

## MCP-DETECTORS

The detectors are made of high quality MCPs of different configurations, sizes and technical parameters. Vital difference of our firm detectors is that you can make an individual order for a detector which matches your device application and specifications.



MCP-detectors' application range covers the following sciences:

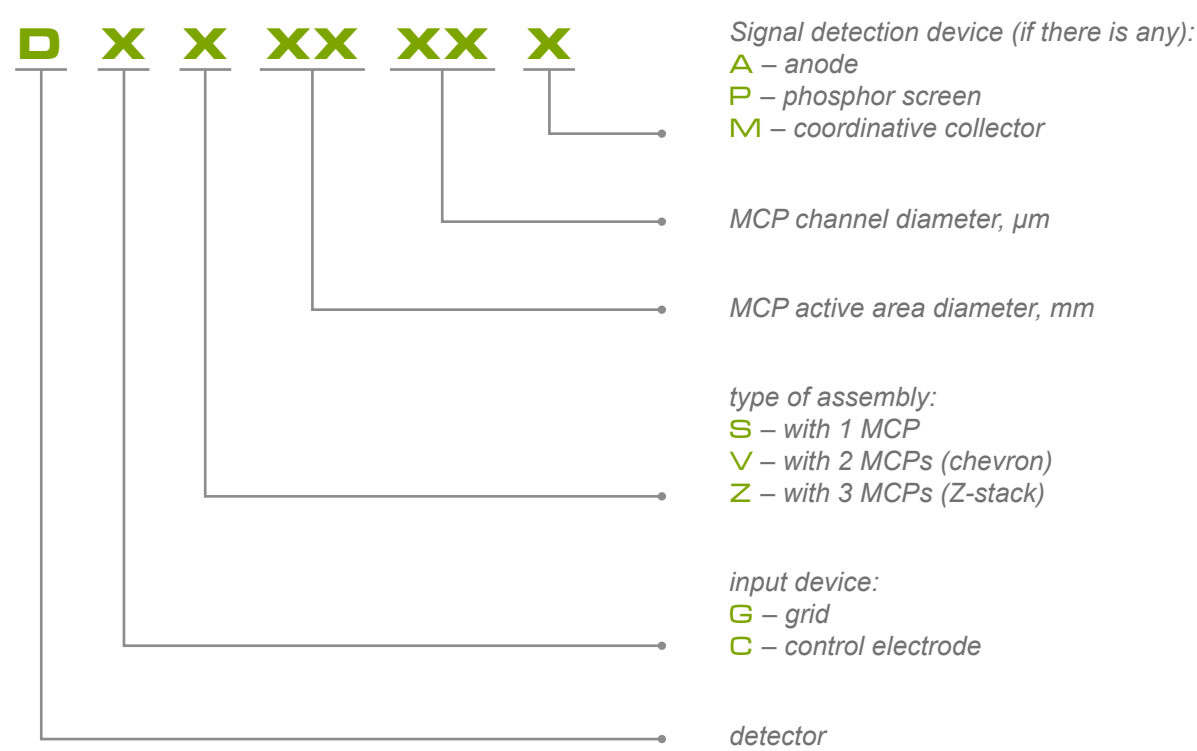
- Astrophysics and Space Research;
- Experimental and Nuclear Physics;
- Electron and Ion Microscopy;
- Spectrometry;
- Medical practice.

The singularity of Z-stack MCP is that it has spaces between microchannel plates (having separate supplies) and it makes it possible to obtain the gain of more than  $1 \times 10^7$  (shevron) and  $1 \times 10^9$  (Z-stack) in contrast to other similar assemblies which do not have spaces between the plates and have the gain of  $1 \times 10^6$  and  $1 \times 10^8$  respectively.

### THE AVAILABLE MODIFICATIONS OF MCPS ARE:

With a metal anode;  
with a phosphor screen;  
with a control electrode.

## STRUCTURE OF DESIGNATION OF THE PRODUCT MODEL



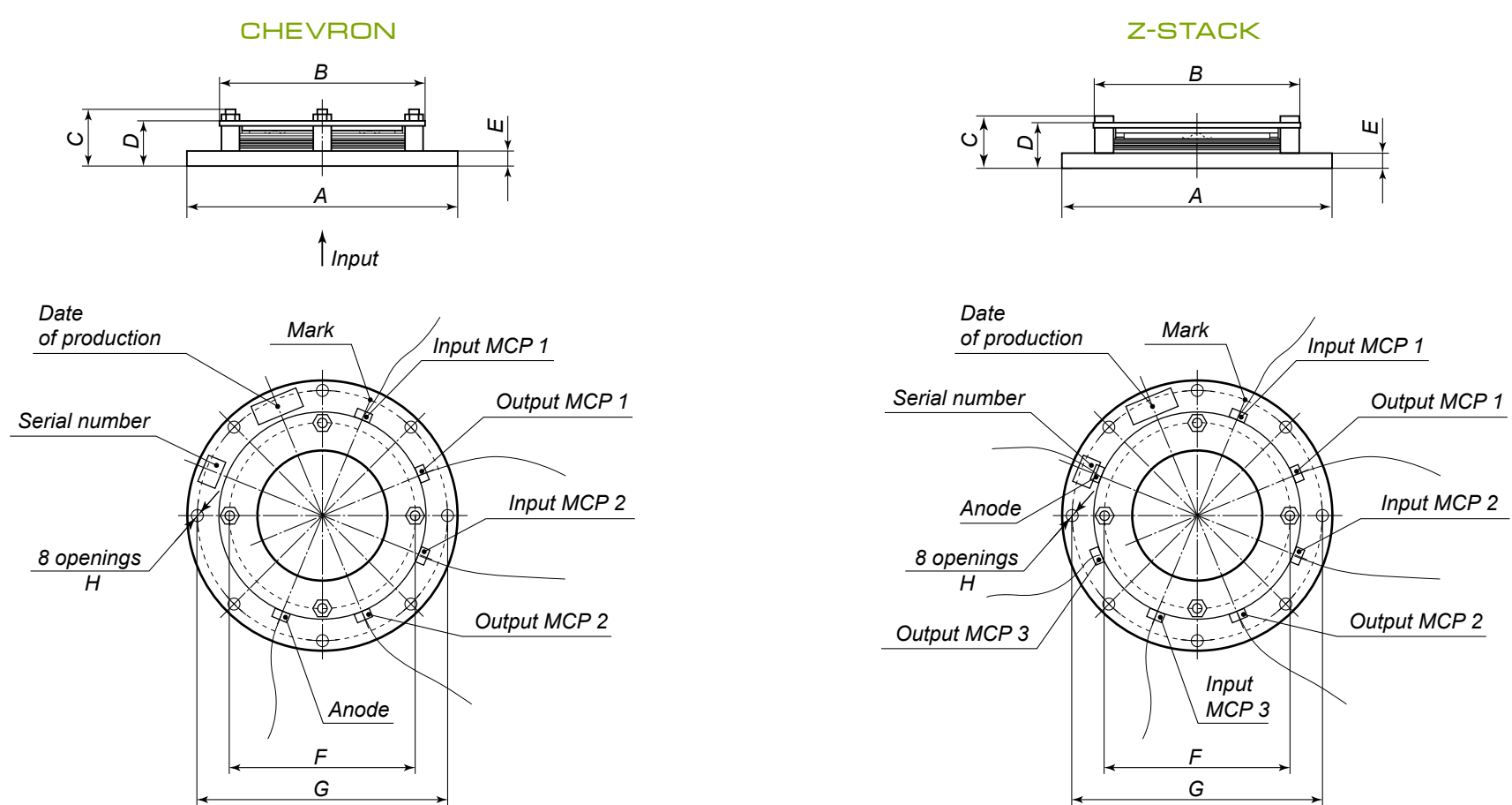
## SPECIFICATION

ASSEMBLY TYPE	UNIT	1 MCP			CHEVRON (2 MCP)			Z-STACK (3 MCP)		
		DS2510 DS256 DS258	DS5010 DS5015	DS5612 DS5615	DV2510 DV256 DV258	DV5010 DV5015	DV5612 DV5615	DZ2510 DZ256 DZ258	DZ5010 DZ5015	DZ5612 DZ5615
Outer diameter of MCP	mm	33	50	56	33	50	56	33	50	56
Active Diameter	mm	25	44	50	25	44	50	25	44	50
MCP Pore Size	$\mu\text{m}$	6, 8, 10	10, 12, 15	12, 15	6, 8, 10	10, 12, 15	12, 15	6, 8, 10	10, 12, 15	12, 15
Center-to-Center Spacing	$\mu\text{m}$	8, 9.5, 12	12, 15, 19	15, 19	8, 9.5, 12	12, 15, 19	15, 19	8, 9.5, 12	12, 15, 19	15, 19
MCP Thickness	mm	0.3, 0.32, 0.4	0.5, 0.75	0.48, 0.75	0.3, 0.32, 0.4	0.5, 0.75	0.48, 0.75	0.3, 0.32, 0.4	0.5, 0.75	0.48, 0.75
Bias Angle	degree	6 - 8; 12 - 13								
MCP Resistance	$\Omega$	$5 \times 10^7 + 2 \times 10^8$								
Maximum Operating Voltage	V	1000			2800			3500		
Detector Height	mm	max. 12			max. 15			max. 20		
Detector Diameter	mm	max. 54	max. 76	max. 82	max. 54	max. 76	max. 82	max. 54	max. 76	max. 82
Single-electron Pulse Height Resolution	%	exponent			max. 70	max. 80	max. 100	max. 30		
Maximum Dark Pulses Count Rate Density	cps/cm <sup>2</sup>	max. 3								
Minimum gain		$1 \times 10^4$			$1 \times 10^7$			$1 \times 10^9$		
Modifications		with a metal anode, and a phosphor screen						with a metal Anode		

### MCP-DETECTORS WITH A PHOSPHOR SCREEN

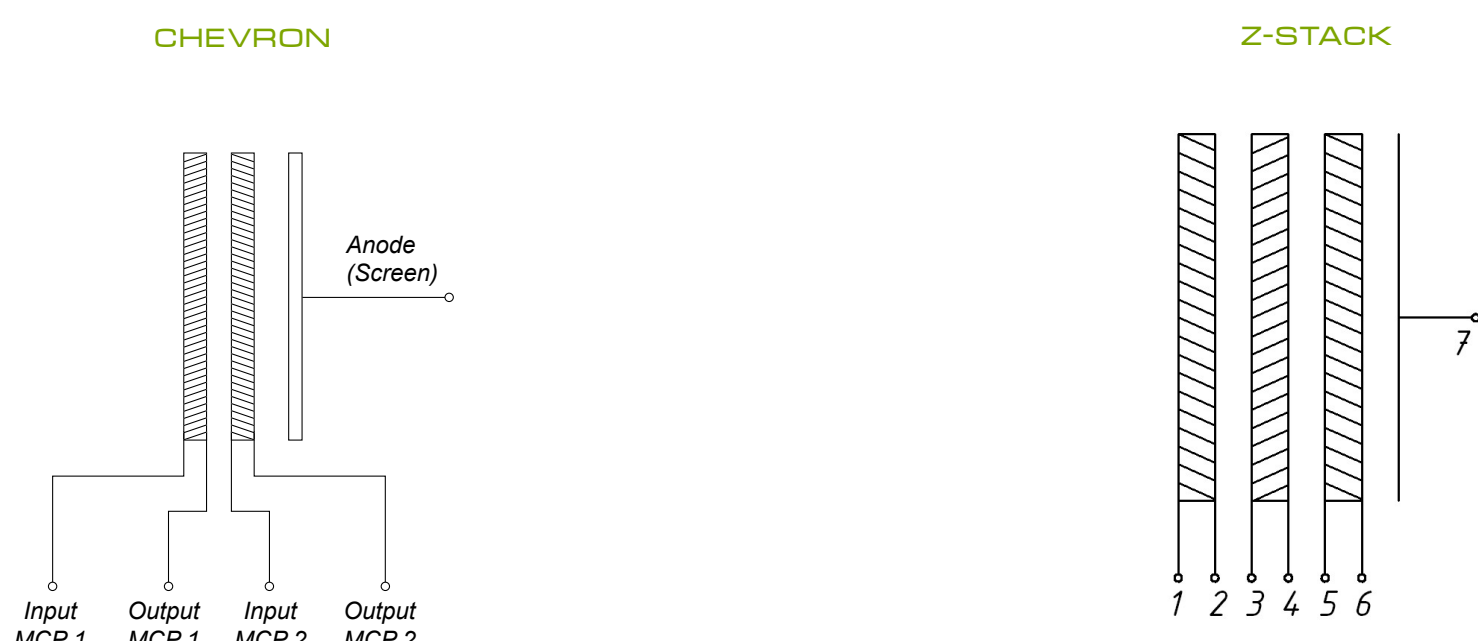
PHOSPHOR SCREEN	RADIATION WAVE PEAK	LUMINESCENCE COLOUR	10% OF DECAY TIME
K-67 (analog of P-43)	550	yellow-green	1 ms

## DIMENSIONAL OUTLINES



	PHYSICAL CHARACTERISTICS	ACTIVE AREA DIAMETER		
		25	50	56
A	MCP Diameter	54	76	82
B	MCP Assembly Diameter	41	58	64
C	Maximum Height	18	20	20
D	MCP Assembly Height	max.16	max.18	max.18
E	Height of Flange	3	3	3
F	Setting Diameter of Assembly Pins	36,6	53,6	59,6
G	Detector Setting Diameter	50	68	74
H	Fixing Hole Diameter	2,4	3,5	3,5

## CIRCUIT DIAGRAMS



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