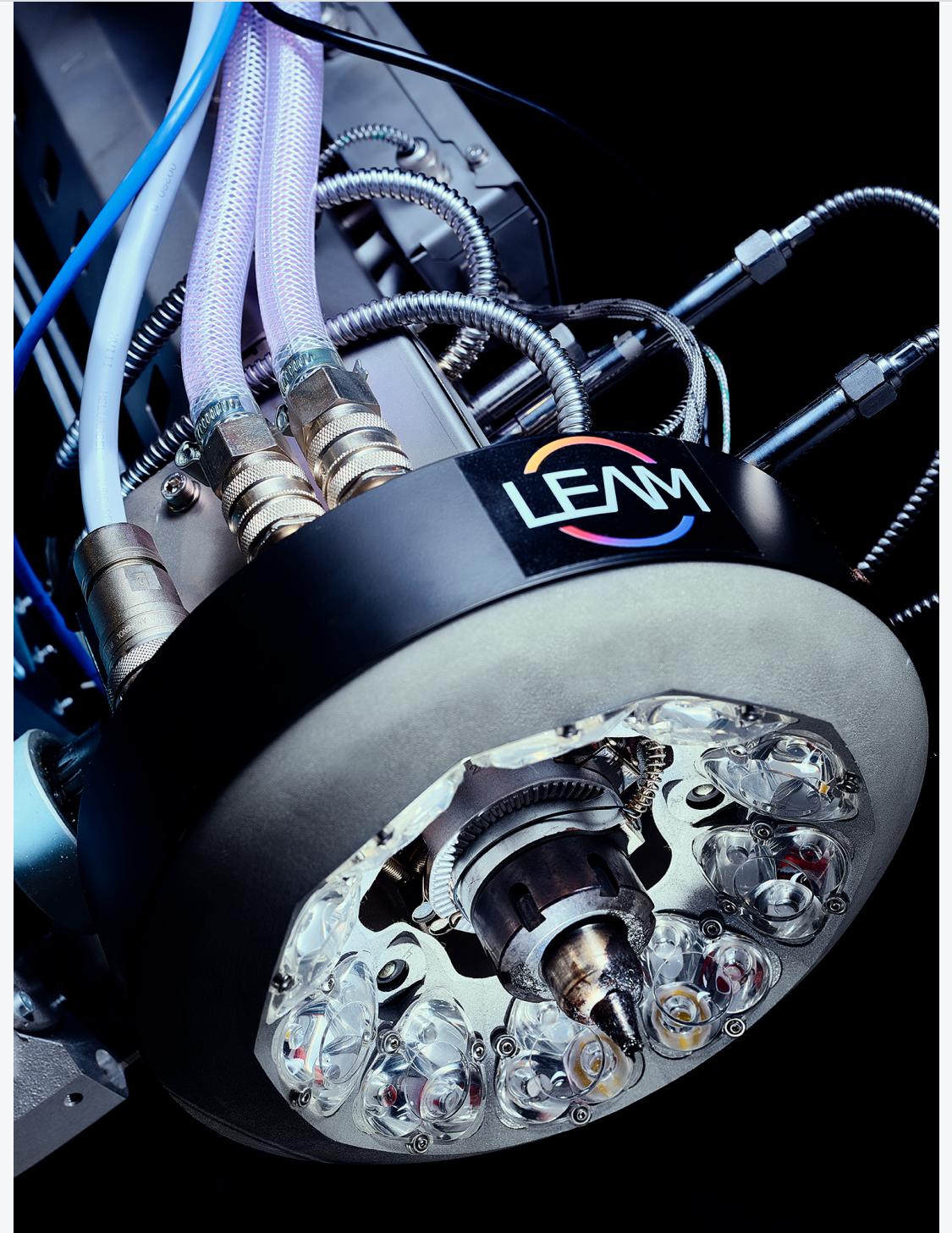


● COMPLETE FIELD INSTALLATION PACKAGE

LEAM Standalone DEMEX System

A complete retrofit package: cabinet and HMI, DEMEX end effector, connection set, optional chiller, consumables, safety glasses, and mounting hardware for installation on your LFAM machine.



Operational DEMEX end effector installed around an extruder.



Standalone LEAM system prepared for delivery on a standard Euro pallet.

● PACKAGE CONTENTS

The standalone system ships as a complete field-installable retrofit kit.

The core product is not just the end effector. You receive the control cabinet, operator interface, connection hardware, mounting parts, cooling path, safety accessories, and installation instructions needed to make the system usable on your machine.

CONTROL

Electrical cabinet with HMI

Power distribution, LED supply controls, proportional air regulation, HMI, and integration logic.

TOOL

DEMEX end effector in tough case

The ring assembly that mounts to the extruder and performs sensing, heating, and cooling.

CONNECTIONS

Cables, hoses, and cable protection

Power, data, cooling, compressed air, chiller alarm signal, and robot-side protection.

MOUNTING

Brackets and sheet-metal parts

Mechanical adapter set for mounting the end effector on your extruder.

COOLING

Optional chiller and coolant fill

Cooling unit when ordered, plus distilled water and G12 coolant for the system fill.

OPERATION

Four safety glasses, mouse, keyboard

Operator accessories needed to run the cabinet and work around the visible LED system.



Electrical cabinet with HMI touchscreen and front controls.

● CONTROL CABINET & HMI

The cabinet connects the building, the machine controller, the end effector, and the optional chiller.

Building services

Receives 400 V / 16 A power and pressurized air from the building. Building interface supplies 6 bar for the 6 mm tube/hose. Power and air supply cable/hose lengths are 10 m.

Machine controller

Connects by Ethernet to the machine controller. OPC UA server must already be installed, be provided by the OEM, or be ordered from LEAM as OPC UA License & Configuration if the required access rights can be provided. Standard data cable length is 25 m.

End effector

Supplies LED power, Ethernet data, and regulated pressurized air for part cooling. End-effector routing is 25 m standard or 50 m optional.

Operator control

HMI displays needed process and system information. Front controls include LED power-supply enable/disable buttons and the cabinet main switch.

● CONNECTION SET

System interfaces and routing lengths

25 m standard

Cables and hoses from cabinet and chiller to the end effector.

50 m optional

Upgrade for larger cells when the cabinet/chiller-to-tool route needs more reach.

25 m data

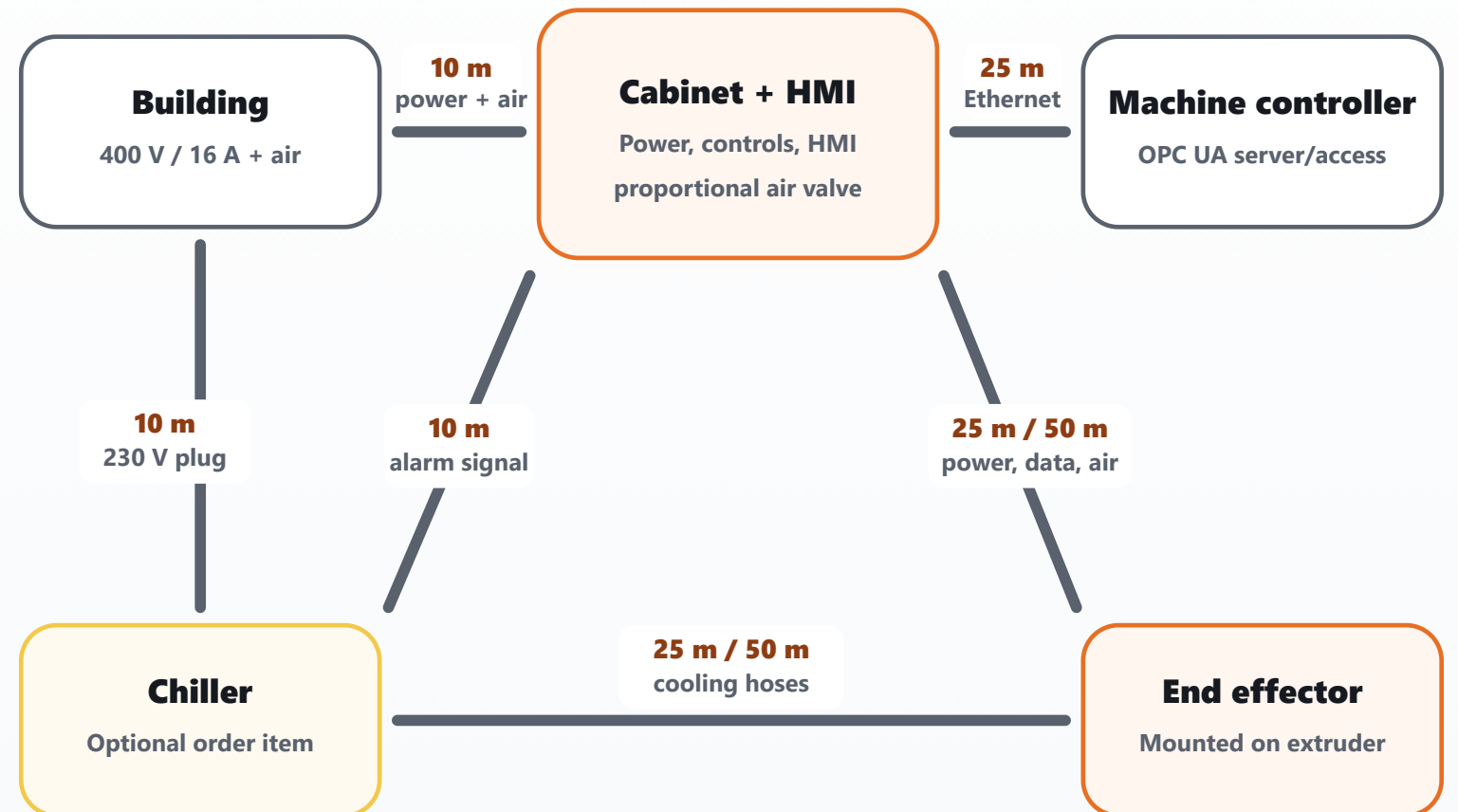
Ethernet connection from cabinet to the machine controller for OPC UA access.

10 m fixed leads

Cabinet power, chiller power, chiller alarm signal, and building compressed-air feed.

Last 2.5 m protected

The exposed robot-side section uses igus triflex R-TRL cable protection, article TRL.60.087.0, on the last 2.5 m near the moving tool.





DEMEX end effector packed in its tough transport case.

TOOL HEAD PACKAGE

The tough case protects the end-effector ring during shipping and storage when it is not installed on the machine.

Once installed, the end effector is the active process module: it measures the thermal state, applies local LED heating, and receives cooling media to manage the LEDs, electronics, and part-cooling airflow.

Measures

Thermal sensing close to the extrusion process supports the HMI and control system.

Heats

LED power is routed from the cabinet to the end effector through the supplied power cable.

Communicates

Ethernet data transfer connects the end-effector electronics with the cabinet.

Cools

Chiller hoses cool LEDs and electronics; regulated pressurized air supports part cooling.

The package includes the required brackets and sheet-metal mounting parts to fit the end effector to your extruder. For self-installation, you only need normal shop tools.

COOLING SYSTEM

The optional chiller provides a standardized industrial cooling loop for the end effector.



CW-6000 class cooling system used in the LEAM product package when ordered.

Building power

The chiller connects to the building with a normal 230 V plug. The chiller power cable is 10 m.

Cooling hoses

Two cooling hoses run from the chiller to the end effector. Standard route length is 25 m; optional route length is 50 m.

Alarm signal

The chiller connects to the cabinet through a 10 m two-lead normally closed alarm signal cable.

Fill materials

The box contains distilled water and G12 coolant for the initial fill. Target mix: 15 L distilled water plus 5 L G12 coolant.

● INSTALLATION KIT

The package includes the mechanical and routing parts needed for a normal field installation.

You can install the system from instructions using ordinary workshop tools, or order LEAM onsite installation service.

Self-installation tooling: no specialized tools are expected, only a set of Allen keys and wrenches plus your normal site tools.

1

Brackets and sheet-metal parts

Mounting parts needed to attach the end effector to the extruder.

2

End-effector power cable

Power cable from the cabinet to the end effector.

3

Ethernet data cables

End-effector data transfer plus machine-controller connection for OPC UA access.

4

Cooling hoses and compressed-air line

Cooling loop to the end effector and regulated pressurized air for part cooling.

5

Robot-side cable protection

Cable protection on the last 2.5 m where the exposed route sits on the robot side.

6

Accessories

Four operator safety glasses, cabinet mouse, and cabinet keyboard.

● SITE PREREQUISITES

Your order includes the LEAM system and connection set; your site provides utilities, controller access, and installation space.

YOU PROVIDE	STANDARD LENGTH	PURPOSE
400 V / 16 A	10 m cabinet power cable	Overall cabinet power supply.
Pressurized air	10 m feed hose	Building air supply into the cabinet; the proportional valve regulates air sent to the end effector for part cooling.
Machine OPC UA access	25 m Ethernet data cable	OPC UA must already be available, be made available by the OEM, or be ordered from LEAM as OPC UA License & Configuration if the required access rights can be provided.
230 V socket	10 m chiller power cable	Required when the chiller is part of the order.
Normal shop tools	Self-installation only	For self-installation, you provide Allen keys and wrenches. If you order LEAM onsite installation, LEAM brings its own installation tools.

LIGHT SAFETY PREPARATION

Add a light-safety screen around the visible LED process before operation.

The standalone package includes four operator safety glasses. Your machine cell still needs a light-safety concept for normal operation.

Recommended sheet variant

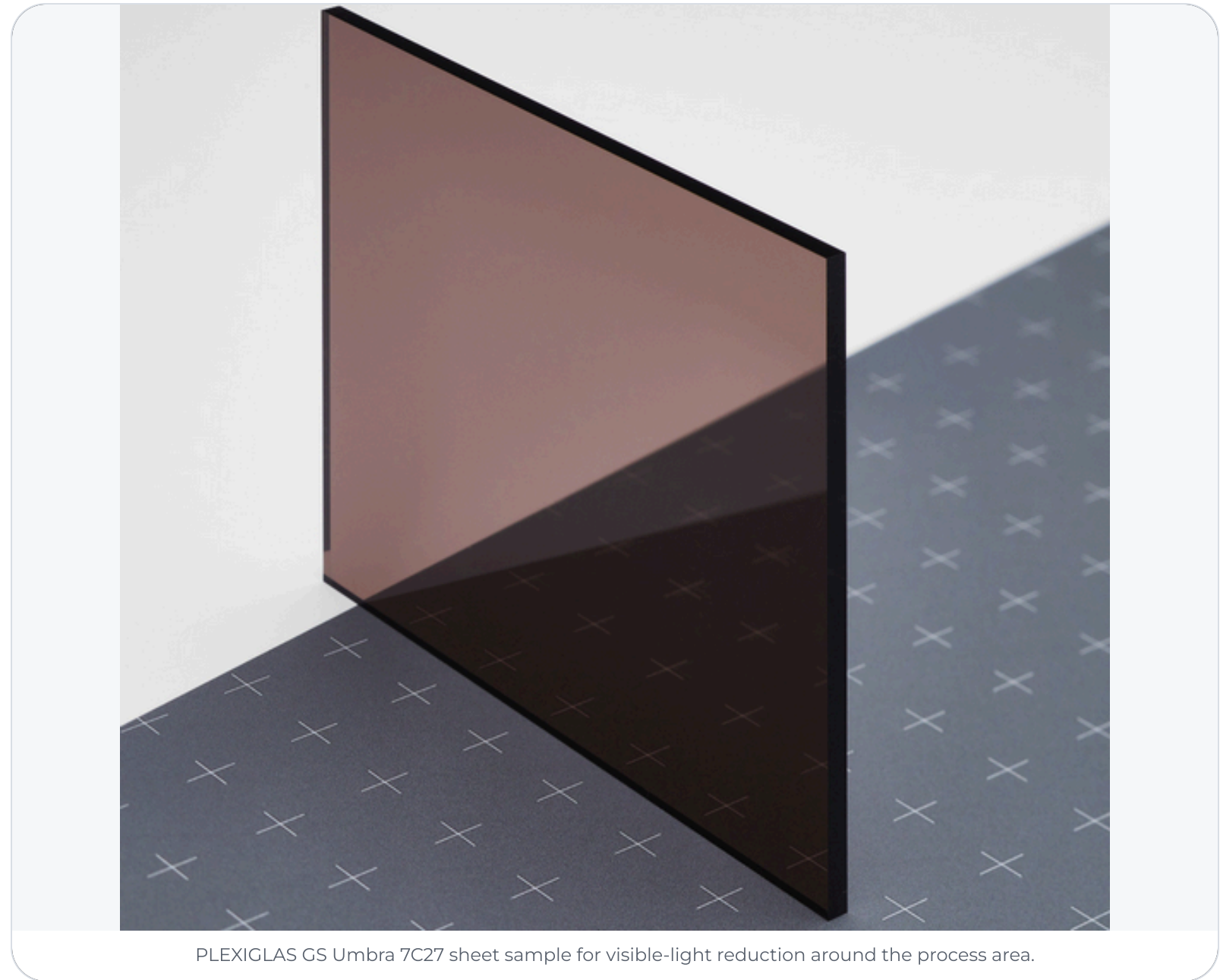
For sheet-panel shielding, LEAM recommends PLEXIGLAS GS Umbra 7C27 as the standard sheet option.

Self-install option

You can install sheet panels in your existing machine fence when the geometry and access points are straightforward.

Flexible cell option

Welding curtains can be used where a modular or temporary light-safety boundary fits the machine better.



PLEXIGLAS GS Umbra 7C27 sheet sample for visible-light reduction around the process area.

LEAM advisory

LEAM can advise on a machine-specific light-safety concept and a custom solution when standard panels or curtains do not fit.

Operator safety glasses

Four safety glasses are included with the standalone system package.

DEPLOYMENT OPTIONS

Designed to help you move from delivery to first prints in days.

1

Position cabinet and chiller

Roll the cabinet and chiller near services and machine access.

2

Mount end effector

Use supplied brackets and sheet-metal parts on the extruder.

3

Route cables and hoses

25 m standard or 50 m optional to the moving end effector.

4

Confirm OPC UA access

Connect cabinet to machine controller and configure the server.

5

Fill, verify, and print

Fill cooling circuit, test alarms, and confirm HMI and LED supply controls before first print.

Self-install path

You install with instructions and ordinary tools. No specialized LEAM-only tooling is expected.

LEAM onsite path

LEAM can perform installation, integration checks, functional testing, and operator onboarding on site.

System value

You receive a concrete, installable system rather than a loose component bundle.

DEMEX in operation after installation: the package is designed to help you move from delivery to first prints in days.