

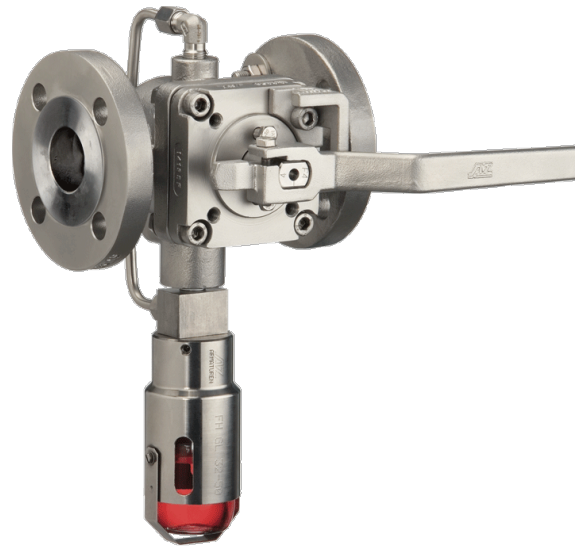
# SAMPLING

## 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

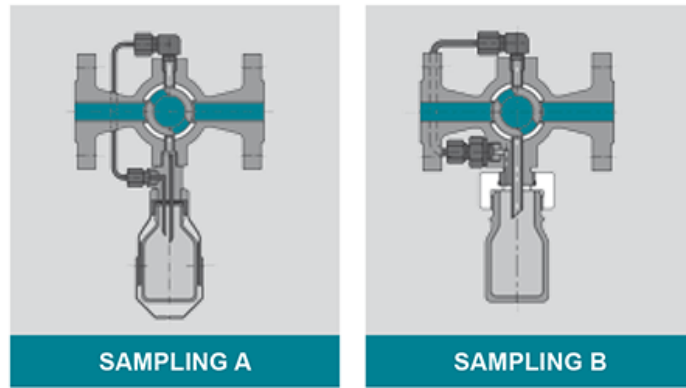


## Design Features

### 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

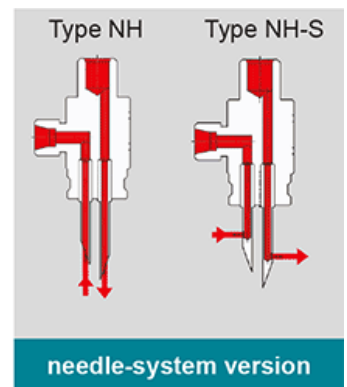
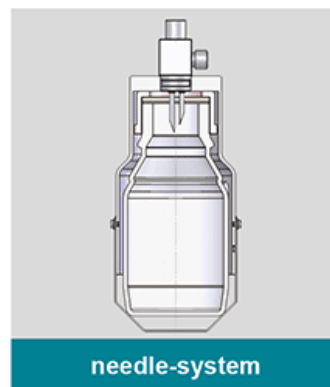
### Standard Design



Standard Design	TYPE A	TYPE B
<b>application</b>	for high-toxic liquid media	for less toxic resp. polluted media
<b>bottle connection</b>	needle system and bottle protection	PTFE-adaptor
<b>sample bottles</b>	clear glass or SCHOTT-DURAN laboratory bottle with ISO-thread	clear glass or SCHOTT-DURAN laboratory bottle with ISO-thread
<b>bottle volume(VF)</b>	60, 100, 250, 500 ml	60, 100, 250, 500 ml
<b>standard diaphragm (Septum)</b>	rubber/ PTFE	-
<b>temperature (Tmax)</b>	230°C	230°C
<b>Needle diameter</b>	2, 4, 6 mm	6, 8, 10, 15 mm

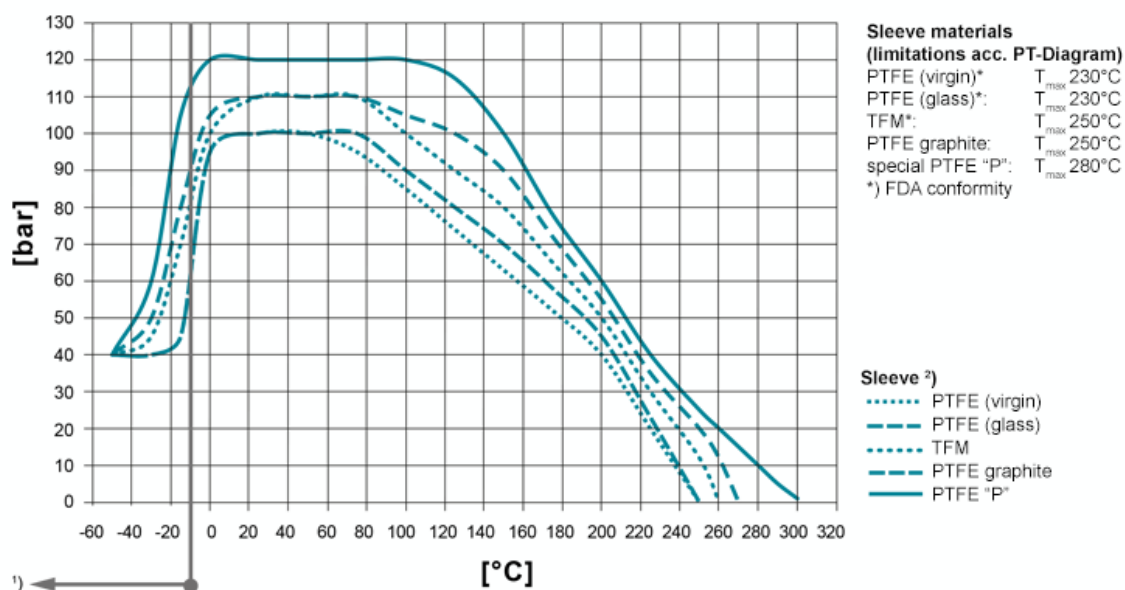
#### Bottle connection

- 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.



## 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

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

### Type FS

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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

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

### Type FSN

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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

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Chemical safety sealing for fluctuating temperatures with 3x PTFE packing (adjustment) for additional stem sealing;  
Tmax 230°C

### Type CASN

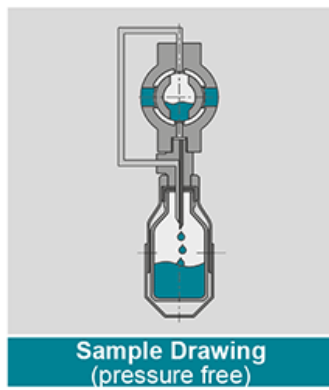
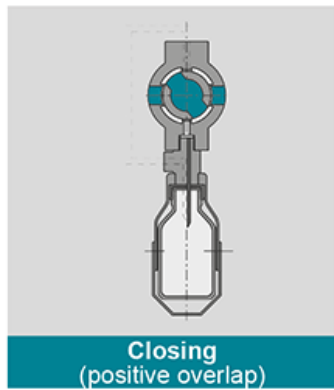
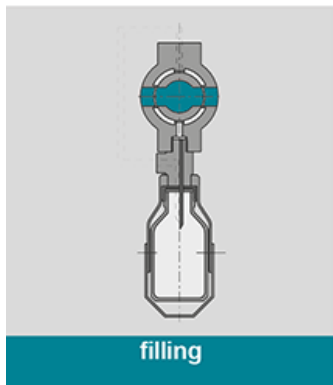
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Chemical safety sealing for fluctuation temperatures with 3x PTFE packing (live loaded disc springs) for additional stem sealing; Tmax 230°C

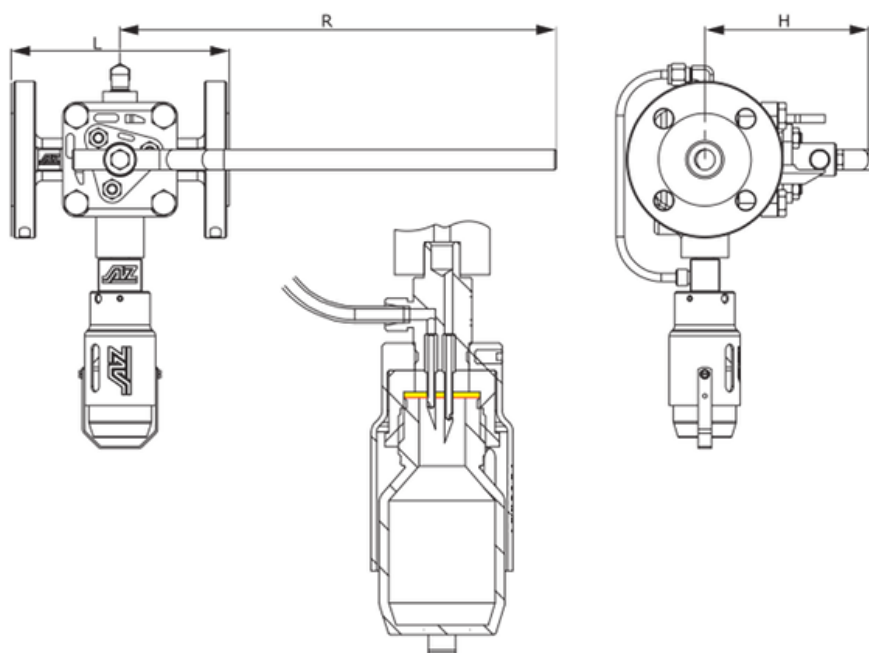
### Type CASN-SL

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## Port Forms

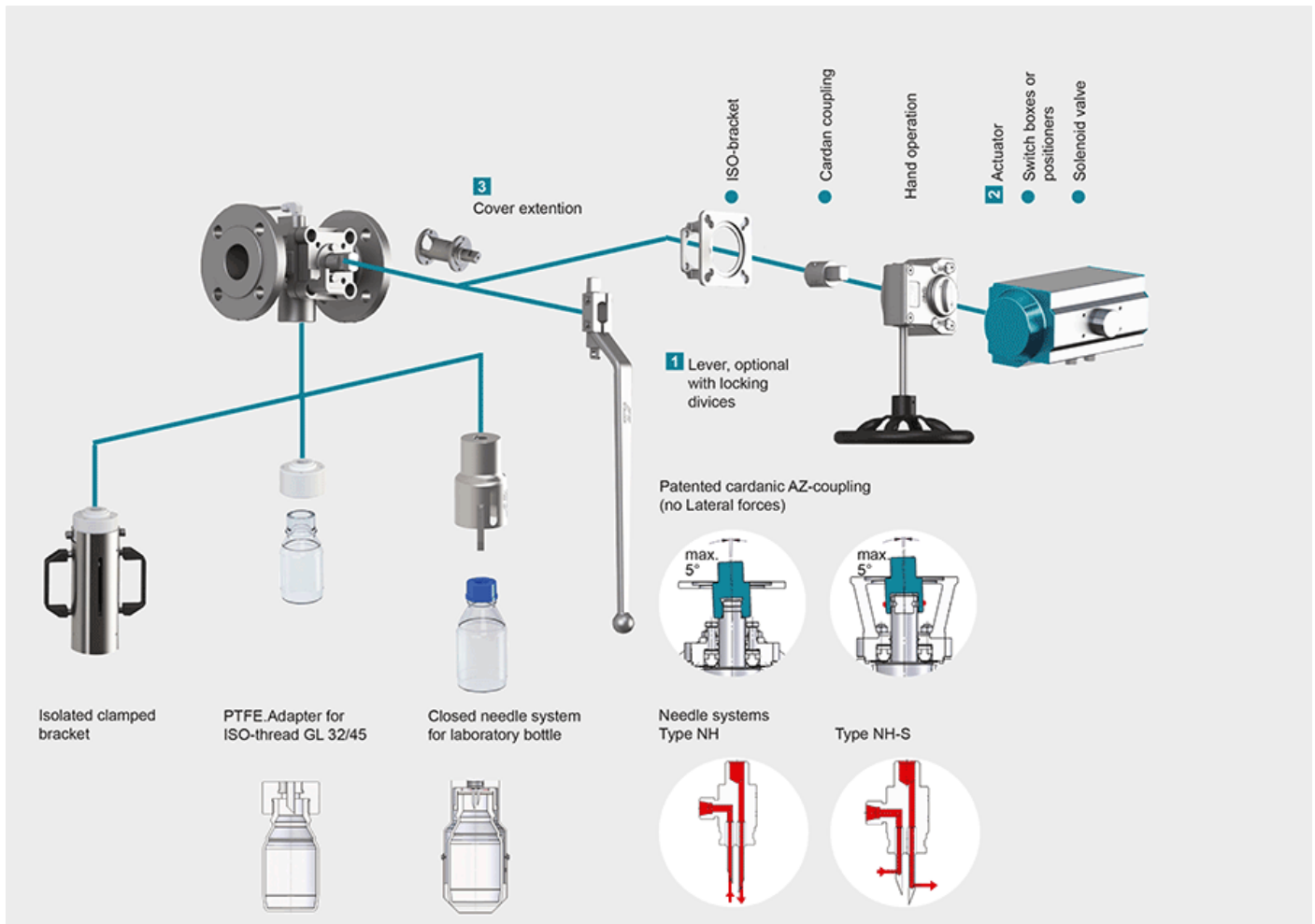


## Dimensions



DIN EN 1092/1 / 558-1	DN	PN	L	R	H	sample quantity $V_p$ [ml]		Outflow-/Ventilation Ø [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
ASME B 16.5 / 16.10	NPS	Class	L	R	H	sample quantity $V_p$ [ml]		Outflow-/Ventilation Ø [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.  
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## 2 Actuators

Actuators for mounting-flange acc. to DIN ISO 5211  
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## 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  
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