

## Pilot Burner

### Ignition of waste gas from pipe flares, air and steam assisted flares and ground flares

For most flare systems the pilot burner can not be accessed for service. Maintenance or replacement is not possible while the flare is in operation. To safeguard operation, Smitsvonk's pilots provide reliable ignition and stable burning even under the most difficult climate conditions.

#### Features

- High energy ignition
- Ignition by three integrated spark plugs
- Long lifetime, longer maintenance intervals
- Insensitive to moisture and dirt
- Complete delivery; cables, junction boxes and ignition unit
- Easy fit cable connectors
- Self-aspirating or forced air supply
- Integrated and protected thermocouple
- Functionally tested to client specifications
- Construction completely out of high temperature-resistant stainless steel

#### Applications

- Ignition of all kind of flares in the (petro) chemical, oil and gas, steel and biogas industry



Heavy duty pilot burner with radiation shield to protect the electrical connections



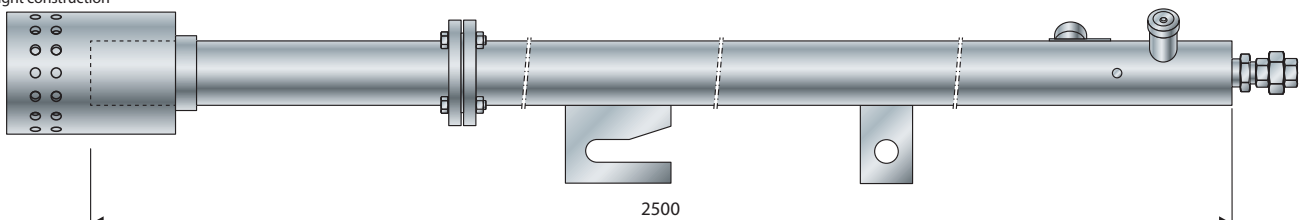
Pilot burners in different lengths and shapes

Common Data			
pipe diameter	2" (60 mm)	materials	mainly 310 SST
length	1200, 2326 or 2500 mm	windcap diameter	4", option 3"
design	angled or straight	mounting hooks	included
air requirement	self-aspirating	flame detection	by 6 mm thermocouple type K (T)
gas connection	½" BSPM	options	double thermocouple (DT) 2 separate thermocouples (2T)
supply gas	natural gas or propane/ butane refinery gas (max. 40 vol% H <sub>2</sub> )		
options	refinery gas, up to 100% H <sub>2</sub> coke gas biogas		

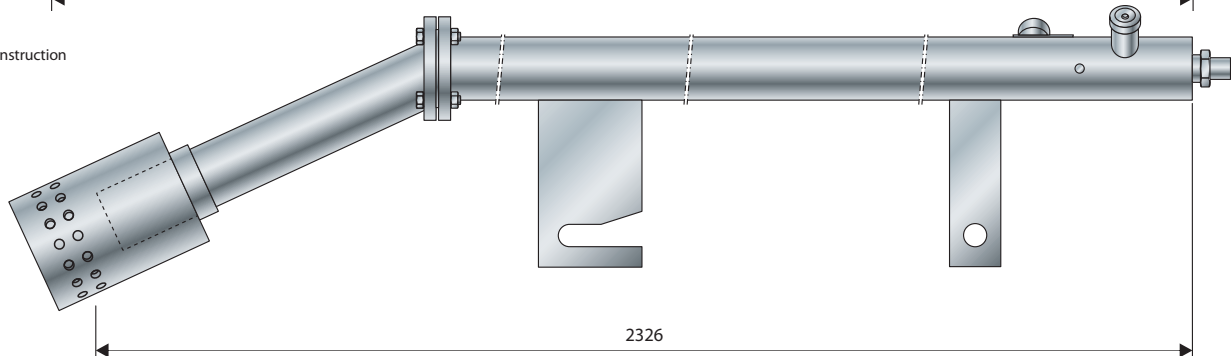
## Pilot Burner Selection Table for Small and Medium Size Flares

Model Number	Design	Heat Release based on Natural Gas in kW	Gas Flow in nm <sup>3</sup> /hr	Required Pressure	Gas	Ignition	Thermocouple
<b>ST60AF13-2326-360-25-TW</b> length: 2326 mm <b>option for thermocouple:</b> ST60AF13-2326-360-25-DTW <b>option for extra flame front ignition:</b> ST60AF13-2326-360-25-TW-FFG	angled	10–17	1–1.7	0.5–1.5	natural gas or propane/ butane or refinery gas (max. 40% H <sub>2</sub> )	3 integrated spark plugs at flame side  3 spark plugs and extra flame front tube	single  double
<b>ST60AF13-1200-TW</b> length: 1200 mm <b>option for thermocouple:</b> ST60AF13-1200-DTW	angled	10–17	1–1.7	0.5–1.5	natural gas or propane/ butane or refinery gas (max. 40% H <sub>2</sub> )	3 integrated spark plugs at flame side tube	single  double
<b>ST60AF13-2500-360-25-TW</b> length: 2500 mm <b>option for thermocouple:</b> ST60AF13-2500-360-25-DTW <b>option for extra flame front ignition:</b> ST60AF13-2500-360-25-TW-FFG	straight	10–17	1–1.7	0.5–1.5	natural gas or propane/ butane or refinery gas (max. 40% H <sub>2</sub> )	3 integrated spark plugs at flame side  3 spark plugs and extra flame front tube	single  double
<b>ST60AF19-2326-360-25-TW</b> length: 2326 mm <b>option for thermocouple:</b> ST60AF19-2326-360-25-DTW <b>option for extra flame front ignition:</b> ST60AF19-2326-360-25-TW-FFG	angled	15–29	1.5–2.9	0.2–0.8	natural gas or propane/ butane or refinery gas (max. 40% H <sub>2</sub> )	3 integrated spark plugs at flame side  3 spark plugs and extra flame front tube	single  double
<b>ST60AF19-2500-360-25-TW</b> length: 2500 mm <b>option for thermocouple:</b> ST60AF19-2500-360-25-DTW <b>option for extra flame front ignition:</b> ST60AF19-2500-360-25-TW-FFG	straight	15–29	1.5–2.9	0.2–0.8	natural gas or propane/ butane or refinery gas (max. 40% H <sub>2</sub> )	3 integrated spark plugs at flame side  3 spark plugs and extra flame front tube	single  double
<b>for biogas:</b> ST60BF19-1200-T3 length: 1200 mm	straight	4–6 biogas	0.7–0.9	0.07–0.1	bio gas	3 integrated spark plugs at flame side	single
<b>for coke gas:</b> ST60WF-2326-360-25-TW length: 2326 mm	angled	15–25 coke gas	3–5	0.1–0.3	coke gas 40–60% H <sub>2</sub> rest CO	3 integrated spark plugs at flame side	single
<b>for low pressure:</b> ST76(60)AF23-2326-360-25-TW length: 2326 mm	angled	15–23	1.5–2.3	40–100 mBarg	natural gas	3 integrated spark plugs at flame side	single

Straight construction



Angled construction



## Pilot Burner Selection Table for Large Flares (Heavy Duty Applications)

Model Number	Design	Heat Release based on Natural Gas in kW	Gas Flow in nm <sup>3</sup> /hr	Required Pressure	Gas	Ignition	Thermocouple
<b>HD60AF19-2326-360-25-TW</b> length: 2326 mm  option for thermocouple: <b>HD60AF19-2326-360-25-DTW</b> <b>HD60AF19-2326-360-25-2TW</b> option for extra flame front ignition: <b>HD60AF19-2326-360-25-TW-FFG</b>	angled	24-30	2.4-3.0	0.5-0.9	natural gas or propane/ butane or refinery gas (max. 10% H <sub>2</sub> )	3 integrated spark plugs at 1.8 m from the top  3 spark plugs and extra flame front tube	single  double 2 pieces
<b>HD60AF19-2500-360-TW</b> length: 2500 mm  option for thermocouple: <b>HD60AF19-2500-360-DTW</b> <b>HD60AF19-2500-360-2TW</b>  option for extra flame front ignition: <b>HD60AF19-2500-360-TW-FFG</b>	angled	24-30	2.4-3.0	0.5-0.9	natural gas or propane/ butane or refinery gas (max. 10% H <sub>2</sub> )	3 integrated spark plugs at 1.9 m from the top  3 spark plugs and extra flame front tube	single  double 2 pieces

Heavy duty pilot burner with a hybrid ignition system:  
Integrated spark plugs and flame front ignition

