CH-MS (Multi-Stage) Sampler Datasheet

WHAT IS THE MULTI-STAGE SAMPLER?

The CH-MS Sampler is a professional automatic sampling device designed for the mining industry, capable of taking continuous or semi-continuous slurry samples from a pressure-free horizontal process stream. The product is equipped with fixed cutters in one or two stages and moving cutters in the final stage, ensuring higher representativeness of the collected samples. The internal surfaces of the body are coated with rubber to enhance durability, and it is equipped with washing systems to prevent clogging and further improve sample representativeness. The device is remotely controlled via a PLC system, allowing precise adjustment of sampling time and quantity.

CH-MS-3-140-H

CH-MS-2-80-H

Sampler Models	Technical Specifications						
	Nominal Capacity (m^3/h)	Stages	Number of Static Cutters	Length (mm)	Height (mm)	Width (mm)	Weight (kg)
CH-MS-1-40-S	60-180	1	-	2000	1450	1300	365
CH-MS-1-40-H	60-180	1	-	2400	1550	1300	470
CH-MS-2-50-S	180-600	2	3	2500	1750	1350	585
CH-MS-2-50-H	180-600	2	3	2900	2050	1350	750
CH-MS-2-80-S	600-1800	2	4	3500	2450	1500	1400
CH-MS-2-80-H	600-1800	2	4	4500	2580	1500	1860
CH-MS-3-140-S	1800-6000	3	5-3	5200	2850	3700	3850
CH-MS-3-140-H	1800-6000	3	5-3	6065	3700	3730	5200
CH-MS-3-200-S	6000-18000	3	5-4	6700	5000	4700	7250
CH-MS-3-200-H	6000-18000	3	5-4	7600	6200	4700	8700
CH-MS-3-300-S	9000-27000	3	6-4	6800	4800	5900	9100
CH-MS-3-300-H	9000-27000	3	6-4	7800	5800	5900	11550

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Process Connections

Model	Inlet Flange	Outlet Flange
CH-MS-1-40-S	DN 100/4” - DN 300/12”	-
CH-MS-1-40-H	DN 100/4” - DN 300/12”	DN 100/4” - DN 300/12”
CH-MS-2-50-S	DN 200/8” - DN 400/16”	-
CH-MS-2-50-H	DN 200/8” - DN 400/16”	DN 200/8” - DN 400/16”
CH-MS-2-80-S	DN 350/14” - DN 700/28”	-
CH-MS-2-80-H	DN 350/14” - DN 700/28”	DN 350/14” - DN 700/28”
CH-MS-3-140-S	DN 650/26” - DN 1050/42”	-
CH-MS-3-140-H	DN 650/26” - DN 1050/42”	DN 650/26” - DN 1050/42”
CH-MS-3-200-S	Specific	-
CH-MS-3-200-H	Specific	Specific
CH-MS-3-300-S	Specific	-
CH-MS-3-300-H	Specific	Specific

Flange Compatibility

Inlet and Outlet	EN 1092-1 PN 10 / ASME B16.5 Class 150 / SABS 1123-TABLE 10

Materials

Sampler body	Mild Steel 5mm (S235 JR)
Inside surfaces	Natural rubber 5 mm, other lining materials available upon request
Outside surfaces	Epoxy paint 210 µm, EP210/2-3-FeSa 2½ - RAL 7026
Fixed Cutters	Stainless steel 3-8 mm (AISI 304, EN 1.4301)
Moving Cutter	Stainless steel 3 mm (AISI 304, EN 1.4301)
Abrasion resistant AR cutter	Stainless steel 3-8 mm (AISI 304, EN 1.4301), Tungsten Carbide (WC)
Sample Tank	Stainless steel 4 mm (AISI 304, EN 1.4301)

Flushing System

Flushing water requirements	
Pressure	2–6 bar / 0.2–0.6 MPa / 30–90 PSI
Water consumption	May temporarily rise up to 150 l/min (40 GPM)
Flushing water quality recommendations	
Solid particles	Max. 10 mg/l
Particle size	Max. 50 µm
Permanganate value	Max. 30 (free from humus)
Ferro content	Max. 1 mg/l
Hardness value	Max. 10° dH
Critical particle size	2–5 µm
Flushing water connections	
Water inlet – Main flushing	Hose connector OD 25 mm / 1” or G1” female
Water inlet – Tank flushing	Hose connector OD 25 mm / 1” or G1” female
Pipe threads	According to ISO 228/1

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Air System

Air connections	
Inlet to cylinder	Compatible with 8 mm tube
Inlets to valves	For 6/4 mm tube only
Air requirements	
Instrument air	Oil free, dry instrument air
Quality	Class 2.2.2 according to standard ISO 8573-1
Pressure	6–10 bar / 0.6–1.0 MPa / 88–145 PSI
Air consumption	Momentary 7–120 Nl/min (0.25–4.24 cuft/min) depending on cutter frequency

Other Specifications

Accessories	
Valve Management Panel (VMP)	For more information, refer to the corresponding datasheet
Optional control devices	
Sampler Management Panel (SMP)	For more information, refer to the corresponding datasheet
Ambient conditions	
Operating temperature	0 – +50°C
Storing temperature	-20 – +50°C