

METACAM 20-V2

Pushrod camera system

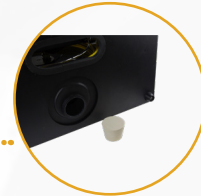
Inspection of pipes DN50 - DN160

HD screen 10.1",
Sunshade



HD Controller

- Built-in key-board for text editing
- Autonomy $\geq$ 4 h



Wastewater output



Cleaning kit

Φ 7 mm/40 m cable,
meter counting

Φ 28 mm camera head,
PAN360°/TILT210°

Description

METACAM 20-V2 is an inspection equipment to, with a flexible structure for ease of use, carrying and maintenance.

It has many advantages:

- PAN360°/TILT 210° camera head of only $\varnothing$ 28 mm;
- 10.1" HD controller to offer high quality images;
- Impact-resistant steel plate;
- An integrated cleaning kit to make the cable clean after each use.

Technical Parameters

Camera heads	C28T by default, C40EB in option (Refer to <i>Annex 1 - Camera Heads</i>)
	Dimensions: $\Phi 28$ mm x 48.5 mm
	Range: DN50 - DN160
	Materials: housing in aluminium and lens in sapphire
	View angle of 60°, PAN360°/TIL210°, fixed focal length
	512 Hz transmitter, distance of 4 - 5 m
	Lighting: 2 LEDs
Jonc & Touret	Waterproof: IP68 (1 bar)
	$\Phi 7$ mm & 40 m, meter counter
	Pushrod blocker for easy unwinding
	Kit to clean pushrod after every use
Controller	Support plate in steel, resistant to shocks
	Video/audio/photo recording on USB/SD
	10.1" HD screen, detachable controller
	Built-in keyboard to input texts
	Joystick to control PAN/TILT camera heads
	System in 7 languages: English, Spain, Italian, French, German, Portuguese and Russian
	HDMI output
Weight & Dimensions	6600 mAh Li-Ion rechargeable battery, autonomy ≥ 4 h
	15.6 kg, 490 mm x 420 mm x 350 mm (L x l x H)

Multi-functions



Excellent compatibility = Multi-functions

- Direct connection of a $\Phi 28$ mm PAN360°/TILT210° camera or a $\Phi 40$ mm axial camera;
- Indirect connection via separate reels to connect camera heads of $\Phi 12$ mm, $\Phi 14$ mm, $\Phi 23$ mm and $\Phi 25$ mm for inspecting pipes ranging from DN20 to DN125.

Centring devices for C28



Centring devices of DN50 and DN96

Annex 1

Camera Heads



C12B



C14T



C23F (T)



CD23F



CD23FT



CD23HD



C25B



C25BT



C28(T)



C40EB



C40HD



C360E



C360A



C360B



C360HD



C360D

Annex 1

Camera Heads

Models		C12B	C14T	C23F(T)
Applications	Range	DN20 - DN50	DN30 - DN65	DN50 - DN125
	90° elbows	≥ 32 mm	≥ 30 mm	≥ 65 mm
	Compatibility	OXLUS 10/20		OXLUS 10/20, META-CAM 10
General parameters	Dimensions	Φ 12 × 22 mm	Φ 13,5 × 29 mm	Φ 23 × 75 mm
	Materials	Housing in stainless steel, lens in sapphire		
	IP	IP68 (1 bar)		
	Temperature	-20°C to 55°C		
Technical parameters	Self-levelling	No		
	Focal length	5 - 15 cm, fixed		10 - 20 cm, fixed
	Pan/Tilt	No		
	Lighting	8 LEDs		12 LEDs
	Resolution	0.4 MP		0.5 MP
	512 Hz transmitter	No	Yes	In option

Models		CD23F(T)	C25B	C25BT
Applications	Range	DN50 - DN125		
	90° elbows	≥ 65 mm	≥ 50 mm	≥ 65 mm
	Compatibility	OXLUS 10/20, METACAM 10		
General parameters	Dimensions	Φ 23 × 42 mm	Φ 25 × 27 mm	Φ 25 × 62 mm
	Materials	Housing in stainless steel, lens in sapphire		
	Protection rating	IP68 (1 bar)		
	Temperature	-20°C to 55°C		
Technical parameters	Self-levelling	Yes	No	
	Focal length	10 - 20 cm, fixed		
	Pan/Tilt	No	No	
	Lighting	9 LEDs (strong)	12 LEDs	
	Resolution	0.5 MP	0.5 MP	
	512 Hz transmitter	In option	No	Yes

Annex 1

Camera Heads

Models		C23HD(T)	CD23HD(T)	C40EB(T)	C40HD(T)
Applications	Range	DN50 to DN125		DN70 to DN150	
	90° elbows	≥ 65 mm	≥ 65 mm	≥ 75 mm	
	Compatibility	ELEGAM HD	ELEGAM HD	METACAM 20	VISIO Pro
General parameters	Dimensions	Φ23 × 42 mm	Φ23 × 50 mm	Φ40 × 42 mm	
	Materials	Housing in SST, lens in sapphire			
	Protection rating	IP68 (1 bar)			
	Temperature	-20°C to 70°C		-20°C to 55°C	
Technical parameters	Self-levelling	No	Yes	Yes	
	Focal length	10 - 20 cm, fixed			
	Pan/Tilt	No			
	Lighting	9 LEDs		30 LEDs	
	Resolution	Full HD		0.5 MP	Full HD
	Sonde 512 Hz	In option			
Models		C28(T)	C360A (T)	C360B (T)	
Applications	Range	DN50 to DN160	DN70 to DN450		
	90° elbows	≥ 70 mm	≥ 100 mm	Sans données	
	Compatibility	METACAM 20	VISIO PRO		
General parameters	Dimensions	Φ28 x 48,5 mm	Φ60 x 120 mm	Φ55 × 142 mm	
	Materials	Housing in aluminium, lens in sapphire			
	Protection rating	IP68 (1 bar)	IP68 (1 bar)		
	Temperature	-20°C to 55°C	-20°C to 55°C		
Technical parameters	Self-levelling	No			
	Focal length	10 - 20 cm, fixed	10 - 20 cm, adjustable	10 - 20 cm, fixed	
	Pan/Tilt	360°/210°	360°/180°	360°/210°	
	Lighting	2 LEDs	18 LEDs (strong)	4 LEDs (strong)	
	Resolution	0.4 MP	0.5 MP		
	512 Hz transmitter	In option			

Annex 2

Centring Devices

Models	Photos	Description	Applications	DN ext.
SKID-12		Protection ball C12	Ø12 mm camera heads	-
SKID-14		Protection ball C14	Ø14 mm camera heads	-
SKID-23S		Protection guide C23 (Small)	Φ23 mm camera heads	45 mm
SKID-23L		Protection guide C23 (Big)	Φ23 mm camera heads	80 mm
R-SKID23S		Guide with wheels C23	Φ23 mm camera heads	84 mm
SKID-23B		Guide C23	C23F(T)	44,5 mm
SKID-CD23		Guide CD23	CD23F(T) and CD23H-D(T)	44,5 mm
SKID-28S/L		1 pair of plastic guides C28	Φ28 mm PAN/TILT camera heads	50 mm
R-SKID28S		1 pair of metal guides with wheels C28	Φ28 mm PAN/TILT camera heads	96 mm
SKID-40		Guide C40EB	C40EB	72mm
R-SKID40S		Guide with wheels C40HD (Small)	Φ40 mm camera heads	72mm