

## SpeedMarker 050 (8019)



### System specification

Norm	CDRH Lasersafety Laserclass 4 with EC- Declaration of Incorporation according to Machine Directive 2006/42/EC, Annex II 1. B
Software	Speedmark; Directmark Printerdriver
Supported mono fonts	ISOCT, RomanS,SOKOL
Supported fonts	all installed TrueTypeFonts
Supported 1D barcodes	Australian Post; Codebar; Code 11; Code 128; Code 39; Code 93; DAFT; Deutsche Post; DPD; EAN-13; EAN-14; EAN-8; GS1; HIBC; ISBN; GS1; Pharmacode
Supported 2D codes	Datamatrix; QR-Code; Aztec; Codeblock-F; GS1 Databar; HIBC; Maxi Code; PDF 417
Supported image formats	BMP; JPG; DXF; PDF; EPS; PS; TSF; DWG
Laser source	Pulsed Yb-fiberlaser
Power stability	better $\pm 5\%$
Wavelength	1.064 nm
Focus and pilot laser	Diode laser $\lambda = 655\text{nm}$ , Laser class 2; 1mW
Cooling	passiv air cooled
Cable length to rack	$\sim 2,5\text{m}$
Protection level	IP 54
Dimensions LxBxH (mm)	651 x 160 x 120
Weight including lense	$\sim 8,5\text{kg}$

### Laser Rack

Interfaces	Ethernet, RS232, Laser-Interlock, Marking-Start (24 VDC), Marking-Stop (24 VDC),E-Stop, Error-Reset, Laser-Busy, assignable digital I/O's (4/4;24 VDC),
Weight	20kg (100W 25 kg)
Dimensions LxBxH (mm)	449x619x177
Power supply	115 - 230V AC, 50/60Hz, 1/N/PE
Maximum power consumption	Max. 500W
Cooling	active fan cooled
Protection level	IP 20
Mini. required exhaust	Atmos Nano

### Laser Controller IPC

Weight	9 KG
Dimensions LxBxH (mm)	428x400x88.5
Power supply	115 - 230V AC, 50/60Hz, 1/N/PE
Maximum power consumption	Max. 500W
Cooling	active fan cooled
Protection level	IP 20

### Ambient conditions

Operation	Temperature range +15 to +35° C; Relative humidity max. 60 %. Non-condensing
Storage	Temperature range +0 to +30° C; Relative humidity max. 60 %. Non-condensing
Transport	Temperature range -10 to +40° C; Relative humidity max. 70 %. Non-condensing

### Lens

	F100	F160	F210	F254	F330	F420
Marking field XxY(mm)	70x70	120x120	150x150	190x190	240x240	310x310
Working distance (mm)	154,0	215,0	271,5	322,0	391,5	501,5
Spotdiameter @ working dist.(mm)	0,027	0,045	0,059	0,068	0,088	0,112
Marking resolution (mm)	0,001	0,002	0,002	0,003	0,004	0,005
Max. marking speed (m/sec)	7	12	12	12	12	12

## SM 0050 02G

Laser type	Fiber
Maximum laser power	20W
Maximum pulse energy [mJ]	0,8
Pulse frequency (kHz)	1-600
Pulse length(ns)	200
Beam quality	M <sup>2</sup> < 1.5

## SM 0050 02N

Laser type	MOPA
Maximum laser power	20W
Maximum pulse energy [mJ]	0,8
Pulse frequency (kHz)	1-4000
Pulse length(ns)	2-500
Beam quality	M <sup>2</sup> < 1.4

Pulse width [ns]	Pulse Energy [μJ]	Pulse Frequency [kHz]	Max Frequency [kHz]
2	24	850	4000
4	40	500	4000
6	63	320	4000
9	80	250	4000
13	118	170	3000
20	174	115	3000
30	222	90	3000
45	267	75	2000
60	308	65	2000
80	333	60	2000
100	364	55	1000
150	667	30	1000
200	800	25	1000
250	800	25	900
350	800	25	600

## SM 0050 03G

Laser type	Fiber
Maximum laser power	30W
Maximum pulse energy [mJ]	0,8
Pulse frequency (kHz)	1-600
Pulse length(ns)	200
Beam quality	M <sup>2</sup> < 1.8

## SM 0050 05G

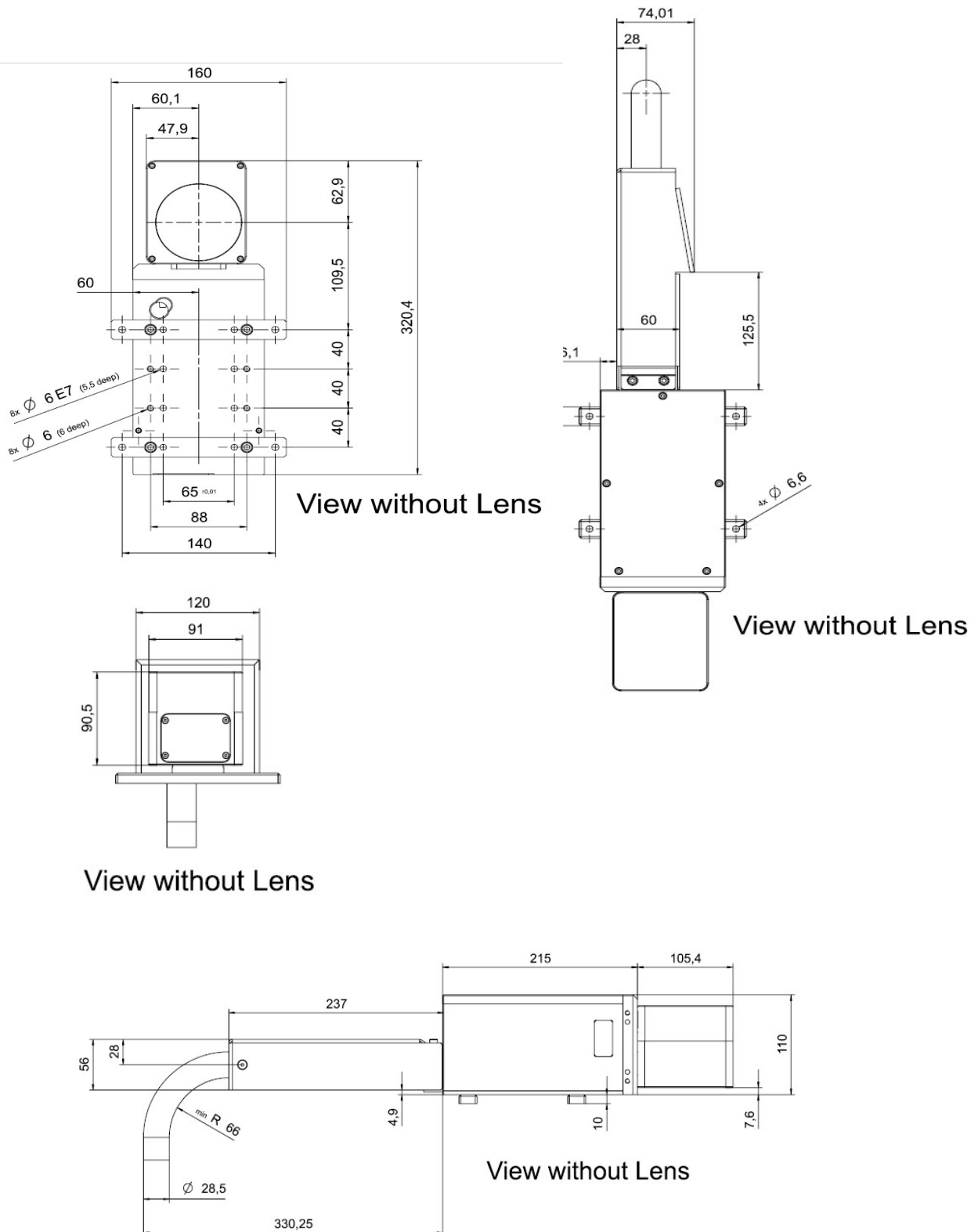
Laser type	Fiber
Maximum laser power	50W
Maximum pulse energy [mJ]	1,25
Pulse frequency (kHz)	2-200
Pulse length(ns)	200
Beam quality	M <sup>2</sup> < 1.4

## SM 0050 10N

Laser type	MOPA
Maximum laser power	100W
Maximum pulse energy [mJ]	1,5
Pulse frequency (kHz)	1-4000
Pulse length(ns)	2-500
Beam quality	M <sup>2</sup> < 1.6

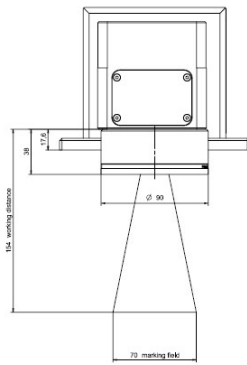
Pulse width [ns]	Pulse Energy [μJ]	Pulse Frequency [kHz]	Max Frequency [kHz]
2	34	2960	4000
4	46	2160	4000
6	71	1400	4000
9	104	960	4000
13	147	680	3000
20	238	420	3000
30	333	300	3000
45	400	250	2000
60	500	200	2000
80	556	180	2000
100	625	160	1000
150	1053	95	1000
200	1333	75	1000
250	1429	70	900
350	1493	67	600
500	1493	67	500

## SpeedMarker 50 - laser marking head (without lens)

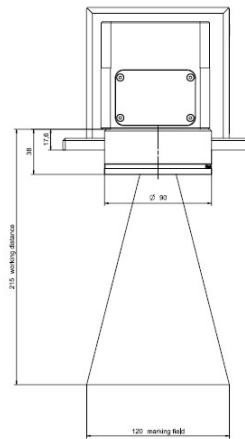


## Laser marking head with lens configuration

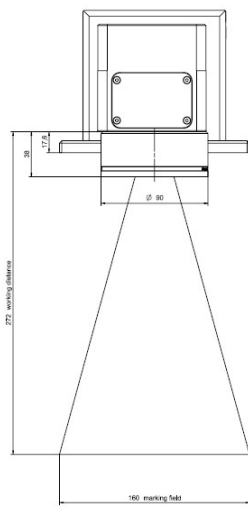
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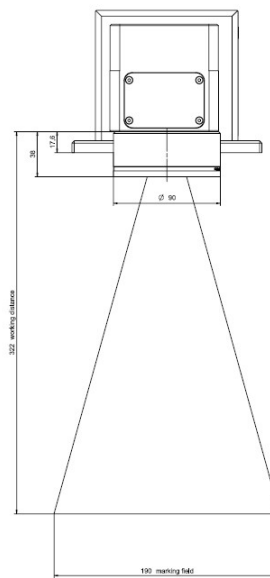
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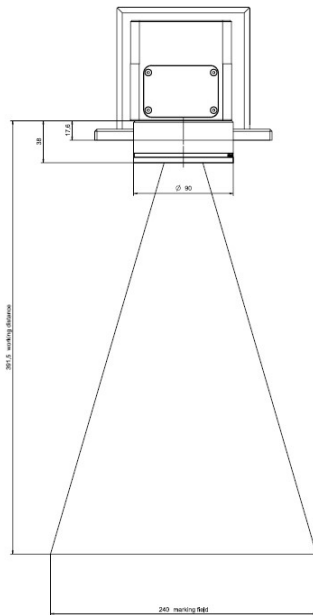
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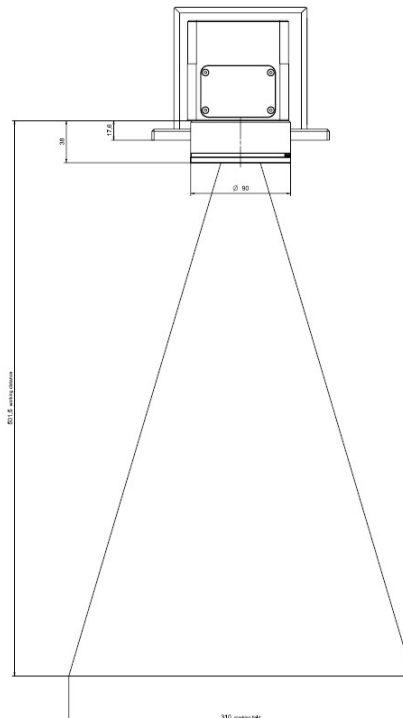
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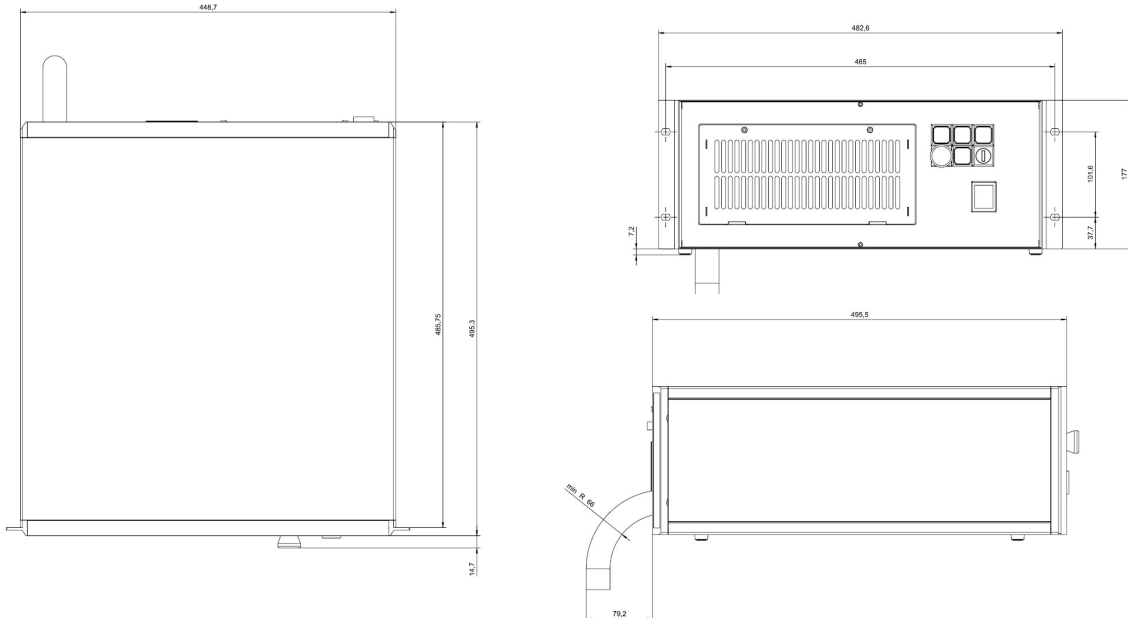
F=330



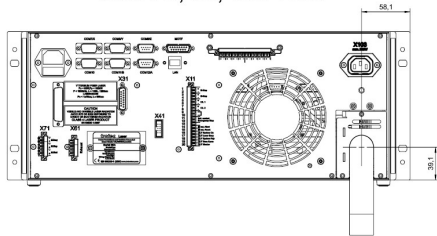
F=420



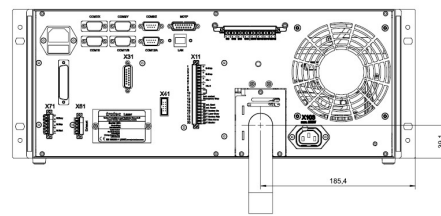
## Laser Rack



View 20, 30, 100 Watt



View 50 Watt



## Laser Controller IPC

