

# Vakuové ventily

Dělení podle různých principů

Podle funkčnosti

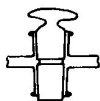
- oddělovací
- napouštěcí
- zavzdušňovací
- omezení čerpací rychlosti

Ovladání

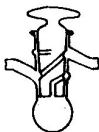
- ruční
- pneumatický
- elektromagnetický

Oblast použití

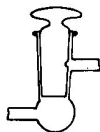
- hrubé vakuum
- HV vakuum
- UHV, XHV vakuum



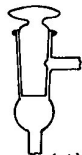
(a)



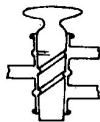
(b)



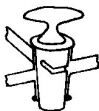
(c)



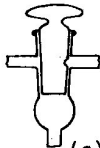
(d)



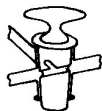
(e)



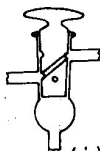
(f)



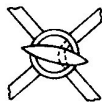
(g)



(h)

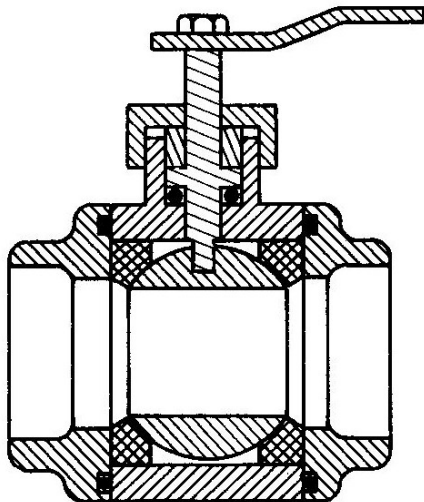


(i)

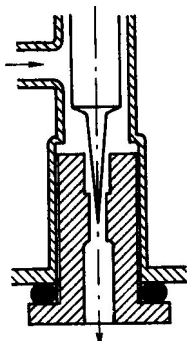


(j)

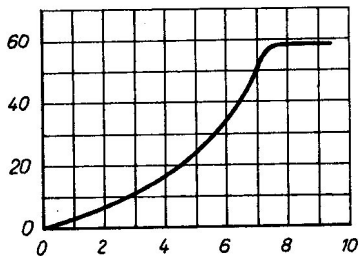
# Kulový ventil



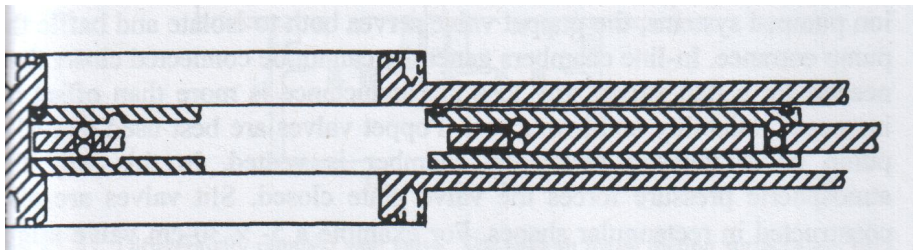
# Jehlový ventil



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



# Deskový ventil



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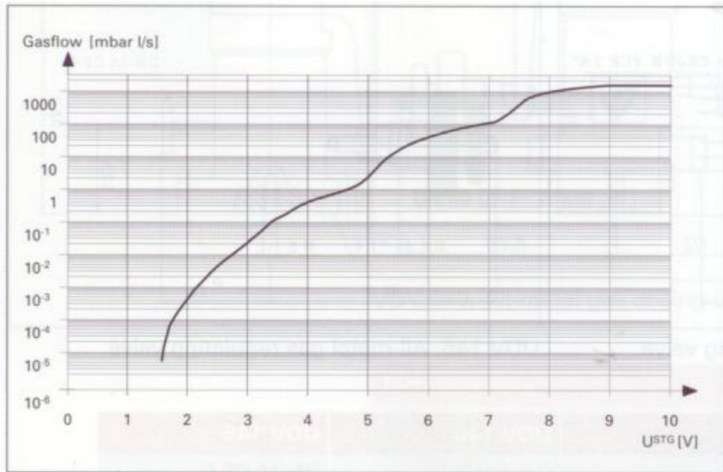
# EVN-116



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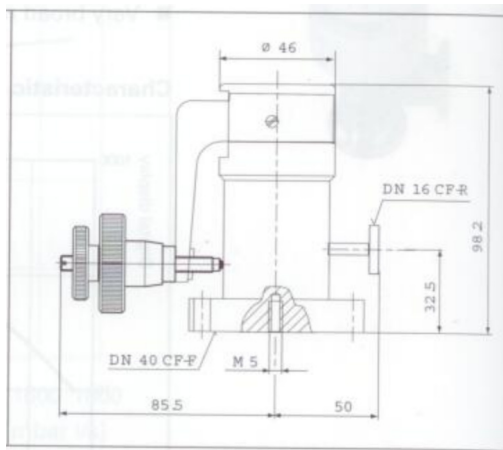
<sup>5</sup>firemní mat. Pfeiffer

# EVR-116



EVR 116, Gas regulating valve

# UDV-046



UDV 046, All-metal gas dosing valve

$7 \text{ min. } 1 \times 10^{-9} \text{ hPa/s}$

$7$  firemní mat. Pfeiffer

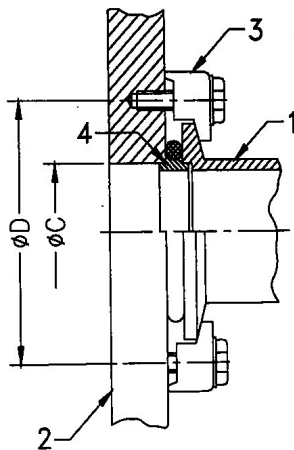
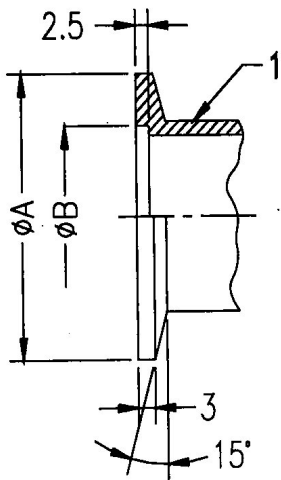


- deskové ventily - při otevírání dif.tlak menší než  $\sim 30$  mbar
- ventily s kovovým těsněním - omezený počet cyklů
- jehlové ventily - nedotahovat silou
- zábrusové ventily - dobře namazat

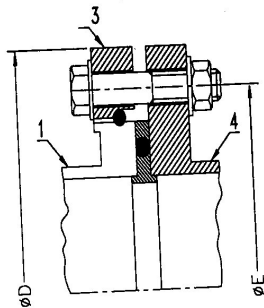
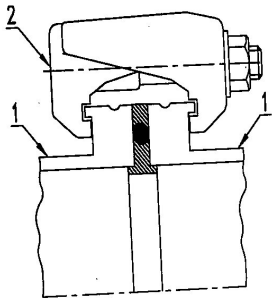
# Rozebíratelné spoje

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

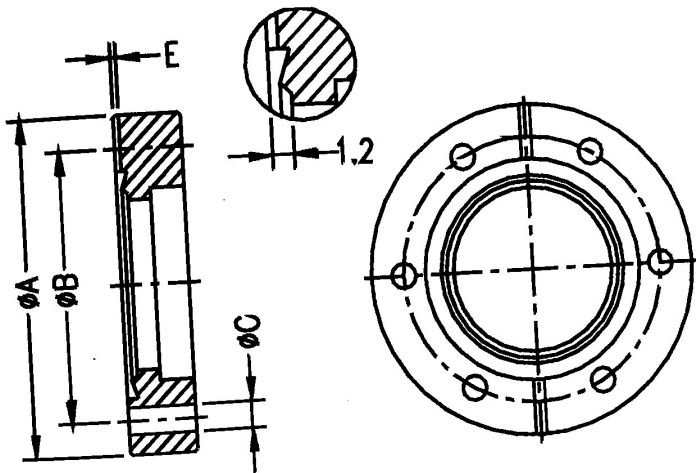
# ISO-KF



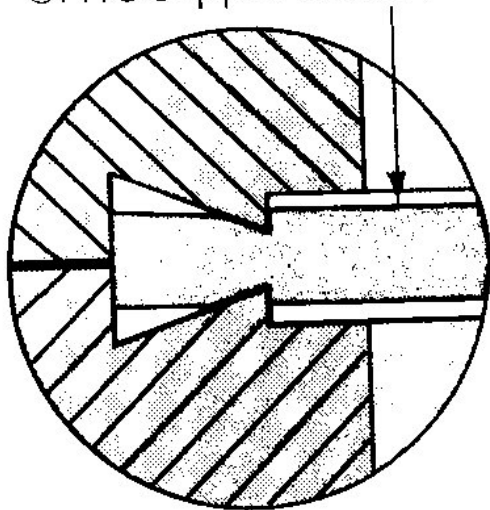
# ISO-K, ISO-F



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## OFHC Copper Gasket



## Sealants

	Temperature range	Reusable
<b>Elastomer</b>		
Neoprene (CR)	-40 to 100 °C	yes
Viton (FPM)	-15 to 150 °C	yes
<b>Metals</b>		
Indium	-196 to 60 °C	yes
Aluminum	-196 to 200 °C	no
Copper	-196 to 200 °C	no
Copper, silver-plated	-270 to 450 °C	no

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