

Capital Project Request Form



Request Type:

Department: Date:

Title of Request:

Department Priority

Linked to another project?
 Yes
 No

Project Request is: New Estimated Useful Life:
 Replacement
 Modification

This is a limited field, please attach documents for more detail.

Description:

Basis of Cost: Quote Total Cost
 Bid
 Estimate

Revenue (if any) Net Cost

Will there be additional costs in future years to complete this project?

select one: Yes If yes, amount?
 No

Finance: Account

Send to Department Date:



**PAUL CONWAY
SHIELDS & EQUIPMENT**

QUOTE

14100 W. Cleveland Av. New Berlin, WI. 53151
Phn 800-955-8489 Fax 262-782-4437 info@paulconwayshields.com

Date	Quote #
05/29/14	LYOKQ1006

Sold To: Manitowoc Fire Department
Gregg Kadow

Phone: 920-686-6540
Fax: (920) 686-6545

Ship To: Manitowoc Fire Department
Gregg Kadow

Phone: 920-686-6540
Fax: (920) 686-6545

Terms	Rep	P.O. Number	Ship Via
	Lee Kasten		

Qty	Part #	Description	Unit Price	Ext. Price
1	DRA4059464	UCF 9000 TRUCK KIT NFPA	\$9,400.00	\$9,400.00
			SubTotal	\$9,400.00
			Sales Tax	\$0.00
			Shipping	\$0.00
			Total	\$9,400.00

PRICES SUBJECT TO CHANGE - PRICES BASED UPON TOTAL PURCHASE -

Dräger UCF 9000 Thermal imaging camera

Always remain focused: The thermal imaging camera UCF 9000 is thermal imaging and digital camera in one. It ensures you are well equipped even for complex tasks – from fire fighting and hazardous substance operations in Ex zone I to the monitoring and documentation of training.



ALWAYS HAVE A HAND FREE

Like all Dräger UCF thermal imaging cameras, the UCF 9000 is a compact design. The holding hand also operates all functions. Buttons and keys are quickly selected with the thumb or index finger. With its robust support the UCF is conveniently at hand even while you are crawling on all fours: Simply support yourself against the ground with the device's crawlplate support.

CRYSTAL CLEAR IMAGES

Even when the visibility is extremely poor, the UCF 9000 will still deliver first-rate image quality and detailed precision. With its 384 x 288 pixels it offers an extremely high resolution and thus provides 44 % more detail than other fire fighting thermal imaging cameras. Its 57° field of view (horizontal) provides you with an extra-large overview of the situation. To bring the scene in even closer, you have the option of using the 4x zoom in addition to the 2x zoom.

FILMING OR PHOTOGRAPHING SCENES WITHIN THERMAL IMAGE OR REAL IMAGE MODE

Unlike the UCF 7000, the UCF 9000 is capable of capturing films and individual photos of not just the displayed thermal images, but also from real digital images. With this option, you can make a live recording of real operations and training situations and evaluate them on the display on site with the play function.

PREPARED FOR INSIDE OPERATIONS: THE UCF BASIC FUNCTIONS

Laser pointer:

use the pointer to mark heat sources or display the fill level of tanks

Snapshot-function:

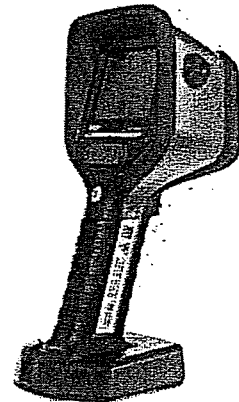
look around corners and freeze the image to assess the situation

Extended dynamic range:

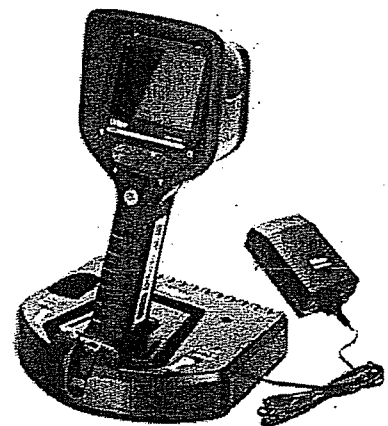
clearly detect persons and objects even near fires

Quick shutter:

don't miss information because the detector is calibrating itself or when switching to a different operating mode



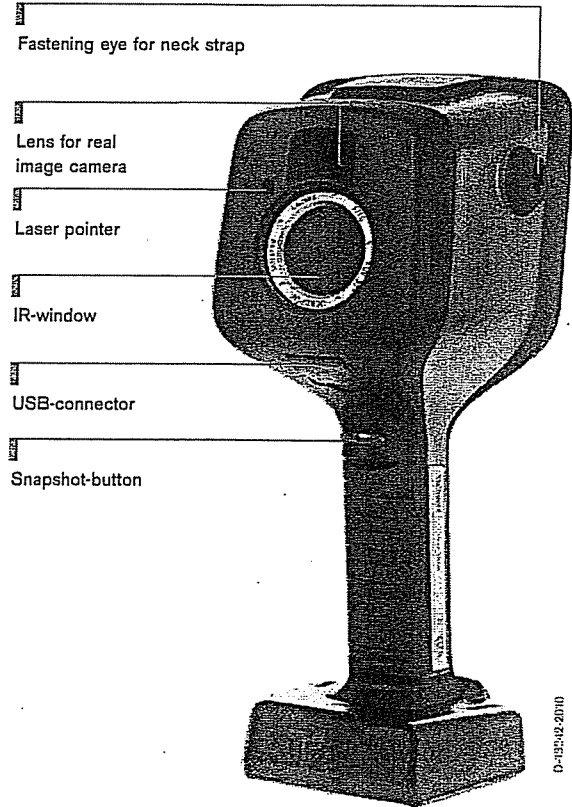
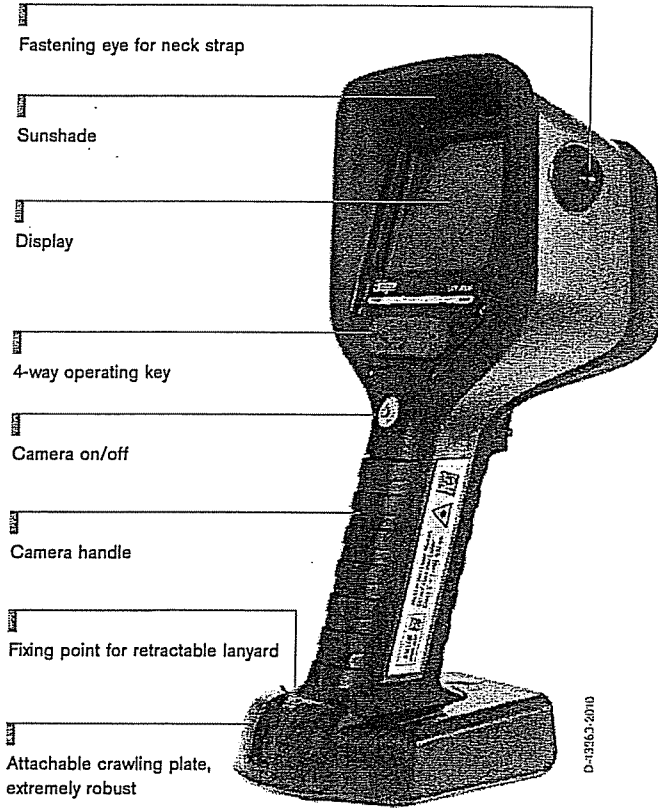
D-13163-2010



D-13165-2010

UCF 9000 in charging station

DRÄGER UCF 9000



EIGHT ADDITIONAL IMAGE MODES IN ADDITION TO STANDARD MODE –

- Fire (fire fighting)
- Persons (search and rescue)
- Thermal Scan (searching for hotspots)
- Outdoors (searching for persons outside)
- Hazardous Goods (leak detection and level indicators)
- Scan PLUS (searching for heat sources – in real image)
- Normal Image (video camera)
- User-defined 1

CONTINUED RECORDING WITH FULL MEMORY CARD

Should the recording capacity of approx. two hours be exhausted, the black box of the UCF 9000, just like the UCF 7000, guarantees further use of the thermal imaging video. If the memory is full, the camera will simply record over the beginning of the recording. The recording continues automatically.

ADDITIONAL ADVANTAGES:

- intuitive operation: easy and safe handling even under rough conditions
- display brightness adjusts automatically to environment
- easy-to-read status information
- modern lithium ion batteries provide approx. four hours operating time
- automatic stand-by for longer battery life
- different attachment options (e.g. neck strap or retractable lanyard)
- wide range of accessories (e.g. transport case, vehicle installation kit, tripods, etc.)

TECHNICAL DATA

Dräger UCF 9000	
Dimensions of camera (W x H x D)	125 x 280 x 110 mm
Weight	1.4 kg (3 lbs) incl. battery
Display	
Technology	Liquid crystal display (LCD)
Size (diagonal)	9 cm (3.5 inches)
Application modes	Standard, Fire, Persons, Thermal Scan, Outdoors, Hazardous Goods, Scan PLUS, Normal Image, User defined 1
Housing	
Protection cover	Rubber material EPDM
Carrying loops	High-temperature-resistant material
Housing material	High-temperature-resistant plastic
Protection class	IP 67
Infrared specifications	
Type of sensor	a-Si Microbolometer Array
Resolution	384 x 288 Pixel
IR spectral	7 to 14 µm
Temperature sensitivity	Typically 0.035°C (0.063 °F)
Picture frequency	50 Hz
Optics	
Material	Germanium
Focus	1 m to infinity
Field of view	Horizontal: 57° / Vertical: 41° / Diagonal: 74°
Operation	
Operation time (at 23°C) with battery	Typically 4 hours
Operation time (at 23°C) with alkaline power pack	Typically 2 hours
Temperature measurement	Digital temperature display: -40 °C ... 1,000 °C (-40 °F ... 1,832 °F) 40°C to 85°C (-40 °F ... 185 °F) (inside camera), 150 °C (300 °F) for 20 min, 260 °C (500 °F) for 10 min
Operating temperature	Rechargeable lithium ion batteries
Battery technology	Precise 4-level battery indicator
Battery status display	The Dräger UCF 9000 meets the following explosion protection regulations:
Approvals	IEC 60079-0:2007 IEC 60079-11:2006 EN 60079-0:2009 EN 60079-11:2007 ANSI/ISA 12.12.01 CAN/CSA E60079-0 CAN/CSA E60079-11
	It is classified as follows: for Europe: I M2 / II 2G, Ex ib I Mb / Ex ib IIC T4 Gb for Australia: Ex ib IIC T4 Gb for the USA and Canada: Class I, Div. 2, Groups A, B, C, D, Class I, Zone 1, Ex ib IIC T4
	Flame test according to EN137:2006

ORDERING INFORMATION

Dräger UCF 9000	
Dräger UCF 9000 (50 Hz)	83 21 225
Accessories	
Transport case	83 21 099
Neck strap	83 23 031
Retractable lanyard	83 23 032
Hand support loop	83 23 033
Li-ion battery (with Ex-approval)	83 23 075
Battery charger	83 21 247
Power supply for charger	83 16 994
Vehicle installation kit (bracket and 12-30 V-cable)	83 21 253
Suction tripod, e. g. to mount on truck roof	83 23 070
Tripod	83 21 254
Universal clamp	83 21 259
12 V-adapter for operations with tripod	In preparation
12 V-power supply for operations with tripod	83 16 994

Included in scope of delivery

Thermal imaging camera with integrated laser pointer, "snapshot function", 2x and 4x digital zoom, 8 additional application modes in addition to the standard mode ("application switch") including thermal scan function (also real image) and image and sound storage as well as direct display function, 1 battery and 1 charger. Also includes USB cable (camera standard: USB 2.0 interface), attachable crawling plate, PC-software, Instructions for Use and brief instruction.

HEADQUARTERS

Dräger Safety AG & Co. KGaA
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23560 Lübeck, Germany

www.draeger.com

SUBSIDIARIES**AUSTRALIA**

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Fax +44 1670 356-266

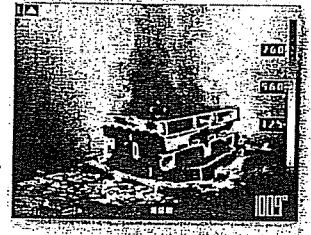
USA

Draeger Safety, Inc.
101 Technology Drive
Pittsburgh, PA 15275
Tel +1 412 787 8383
Fax +1 412 787 2207

TECHNICAL SPECIFICATION

Engine Characteristics

Detector Type:	Uncooled Microbolometer
Sensor Material:	Amorphous Silicon
Resolution:	384 x 288
Spectral Response:	8 μ m to 14 μ m
Sensitivity (nominal):	<50 mK
Scene Update Rate:	50 Hz
Dynamic Range:	>2000°F (1000°C)
Thermoelectric Cooler:	None required



Performance Characteristics

Modes of Operation:	Three
Operating Duration:	20 mins @ 250°F (120°C), 8 mins @ 500°F (260°C)
Operating Temperature:	-30°F (-35°C) to ~850°F (~450°C) (limited exposure)
Storage Temperature:	-15°F (-25°C) to 55°C (130°F) when in carry case
DTM Range:	-40°F (-40°C) to 2000°F (1000°C)
DTM Accuracy:	+/- 5°C @ <200°F (100°C), +/- 10% @ >200°F (100°C)

Physical Characteristics

Dimensions (L x W x H):	5" x 4.5" x 9" / 130 mm x 115 mm x 225 mm
Weight (excluding battery):	2.1 lbs / 0.95 kg
Shell Material:	Radel
Shell Colour:	Black
Hand-strap Material:	Kevlar
IR Protection Window Material:	Germanium
Tripod Mount:	1/4" BSW
Water Resistant:	IP67, submerged at 3' / 1m for 30 mins
Drop Tested:	6'6" / 2.0 metres
Intrinsic Safety Compliance:	ANSI/ISA-12.12.01-2007

Optical & Display Characteristics

Lens Size:	12 mm
Focus Range:	3' / 1.0 m to ∞
Field of View (H x V):	43° x 32° (54° diagonal)
Display Viewing Angle:	50° (left/right), 15° (up), 35° (down)
Display Technology:	LCD
Display Size (diagonal):	3.5" / 90 mm
Luminance:	250 cd / m ²

Power Characteristics

Battery Technology:	Li-Ion
Battery Weight:	7 oz / 0.2 kg
Operating Time:	>3.5 hours
Recharge Time (nominal):	<2.5 hours
Recharge Cycles:	1000+

Operational Characteristics

Pushbutton Controls:	1-button, 3-button or 5-button control panel
Start-up Time:	< 10 seconds
Video Standard:	PAL
Image Optimisation:	Automatic
Colourisation:	Dual-transparent colour



FEATURES

X380

CORE FUNCTIONS	Basic	Standard	Advanced
Intelligent Focus	✓	✓	✓
1000+ Mode	✓	✓	✓
100k Super-high Resolution	✓	✓	✓
Laser Pointer	✓	✓	✓
CORE ENHANCEMENTS			
Zoom (X2 & X4)	x	✓	✓
Hot Spot Tracker	x	✓	✓
Cold Spot Tracker	x		✓
Image Freeze	x	x	✓
Digital Video Recorder (DVR)	x	x	✓

✓ Standard feature ✖ Optional feature ✗ Not applicable

EXTRAS

Fast Service

At ISG Infrasy, we believe in exceptional customer service and it's our mission to deliver a great after-sale care package to help ensure complete peace of mind for our customers.*

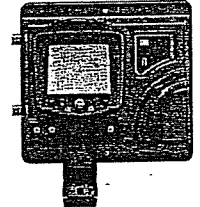


Battery for Life

Fed up with batteries failing, losing charge or unable to allocate budget for those unforeseen repairs. For a nominal one off payment, take part in our battery for life program and never pay for another new battery again.*

Fast Attack Micro Charger

The Fast Attack Micro Charger is the smallest, most compact truck charger from ISG Infrasy. It's intelligent design allows for easy installation in a vehicle so your TIC and spare battery are always fully charged and ready for use.



* Terms and Conditions apply.

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 +1 678 442 1234 (Int'l.)
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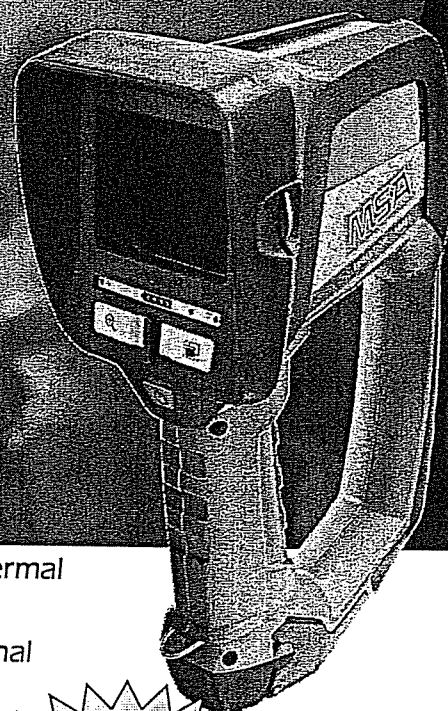
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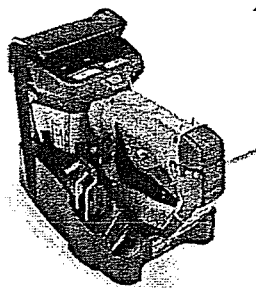
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for Thermal Image Case

A+E	NA7
 <p>Handwritten signatures and initials in the A+E column, including a large signature, a signature with 'my' written below it, and the text 'Mrs O'Neil'.</p>	