Croma 454

Main Features

- Cross beam and Axis Z are made of surface-anodized aerometal with superior temperature consistency, reducing the mass of the moving parts and the inertia motion of measuring machine running at high speeds.
- High-precision self-cleaning air bearing is used for permanently wear-resistant guideways of all the three axes for more steady operation.
- Patented TESA high-precision optical scale is used for all the three axes.
- Each motion axes are driven by DC servo motor. Ensure steady and accurate motion.
- Precise triangular beam patented technology is applied to axis X, featuring lower center of gravity, better mass-rigidity ratio and more reliable motion relative to rectangular and cross beams.
- Patented pneumatic counterbalance (adjustable) for Z axis combined solves interference between axial movement and transmission system and enhances accuracy and long term stability with flexible suspension system, improves measuring machine's stability and rigidity.
- IDC-I control system specially designed by HEXAGOON for Croma improves the dynamic performance and measuring accuracy
- Powerful, easy-to-learn and efficient PC-DMIS BASIC (/PC-FMIS PREMIUM) software

Machine Types		Croma 454
Strokes (mm)	X	440
	Y	490
	Z	390
Overall Size (mm)	L	1162
	W	1032
	H	2318
Platform (mm)	X	559
	Y	750
	Z	483
Capacity (kg)		227

Machine Weight (kg)		345
MPEe (µm)		2.8 + L/300
MPEp (µm)		3.5
Raster Resolution (µm)		0.078
Max. 3D Speed (mm/s)		520
Max.3D Acceleration (mm/s)		1730
Air Pressure		100 Nl/min, 0.45 Mpa
Temperature		20±2°C
Humidity		45%-75%

Croma Coordinate Measuring Machines

Main features

- All aluminium structure combined with hard ammonized aero metal for cross beam and Z axis ensures temperature consistency, reduces mass of moving parts and force of inertia, hence ensures high accuracy during high-speed movement High-precision self-cleaning air bearing in all three axes, smoother movement without wearing down guide ways
- Europe-imported high-precision optical scales for all the three axes, system resolution up to 0.078um; installation method with one end fixed and the other end freely extensible ensures linear expansion and contraction at temperature change and reduces the deformation of the optical scale.
- The patented precision triangular beam, featuring gravity centre, better stiffness, and more reliable motion compared to rectangular and cross beams.
- Integral dovetail guideway is Y axis, reduces machine weight as well as twisting during movement, ensures measuring accuracy and stability
- All axes driven by DC servo motors for stable movement and accurate locations
- The IDC-I control system specially designed by HEXA or CROMA improves the dynamic performance and measuring accuracy
- Powerful, easy-to-learn and efficient PC-DMIS BASIC (/PC-DMIS PREMIUM) software

Machine Types		**Croma 584**	**Croma 686**	**Croma 8106**	**Croma8126**
Strokes (mm)	x	500	600	800	600
	y	600	800	1000	1200
	z	400	600	600	600
Measuring Range (mm)	Dx	634	734	934	934
	Dz	144	144	144	144
	Dz1	594	794	794	794
Working Plate (mm)	Ph	783	783	805	805
	Py	1155	1355	1555	1755
Support (mm)	Sy	824	976	1178	1378
	Sy1	356	379	379	379
Overall Size (mm)	Lx	1050	1150	1350	1350
	Ly	1535	1735	1935	2135
	Lz	2247	2647	2729	2729
Max. Part Weight (kg)		300	300	500	500
Machine Weight (kg)		590	739	1074	1196
MPEe (µm)		2.8 + L/300	2.8 + L/300	3.0 + L/300	3.0 + L/300
MPEp (µm)		3.5	3.5	3.5	4
Scales Resolution (µm)		0.078			
Max. 3D Speed (mm/s)		520			

Max.3D Acceleration (mm/s)		1730
Air Pressure		120 Nl/min, 0.45 Mpa
Temperature		20±2°C
Humidity		45%-75%

Function Plus

Main features

- “L” shape movable bridge, with 3 same height columns supporting Y axis groove guideway, while left column, cross beam, carriage and saddle work together as the moving bridge. Better mobility and less abbe error improve CMM’s accuracy and repeatability.
- X and Z beam adopt the ultra-rigid precise aero metal
- Y beam adopts precise integrated granite guideway
- Pneumatic counterbalance (adjustable) for Z axis, together with flexible suspension system, which make Z axis operate stably. This structure is the best solution to the interference between axial motion and rive system and improves measuring machine’s stability and rigidity.
- All machine axes’ transmission mode is timing belt, whose compact, non-skid structure makes it has excellence of high stability and accurate positioning.
- High-precision self-cleaning air bearing is used for the permanently wear-resistant guideways of all the three axes for more steady operation
- All machine axes are equipped with the scales (gold and steel) of German Heidenhain which are certified by PTB (Physikalisch-Technische Bundesanstalt), a German national institute of science and technology. Europe-imported high-precision optical scale are used for all the three axes, system resolution up to 0.078um; Installation method with one end fixed and the other end freely extensible reduces the deformation of the optical scale.
- Remote mounted drive motors reduce moving mass for faster setting, and dissipate heat away from the machine frame
- Equipped with the powerful measuring software which second to none, Inspector can handle any common shop measurement and inspection tasks
- Powerful, easy-to-learn and efficient PC-DMIS BASIC (/PC-DMIS PREMIUM) software

Function Plus Model		10158	10218	10308	122110	123010	152110	153010	152112	153012

Strokes (mm)	x	1000	1000	1000	1200	1200	1500	1500	1500	1500
	y	1500	2100	3000	2100	3000	2100	3000	2100	3000
	z	800	800	800	1000	1000	1000	1000	1200	1200
Measuring Range (mm)	Dx	1364	1364	1364	1564	1564	1864	1864	1864	1864
	Dz	151	151	151	151	151	151	151	151	151
	Dz 1	951	951	951	1151	1151	1151	1151	1351	1351
Platform (mm)	Ph	400	400	400	400	400	400	400	400	400
	Py	2000	2600	3600	2600	3500	2600	3500	2600	3500
Propping (mm)	Sy1	400	400	400	400	400	400	400	400	400
	Sy2	1200	1800	2700	1800	2700	1800	2700	1800	2700
	Sx	1300	1300	1300	1500	1500	1800	1800	1800	1800
Overall Size (mm)	L	2725	3326	4226	3326	4226	3326	4226	33264	4226
	W	1780	1780	1780	1980	1980	2280	2280	2280	2280
	H	3422	3422	3422	3622	3622	3622	3622	3822	3822
Capacity (kg)		1300	1800	2000	3000	3500	3000	3500	3000	3500
Machine Weight (kg)		5500	6500	9500	7600	11000	8600	13000	8800	13200
MPEe (µm)		3.1 + L/300			3.5 + L/300		4.0 + L/300		5.0 + L/300	
MPEp (µm)		3.3			3.7		4.2		5.2	
Raster Resolution (µm)		0.078								

Space Speed (mm/s)		433
Space Acceleration (mm/s)		1039
Air Pressure		2.5 dm3/s (150 Nl/min), >0.7 Mpa
Temperature		20±2°C
Humidity		45%-75%