

LINDOFLAMM[®]

Thermal Engineering

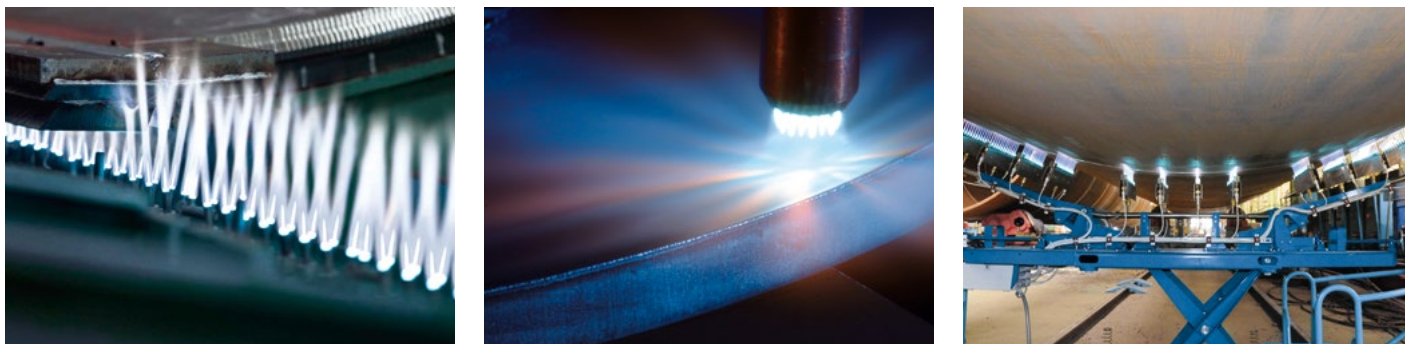
Tailored Solutions for Every Heating Application



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All-round offering



BOC's range of LINDOFLAMM special burners has the perfect fit for every heating application.

Our all-round heating solutions for semi- and fully-automated heating processes are tailored to customer requirements and deliver outstanding results. At the heart of each heating installation is the LINDOFLAMM burner. Further components and services – from automatic ignition to monitoring, temperature control and documentation – put the perfect finish on our offering.

Our application engineers provide expert advice and work with customers to develop the right solution every time. They also start up installations and provide training on their correct operation. In addition to these services, we can also advise on and deliver the supporting gas supply system – making BOC the preferred provider for all gas supply and heating needs.

High-performance burners (acetylene/oxygen)



Burner type	Gases	Operating pressure / bar	Consumption* m ³ /h	Handle	Overall length mm	Flame field Ø mm	Part no.
LF-H-4	Acetylene	0.8	1.4-1.9	LF-S-3-H	375	10	19324220
	Oxygen	2.5-3.5	1.6-2.2				
LF-H-6	Acetylene	0.8	3.3-4.5		440	16	19324221
	Oxygen	2.5-4.0	3.8-5.2				
LF-H-8	Acetylene	1.0	5.0-7.1		500	18	19324222
	Oxygen	2.5-4.0	5.8-8.9				
LF-H-16	Acetylene	1.2	12.4-15.9	LF-S-4-H	650	28	19324223
	Oxygen	3.5-5.0	14.3-18.3				

Applications

- Heating applications for large workpieces
- Flame straightening of large sheet thicknesses
- Thorough heating of heat wedges
- Fusing flame-sprayed coatings
- Heat-shaping of thick-walled plates, pipes and profiles
- Achieving high temperatures during heating

Mandatory additional equipment

- Handles, page 13
- Ball valves for burner LF-H-16 (handle LF-S-4-H), see page 16

Design

- Burner head at 45° angle with reinforcement between the mixer and feeder shaft
- Gas-cooled burner
- Injector with O-rings for internal and external tightness
- Brazed components for extra strength

Extension options

Ball valves on handle for quick opening/closing and reproducible flame adjustment, see page 16

* The consumption values, measured at the burner inlet, are related to the burner's power range. By altering the gas flow rate, the power in the specified range can be adjusted to the corresponding tasks. The consumption data should be noted when constructing the gas supply. The operating instructions contain further information about operating LINDOFLAMM burners. Our specialists are always available to provide further information.

High-performance burners (acetylene/compressed air)



Burner type	Gases	Operating pressure / bar	Consumption* m ³ /h	Handle	Overall length mm	Flame field Ø mm	Part no.
LF-H-1D	Acetylene	0.6	0.4-1.0	LF-S-2-H	500	13	19330000
	Compressed air	2.0-4.0	3.1-6.6				
LF-H-2D	Acetylene	0.6	0.8-1.7		650	23	19324224
	Compressed air	2.0-4.0	5.6-11.9				

Applications

- Pre-heating components before welding and cutting
- Drying the area around a weld seam
- Maintaining interpass temperatures
- Post-heating

Mandatory additional equipment

- Handles, see page 13

Design

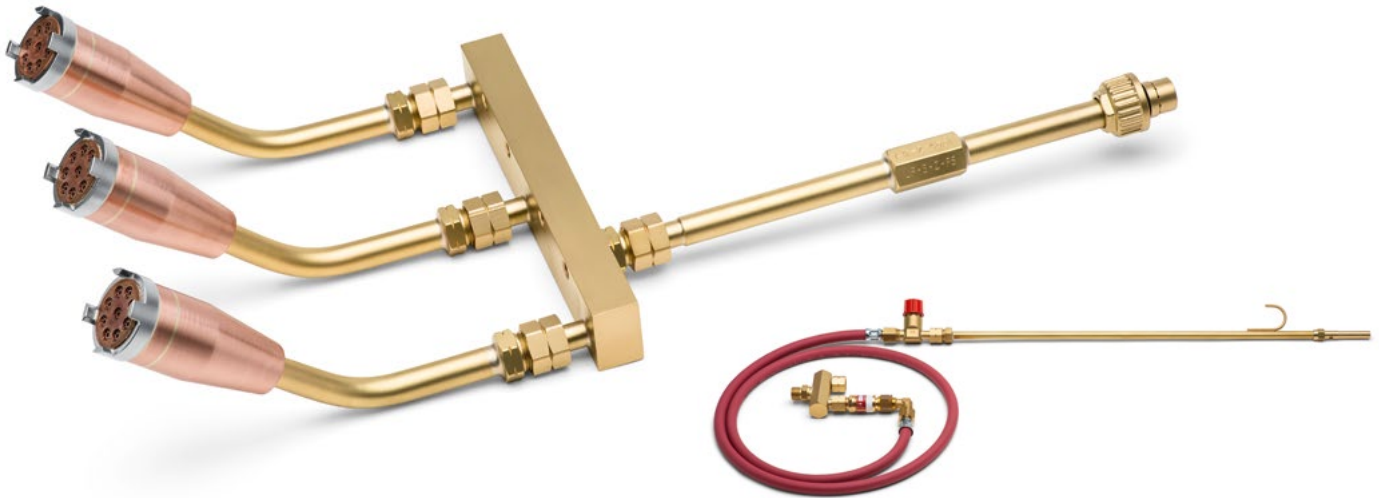
- Burner head at 45° angle with reinforcement between the mixer and feeder shaft
- Gas-cooled burner
- Injector with O-rings for external tightness
- Brazed components for extra strength

Extension options

Ball valves on handle for quick opening/closing and reproducible flame adjustment, see page 16

* The consumption values, measured at the burner inlet, are related to the burner's power range. By altering the gas flow rate, the power in the specified range can be adjusted to the corresponding tasks. The consumption data should be noted when constructing the gas supply. The operating instructions contain further information about operating LINDOFLAMM burners. Our specialists are always available to provide further information.

Triple-head burners



Burner type	Gases	Operating pressure / bar	Consumption* m ³ /h	Number of nozzles	Connecting thread / inch	Handle	Overall length / mm	Part no.
LF-H-3x2D-K	Acetylene	0.8-1.0	2.9-5.4	27	3/8" LH	LF-S-2-H or	600	19330005
	Compressed air	2.0-4.0	20.0-35.0		3/8" RH	LF-S-2-M		

Applications

- Pre-heating up to app. 500°C
- Drying of welding area
- Maintenance of interpass temperatures
- Flexible system suitable e.g. for round and longitudinal seam pre-heating

Design

- Angled design with manifold
- Adjustable burner heads
- Injector with O-ring seals for inner and outer gas tightness
- Gas-cooled burner
- Brazed components for extra strength

Mandatory additional equipment

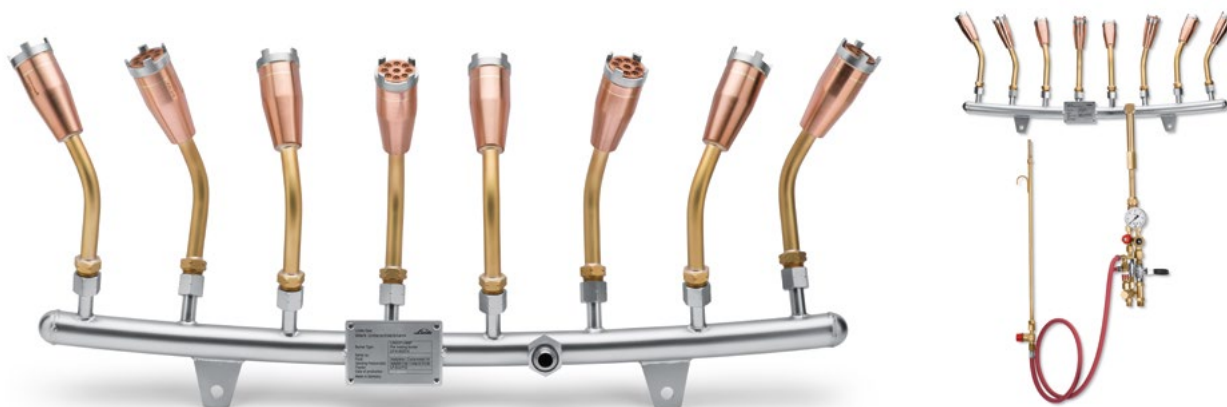
- Handle LF-S-2-H or machine shaft LF-S-2-M, see page 13/14

Extension options

- Ball valves for quick shut-off and easy, repeatable flame adjustment (when using handle), see page 16
- Flow stop safety device, see page 8

* The consumption values, measured at the burner inlet, are related to the burner's power range. By altering the gas flow rate, the power in the specified range can be adjusted to the corresponding tasks. The consumption data should be noted when constructing the gas supply. The operating instructions contain further information about operating LINDOFLAMM burners. Our specialists are always available to provide further information.

Eight-head burners



Burner type	Gases	Operating pressure / bar	Consumption* m ³ /h	Number of nozzles	Machine shaft	Connection thread inch	Hose diameter** mm	Part no.
LF-H-8x2D-K	Acetylene	0.8-1.0	7.2-10.0	72	LF-S-2-M adjusted to higher gas flow	3/8" LH 1/2" RH	9.5 12.5	19330006
	Compressed air	3.0-5.0	47.0-62.5					

**acc. to ISO 3821

Applications

- Pre-warming up to app. 500°C
- Pre-and post-heating, suitable in particular for round seams with diameters in excess of 2m
- Drying of welding area
- Maintenance of interpass temperatures

Design

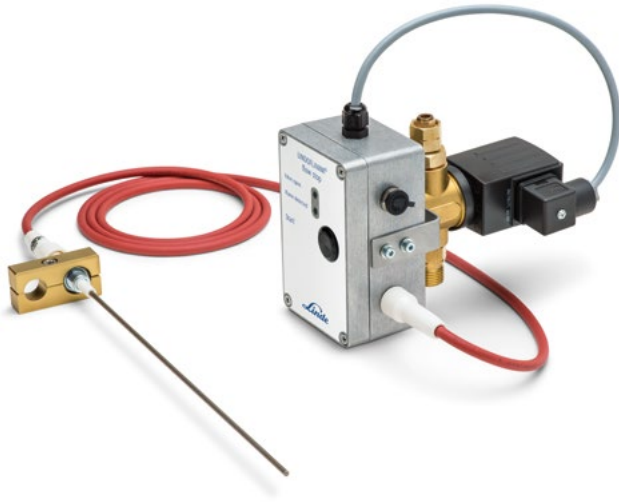
- Curved stainless steel manifold, length 800mm
- Adjustable burner heads
- Injector with O-ring seals for inner and outer gas tightness
- Gas-cooled burner
- Main components brazed for extra strength

Extension options

- Flow stop safety device, see page 8

* The consumption values, measured at the burner inlet, are related to the burner's power range. By altering the gas flow rate, the power in the specified range can be adjusted to the corresponding tasks. The consumption data should be noted when constructing the gas supply. The operating instructions contain further information about operating LINDOFLAMM burners. Our specialists are always available to provide further information.

LINDOFLAMM flow stop



Manometer for compressed air monitoring

Safety device	Burner system maximum consumption	Operating mode	Connection thread inch	Voltage supply	Plug connector	Part no.
LINDOFLAMM flow stop, type LF-M-FS 2.0	LF-H-3x2D-K LF-H-8x2D-K max. 10m ³ /h acetylene	Flame detection via ionisation electrode	Input: 3/8" LH outside thread Output: 3/8" LH -cap nut	230V/AC IP 54	CEE 7/7 type E+F (Schuko)	19330009
LINDOFLAMM flow stop, type LF-M-FS 2.0	LF-H-3x2D-K LF-H-8x2D-K max. 10m ³ /h acetylene	Flame detection via ionisation electrode	Input: 3/8" LH outside thread Output: 3/8" LH -cap nut	110V/AC IP 44	EN 60309 16A – 4h 2P+E	19330010
Optional extension:						
Contact manometer for LINDOFLAMM flow stop	LF-H-3x2D-K LF-H-8x2D-K max. 10bar compressed air	Monitoring of compressed air via contact manometer	1/4" RH backside	U _{max} 250Vac, P _{max} 30W, 50VA	Switchcraft 761KS17	19330011

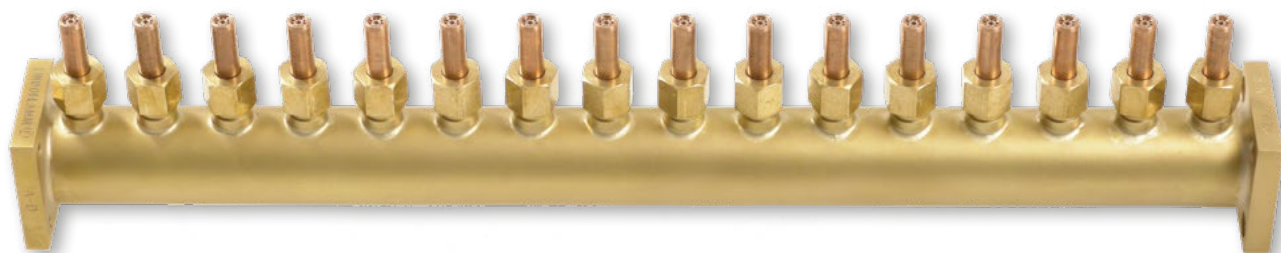
Applications

- Safety add-on for hand-operated acetylene – compressed air LINDOFLAMM burners with LF-H-2D-K burner heads
- More convenient, efficient and reliable acetylene flame control for operators
- Very fast – acetylene flow automatically cuts off within one second
- Easy plug-and-play installation or retrofitting
- Optional manometer cuts off the acetylene flow as soon as minimum limit value of compressed air is detected

Design

- Control unit
- Solenoid valve
- Ionisation electrode
- Mounting unit
- Contact manometer for compressed air (optional)

Lance burners



Burner type	Gases	Operating pressure / bar	Consumption* m ³ /h	Number of nozzles	Machine shaft	Overall length mm	Burner height mm	Part no.
LF-M-16D standard nozzle	Acetylene	0.8-1.0	1.3-2.3	16	LF-S-2-M	500	100	19324226
	Compressed air	2.0-4.0	9.0-17.1					
LF-M-33D standard nozzle	Acetylene	0.8-1.0	2.4-4.4	33		1010	100	19324227
	Compressed air	2.0-4.0	17.2-31.5					

Applications

- Stationary pre-heating before welding and cutting
- Drying before welding
- Maintaining interpass temperatures
- Post-heating

Design

- Elongated construction with exchangeable nozzles
- Nozzles arranged in a row
- Bolted flange connections enable several burner elements to be connected (max. length 2m^{**})
- Parallel operation via distributors and bridges (max. number of nozzles: 66^{**})

Mandatory additional equipment

- Flanges, see page 18
- Feed with mixing chamber, see page 15
- Machine shaft, see page 14

Extension options

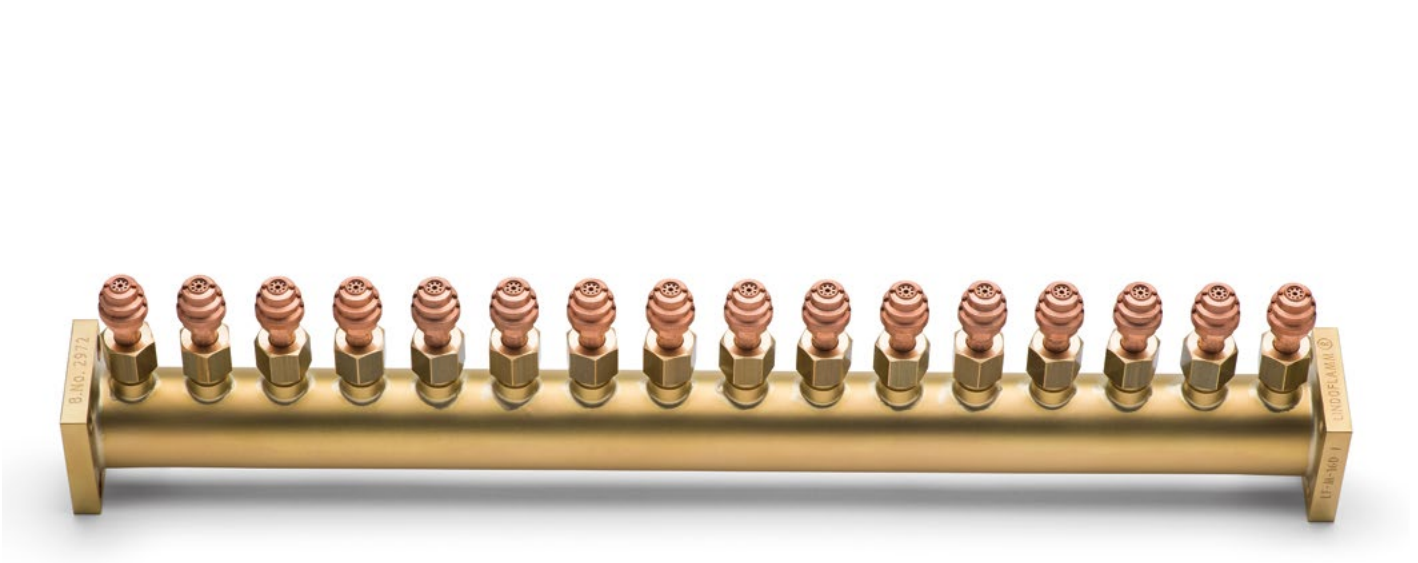
- Optional automation using pilot flame and monitoring elements (flame monitoring, temperature monitoring, data capture systems, etc.)
- Ball valves or solenoid valves for reproducible results
- Gas mixture distributor

* The consumption values, measured at the burner inlet, are related to the burner's power range. By altering the gas flow rate, the power in the specified range can be adjusted to the corresponding tasks. The consumption data should be noted when constructing the gas supply.

The operating instructions contain further information about operating LINDOFLAMM burners. Our specialists are always available to provide further information.

** For applications other than this, please contact the thermal engineering department at BOC.

Lance burners with ignition nozzles



Burner type	Gases	Operating pressure / bar	Consumption* m ³ /h	Number of nozzles	Machine shaft	Overall length mm	Burner height mm	Part no.
LF-M-16D-I ignition nozzle	Acetylene	0.8-1.0	1.3-2.3	16	LF-S-2-M	500	103	19330001
	Compressed air	2.0-4.0	9.0-17.1					
LF-M-33D-I ignition nozzle	Acetylene	0.8-1.0	2.4-4.4	33	LF-S-2-M	1010	103	19330003
	Compressed air	2.0-4.0	17.2-31.5					

Applications

- For safe ignition regardless of workpiece length
- Stationary pre-heating before welding and cutting
- Drying before welding
- Maintaining interpass temperatures
- Post-heating

Design

- Nozzles with flame transfer 180° arranged in a row
- Elongated construction with exchangeable ignition nozzles
- Bolted flange connections enable several burner elements to be connected (max. length 2m^{**})
- Parallel operation via distributors and bridges (max. number of nozzles: 66^{**})

Mandatory additional equipment

- Flanges, see page 18
- Feed with mixing chamber, see page 15
- Machine shaft, see page 14

Extension options

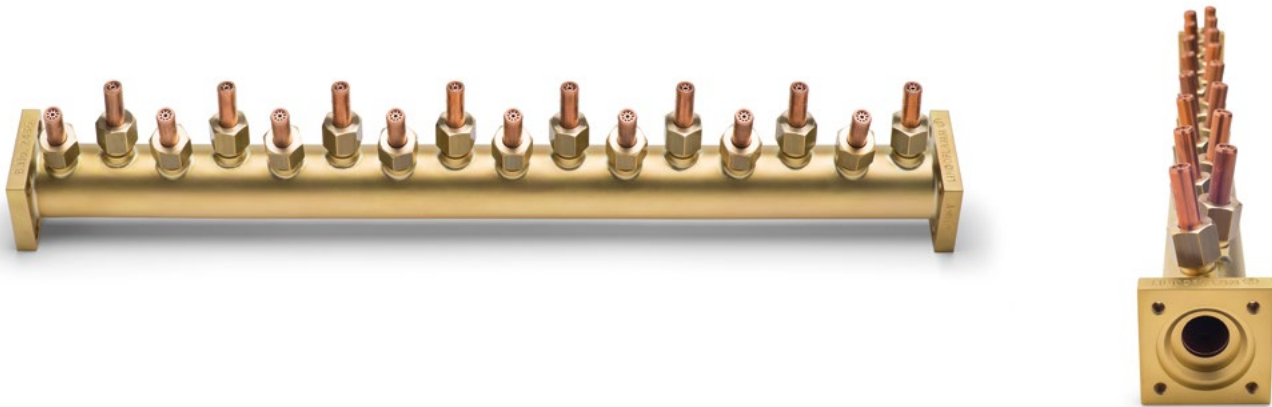
- Optional automation using pilot flame and monitoring elements (flame monitoring, temperature monitoring, data capture systems, etc.)
- Ball valves or solenoid valves for reproducible results
- Gas mixture distributor
- For in-line operation, see page 18 for connectors for lance burners with ignition nozzles; Y-nozzles to bridge the gap are available on demand

* The consumption values, measured at the burner inlet, are related to the burner's power range. By altering the gas flow rate, the power in the specified range can be adjusted to the corresponding tasks. The consumption data should be noted when constructing the gas supply.

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Lance burners – v-shaped



Burner type	Gases	Operating pressure / bar	Consumption* m ³ /h	Number of nozzles	Machine shaft	Overall length mm	Burner height mm	Part no.
LF-M-16D-V standard nozzle only	Acetylene	0.8-1.0	1.3-2.3	16	LF-S-2-M	500	100	19330002
	Compressed air	2.0-4.0	9.0-17.1					
LF-M-33D-V standard nozzle only	Acetylene	0.8-1.0	2.4-4.4	33	LF-S-2-M	1010	100	19330004
	Compressed air	2.0-4.0	17.2-31.5					

Applications

- For wider heat input in the welding seam area
- Stationary pre-heating before welding and cutting
- Drying before welding
- Maintaining interpass temperatures
- Post-heating

Design

- Elongated construction with exchangeable standard nozzles
- Nozzles arranged in V-position
- Bolted flange connections enable several burner elements to be connected (max. length 2m^{**})
- Parallel operation via distributors and bridges (max. number of nozzles: 66^{**})

Mandatory additional equipment

- Flanges, see page 18
- Feed with mixing chamber, see page 15
- Machine shaft, see page 14

Extension options

- Optional automation using pilot flame and monitoring elements (flame monitoring, temperature monitoring, data capture systems, etc.)
- Ball valves or solenoid valves for reproducible results
- Gas mixture distributor
- Y-nozzles to bridge the gap between two lance burners for in-line operation are available on demand

* The consumption values, measured at the burner inlet, are related to the burner's power range. By altering the gas flow rate, the power in the specified range can be adjusted to the corresponding tasks. The consumption data should be noted when constructing the gas supply.

The operating instructions contain further information about operating LINDOFLAMM burners. Our specialists are always available to provide further information.

** For applications other than this, please contact the thermal engineering department at BOC.

Short lance burners



Burner type	Gases	Operating pressure / bar	Consumption* m ³ /h	Number of nozzles	Connecting thread inch	Machine shaft	Overall length mm	Burner height mm	Part no.
LF-M-8D	Acetylene	0.8-1.0	0.7-1.3	8	1/2" LH	LF-S-2-M	240	110	19324228
	Compressed air	2.0-4.0	5.3-9.4						
LF-M-12D	Acetylene	0.8-1.0	1.0-1.9	12	1/2" LH		360	110	19324229
	Compressed air	2.0-4.0	7.5-13.8						

Applications

- Stationary pre-heating before welding and cutting
- Drying before welding
- Maintaining interpass temperatures
- Post-heating

Design

- Lightweight construction with exchangeable nozzles
- Nozzles arranged in a row
- Combination of several short lances available to cover a large flame field
- Heat shield made of heat-resistant steel

Mandatory additional equipment

- Feed with mixing chamber, see page 15
- Machine shaft, see page 14

Extension options

- Optional automation using pilot flame, ignition electrode and monitoring elements (flame monitoring, temperature monitoring, data capture systems, etc.)
- Ball valves or solenoid valves for reproducible results
- Gas mixture distributor

* The consumption values, measured at the burner inlet, are related to the burner's power range. By altering the gas flow rate, the power in the specified range can be adjusted to the corresponding tasks. The consumption data should be noted when constructing the gas supply. The operating instructions contain further information about operating LINDOFLAMM burners. Our specialists are always available to provide further information.

Handles



Handle with connection for:	Connecting thread inch	Inner Ø of hose mm (ISO 3821)	Special burner	Part no.
LF-S-2-H	3/8" LH	9.5	LF-H-1D, LF-H-2D, LF-H-3x2D-K	19324230*
	3/8" RH	9.5		
LF-S-3-H	3/8" LH	9.5	LF-H-4, LF-H-6, LF-H-8	19324231*
	1/4" RH	6.3		
LF-S-4-H	1/2" LH	12.5	LF-H-16	19324232
	3/8" RH	9.5		

Applications

- To adjust the consumption of acetylene-oxygen/ compressed air series LF-H burners

Design

- Ergonomic design ensures ease of use as well as comfortable, fatigue-free operation
- Furthermore, the sturdy design ensures that the handles have a long life
- The self-tightening radial seals at the inserts guarantee a quick and secure seal

Extension options

Ball valves on handle for quick opening/closing and a reproducible flame

Mandatory

Ball valves are mandatory when using the LF-H-16 burner with the LF-S-4-H handle, see page 16

* May differ from the illustration

Machine shafts



Machine shaft for use with:	Connecting thread inch	Inner Ø of hose mm (ISO 3821)	Special burner	Area of application (number of nozzles)	Part no.
LF-S-2-M	3/8" LH 3/8" RH	9.5 9.5	LF-M-8D, LF-M-12D, LF-M-16D, LF-M-33D	8-66	19324233

Applications

- Adjusting the consumption of LF-M series acetylene-compressed air burners with 8-66 nozzles

Extension options

Solenoid valves can be used instead of ball valves for automated heating applications

Design

- Brass machine shaft with integrated compressed air manometer, adjusting valves and ball valves
- The self-tightening radial seals at the inserts guarantee a quick, secure seal

Feeds with mixing chamber and injector



Feed	Connecting thread inch	Length mm	External Ø mm	Area of application (number of nozzles)	Part no.
LF-S-2 -F1	1/2" LH	300	16	8-12	19324234
LF-S-2 -F2	1/2" LH	500	16	8-12	19324235
LF-S-2 -F3	1/2" LH	300	16	13-24	19325984
LF-S-2 -F4	1/2" LH	500	16	13-24	19325985
LF-S-2 -F5	1/2" LH	300	16	25-41	19325986
LF-S-2 -F6	1/2" LH	500	16	25-41	19325987
LF-S-2 -F7	1/2" LH	300	16	41-57	19325988
LF-S-2 -F8	1/2" LH	500	16	41-57	19325989
LF-S-2 -F9	1/2" LH	300	16	58-66	19325990
LF-S-2 -F10	1/2" LH	500	16	58-66	19325991

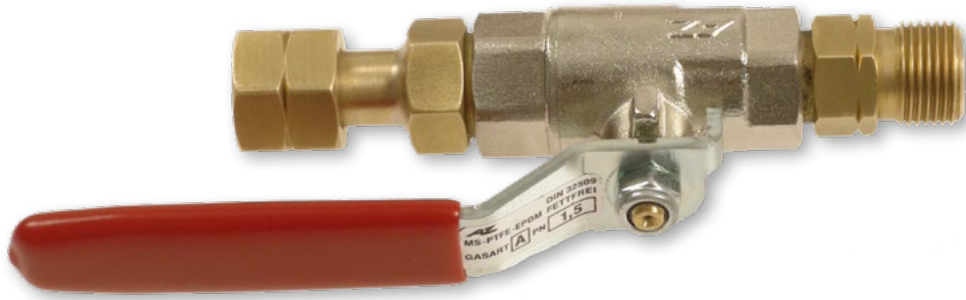
Applications

- Using an injector to mix acetylene and compressed air
- Feeding the acetylene-compressed air mixture to the lance, short lance and triple-head burner

Design

- Injector with O-rings for external tightness
- Brazed component joints

Ball valves



Gases	Connecting thread inch	Nominal size	Handle/machine shaft	Part no.
Acetylene	3/8" LH	DN 6	LF-S-2-H, LF-S-3-H, LF-S-5-H, LF-S-6-H	19324236
Acetylene	3/8" LH	DN 10	LF-S-2-M	19324237
Acetylene	1/2" LH	DN 10	LF-S-4-H	19324238
Compressed air	3/8" RH	DN 6	LF-S-2-H	19324239
Compressed air	3/8" RH	DN 10	LF-S-2-M	19324240
Oxygen	1/4" RH	DN 6	LF-S-3-H, LF-S-5-H	19324241
Oxygen	3/8" RH	DN 10	LF-S-4-H, LF-S-6-H	19324242
Oxygen	1/4" RH - 3/8" RH handle - hose	DN 6	LF-S-3-H, LF-S-5-H	19330007

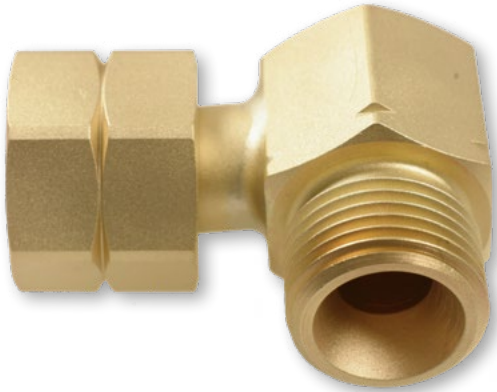
Applications

- For the quick shutting off of acetylene, oxygen and compressed air
- Reproducible flame adjustment

Design

- Chrome-plated brass
- Equipped with double-threaded connections in accordance with EN 560

Elbow joints



Connecting thread inch	Part no.
3/8" RH	19324243
3/8" LH	19324244
1/2" RH	19324245
1/2" LH	19324246

Applications

- Connecting feeds with burners
- Tubes with machine shafts or feeds with distributors.

Design

- The elbow joints are made of brass in accordance with EN 560

Flanges



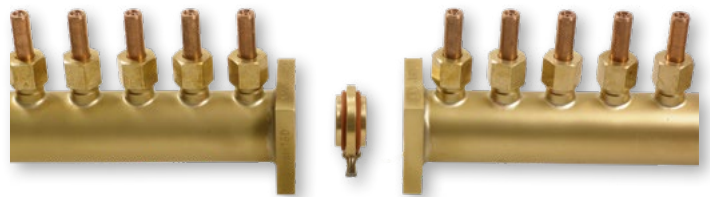
End flange



Output flange



Input flange



Lance burners with connector

Flange	Connecting thread inch	Part no.
Input flange	1/2" LH	19324247
Output flange	1/2" LH	19324248
End flange		19324249
Connector standard		19324250
Connector ignition nozzles		19330119

Application

- Joining, closing and connecting lance burners

Design

- Made of brass
- Equipped with O-rings and screws
- Input flanges with simple bore
- Output flanges with threaded hole

Distributors



150mm bridge



100mm input distributor



150mm input distributor

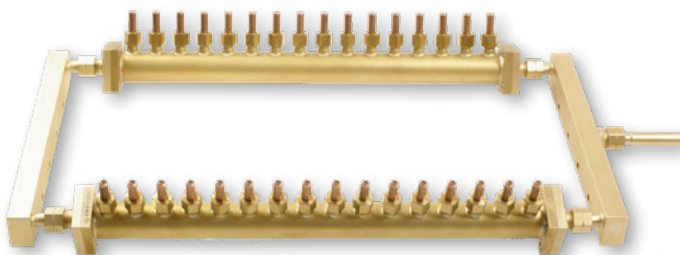
Connection distance	Input connecting thread / inch	Output connecting thread / inch	Number of output connectors	Part no.
150mm input distributor	1/2" LH	1/2" LH	2	19324251
150mm bridge		1/2" LH	2	19324252
100mm input distributor	1/2" LH	1/2" LH	3	19324253

Applications

Operating round head, lance or short lance burners in parallel

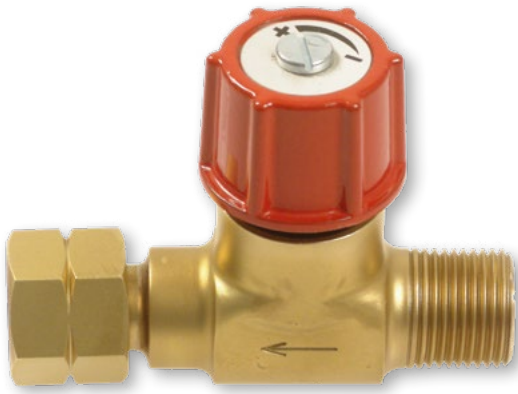
Design

- Brass distributor with or without input connector



Lance burners with 150mm input distributor and 150mm bridge

Adjusting valves



Acetylene valve



Compressed air valve

Gases	Connecting thread inch	Nominal size	Max. operating pressure bar	Part no.
Acetylene	3/8" LH	DN 9	1.5	19324255
Compressed air	3/8" RH	DN 9	40	19324256

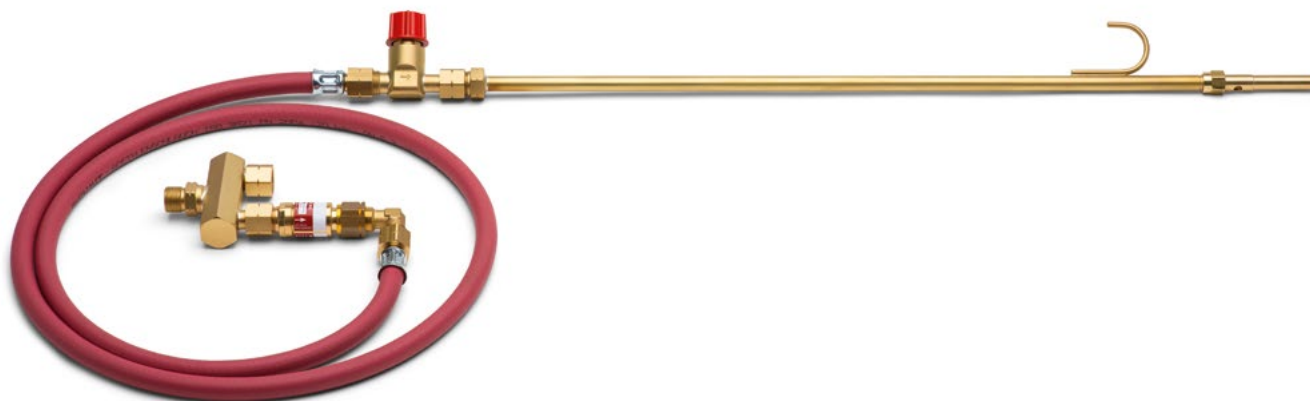
Application

- Adjusting valve located on the machine shaft for regulating the flow of acetylene and compressed air

Design

- Adjusting valve with vertical hand wheel and vertical valve cone
- Labelling
 - Acetylene: red
 - Compressed air: black

Ignition flame



Length of ignition pole / mm	Connecting thread inch	Hose length / mm	Inner Ø of hose mm (ISO 3821)	Part no.
600	3/8" LH	1500	6.3	19330008*

Application

- Safely igniting hand-operated and stationary burners

Design

- Two-part brass ignition flame with adjusting valve
- Mixing principle: acetylene with aspirated air
- With a brazed hook
- Manifold for acetylene supply to main burner system

Components

- Ignition pole with hook
- A3 nozzle
- Adjusting valve
- Hose
- Manifold
- Flashback arrestor

* May differ from the illustration

All-round support

First-class services for LINDOFLAMM special burner applications

Repairs to LINDOFLAMM special burners must only be carried out by competent personnel, authorised by BOC. Please contact BOC personnel to find the authorised specialists in your region.

Your local BOC contact can provide you with information on the purchase of spare parts.

LINDOFLAMM special burner applications can be easily incorporated into customer production processes. Our all-round service package delivers a wide range of benefits for easy installation and operation.

This extensive package comprises a wide range of services including:

- Integration management
- Installation service
- Burner optimisation
- Burner maintenance, repairs and service
- Targeted support

Further information about LINDOFLAMM can be obtained by visiting boconline.co.uk/lindoflamm

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