

# HRD Series Tank Inspection Lights

## Flameproof. Incandescent, Halogen

Zone 1 and 2 - 21 and 22  
Gas (G) and Dust (D)

### Applications

- Designed to illuminate the interiors of boilers, tanks, bunkers, silos, mixers, separators, pipelines and other vessels or reactors that are normally closed.
- For use in hazardous areas where ignitable vapors, gases or highly combustible dusts are present.
- For installation in chemical and petrochemical plants, refineries and other process industries.

### Features

- Type IIB version:
  - 40 W to 100 W incandescent or 50 W halogen lamp (lamp not supplied).
  - Internal aluminum reflector.
  - Operates in any position.
  - E27 lampholder.
  - Terminals: 2.5 mm<sup>2</sup>.
  - Internal and external earth: 2.5 mm<sup>2</sup>.
  - High temperature cable to be used.
  - Fixing by three integrated lugs.
  - One M20 threaded cable entry.
- Type IIC version:
  - 20 W to 50 W halogen lamp (lamp supplied).
  - Internal aluminum reflector.
  - Operates in any position.
  - G4 lampholder for 20 W and BA 15d for 50 W.
  - Power supply: 230 V 50/60 Hz.
  - Fitted with transformer 230/12 V for 12 V halogen lamp.
  - Terminals: 2.5 mm<sup>2</sup> terminals.
  - Internal earth: 2.5 mm<sup>2</sup>.
  - External earth: 4 mm<sup>2</sup>.
  - Supplied with a set of rocker hinges for mounting with DN 50 to DN 150 sightglass fittings (according to DIN 28 120).
  - One M20 threaded cable entry (via increased safety "e" box).

### Standard Materials

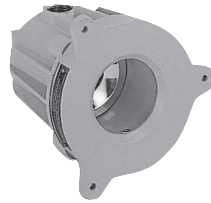
- Body and bezel: gray painted marine grade aluminum alloy
- Lens: toughened sealed lamp glass
- Reflector: internal aluminum

### Certifications and Compliances

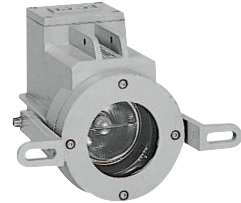
#### ◆ ATEX Certification

##### • IIB Version - Certification Type: HRCd

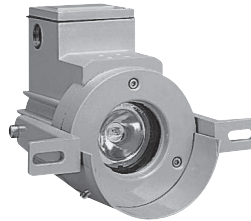
- Gas: Zone 1 and 2
  - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
  - Type of Protection: Ex d IIB
  - Temperature class: T4 to T3
- Dust: Zone 21 and 22
  - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
  - Type of Protection: Ex tD A21
  - Surface Temperature: T130 °C to T195 °C
- Ambient Temperature: -40 °C to +40 °C
- CE Declaration of Conformity: 50241
- ATEX Certificate: LCIE 02 ATEX 6232
- Index of Protection according EN/IEC 60529: IP66
- Impact Resistance (shock): IK08
- Internal Volume: > 2 dm<sup>3</sup> -2 liters



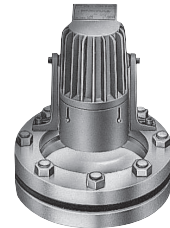
IIB Version



IIC Version (50 W)



IIC Version (20 W)



IIB Version Fitted with  
DN Model Sightglass Fitting

- IIC Version - Certification Type: HRC 20WH (20W), HRC 50 (50W)
  - Zone 1 and 2
    - Conforming to ATEX 94/9/CE: Ⓢ II 2 G
    - Type of Protection: Ex d IIC
    - Temperature class: T4 (20W), T3 (50W)
  - Zone 21 and 22
    - Conforming to ATEX 94/9/CE: Ⓢ II 2 D
    - Type of Protection: Ex tD A21
    - Surface Temperature: 20 W: T130 °C, 50 W: T195 °C
  - Ambient Temperature: -20 °C to +40 °C
  - CE Declaration of Conformity: 50260 (20W), 50661 (50W)
  - ATEX Certificate: LCIE 03 ATEX 6110 (20W), LCIE 03 ATEX 6109 (50W)
  - Index of Protection according EN/IEC 60529: IP65

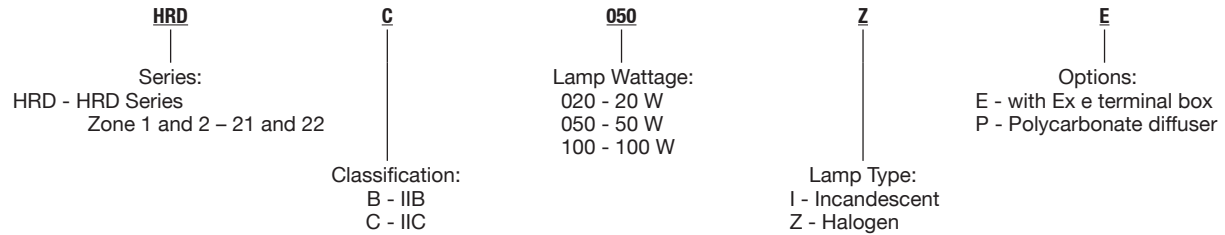
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Order using catalog numbering guide below or select catalog number from table below

### Catalog Numbering Guide – HRD Series Tank Inspection Lights



Description	Type	Weight kg	Volume dm <sup>3</sup>	Catalog Number
40 W to 100 W incandescent or 50 W halogen ①	IIB	2.90	8.10	HRDB100I
20 W halogen ② 230 V, 50/60 Hz	IIC	2.30	3.00	HRDC020ZE
50 W halogen ② 230 V, 50/60 Hz	IIC	4.00	3.60	HRDC050ZE

### Technical Data

Catalog Number	Version	Lamp Type and Wattage	T Rating	Ambient Temperature = +40 °C	
				Gas Cable Temperature	Dust Surface Temperature
HRDB100I (lamp not supplied)	IIB	40 W Incandescent	T4	N.A.	+130 °C
		60 W Incandescent	T3	+87 °C	+137 °C
		100 W Incandescent	T3	+107 °C	+195 °C
		50 W Halogen	T3	+82 °C	+149 °C

① Can also be used with compact fluorescent lamp.  
② Lamp supplied.

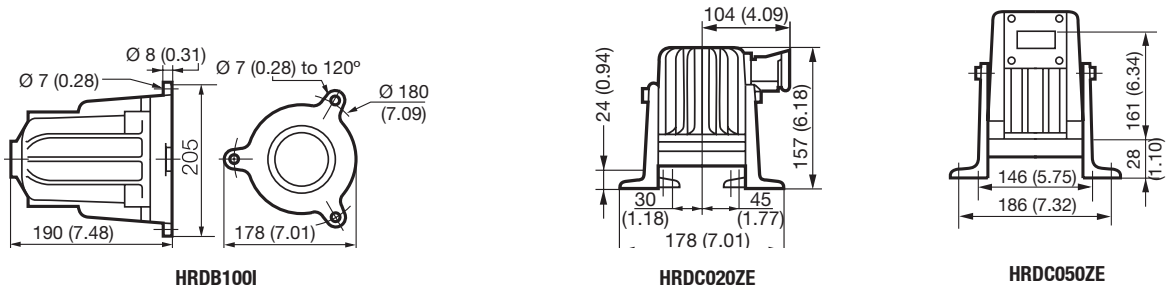
**Shaded catalog numbers are normally stocked items. All other items are made to order.**

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## Dimensions in Millimeters (Inches)



## Photometric Data

### IIC Versions

ISOLUX CURVE		20 W Version		Illuminance E (lux)				
Height (m)	Position	Distance (cm)	0	10	20	30	40	
1	L		3000	1000	125	-	-	
	H		3000	900	75	-	-	
2	L		1150	750	300	100	50	
	H		1150	750	300	100	50	

ISOLUX CURVE		50 W Version		Illuminance E (lux)				
Height (m)	Position	Distance (cm)	0	10	20	30	40	
1	L		12000	2300	375	50	-	
	H		12000	2700	250	50	-	
2	L		2550	1550	600	200	-	
	H		2550	1800	800	200	-	

### IIB Versions

Polar curves for a lumen output of 1000 lm flux, according to NF C 71-120  
Luminaire symbol as per NF C 71-121

100 W Incandescent

#### CANDELA DISTRIBUTION

Degree	Candelas
0	155
5	145
10	136
15	135
20	133
25	127
30	112
35	90
40	66
45	54
50	46
60	29
70	11

