

**LED lighting for hazardous areas**  
Zone 1, 2, 21 and 22

**CROUSE-HINDS**  
SERIES

# VLL LED

**Zone 1 GRP linear fixtures**



**Safe. Reliable. Efficient.**

**EATON**

*Powering Business Worldwide*



# Safe. Reliable. Efficient.

Featuring the industry's broadest range of LED luminaires for harsh and hazardous environments, Eaton's Crouse-Hinds can deliver a lighting solution that performs reliably in even the worst operating conditions. All the while reducing your energy, maintenance and manpower costs.

## Why LED?

### Useful life

Rated life of 50,000 hours of maintenance-free and safe operation

### Energy efficiency

LED average energy consumption is 50% less than HID and 85% less than incandescent

### Start/restart time

Instant illumination compared to 10 minute restrike time for HID

### Light quality

Higher color rendering and color temperature compared to fluorescent

### Environmental benefits

Mercury-free LED eliminates disposal costs and lower energy consumption for a smaller carbon footprint

## Why Crouse-Hinds?

### Industry-best reliability

Built to withstand extreme temperatures, vibration, water and dust

### Thermal management

Effective heat sinking ensures longer life

### Quality of light

Custom optics designed to maximize light distribution and intensity

### Retrofit compatibility

LED fixtures are compatible with Crouse-Hinds' HID installed base

# VLL LED Zone 1 GRP linear fixtures

## Features & specifications

The Zone 1 VLL product Series LED Luminaires with high-quality international brand LED chips, have extremely long lifespan. Multiple versions of the LED are available, providing ideal solutions for indoor or outdoor areas to retrofit existing fluorescent fixtures.

Model	Nominal* lumens	Wattage	Efficacy	Equivalent fluorescent
VLL-3L	3100	<25W	>130~lm/W	2x18W
VLL-5L	6400	<50W	>130~lm/W	2X36W
VLL-7L	7400	<60W	>130~lm/W	2X54W

\*Lumen values apply to 5700K light color, 70 CRI fixtures. Lumen output may vary slightly for different models.

\*Tolerance+/-10%

## Application

- Locations where require continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent on-and-off of lights
- Where flammable vapors, gases, ignitable dusts, fibers or flyings are present; indoors or outdoors
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Marine, wet locations and hose-down environments
- Manufacturing plants; heavy industrial, chemical, petrochemical or pharmaceutical facilities; Offshore platforms; FPSO; loading docks; tunnels



## Benefits:

### EFFICIENCY

- Industry leading lumen efficacy up to 130~lm/w reduces energy consumption and delivers cost savings.
- Three lumen packages available from 3000 to 7300 lumens providing a versatile solution for different illumination applications.

### SAFETY AND RELIABILITY

- Rugged design for extremely harsh environments, IP66 even under vibration.
- Optional self-contained battery for emergency lighting applications delivers 25% of standard lumen output for 1.5-hours or 3-hours.

### EASY INSTALLATION AND MAINTENANCE

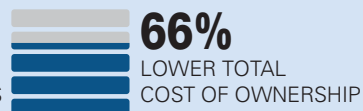
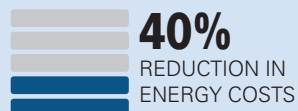
- Retrofit- friendly with optional sliding rail mounting system, allowing brackets to be easily adjusted to existing mounting holes.
- Self-monitoring status battery indicator makes easy for maintenance check.
- Inhibit switch comes as standard for our emergency fitting which is suitable for offshore unmanned platform application.

## LED vs. fluorescent savings at a glance

Why are so many facilities making the switch from fluorescent to LED?

The numbers say it all.

## VLL-5L vs. x 36W Fluorescent



# VLL LED Zone 1 GRP linear fixtures

## Standard materials

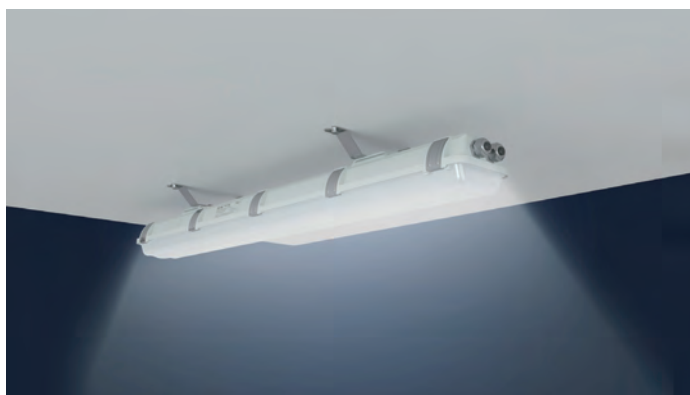
- Enclosure-Glass Fiber Reinforced Plastic (GRP)
- Impact resistance diffuser-Polycarbonate (PC)
- Gaskets-Silicone
- Fasteners-All external fasteners are stainless steel

## LED system:

- Cold white 5700K
- Optional 3000k, 4000k, 5000K
- All series feature field replaced LED modules.
- Fog diffuser with harmful glare protection as standard
- Rated life of 5 years at 55°C provides long term, low-maintenance operation.

## Certifications and compliances

- Marking accd.to IECEx  
Ex eb mb IIC T5 Gb or Ex db eb mb IIC T5 Gb / Ex db eb ib mb IIC T5Gb (EM)\*  
Ex tb IIIC T80°C Db
- Marking accd.to ATEX  
II2 G Ex eb mb IIC T5 Gb  
II2 G Ex db eb mb IIC T5 Gb  
II2 G Ex db eb ib mb IIC T5 Gb(EM)  
II2 D Ex tb IIIC T80°C Db



## Technical data

<b>IECEx-certification of conformity</b>	IECEx NEP 21.0020X
<b>Ex Marking</b>	Ex eb mb IIC T5 Gb or Ex db eb mb IIC T5 Gb / Ex db eb ib mb IIC T5Gb (EM)* Ex tb IIIC T80°C Db
<b>Ambient temp</b>	-40°C to 55°C (Normal) -25°C to 45/50°C (Emergency)
<b>Rated input volt</b>	100-240VAC 50/60Hz, DC 105-250V
<b>Power factor</b>	>0.9
<b>Color Temperature</b>	5700K as standard, 3000K,4000K,5000K is available.
<b>CRI</b>	Cool white>70 as standard, CRI>80 is optional
<b>System watt*</b>	VLL 3L series: <30W VLL 5L series: <55W VLL 7L series: <65W
<b>Lumen output</b>	VLL 3L series:3100Lm VLL 5L series:6400Lm VLL 7L series:7400Lm
<b>Material</b>	GRP and PC
<b>Weight</b>	VLL 3L series Normal and EM: 4.3Kg / 5.8Kg VLL 5L /7L series Normal and EM: 7.5Kg / 9.8Kg
<b>Terminals</b>	Max 6mm <sup>2</sup>
<b>Entry Size</b>	M20 as standard, M25 is available.
<b>Out line dimension</b>	VLL 3L series: 732x178x125 VLL 5L /7L series:1333x178x125
<b>Backup duration &amp; Lumen percentage</b>	Standard version EM1=1.5h,25% output. EM2=3h, 25% output is available.
<b>IP(IEC60598)</b>	IP66

\*Isolation switch is available as optional

\*Tolerance+/-5%

# VLL LED Zone 1 GRP linear fixtures

## Ordering Information:

Product Type	Colour Temp <sup>1)</sup>	Terminals	Throughwiring		Cable gland/ Threaded	Threaded Plug <sup>2)</sup>	Blanking plug	Part No. <sup>3)</sup>
			Single-ended	Twin-ended				
<b>VLL 3L</b>								
VLL-3L-57-1/6-120-N	5700K	1x6	●	-	2xM20	1	1	CCL2004126
VLL-3L-57-2/6-220-N		2x6	-	●	4xM20	2	2	CCL2004130
<b>VLL 3L Emergency</b>								
VLL-3L-57-EM1-1/6-120-N	5700K	1x6	●	-	2xM20	1	1	CCL2004134
VLL-3L-57-EM1-2/6-220-N		2x6	-	●	4xM20	2	2	CCL2004138
<b>VLL 5L</b>								
VLL-5L-57-1/6-120-N	5700K	1x6	●	-	2xM20	1	1	CCL2004174
VLL-5L-57-2/6-220-N		2x6	-	●	4xM20	2	2	CCL2004178
<b>VLL 5L Emergency</b>								
VLL-5L-57-EM1-1/6-120-N	5700K	1x6	●	-	2xM20	1	1	CCL2004182
VLL-5L-57-EM1-2/6-220-N		2x6	-	●	4xM20	2	2	CCL2004186
<b>VLL 7L</b>								
VLL-7L-57-1/6-120-N	5700K	1x6	●	-	2xM20	1	1	CCL2004222
VLL-7L-57-2/6-220-N		2x6	-	●	4xM20	2	2	CCL2004226
<b>VLL 7L Emergency</b>								
VLL-7L-57-EM1-1/6-120-N	5700K	1x6	●	-	2xM20	1	1	CCL2004230
VLL-7L-57-EM1-2/6-220-N		2x6	-	●	4xM20	2	2	CCL2004234

<sup>1)</sup> Tolerance +/- 10%

<sup>2)</sup> Standard version without cable gland. if need, please order separately

<sup>3)</sup> Contact your local sales representative for special requirements.

## Metallic Cable Glands (Order Separately)

### ADE-1F2

Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable sealing range - Max
<a href="#">ADE1M200NPN</a>	M20	Non-armoured, Marine shipboard, Type P; Tray cable (armoured)	2.8	5.5
<a href="#">ADE1M201NPN</a>	M20		4.5	8.5
<a href="#">ADE1M202NPN</a>	M20		7.0	12.0
<a href="#">ADE1M203NPN</a>	M20		10.0	16.0



### ADE-4F

Catalog #	Metric Thread Size	Cable Types	Cable sealing range inner sheath		Cable sealing range outer sheath		Armor	
			Min.	Max.	Min.	Max.	Min.	Max.
<a href="#">ADE4M200NPN</a>	M20	SWA, SWB, STA, Braided marine shipboard, Type P; Lead sheathed cable (with addition of earthing washer)	2.8	5.5	4.5	8.5	0.2	0.9
<a href="#">ADE4M201NPN</a>	M20		4.5	8.0	7.0	12.0	0.2	0.9
<a href="#">ADE4M202NPN</a>	M20		7.0	12.0	10.0	16.0	0.2	1.3
<a href="#">ADE4M203NPN</a>	M20		10.0	15.5	13.5	21.0	0.2	1.3



ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, please contact our sales representative.

# VLL LED Zone 1 GRP linear fixtures

## Dimensions (mm)

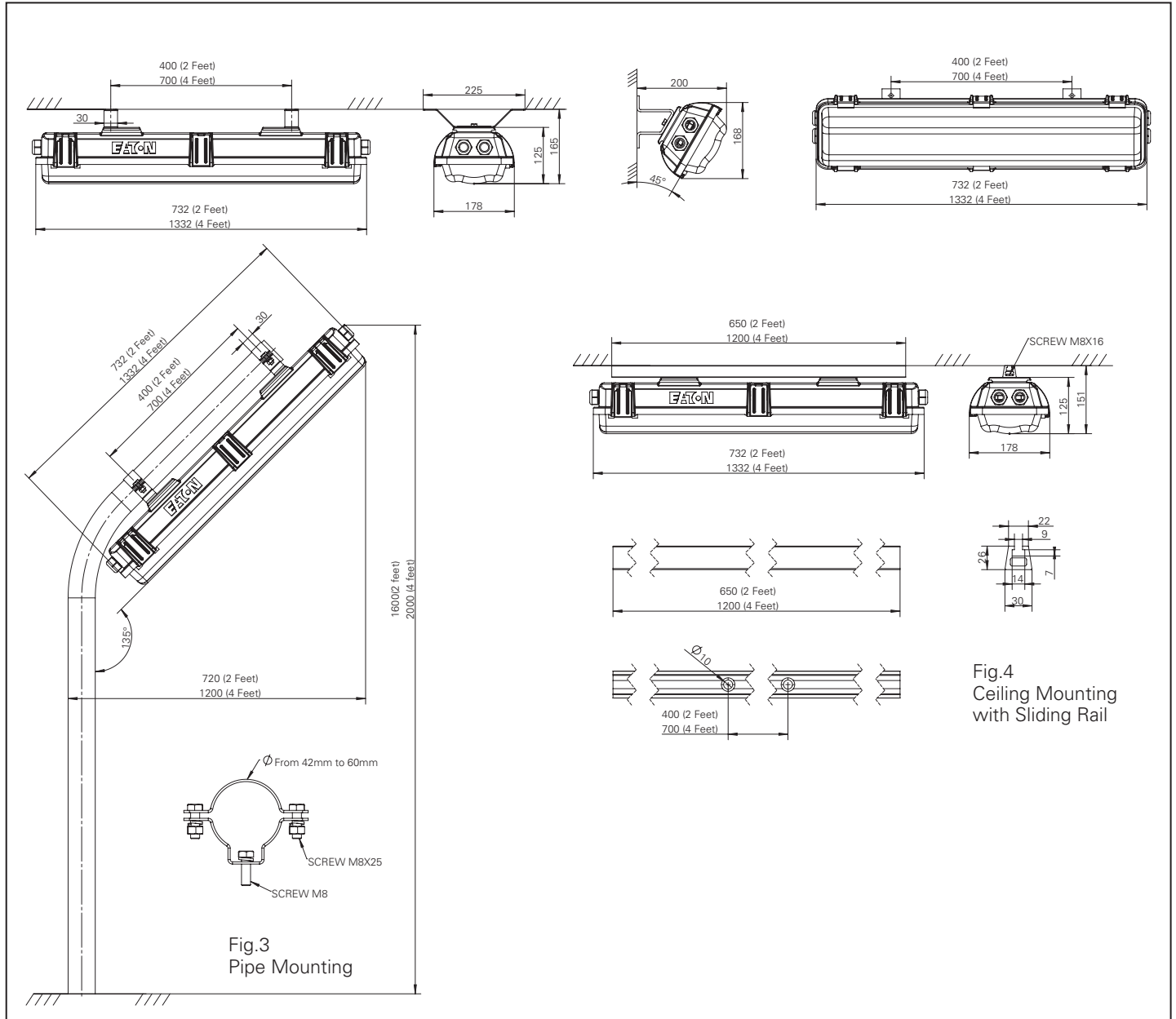
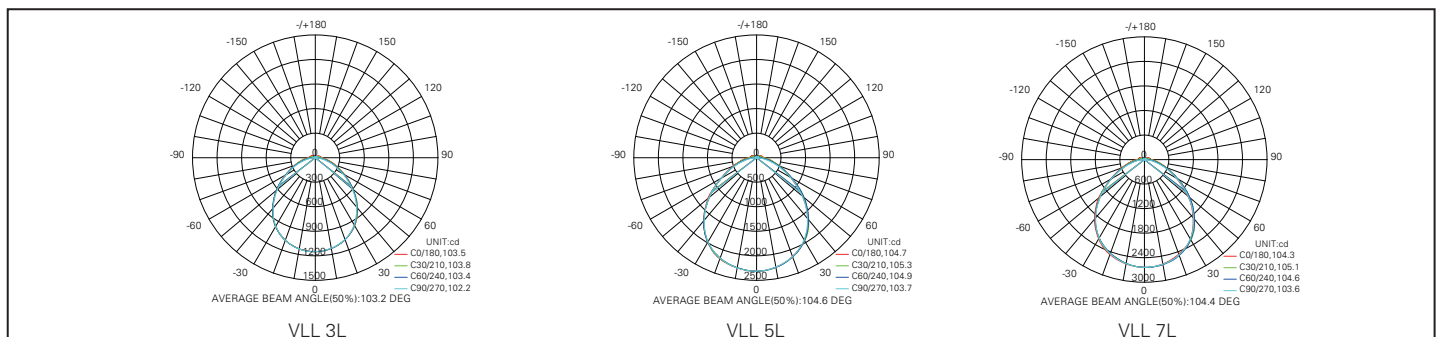


Fig.4  
Ceiling Mounting  
with Sliding Rail

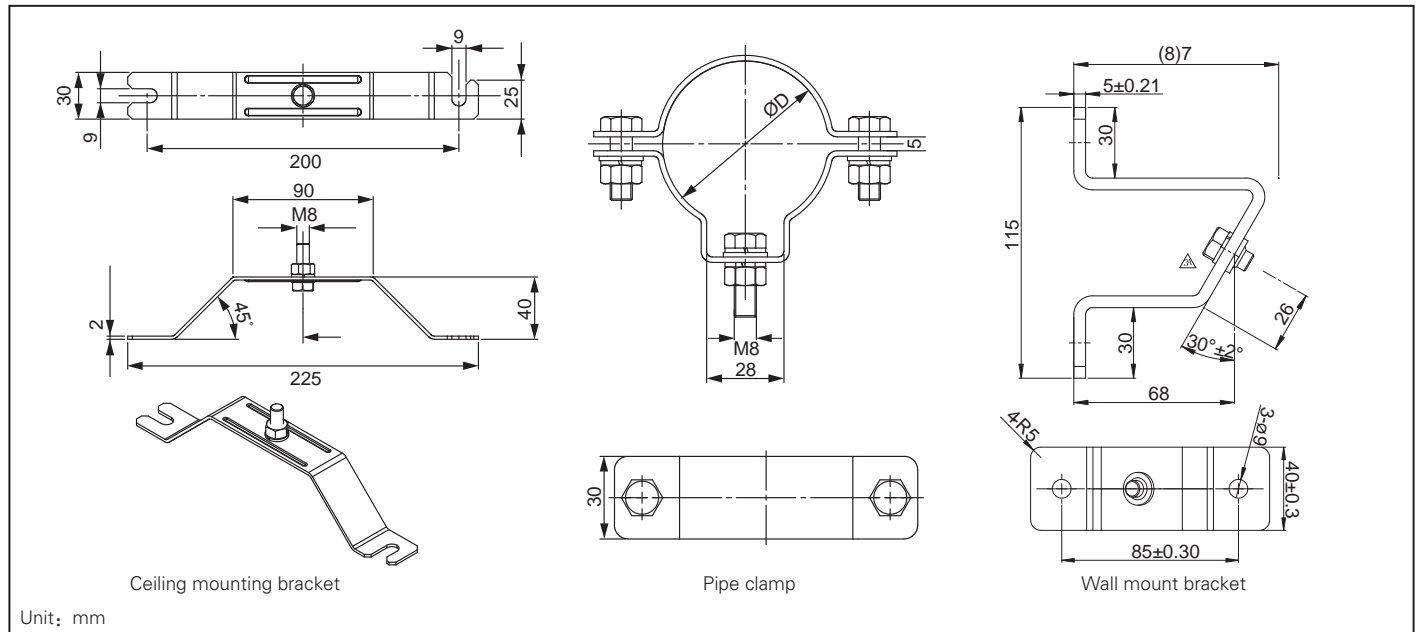
Fig.3  
Pipe Mounting

## Polar curve



# VLL LED Zone 1 GRP linear fixtures

## Mounting accessories (To be ordered separately)



## Pipe mounting

Part No	Description	Quantity per luminaire
CHR5218	Pipe clamp assy D42 316S/S	2
CHR5220	Pipe clamp assy D42 plating	2
CHR5221	Pipe clamp assy D51 316S/S	2
CHR5223	Pipe clamp assy D51 plating	2

## Wall mounting

Part No	Description	Quantity per luminaire
CHR5248	Wall suspension 316S/S	2
CHR5250	Wall suspension plating	2

## Ceiling mounting

Part No	Description	Quantity per luminaire
CHR5245	Ceiling mounting BKT 316S/S	2
CHR5247	Ceiling mounting BKT plating	2
CHLMT2372-01	Mounting sliding rail for 2 feet	1
CHLMT2372-02	Mounting sliding rail for 4 feet	1



**U.S. (global headquarters):  
Eaton's Crouse-Hinds Division**

1201 Wolf Street  
Syracuse, NY 13208

(866) 764-5454  
FAX: (315) 477-5179  
FAX Orders Only:  
(866) 653-0640

[crousecustomerctr@eaton.com](mailto:crousecustomerctr@eaton.com)

**For more information:**

If further assistance is required, please contact an authorized Eaton Distributor, Sales Office, or Customer Service Department.

**Authorised Distributor:**



46, Jalan SS 22/21, Damansara Jaya,  
47400 Petaling Jaya,  
Selangor Darul Ehsan, Malaysia.  
*Email: [ampmech@ampmech.com](mailto:ampmech@ampmech.com)*  
*Website: [www.ampmech.com](http://www.ampmech.com)*

**Eaton**  
1000 Eaton Boulevard  
Cleveland, OH 44122  
United States  
[Eaton.com](http://Eaton.com)

© 2021 Eaton  
All Rights Reserved  
Publication No. VLL2021EN  
August 2021

Eaton is a registered trademark.  
All other trademarks are property  
of their respective owners.