

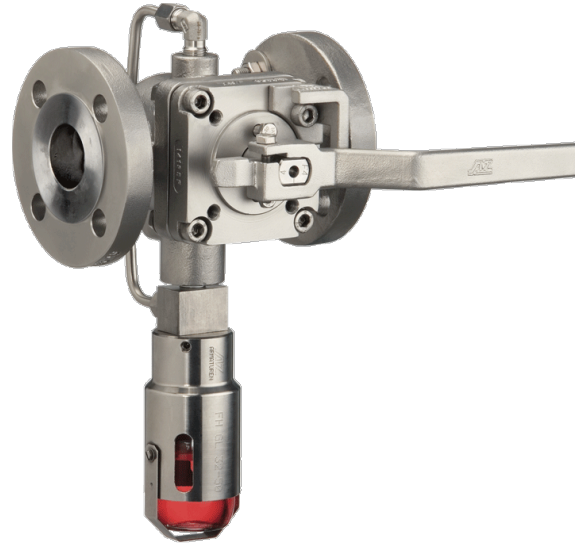
# SAMPLING

## Sampling System for Liquids

DIN-EN: DN 15 - 100 / PN 10 - 40

ASME: NPS ½" - 4" / class 150 - 300

PT range:  $-40 < T < 230^{\circ}\text{C}$ , vacuum  $10^{-8}$  mbar

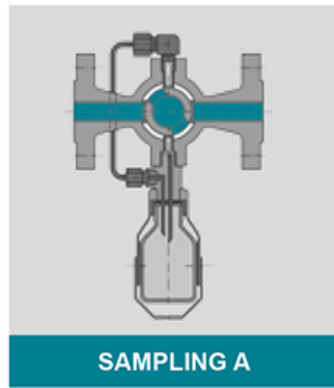


## Design Features

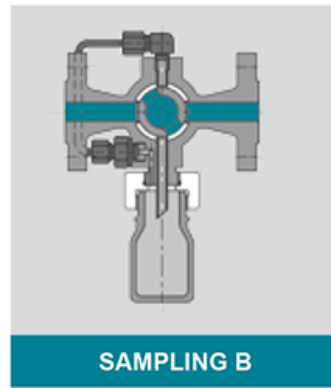
### Design Characteristics

- closed system
- cavity free
- spilling eliminated and contamination free
- specific defined representative sample quantity
- pressure free sampling (positive overlap)
- simple and fool safe operation
- absolutely tight
- utility model
- fugitive emission resp. clean air act certified (TA - Luft 2002 approval)
- Directive 2014/68/EU

### Standard Design



SAMPLING A



SAMPLING B

**Standard Design**

**TYPE A**

**TYPE B**

**application**

for high-toxic liquid media

for less toxic resp. polluted media

**bottle connection**

needle system and bottle protection

PTFE-adaptor

**sample bottles**

clear glass or SCHOTT-DURAN laboratory bottle with ISO-thread

clear glass or SCHOTT-DURAN laboratory bottle with ISO-thread

**bottle volume(VF)**

60, 100, 250, 500 ml

60, 100, 250, 500 ml

**standard diaphragm (Septum)**

rubber/ PTFE

-

**temperature (Tmax)**

230°C

230°C

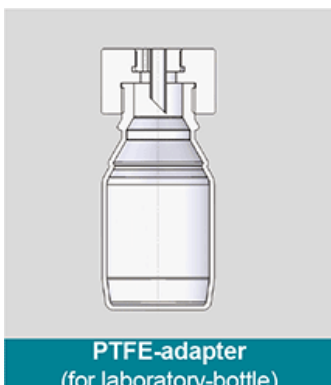
**Needle diameter**

2, 4, 6 mm

6, 8, 10, 15 mm

**Bottle connection**

- PTFE-Adapter: for laboratory bottle with ISO-thread GL 32/45. Application: For less toxic resp. polluted media.
- Clamping Retainer: For fast and easy exchange of laboratory bottle, even for heated version.
- Needle system: closed needle system for laboratory bottle with septum (Butyl and PTFE). Needle System NH and NH-S with diverse internal diameter(2-6 mm). Application for high toxic resp. polluted media for spillnig eliminated an contamination free sampling.



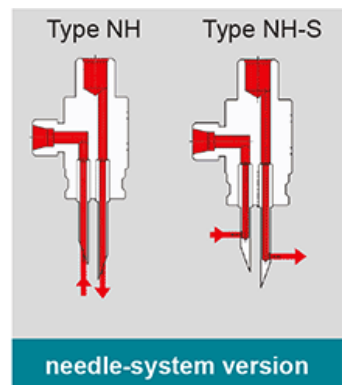
PTFE-adaptor  
(for laboratory-bottle)



clamping retainer



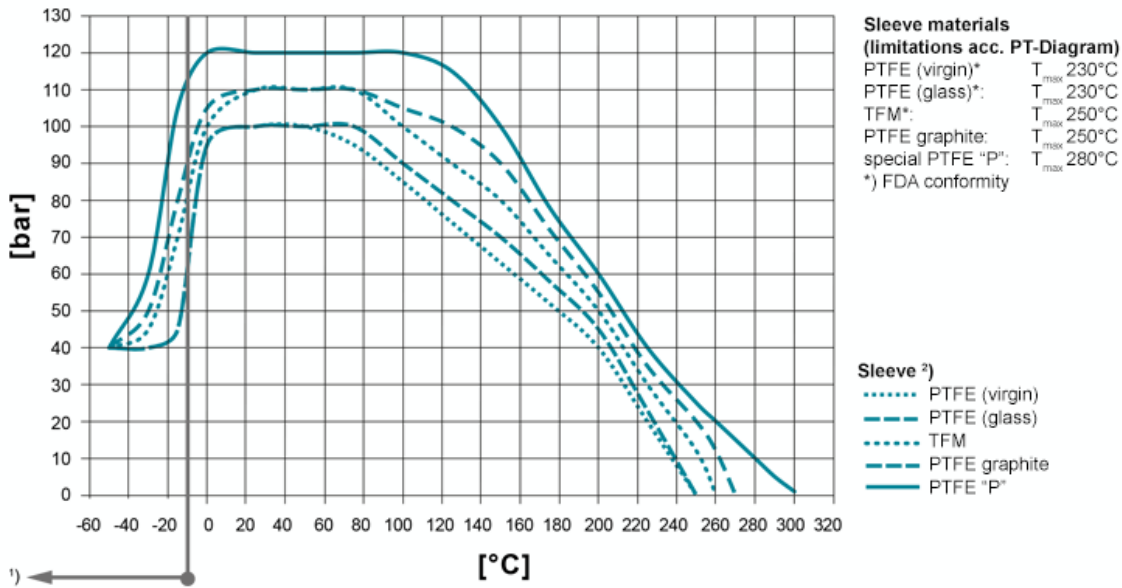
needle-system



needle-system version

# PT-Diagram

General Pressure-Temperature-Diagram



**Operating temperatures < -30°C and > 220 °C have to be checked and approved by AZ according to the operating conditions.**

Besides the P/T value of the sleeve the limitations of the valve bodies also have to be considered. Please refer to the EN 12516-1 resp. ASME B16.34 in order to choose a proper pressure rating (PN/class). The shown values refer to austenitic stainless steel 1.4408 (A351 Gr. CF8M).

- 1) For operating temperatures below -10°C low temperature / austenitic steels are required.
- 2) Sleeve: There are different sleeve materials / compounds available.

## Materials

### Standard body materials

- Carbon Steel 1.0619, ASTM A216 WCB
- Stainless Steel 1.4408, ASTM A351 CF8M
- Stainless Steel 1.4308, ASTM A351 CF8
- Unalloyed stainless steel casting (low Temp.) 1.1138, LCC/LCB/A352

### Standard plug materials

- Stainless Steel 1.4408, ASTM A351 CF8M
- Stainless Steel 1.4308, ASTM A351 CF8

### Special materials

- Alloy

- Monel
- Nickel
- Zirconium
- Titan
- Tantal
- other materials on request

## Sealing Systems

Standard sealing for all major applications;  
Tmax 230°C

### Type STD

[read more \[...\]](#)

Firesafe sealing (API 607) with graphite packing for additional stem sealing; Tmax 230°C

### Type FS

[read more \[...\]](#)

Chemical sealing to prevent fugitive emission of aggressive and toxic media with PTFE packing for additional stem sealing;

T<sub>max</sub> 230°C

### Type CA

[read more \[...\]](#)

Firesafe safety sealing (API 607) for fluctuating temperatures with 3x graphite packing (adjustable) for additional stem sealing; Tmax 280°C

### Type FSN

[read more \[...\]](#)

Firesafe safety sealing (API 607) for fluctuating temperatures with 3x graphite packing (live loaded disc springs) for additional stem sealing; Tmax 280°C

### Type FSN-SL

[read more \[...\]](#)

Chemical safety sealing for fluctuating temperatures with 3x PTFE packing (adjustment) for additional stem sealing;

Tmax 230°C

### Type CASN

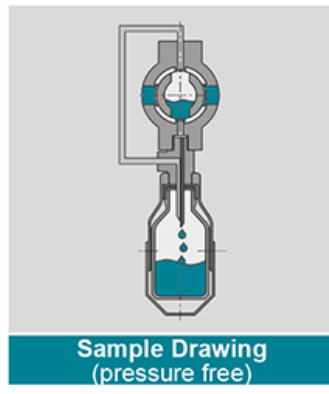
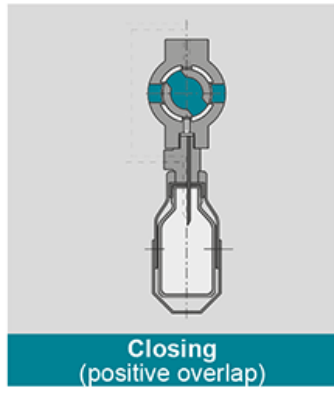
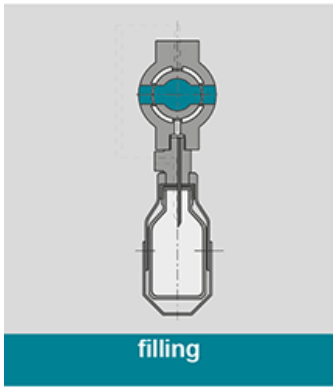
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Chemical safety sealing for fluctuation temperatures with 3x PTFE packing (live loaded disc springs) for additional stem sealing; Tmax 230°C

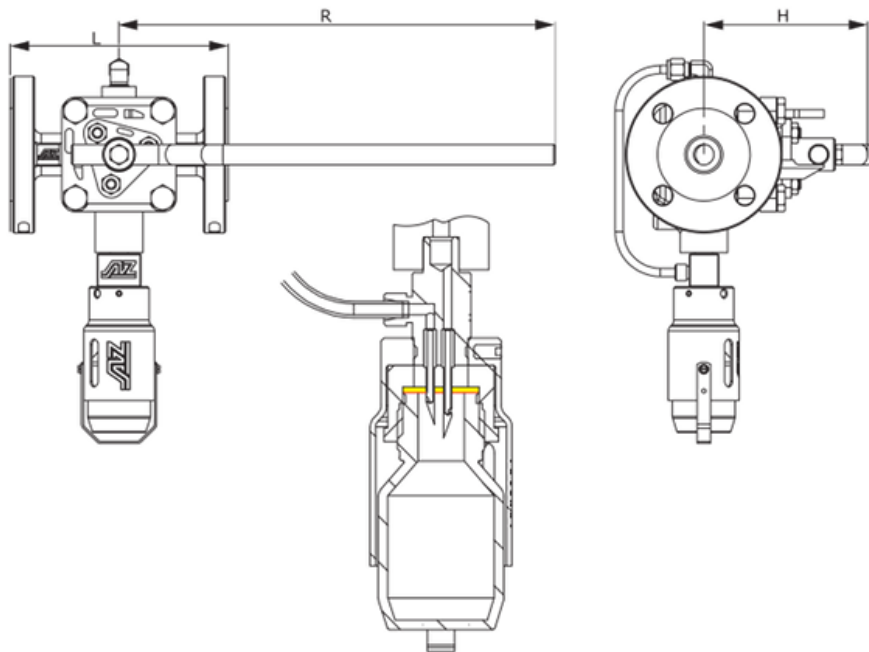
### Type CASN-SL

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## Port Forms



## Dimensions

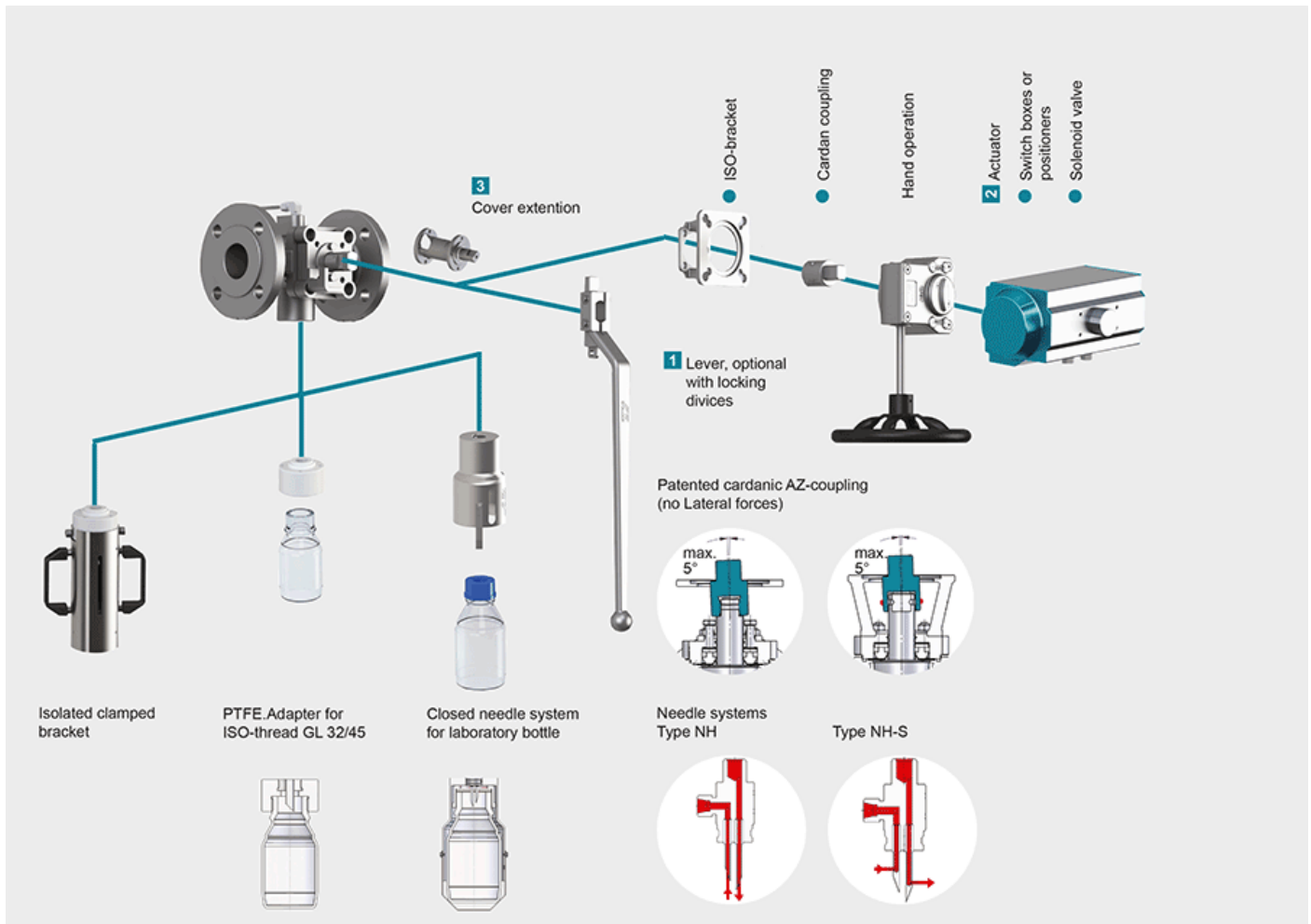


DIN EN 1092/1 / 558-1

ASME B 16.5 / 16.10

DN	PN	L	R	H	sample quantity $V_p$ [ml]		Outflow-/Ventilation $\varnothing$ [mm]	
					Type A	Type B	Type A	Type B
15	10-40	(160)	200	98	20 / 30 / 50	20 / 30 / 50	7 - 30	2 / 1,3
25	10-40	160	200	104	30 / 50	30 / 50	7 - 30	2 / 1,3
40	10-40	200	320	120	30 / 50	30 / 50	78 - 93	2 / 1,3
50	10-40	230	420	140	30 / 50	30 / 50	78 - 93	2 / 1,3
80	10-40	310	600	170	145	145	145 - 200	2 / 1,3
100	10-40	350	600	170	405	405	405 - 530	2 / 1,3
NPS	Class	L	R	H	sample quantity $V_p$ [ml]		Outflow-/Ventilation $\varnothing$ [mm]	
					Type A	Type B	Type A	Type B
½"	150	108	200	98	20 / 30 / 50	20 / 30 / 50	7 - 30	2 / 1,3
	300	139,7						
1"	150	127	200	104	30 / 50	30 / 50	7 - 30	2 / 1,3
	300	165						
1½"	150	165	320	120	30 / 50	30 / 50	78 - 93	2 / 1,3
	300	190,5						
2"	150	177,8	420	140	30 / 50	30 / 50	78 - 93	2 / 1,3
	300	216						
3"	150	203,2	600	170	145	145	145 - 200	2 / 1,3
	300	282,6						
4"	150	228,6	600	170	405	405	405 - 530	2 / 1,3
	300	305						

## Actuation



### 1 Locking Devices

Pilot valve combinations, pad lock eyelets, linear key conception, indexing plunger arrestor.  
 read more [...]

### 2 Actuators

Actuators for mounting-flange acc. to DIN ISO 5211  
 read more [...]

### 3 Cover extension

Solid construction in stainless steel, Standard extension 100 mm or 150 mm high, non standard lengths are available on request . Hexagonal bolts on adjustment ring freely accessible. Note: Don't use with sealing FSN/FSN-SL and CASN/CASN-SL  
 read more [...]