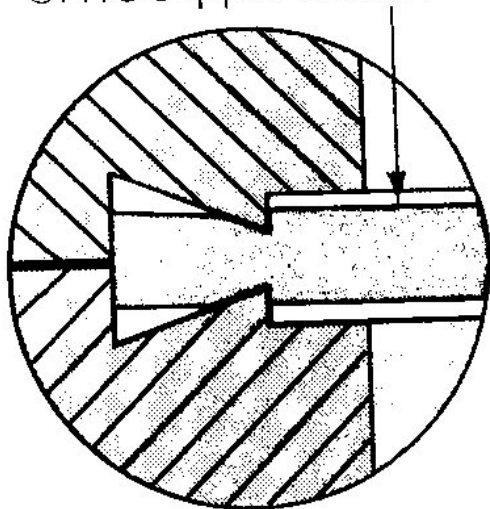
firemní materiály firmy Pfeiffer

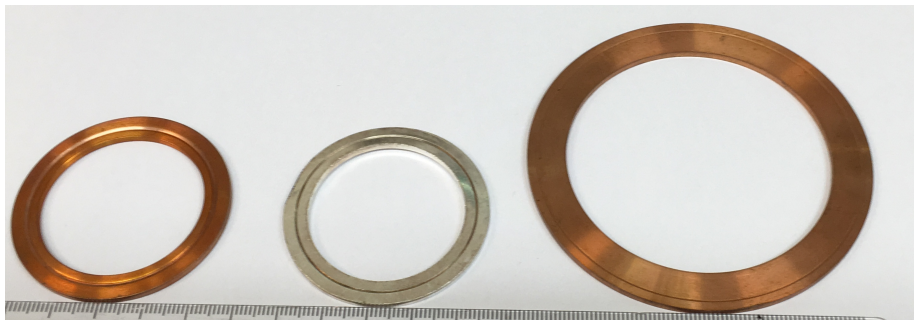
CF



firemní materiály firmy Pfeiffer

OFHC Copper Gasket





těsnění	min. tep [°C]	max. tep. [°C]
elastomer		
FKM	-15	150
NBR	-25	120
CR	-5	120
EPDM	-50	130
silikon	-55	200
kov		
Cu	-196	200
Cu + Ag	-196	450
Al	-196	150
In	-196	60