



Best choice.

Laser cutting: old challenges – modern solutions

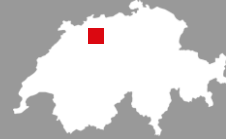
Burgdorf, November 28th 2018

Gilbert Schiltges



Founded

1986



Headquarters



Niederönz, CH



Conzzeta

1994

Field of activity

► systems for **sheet metal processing**





856 Mio. CHF

774 Mio. € / 867 Mio. \$

Revenue



2417

Employees

116 Apprentices



20 %



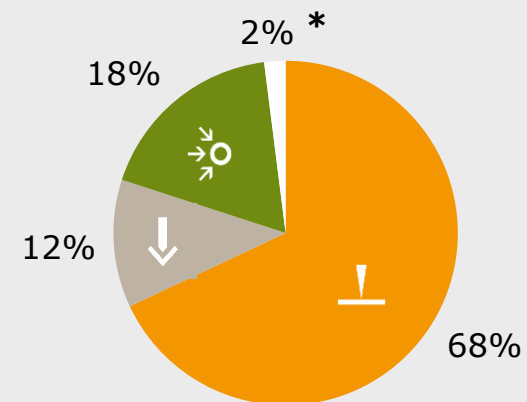
50 %



30 %

Revenue ▶ **market regions**

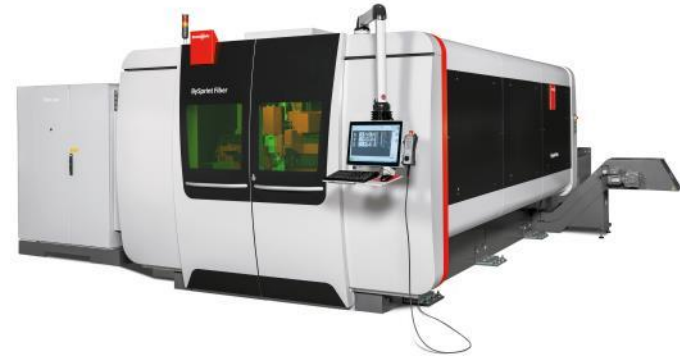
Revenue ▶ **core activities**



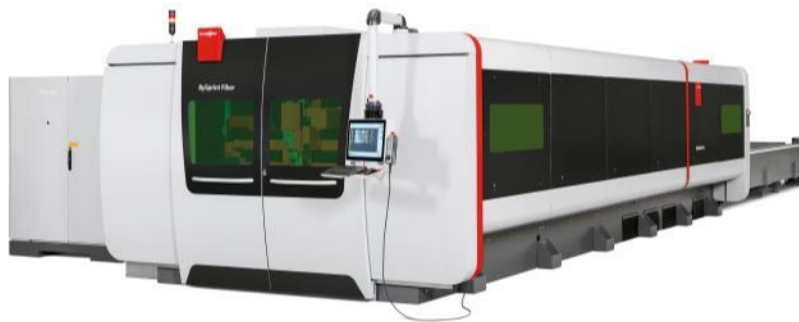
* Secondhand machines



ByStar Fiber



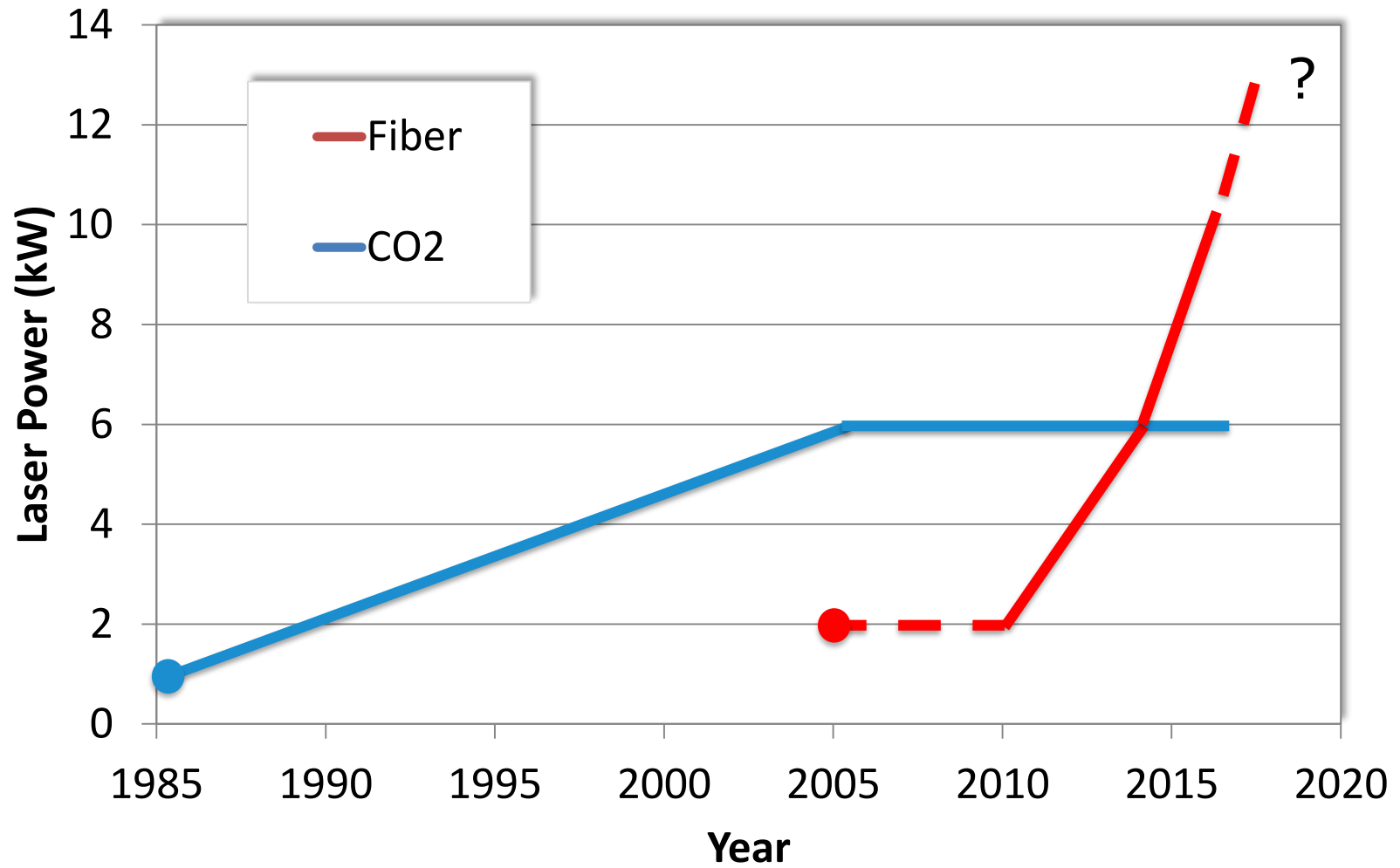
BySprint Fiber

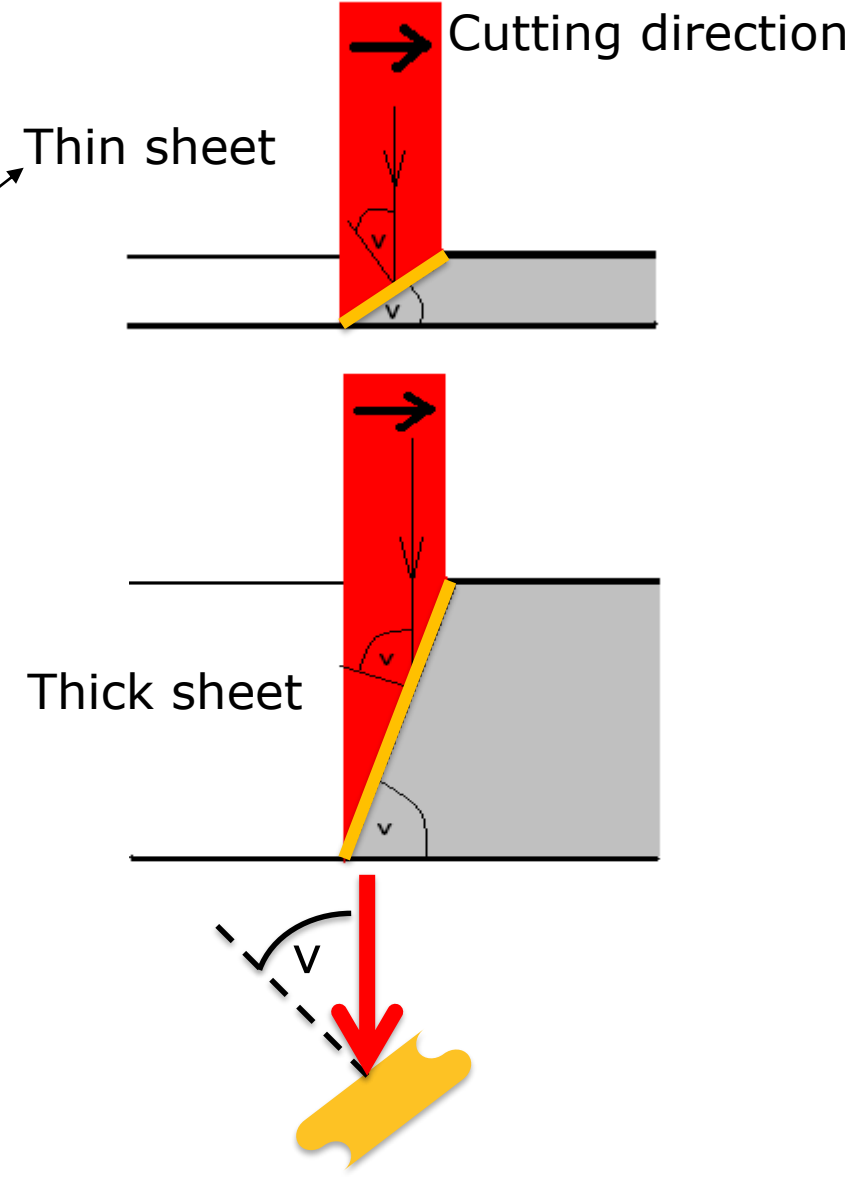
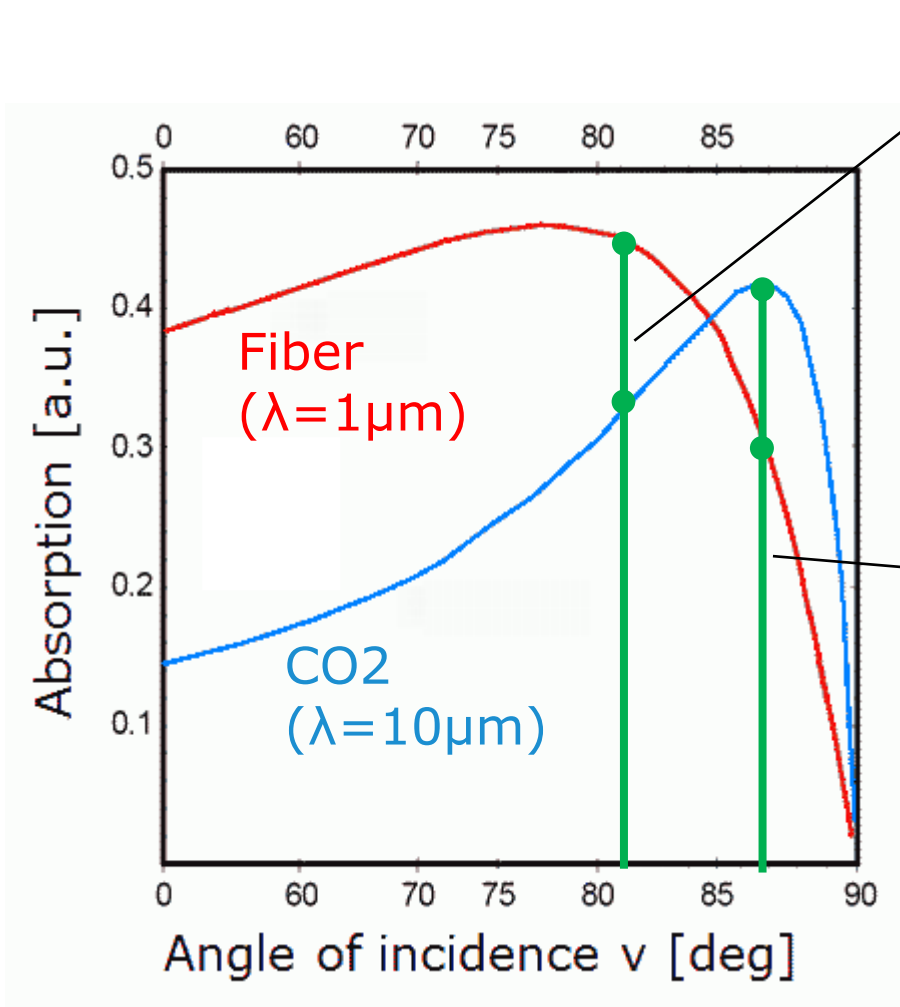


BySprint Fiber XXL



BySmart Fiber







power scaling

(4kW -> 6kW -> 10kW -> 12kW -> ?)

process gas

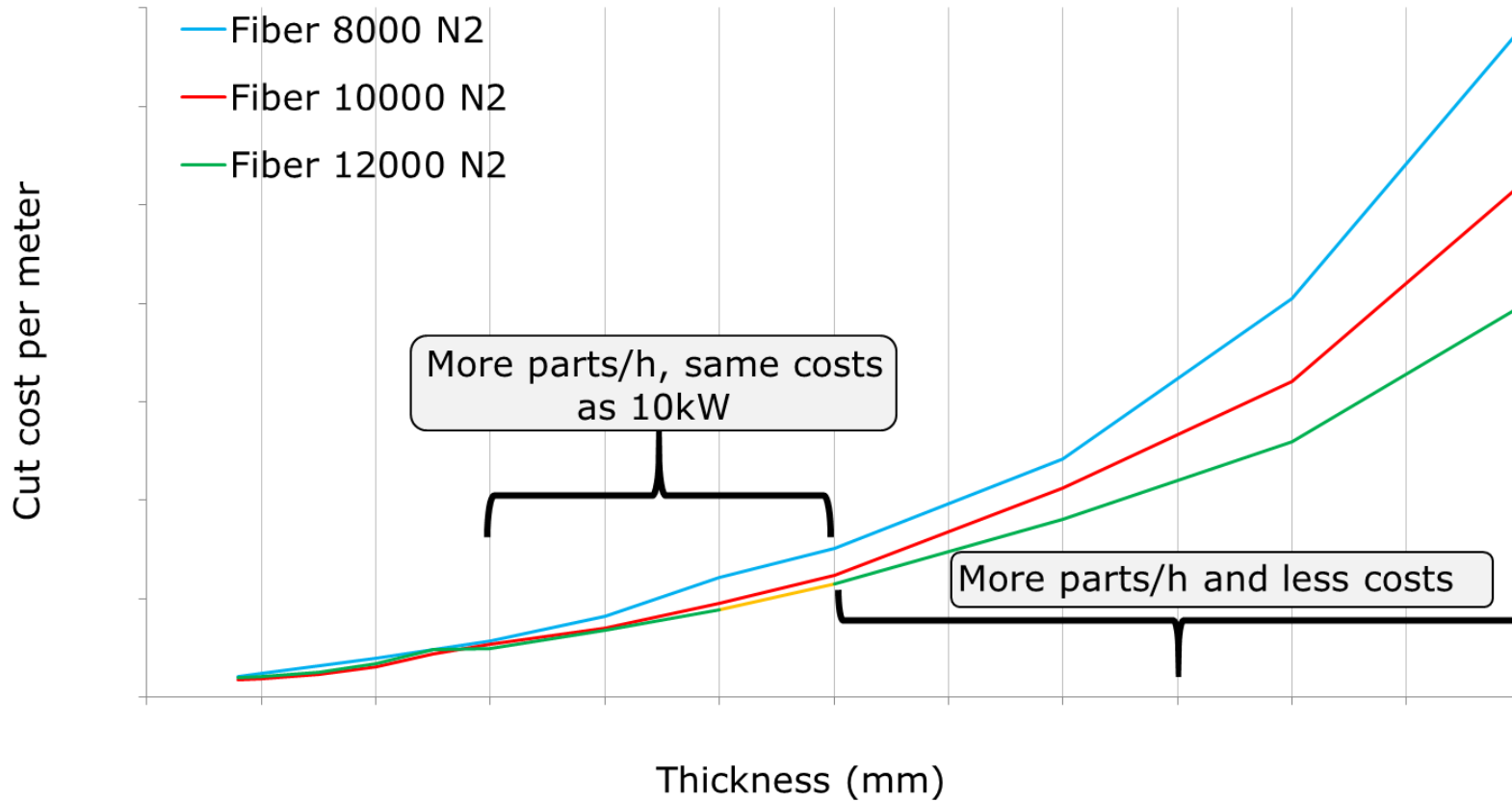
process optimisation

optics

beam shaping technologies



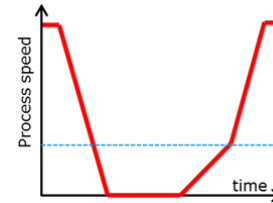
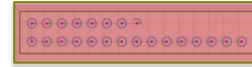
Cost comparison for mild steel and stainless steel (assist gas N2)



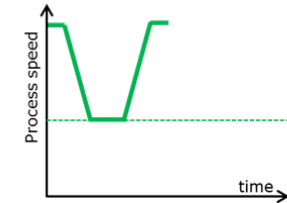
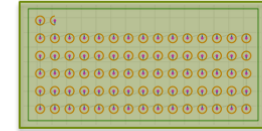
- Piercing with “no time” up to 10mm.
- Increased efficiency by optimized process sequence.



Today
22.3 holes / 30s

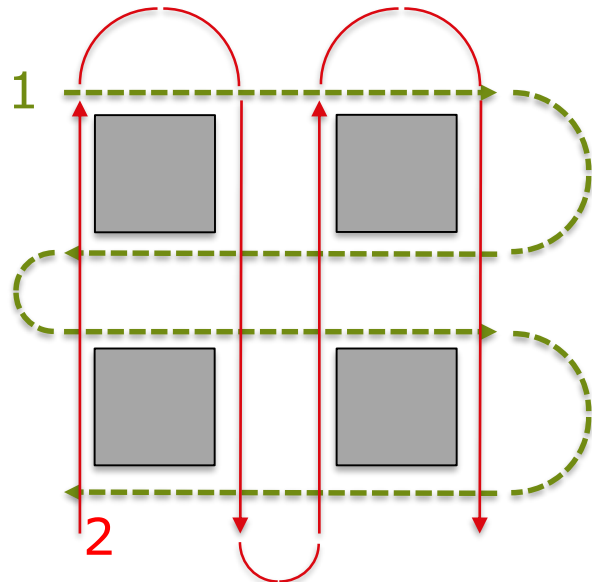


Piercing with no time:
76.5 holes / 30s



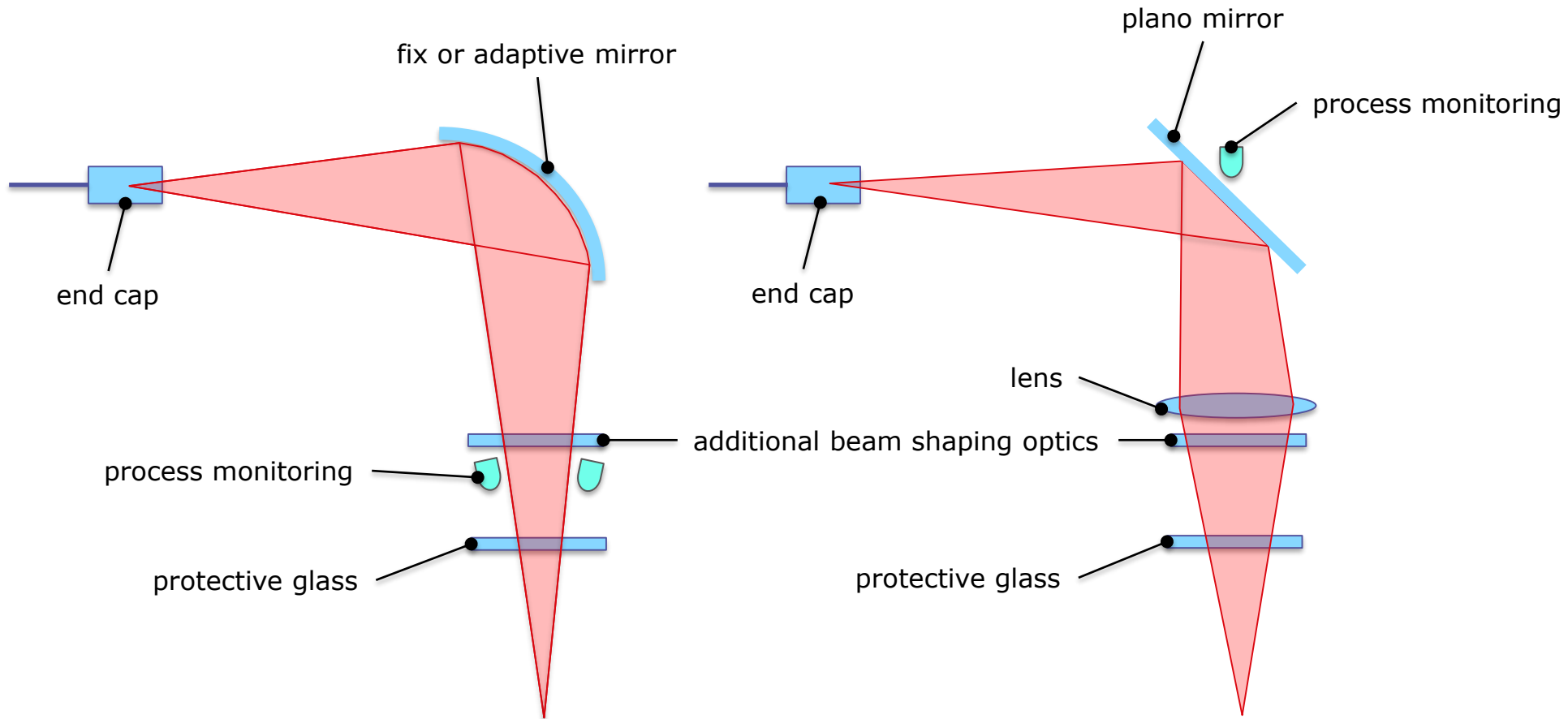
+240%

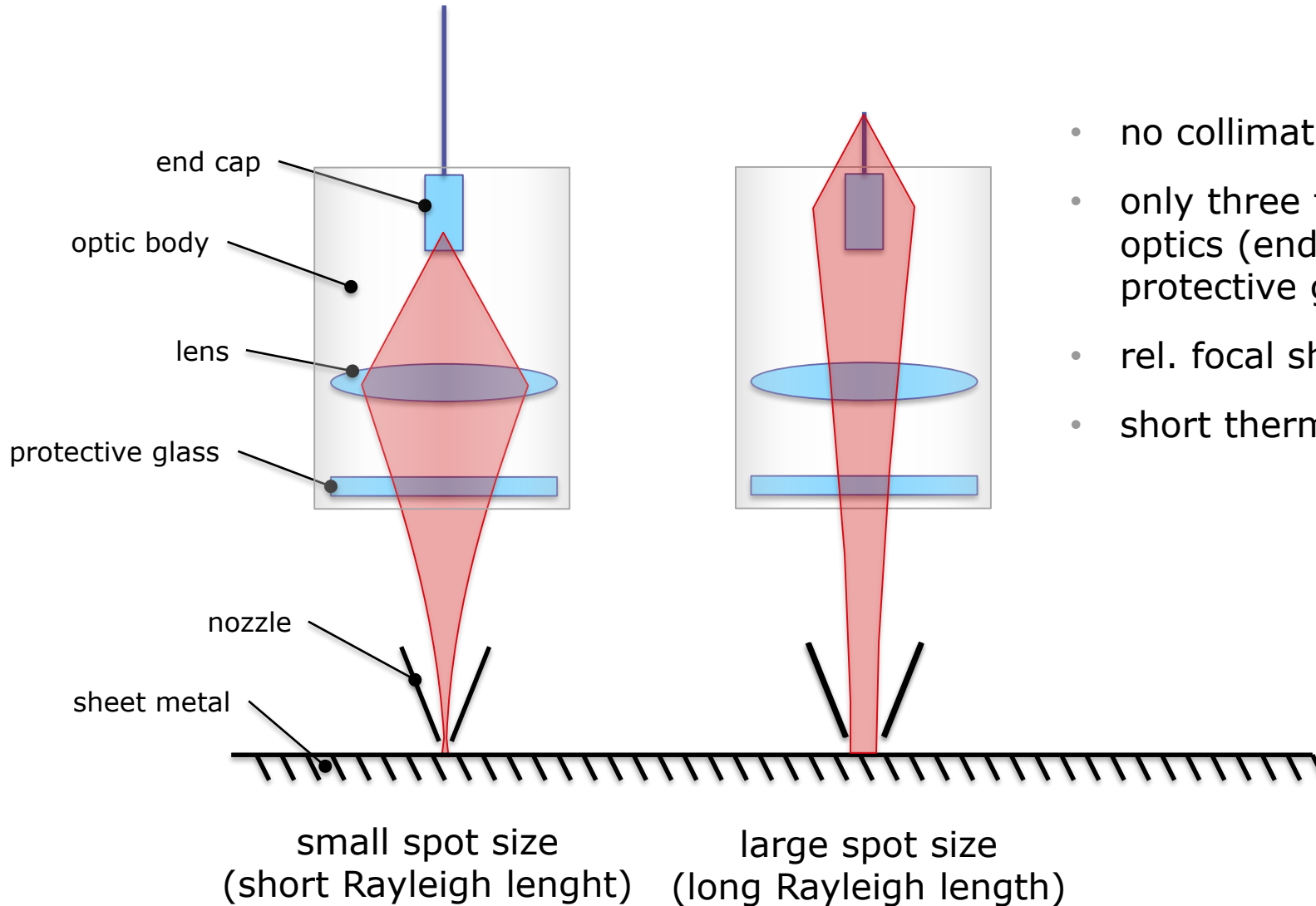
Example mild steel 6mm



- High speed process scanning with constant cutting speed thanks optimized path calculation.
- Increase productivity compared with conventional processing up to 400%.

different optical setups without collimation

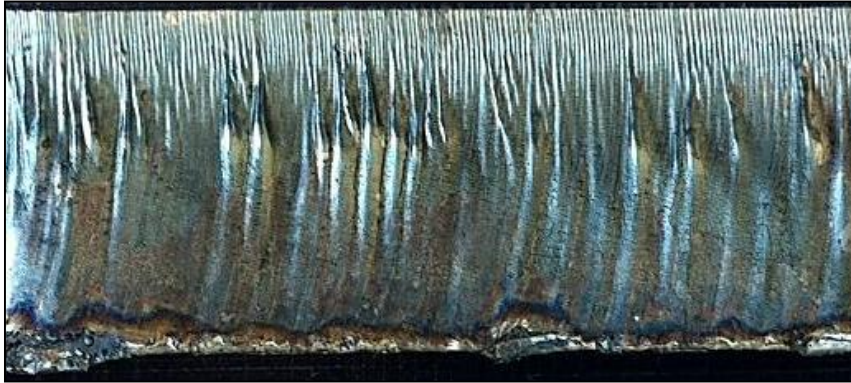




- no collimation
- only three transmissive optics (end cap, lens & protective glass)
- rel. focal shift $< 2\%/kW$
- short thermalisation time



flame cut in «low quality» mild steel 20mm



typical cutting result with standard laser beam



Bystronic BeamShaper

Bystronic BeamShaper

- field of application: flame cutting of mild steel 10 / 12 / 15 / 20 / 25 / 30mm
- higher process stability
- better cutting edge quality – in particular for «low quality» mild steel
- up to 28% higher cutting speeds in «commercial grade» mild steel

Bystronic **Best choice.**

Cutting | Bending | Automation
bystronic.com