



# KOWOTEST

## Pin Hole Camera

according to ASTM E1165-20  
and EN 12543 - 2



Measuring the focal spot size of X-Ray tubes  
with digital detector (DDA) and software

KOWOSPOT X

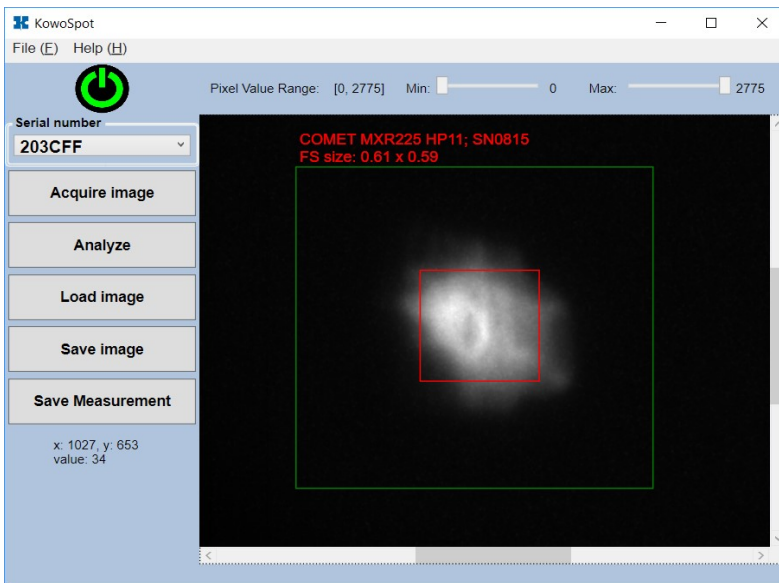
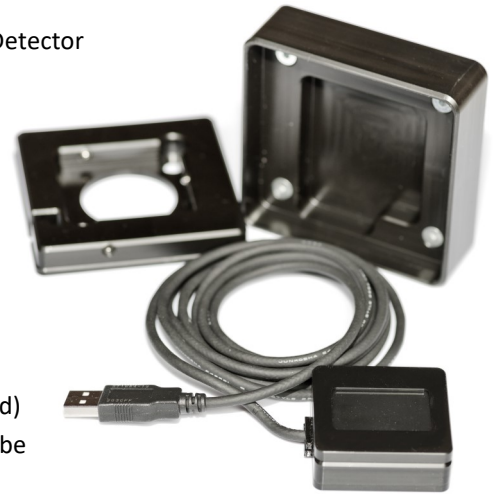
# KOWOSPOT X fully digital measurement of focal spot size with results within a minute

The new digital version of the KOWOSPOT Camera allows a fast stand-alone measurement of focal spots.

The digital version consists of the analogue version of the KOWOSPOT with a Digital Detector Array (DDA) and complete easy to use software package.

## Benefits:

- Measurement (ASTM E1165-20 or EN12543-2) within a few seconds
- Complete solution supplied — only a PC with MS WINDOWS® is required
- Storing images (tif) and results (cvs); repeated measurement stored in same cvs file for focal spot evaluation over lifetime of the X-Ray tube
- DDA design for about 6000 focal spot measurements; DDA can be replaced easily
- DDA with 20µm pixel size and special scintillator offer high resolution and efficiency
- Software with auto exposure function and easy to use evaluation (no expert required)
- Modular concept—fits for focal spots from 100µm up to >4mm (FS 0 to FS 17); may be extended to smaller focal spots with restrictions in precision due to pin hole size



## DDA Specification:

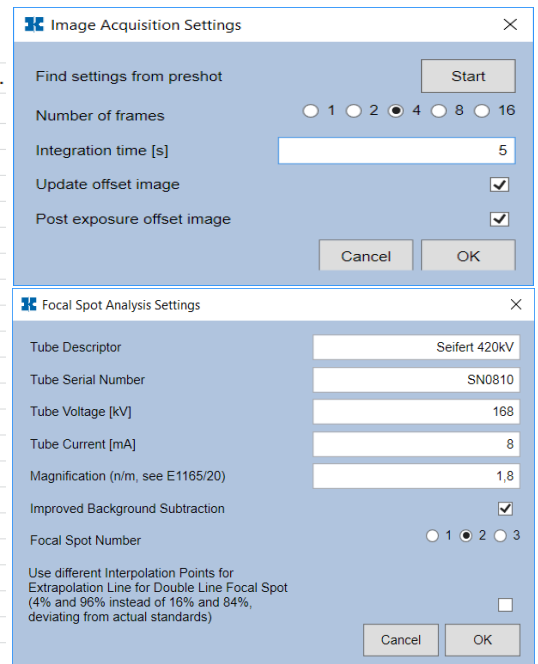
- 20µm pixel (32µm SR<sub>b</sub><sup>detector</sup>) with structured scintillator
- CMOS sensor protected with fiber glass shielding
- active area 1500 x 1000 pixel
- USB connection - may be extended to 6.5m

## Features of the Software:

- automatic detector calibration when plugged in
- automatic evaluation of exposure time (1s..16s)
- image integration for high SNR possible
- automatic calculation of system pixel size
- free style tube descriptor and Serial Number
- scatter reduction with improved background subtraction
- results are stored in images and sheet
- already captured images can be re-evaluated
- image size (Zoom) and gray value scaling adjustable

## Recommended configurations:

Focal Spot Class	max. Size $\varnothing$ [µm]	min. Pinhole Diam. P [µm]	min. FPD (m) [cm]	min. PDD (n) [cm]	min. n / m	Tube Adapter [AD]	Pinhole Element [B µm]	Profile Elements "C" #V1 * (15cm)	# V1 opt. (15cm)	# V2 opt. (30cm)
FS 20	50	10	15	135	9:1	opt. B10	2	2		3
FS 19	63	10	15	120	8:1	opt. B10	2	1	1	2
FS 18	80	10	15	120	8:1	opt. B10	2	1	1	2
FS 17	100	10	15	105	7:1	opt. B10	2	2		2
FS 16	127	10	15	90	6:1	opt. B10	2	1	1	1
FS 15	160	10	15	90	6:1	opt. B10	2	1	1	1
FS 14	200	10	15	75	5:1	opt. B10	2	2		1
FS 13	250	10	15	60	4:1	opt. B10	2	1	1	
FS 12	320	10	15	45	3:1	opt. B10	2	2		
FS 11	400	10	15	45	3:1	opt. B10	2	2		
FS 10	500	30	15	45	3:1	opt. B30	2	2		
FS 9	630	30	15	45	3:1	opt. B30	2	2		
FS 8	800	30	15	45	3:1	opt. B30	2	2		
FS 7	1000	30	15	45	3:1	opt. B30	2	2		
FS 6	1270	30	15	45	3:1	opt. B30	2	2		
FS 5	1600	100	15	45	3:1	opt. B100	2	2		
FS 4	2000	100	15	45	3:1	opt. B100	2	2		
FS 3	2500	100	15	45	3:1	opt. B100	2	2		
FS 2	3200	100	30	30	1:1	opt. B100	2	2		
FS 1	4000	100	30	30	1:1	opt. B100	2	2		
FS 0	5000	100	30	30	1:1	opt. B100	2	2		



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