

Sample Taker



Sampler for vertical downpipes and
air slide conveyor systems

Sample Taker

A variety of sampler takers is available for representative sampling of bulk materials or suspensions from vertical, depressurised downpipes depending on the particular installation situation concerned. Alongside screw and piston samplers for selective removal of samples made of fine materials, we offer you, with the downpipe, downpipe slot vessel and downpipe swivel sampler, equipment to remove a representative sample from the whole cross section of the material. Representative sampling of suspensions is carried out with a slurry sampler, which likewise removes a sample from the whole cross section of the pipeline.

Downpipe slot vessel sampler, Type FLPN

Representative sampling is carried out by a slotted vessel that is guided by a pneumatic linear drive via a rod at constant speed through the complete chute cross-section. The multiple sealing of the rod bushing and the enclosure of the drive mean that the drive is not directly exposed to the product and thus remains practically free of wear. The passage speed of the spoon can be adapted to individual requirements by adjustable valves on the drive.

After the passage of the spoon, the sampling spoon is turned through the product flow via the sample discharge chute and thus emptied. The rotary movement is initiated mechanically by means of adjustable stops and therefore does not require any further drive.

Positioning the spoon in the filling position that occurs outside the product flow is only carried out after again crossing the product flow in the opposite direction. In this waiting position, the sampler is not exposed to the product flow and is thus not subjected to any wear.



Downpipe slot vessel sampler		FLPN 100	FLPN 200	FLPN 300
Nominal diameter of the downpipe	mm	100	200	300
Dimensions (W x H x D)	mm	384 x 450 x 1297	464 x 450 x 1497	504 x 450 x 1497
Weight	kg	75	100	110



Piston sampler, Type KoPN

The piston sampler ranks amongst those samplers which remove a selective sample from the material flow. To be able to secure sufficient representativeness, the product flows to be sampled must be homogeneous in terms of the various grain sizes. Sampling is carried out by means of a sample collecting pipe protruding in the material flow. This sample collecting pipe is provided with an opening, into which the material can drop permanently. At the time of sampling, a pneumatically actuated piston is pressed from the waiting position in the direction of the material flow by the sample collecting pipe. The sample collecting pipe is emptied over the material flow to then, on the return, take along the sample material just dropped in. The sample material can be taken over at a pipe socket outside the main pipe.

Piston sampler		KoPN 50/250
Diameter of the collecting pipe	mm	Ø 50
Sample volume approx.	cm ³	250
Weight	kg	15

Downpipe/ slurry sampler, Type FPN/TPN

Representative sampling is carried out by a sample chute that is guided in a circular movement through the material flow at a constant speed. While the sample chute is rotated through the material flow, a partial material flow is continuously separated and led off. The thus obtained sample material is collected via a pipe socket and further processed. While the waiting position of the sample chute between two samplings is inside the material space, it is, however, outside the principle product flow, so that direct contact between the sample chute and material flow is prevented and wear on the sample chute reduced.

The sample chute can be powered both by a geared motor as well as via a pneumatic cylinder.

The distinction between downpipe and slurry sampler refers to the material flow to be sampled and has an influence on the discharge angle of the sample chute.

Downpipe/ slurry sampler		FPN / TPN
Nominal diameter of the downpipe	mm	200 – 800
Installation height	mm	500 - 3000
Weight	kg	80 – 3000

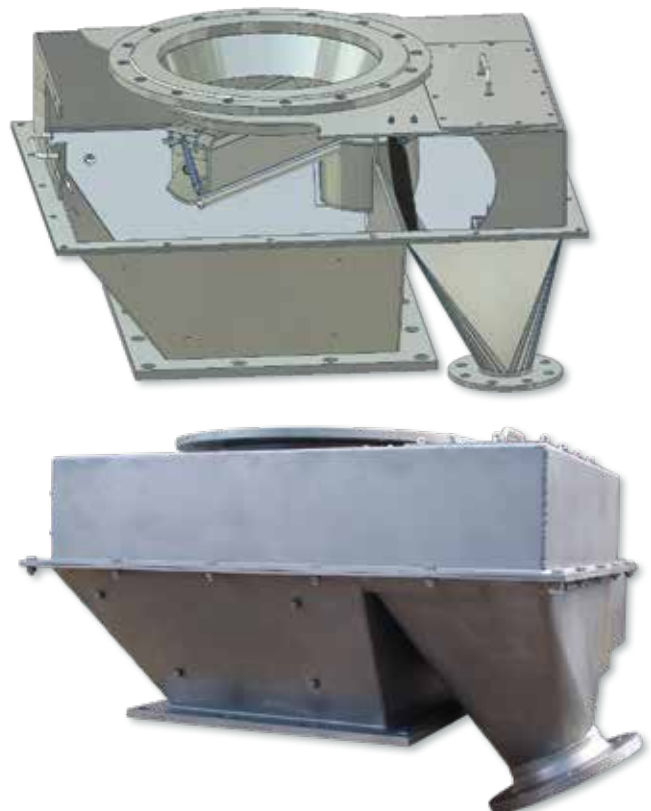


Downpipe swivel sampler, Type FSPN

Representative sampling is carried out by a slotted vessel that is swivelled through the material flow in a circular movement at a constant speed. While the slotted vessel is rotated through the material flow, a sample is removed from the material flow and collected in the slotted vessel. This sample is subsequently emptied by the movable base over the sample discharge chute. After being completely emptied, the slotted vessel swivels back into the waiting position. With this sampler as well, the waiting position lies outside the principle material flow to protect the slotted vessel from wear.

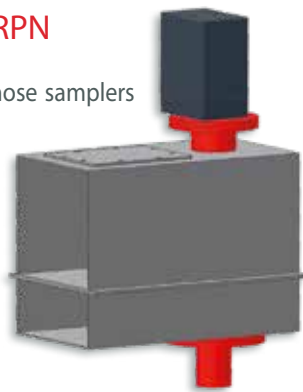
The swivel movement of the slotted vessel can be executed both via a pneumatic cylinder as well as via a three-phase motor.

Downpipe swivel sampler		FSPN
Nominal diameter of the downpipe	mm	400 - 800
Installation height	mm	500 - 700
Weight	kg	150 - 600



Air slide sampler, Type RPN

Air slide sampler rank amongst those samplers that remove a selective sample from the material flow of an air slide conveyor system. To be able to secure sufficient representativeness, the product flows to be sampled must be homogeneous in terms of the conveyor width. Sampling is carried out by a sample collecting pipe protruding in the material flow that is provided with openings. Normally, these openings are turned in the direction of conveyance and close against a sealing gasket. At the time of sampling, the sample collecting pipe with its openings is turned against the direction of conveyance, so that sampling material can flow in. The sample material thus entered is discharged downwards through the air slide conveyor system by means of the sample collecting pipe.

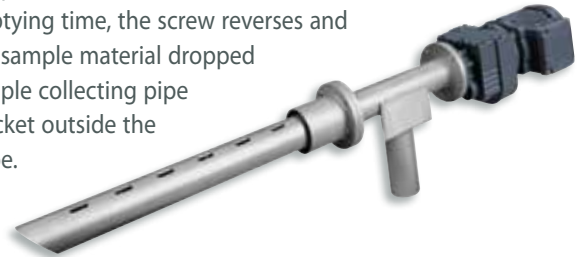


Air slide sampler		RPN 50/480
Diameter of the collecting pipe	mm	Ø 50
Sample volume approx.	cm ³	250
Weight	kg	20

Screw sampler, Type SPN

The screw sampler belongs to the samplers that remove a selective sample from the material flow. To be able to secure sufficient representativeness, the product flows to be sampled must be homogeneous in terms of the different grain sizes. Sampling is carried out by means of a sample collecting pipe protruding in the material flow.

This sample collecting pipe is provided with openings, into which the material can drop permanently. At the time of sampling, the screw-conveyor first of all empties the sample collecting pipe in the direction of the material flow. After a defined emptying time, the screw reverses and conveys the sample material dropped into the sample collecting pipe to a pipe socket outside the principal pipe.



Screw sampler		SPN 50/480
Diameter of the sample collecting pipe	mm	Ø 50
Sample volume approx.	dm ³ /h	130
Weight	kg	20



Clinker sampler		KPN 130x600
Diameter of the sampling spoon	mm	Ø 80
Sample volume approx.	dm ³	3
Weight	kg	280

Clinker sampler, Type KPN

Together with the piston sampler, the clinker sampler ranks amongst those samplers removing a selective sample from the material flow. For this purpose, a sampling spoon, which is filled with sample material over a defined period of time, is run into the product flow pneumatically. When the sampling spoon is drawn back, it is removed inside the sampler housing by a piston and the material sample pre-classified over a rigid sieve grid. The fine material thus obtained can be taken over for further analysis at a pipe socket. The coarse parts are taken over at a further pipe socket and fed to the principal material flow again.

Apart from sampling equipment made up of downpipes and air slide conveyor systems, you can also obtain from us samplers for representative sampling of moved bulk materials, e.g. obtained from conveyor belts. We likewise offer you complete sample preparation plants with dividing equipment, crushers, sampling equipment, ...

Should you want to combine several sampling units by means of a pneumatic post system, we are also able to offer you here a solution customised to your requirements right up to fully automatic laboratory preparation.