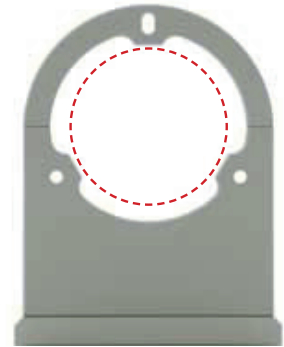


The accurate alignment of optical components is crucial when designing measurement systems. Besides optical components stability, the mechanical system layout should assure that the optical axis is orthonormal to the measurement plane. For this purpose, Opto Engineering supplies CMHO Series clamping mechanics, suitable for most OE telecentric lenses and collimated illuminators.

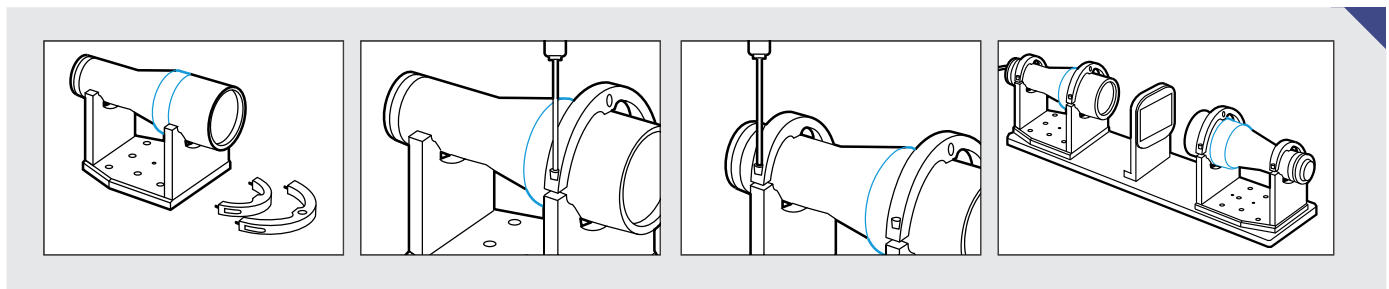
Three-point mounting grants a very precise and stable alignment of the optical components, also making the assembling procedure quick and simple.

CMHO SERIES: CLAMPING HOLDERS

Part Number	COMPATIBLE BI-TELECENTRIC LENSES AND ILLUMINATORS				MECHANICAL SPECIFICATIONS				
	Matrix Detector Bi-Telecentric	Large Detector Bi-Telecentric	Very Large Detector Bi-Telecentric	LT CL Illuminators	Length (mm)	Width (mm)	Height (mm)	Optical Axis Height (mm)	Weight (g)
CMHO23	TC2304, TC2307, TC2309, TC2312	TC4M04, TC4M07, TC4M09	n.a.	LTCL23/x	20,0	53,0	66,5	40,0	114
CMHO16	TC1216, TC2316	TC4M16, TC2M16	n.a.	LTCL16/x	20,0	62,5	71,2	40,0	123
CMHO24	TC1224, TC2324	TC4M24, TC2M24	n.a.	LTCL24/x	20,0	62,5	71,2	40,0	115
CMHO36	TC1336, TC1236, TC2336	TC4M36, TC2M36	TC16M36	LTCL36/x	110,0	97,0	125,5	80,0	520
CMHO48	TC1248, TC2348	TC4M48, TC2M48	TC16M48	LTCL48/x	140,0	111,0	132,5	80,0	640
CMHO56	TC1256, TC2356	TC4M56, TC2M56	TC16M56	LTCL56/x	162,0	116,0	135,0	80,0	720
CMHO64	TC1364, TC1264, TC2364	TC4M64, TC2M64	TC16M64	LTCL64/x	175,0	137,0	145,0	80,0	810
CMHO80	TC2372, TC1380, TC1280, TC2380	TC4M72, TC4M80, TC2M80	TC16M80	LTCL80/x	230,0	153,0	152,0	80,0	1060
CMHO96	TC2385, TC1396, TC1296, TC2396	TC4M85, TC4M96, TC2M96	TC16M96	LTCL96/x	265,0	179,0	186,5	100,0	1400
CMHO120	TC23110, TC12120, TC23120	TC4M110, TC4M120, TC2M120	TC16M120	LTCL120/x	204,0	220,0	240,0	130,0	2600
CMHO144	TC23130, TC12144, TC23144	TC4M130, TC2M144, TC4M144	TC16M144	LTCL144/x	204,0	232,0	247,0	130,0	2400



ASSEMBLING A TELECENTRIC LENS ON A CMHO HOLDER



CMPT SERIES: MOUNTING PLATES

Part Number	Compatible CMHO Clamping Mechanics	Compatible Pattern Mounts	MECHANICAL SPECIFICATIONS			
			Length (mm)	Width (mm)	Thickness (mm)	Weight (g)
CMPT04-09	CMHO23	CMPH004-024	199,6	56,0	10,0	286
CMPT16-24	CMHO16, CMHO24	CMPH004-024	226,8	66,5	10,0	385
CMPT36	CMHO36	CMPH036-056	477,0	103,0	15,0	1950
CMPT48	CMHO48	CMPH036-056	596,0	117,0	15,0	2770
CMPT56	CMHO56	CMPH036-056	631,0	122,0	15,0	3060
CMPT64	CMHO64	CMPH064-096	783,0	143,0	15,0	4460
CMPT80	CMHO80	CMPH064-096	868,0	158,0	15,0	5470
CMPT96	CMHO96	CMPH064-096	1005,0	185,0	20,0	9940

CMPT plates are mechanical tools designed to build up dimensional measurement optical benches. Most Opto Engineering telecentric lenses and collimated sources can be mounted on these plates by means of the compatible CMHO clamps. For very accurate measurement applications, calibration patterns can be precisely positioned in front of the lens with the CMPH pattern holders, allowing for perfect optical system calibration.