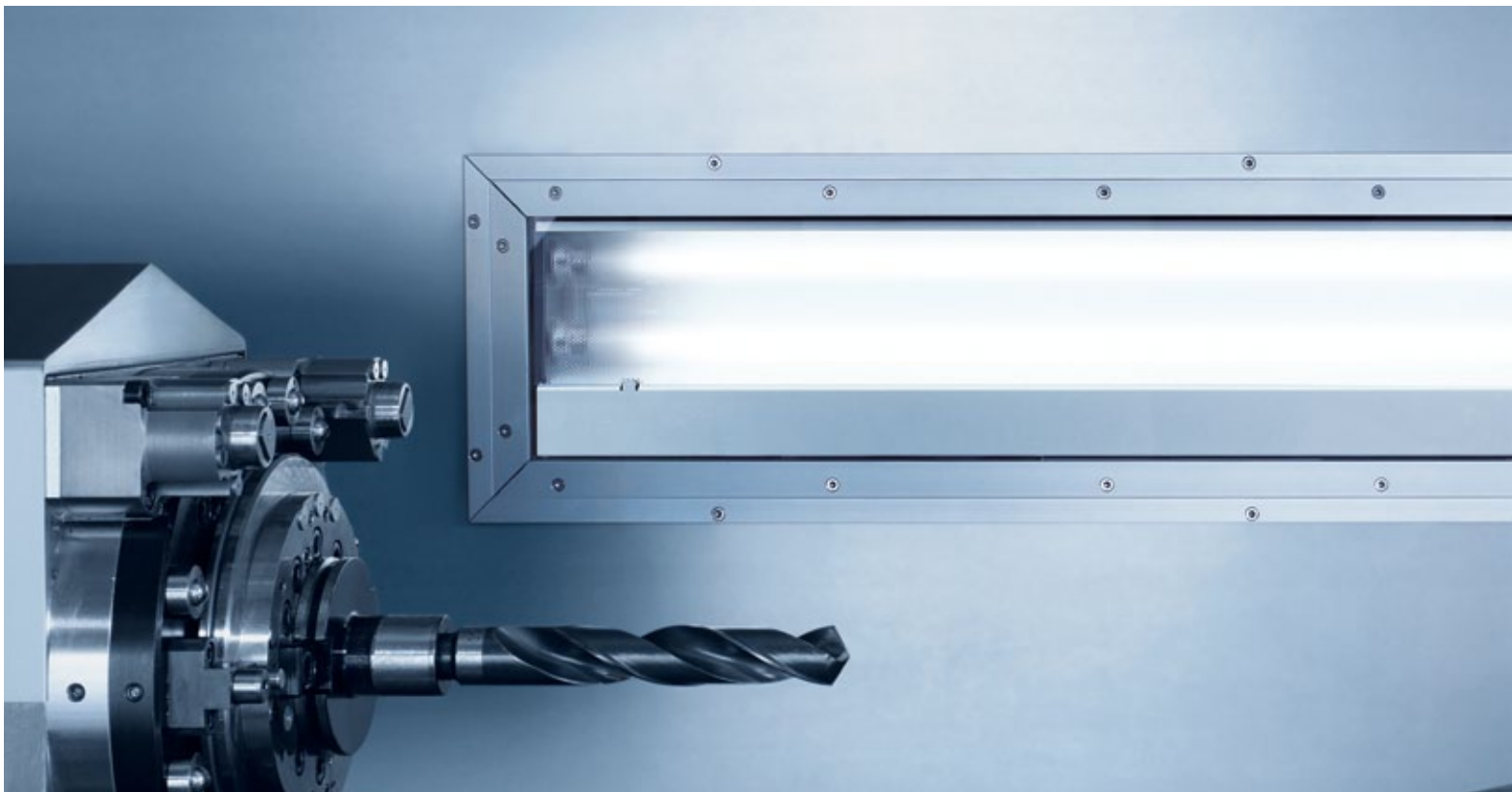




1.65 Inches **THINK FLAT**



FLAT TEC – MORE FLEXIBILITY FOR YOUR EQUIPMENT

The trend in machine development is toward smaller machines that offer greater performance, flexibility and functionality. They also are designed to utilize less space. As a result, the demands for smaller components inside the machine are rising.

Waldmann has recognized this trend. FLAT TEC is part of the new generation of machine luminaires. It is considerably flatter than all comparable systems, not only allowing for greater engineering flexibility, but also meeting the demand for more contemporary design. FLAT TEC offers higher light efficiency, easy integration, considerably longer maintenance intervals, and lower service costs.

1 More flexibility

The flat profile of the FLAT TEC system offers more flexibility in the machine while using less space. State-of-the-art production and materials enable this new design.

2 More light with equal energy consumption

Modern T5 lamps produce considerably higher luminous output and are much more compact than standard T8 lamps

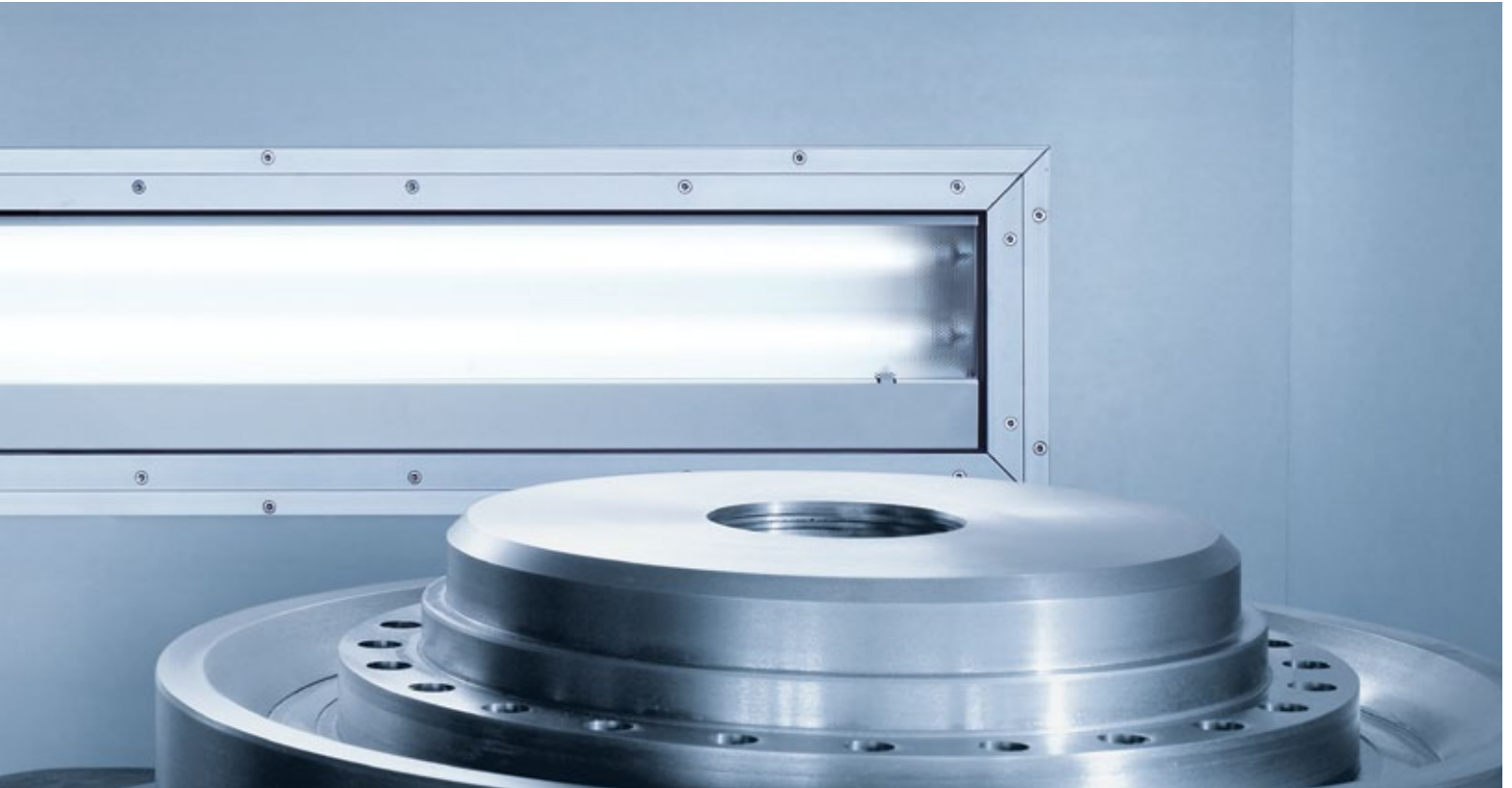
3 Easy integration

The luminaire is connected easily and safely via a plug connection.

This connection is established outside the luminaire, saving time and money.

4 Reduced costs

An intelligent thermal management system significantly increases the service life of lamps and operating devices. The benefits are longer maintenance intervals as well as reduced maintenance and service costs.



MORE SPACE IN THE MACHINE COMPARTMENT

Space advantage due to low height

At a height of only 1.65 inches the FLAT TEC luminaire is unusually flat. The surface-mounted version has a minimal impact on space in the machine compartment. With the recessed version, the luminaire is nearly flush with the machine panel.

The benefits

- The entire machine compartment is accessible
- The machine can move into any position without restrictions
- Requires a minimal footprint inside the machine compartment



Enables better positioning

Due to the high luminous power and state-of-the-art reflector technology, FLAT TEC can be installed farther away from the machining area. Microprism optics reduce glare and reflections during operation of the machine. The luminaire can be mounted in different positions and orientations, even above the machining area.

The benefits

- Integration in the machine is simplified
- The luminaire can be used above or outside the machining area
- The risk of direct impact from debris is reduced



FLAT TEC with symmetrical distribution



STATE-OF-THE-ART LUMINAIRE TECHNOLOGY FOR MAXIMUM LUMINOUS OUTPUT

More light with less energy consumption

With FLAT TEC, Waldmann uses state-of-the-art T5 lamp technology instead of standard T8 lamps. T5 lamps produce higher luminous output, while at the same time reducing energy consumption. T5 lamps also have a more compact design and small lamp diameter.

Greater efficiency

T5 lamps have a much higher optimal operating temperature than T8 lamps. Luminous output of a conventional T8 lamp decreases when the room temperature exceeds 77°F, T5 lamps achieve their optimum efficiency at 95°F.

FLAT TEC luminaires ensure ideal lighting conditions in the machine compartment even at elevated ambient temperatures.

For especially tight applications

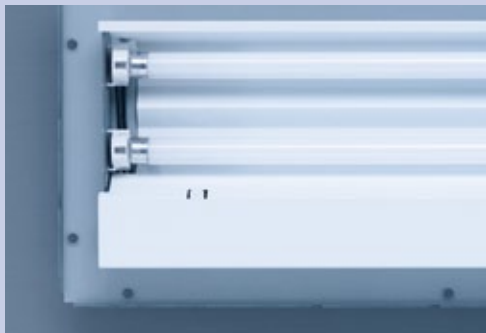
Compact luminaires are the ideal solution wherever high brightness levels are needed and only very limited space is available in the machine compartment. Due to their geometry, T5 lamps have very small dimensions and enable a particularly compact luminaire.

Reduced installation costs

The high efficiency of the FLAT TEC model means that considerably fewer luminaires must be installed, especially in large machines.

The benefits:

- Lower energy consumption
- Lower material costs
- Less complexity during installation



Left: The FLAT TEC luminaire with T5 light tube.
Right: The FLAT TEC luminaire with CFL lamp.



EASY INTEGRATION SAVES TIME AND MONEY

Connected in no time at all

The well-engineered FLAT TEC luminaire proves useful during integration into the machine. The luminaire is connected easily and safely (via a plug-in connection) without opening the unit.

The benefits

- Fast and easy installation and maintenance
- No risk of faulty or unsafe connection of the luminaire

Tailor-made lighting solutions

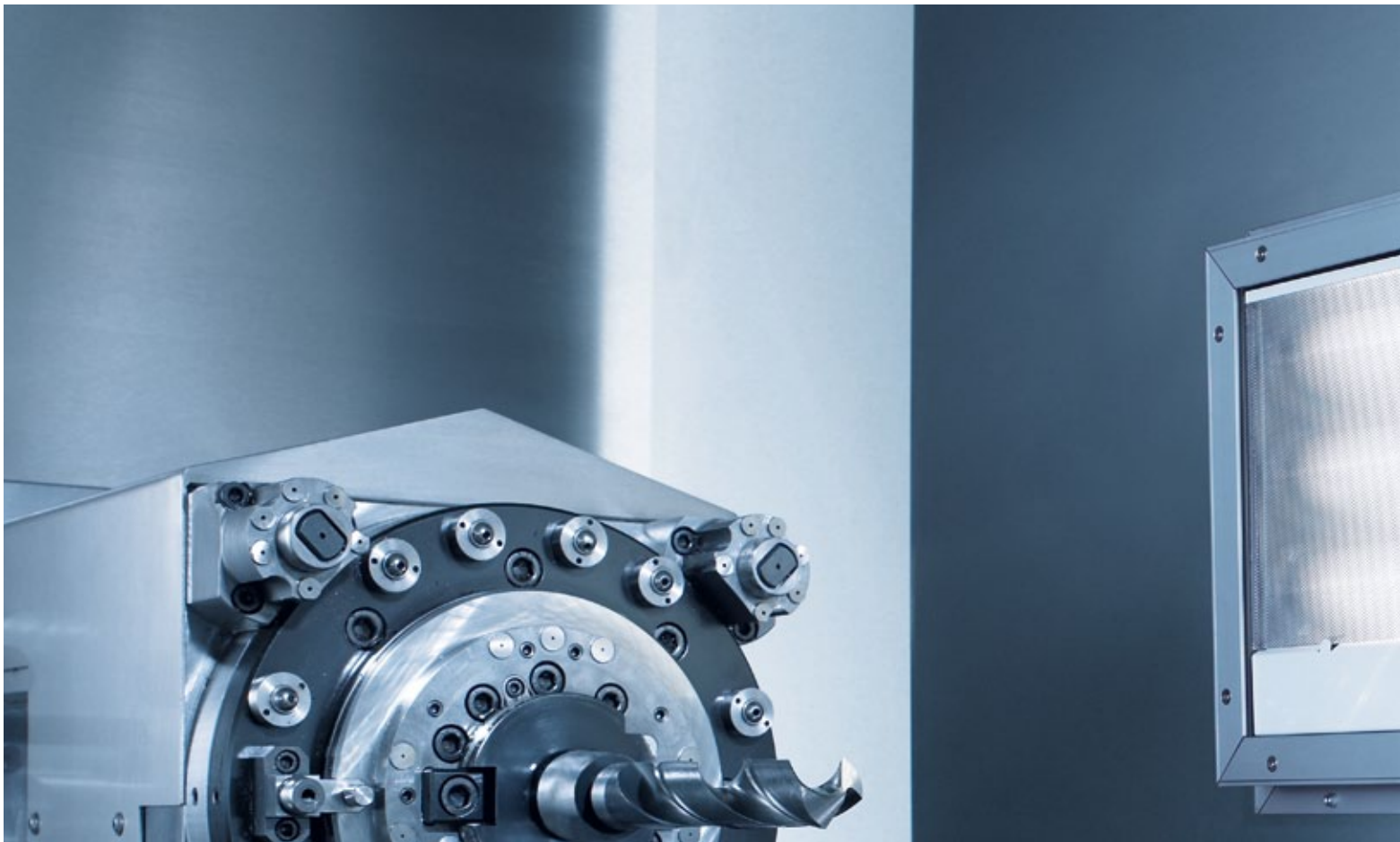
FLAT TEC luminaires have a modular design and therefore optimally adapt to the respective requirements of the machine. The chassis is based on a frame with variable length and width and can be used for both the surface-mounted and recessed versions of the luminaire. The lighting technology also maintains utmost flexibility on the inside of the luminaire: Using various lamps, reflectors, and screens, a tailor-made FLAT TEC luminaire can be configured for any machine.



The luminaire is geared up for connection using a M12 plug. (Included)



A variable frame enables customized lighting solutions.



EXCELLENT QUALITY AND WORKMANSHIP BASED ON WALDMANN'S WORLD-CLASS PRODUCTION CAPABILITIES

FLAT TEC luminaires satisfy the toughest requirements for use in production machines and machining systems. To meet these requirements, Waldmann developed special production processes, insuring the consistent quality of the luminaire. FLATTEC is designed to withstand even the most extreme production and machining conditions and environments.

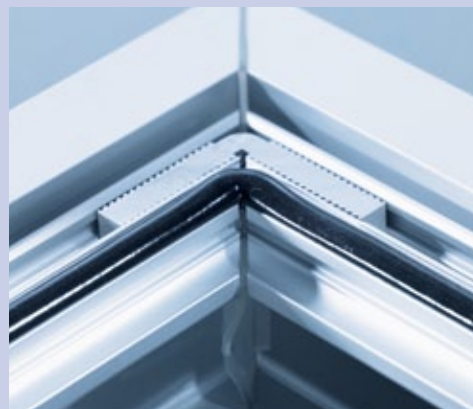
Vibration-resistant attachment with clinch fastening method

Waldmann has translated an innovative production technology from the automotive industry to luminaire applications. The components of the luminaire are attached to the rear panel using the clinch fastening method. This fastening method eliminates the effects of vibration on key components.



Flexible foaming of seals for specific applications

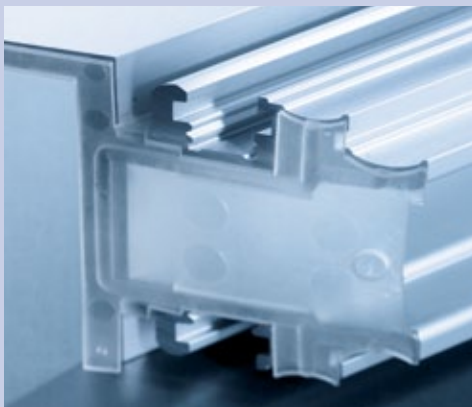
A highly flexible foaming system insures the precise application of sealant. The system can apply sealant to various frame sizes, Waldmann developed a sophisticated automatic robotic arm-based feed mechanism for this innovative production sealing application.





100% leak-proof through special corner seals

For FLAT TEC luminaires, a special corner seal was developed, which ensures a 100% leak-proof seal during press-fitting of the frames. The special injection molding tools were developed and produced exclusively by Waldmann.



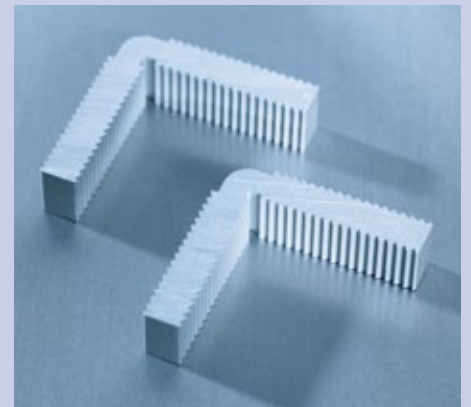
Trimming with millimeter precision

The frame parts of FLAT TEC can be joined like a window frame. To ensure absolute water tightness of the luminaire, the frame parts are miter-cut with millimeter precision.



High-precision press-fit angle supports

The miter-cut frame is pressed together with angle supports to provide strength and consistency to the sealed frame. This production technique was developed in-house by Waldmann to insure consistent product quality to withstand the most difficult production environments.



FLAT TEC. THE ONLY ONE WITH IP69K

Robust design for the toughest requirements

FLAT TEC luminaires are virtually the only machine luminaires to fulfill the high demands of the IP69K protection class. As a result, they are not only waterproof, but also pressure jet-tested up to 100 bar.

Additional benefits

- **Anodized aluminum housing:** withstands sharp-edged metal chips as well as corrosive coolants and lubricants
- **Corner, window and rear panel seals made of polyurethane:** resistant to conventional coolants and lubricants
- **Screen made of 4 mm thick single-pane safety glass:** high mechanical stability and chemical resistance

Maximum dependability for optimum production reliability

The FLAT TEC luminaires stand out with their intelligent thermal management system. The metal housing provides optimum absorption of heat that develops on the inside of the luminaire and dissipates heat to the outside by convection. As a result, the lamps and operating devices experience lower stress due to lower ambient temperatures.

The benefits

- Longer service life
- Lower maintenance requirements
- Reduced service and spare parts costs
- A considerably reduced risk of production failures

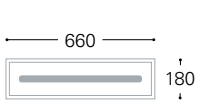
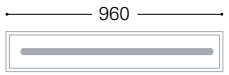

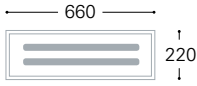
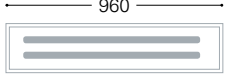







High strength and stability due to 4 mm thick safety glass.

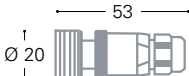


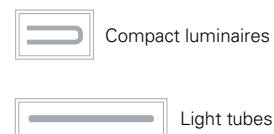
Intelligent thermal management system for lower temperature loads.



FLAT TEC 100-230 VOLT 50/60 HZ	HOUSING	CUTOUT: LENGTH x WIDTH	DISTRIBUTION	LAMPS	MODEL	ITEM NO.
 <p>26" x 7.09"</p>	Recessed	638 x 158 mm 25.11" x 6.22"	symmetrical	1 x T5, 24W	MZE 124 N	112 527 000
	Surface-mounted		symmetrical	1 x T5, 24W	MZA 124 N	112 527 002
 <p>37.8" x 7.09"</p>	Recessed	938 x 158 mm 37" x 6.22"	symmetrical	1 x T5, 39W	MZE 139 N	112 528 000
	Surface-mounted		symmetrical	1 x T5, 39W	MZA 139 N	112 528 002
 <p>49.6" x 7.09"</p>	Recessed	1238 x 158 mm 48.74" x 6.22"	symmetrical	1 x T5, 54W	MZE 154 N	112 529 000
	Surface-mounted		symmetrical	1 x T5, 54W	MZA 154 N	112 529 002
 <p>26" x 8.66"</p>	Recessed	638 x 198 mm 25.12" x 7.8"	symmetrical	2 x T5, 24W	MZE 224 N	112 532 000
	Surface-mounted		symmetrical	2 x T5, 24W	MZA 224 N	112 532 002
 <p>37.8" x 8.66"</p>	Recessed	938 x 198 mm 37" x 7.8"	symmetrical	2 x T5, 39W	MZE 239 N	112 533 000
	Surface-mounted		symmetrical	2 x T5, 39W	MZA 239 N	112 533 002
 <p>49.6" x 8.66"</p>	Recessed	1238 x 198 mm 48.74" x 7.8"	symmetrical	2 x T5, 54W	MZE 254 N	112 534 000
	Surface-mounted		symmetrical	2 x T5, 54W	MZA 254 N	112 534 002
FLAT TEC 24 VOLT (DC)	HOUSING	CUTOUT: LENGTH x WIDTH	DISTRIBUTION	LAMPS	MODEL	ITEM NO.
 <p>13.4" x 1.8"</p>	Recessed	318 x 198 mm 12.52" x 7.8"	symmetrical	2 x CFL, 11W	MZEC 211 S	112 536 004
	Surface-mounted		symmetrical	2 x CFL, 11W	MZAC 211 S	112 536 006
 <p>26" x 7.09"</p>	Recessed	638 x 158 mm 25.11" x 6.22"	symmetrical	1 x T5, 24W	MZE 124 S	112 527 004
	Surface-mounted		symmetrical	1 x T5, 24W	MZA 124 S	112 527 006
 <p>37.8" x 7.09"</p>	Recessed	938 x 158 mm 37" x 6.22"	symmetrical	1 x T5, 39W	MZE 139 S	112 528 004
	Surface-mounted		symmetrical	1 x T5, 39W	MZA 139 S	112 528 006
 <p>49.6" x 7.09"</p>	Recessed	1238 x 158 mm 48.74" x 6.22"	symmetrical	1 x T5, 54W	MZE 154 S	112 529 004
	Surface-mounted		symmetrical	1 x T5, 54W	MZA 154 S	112 529 006

Connection: On the side using M12 plug (Included w/luminaire)

ACCESSORIES	ITEM NO.
 <p>M12 connector plug (Included w/luminaire)</p>	330 634 010



USA

Waldmann Lighting Company
9, W. Century Drive
Wheeling, Illinois 60090, USA
Phone +1 847 520-1060
Fax +1 847 520-1730
www.waldmannlighting.com
waldmann@waldmannlighting.com

FRANCE

Waldmann Eclairage S.A.S.
Z.I. Rue de l'Embranchement
F-67116 REICHSTETT
Adresse postale :
BP 23431 Reichstett
F-67455 MUNDOLSHEIM Cedex
Phone +33 (0) 388209588
Fax +33 (0) 388209568
www.waldmann.com
info-fr@waldmann.com

ITALY

Waldmann Illuminotecnica S.r.l.
Via della Pace, 18 A
IT-20098 San Giuliano Milanese (MI)
Phone +39 02 98 24 90 24
Fax +39 02 98 24 63 78
www.waldmann.com
info-it@waldmann.com

THE NETHERLANDS

Waldmann Lichttechniek BV
Lingewei 19
NL-4004 LK Tiel
Phone +31 (0) 344 - 631019
Fax +31 (0) 344 - 627856
www.waldmann.com
info-nl@waldmann.com

AUSTRIA

Waldmann Lichttechnik Ges.m.b.H.
Gewerbepark Wagram 7
AT-4061 Pasching/Linz
Phone +43 (0)722967400
Fax +43 (0)722967444
www.waldmann.com
info-at@waldmann.com

SWEDEN

Waldmann Ljusteknik AB
Skebokvarnsvägen 370
SE-124 50 Bandhagen
Phone +46 8 990 350
Fax +46 8 991 609
www.waldmann.se
lhk@idecenter.se

SWITZERLAND

Waldmann Lichttechnik GmbH
Benkenstasse 57
CH-5024 Küttigen
Phone +41 (0)62 839 1212
Fax +41 (0)62 839 1299
www.waldmann.com
info-ch@waldmann.com

GERMANY - CORPORATE HEADQUARTERS

Herbert Waldmann GmbH & Co. KG
Postfach 50 62
D-78057 Villingen-Schwenningen
Phone +49 7720 601-100
Fax +49 7720 601-290
www.waldmann.com
info@waldmann.com

UK

Waldmann Lighting Ltd.
Holme Well Road
Middleton
GB-Leeds LS 10 4TQ
West Yorkshire
Phone +44 1132775662
Fax +44 1132775775
www.waldmann.com
enquiries@waldmannlighting.co.uk

CHINA

Waldmann Lighting (Shanghai) Co. Ltd.
Part A, No. Five Normative Workshop
199 Changjian Road, Baoshan
CN-Shanghai, P.R.C. 200949
Phone +86 21 5169-1799
Fax +86 21 3385-0032
www.waldmann.com
s.lo@waldmann.com.cn

SINGAPORE

Waldmann Lighting Singapore Pte. Ltd.
Blk 168, Jalan Bukit Merah,
#04-09B, Connection One, Tower 3,
Singapore 150168
Phone +65 62758300
Fax +65 62758377
www.waldmann.com
sales@waldmann.com.sg