

APODIS

TECHNOLOGIES



AUTOMATED CLAMPING PRESSURE ADJUSTMENT

Industry 4.0
next generation begins

APO.DRIVE

SMART HYDRAULIC CONTROL

AUTOMATED INTELLIGENCE

Optimized production runs through digitization

Premium Quality.
Designed, developed
& **MADE IN GERMANY**



NEXT LEVEL APO.DRIVE

With the **APO.DRIVE**, the hydraulic clamping pressure will be adapted also automatically during machining and take your process to a new level without high costs. **CNC machines are optimized quickly and easily in terms of costs, efficiency and production reliability.** This opens up new opportunities for machine builders and operators.

The benefits – Fast, simple, effective

Achieve more- and at the same time reduce effort and user complexity:

APO.Drive is a Ready-To-Use solution which enables the optimization of CNC machines regardless of the manufacturer with minimum effort.

New: Faster commissioning

Integration is now even simpler: The APO.DRIVE enables a standard system support – regardless of the manufacturer.

Machines that already have an IO-Link Topography are at an advantage. This means you can integrate the APO.DRIVE system in even less time.

APO.DRIVE goes IO-Link

The IO-Link compatibility of the pressure sensor technology allows direct integration of the APO.DRIVE system and provides the future specification for standard communication.

No IO-LINK? No problem!

With an analogue pressure sensor, the APO.DRIVE works at the same efficiency level.

APO.DRIVE + Reversing pole switch



**AUTOMATED CLAMPING
PRESSURE ADJUSTMENT**



TESTED WITH **>35 Mio.
million load changes**

**36 MONTH
GUARANTEE**

75%

**Time saved for clamping
pressure adjustment***
= higher number of parts

90%

Energy savings*

83%

**Overall cost
savings***



*Calculation on basis //0 annual operating time



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Thanks to APO.DRIVE we have substantially increased our productivity from the first installation onwards. A positive side effect is, of course, high-cost savings.

T. Jeners, Team leader- Market leader automotive supplier.

HIGHLIGHTS

- + Retrofitting with little effort
- + Accurate clamping pressure adjustment
- + Low installation costs
- + Very high compatibility
- + IO-Link based communication possible

	APO.DRIVE	MARKET COMPETITORS
Energy requirements	< 20 W	> 2350 W
Pressure range	0,5 – 210 bar	10 – 100 bar
Control system	24 V Reversing pole switch	Steuerkarte & Inbetriebnahme
Reference	not necessary	necessary
Emergency adjustment	✓	✗
Service	Plug & Play	Referencing necessary
Active pressure control	✓	✗



Increase efficiency

Increased productivity

>25%



Cost reduction

Electricity cost reduction

783 € // year
1.566 € // year
2.359 € // year



Optimize resources

Active Forest protection

9.650 m²
19.300 m²
29.350 m²



CO² reduction

Reduction of CO² values

1,84 t // year
3,68 t // year
5,52 t // year

8h
16h
24h

TECHNICAL DATA

APO.DRIVE

APO.DRIVE 2.1
smart



APO.DRIVE 2.2
medium



APO.DRIVE 3.1
heavy



Product measurements	Ø 45 mm x 160 mm	Ø 45 mm x 160 mm	Ø 45 mm x 200 mm			
Material	Anodized aluminium alloy					
Nominal voltage	24 VDC					
Nominal current	≤ 85 mA	≤ 250 mA	≥ 1050 mA			
Starting current	1.1 A	1.1 A	8.3 A			
Output power	4.0 W	4.0 W	19.0 W			
Electrical connection	M12x1					
Max Pump & adjustment	80 bar	100 bar	200 bar			
Adjustment velocity pressure reduction valve	1 bar	10 bar	1 bar	10 bar		
75 bar	0,28 s	2,80 s	0,54 s	5,40 s	0,23 s	2,30 s
100 bar	0,14 s	1,40 s	0,27 s	2,70 s	0,12 s	1,20 s
210 bar	0,10 s	1,00 s	0,19 s	1,90 s	0,08 s	0,80 s

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