

# Shaft chuck

## Complete machining of

Constant lubrication /  
filled with oil.

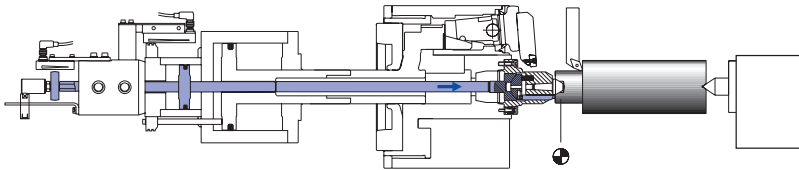
**proofline® series**  
fully sealed – low maintenance

**Jaw carrier,  
retracted**  
The workpiece  
is driven  
by the  
face driver

**Balancing chambers**  
for fine balancing on the  
machine

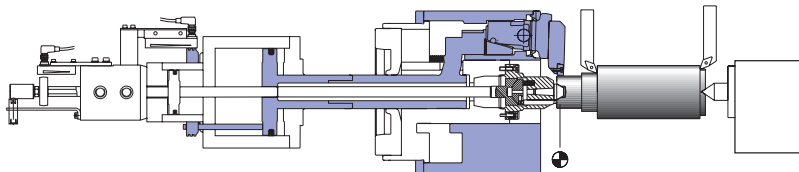
**Face driver**  
power operated via  
double piston cylinder or  
with spring loaded center

### The application: Complete machining of shafts in one setup



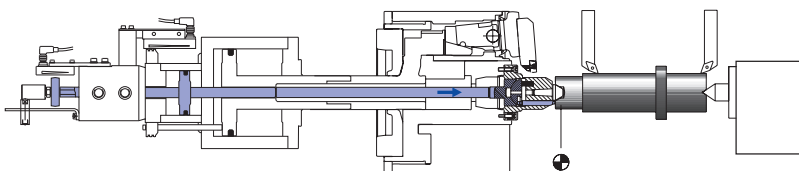
#### 1. Machine clamping dia. (only necessary when using the self centering chuck):

The jaws are retracted. The component is clamped between centers and driven by the face driver. This operation can be eliminated if the clamping dia. is already machined when the center bore is manufactured. This operation is not necessary when using the chuck with compensating jaws.



#### 2. Rough machining:

The part is driven with the high gripping force of the jaws. High chip removal is possible.

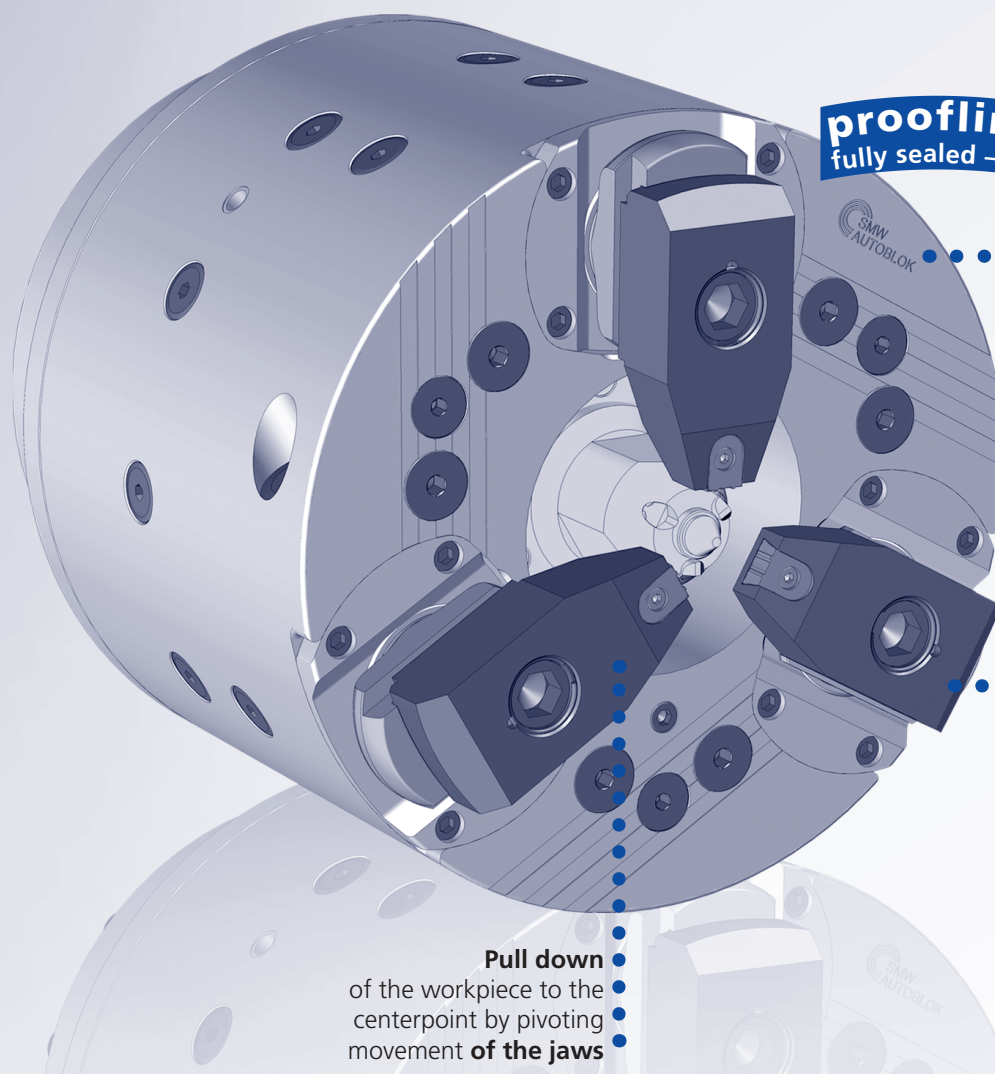


#### 3. Finish machining:

The chuck body is retracted. The part is clamped between centers and driven by the face driver. The complete outline can be machined with perfect concentricity.

# with face driver shafts in one setup

## W 215 • W 260 • W 325 • W 460



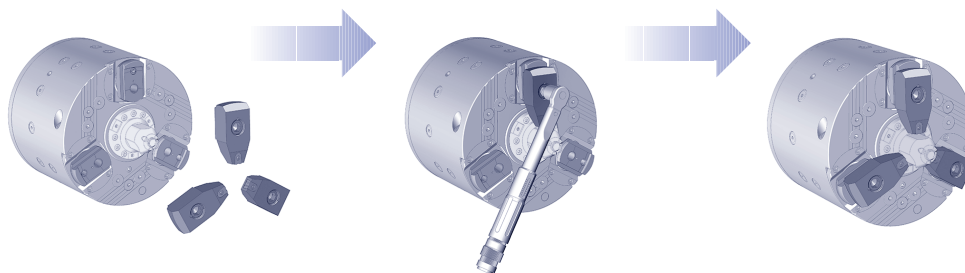
**proofline® series**  
fully sealed – low maintenance

**Jaw carrier, forward**  
High torque transmission with the jaws

**Clamping**  
compensating or self-centering jaw clamping

**Pull down**  
of the workpiece to the centerpoint by pivoting movement of the jaws

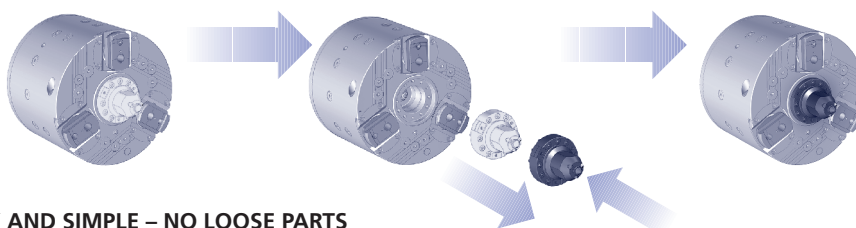
### QUICK JAW CHANGE IN LESS THAN 1 MINUTE



• QUICK AND SIMPLE – NO LOOSE PARTS

### QUICK-CHANGE-FACE-DRIVER IN LESS THAN 2 MINUTES

- Highest accuracy (Runout of face driver center point > 0.02 mm TIR)
- No adjustment necessary. Standard face drivers with self centering installation. (radial adjustment = option)\*



• QUICK AND SIMPLE – NO LOOSE PARTS

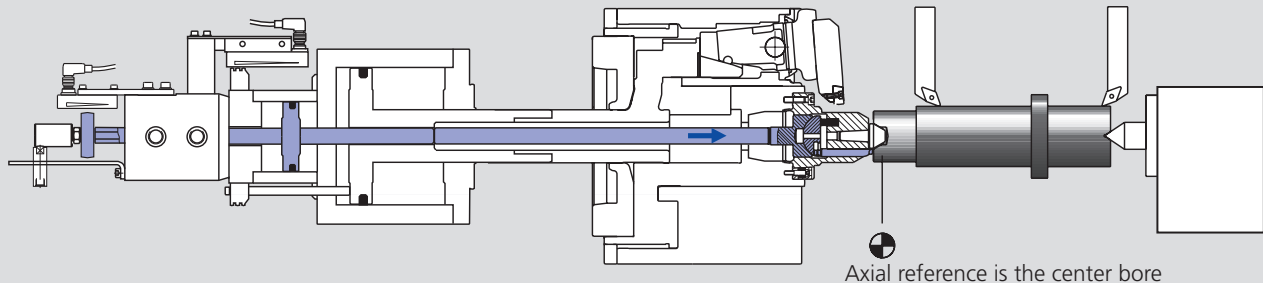
\* A radial fine adjustable face driver version for higher accuracy is available on request.

Shaft chuck with retractable jaw carrier  
Face driver

Face driver with center point  
fixed or spring-loaded

## Type 1

### Shaft chuck with face driver with fixed center ZHVD-SZ or DCN double piston cylinder

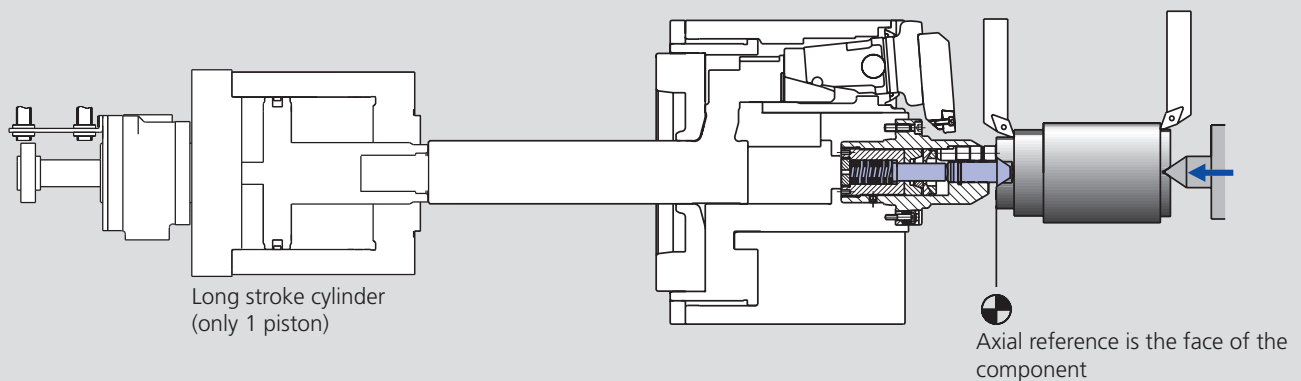


#### Power operated face driver with fixed center type SNF (The design of the face driver is made according to the component)

- The axial reference is the center bore of the component.
- Fixed center guarantees highest concentricity.
- The driving pins are actuated via piston No. 2 of the double piston cylinder ZHVD-SZ. The driving pins penetrate into the face of the component (Piston No. 1 is used for chuck actuation).
- Clamped / unclamped position of the face driver is monitored by proximity switches / LPS.
- Highest accuracy - no adjustment necessary!

## Type 2

### Shaft chuck with face driver with spring-loaded center SIN-L long stroke cylinder



#### Face driver with spring-loaded center type FSB (The design of the face driver is made according to the component)

- The axial reference is the face of the component.
- The component is pushed against the driving pins and the spring-loaded center by the tailstock thrust. The driving pins penetrate into the face of the component.
- A special built-in locking mechanism holds the spring-loaded center and holds the component in its axial position.
- Highest accuracy - no adjustment necessary!

## Low maintenance - low wear by oil bath lubrication

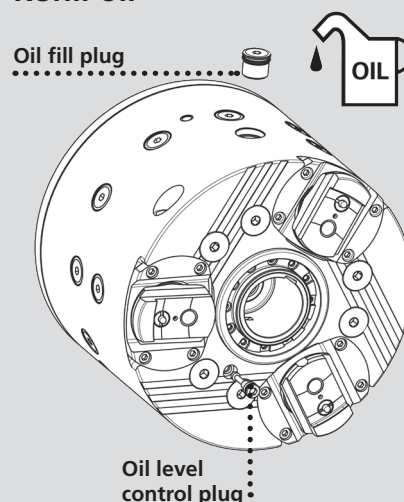
Oil to be changed annually  
Regular oil level check

Oil: CGLP ISO VG 68

**proofline® series**  
fully sealed – low maintenance

Chuck size	W-215 liters	W-260 liters	W-325 liters	W-460 liters
Oil quantity horizontal mounting	0.25	0.50	1.00	1.50
Oil quantity vertical mounting	0.50	1.00	1.70	3.00

### Refill oil



## Applications

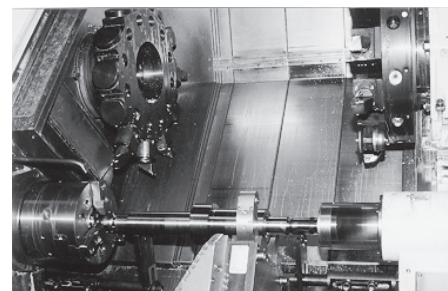
### Shaft

#### Turning operation of:

- Concentric dia.
- Faces
- Outlines

#### Milling operation of:

- Lubrication channels
- Slots
- Serration
- Outlines



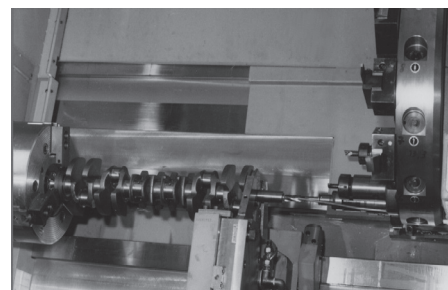
### Crankshaft

#### Turning operation of:

- Bearing dia.
- Crank sides
- Crank O.D.

#### Milling operation of:

- Cranks
- Reference slots
- Serration
- Lubrication channels



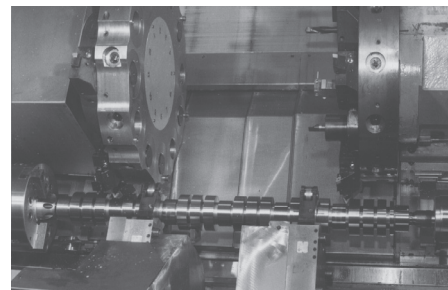
### Camshaft

#### Turning operation of:

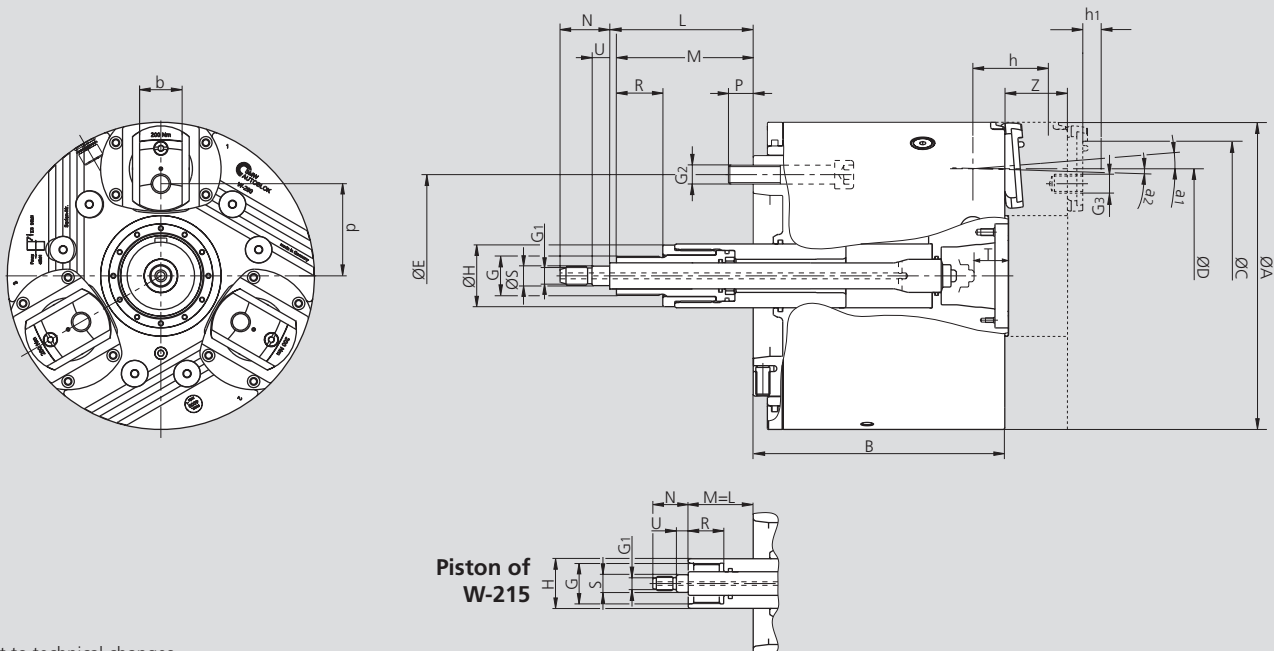
- Bearing dia.
- Cam faces

#### Milling operation of:

- Cam profile
- Slots
- Serration
- Lubrication channels







Subject to technical changes.  
For more detailed information please ask our customer service.

SMW-AUTOBLOK Type		W-215		W-260		W-325		W-460	
Mounting		A6	A8	A6	A8	A8	A11	A11	A15
Chuck outside dia.	A	215		260		325		460	
Chuck height	B	176	211	238	213	285	251	344	309
In clamping position (radius)	C	R92		R115		R143		R205	
Max. clamping dia.	D	145		175		220		335	
	E	133.4	171.4	133.4	171.4	171.4	235	235	330.2
	G	M34 x 1.5		M33 x 1.5		M45 x 1.5		M85 x 2	
	G1	M12		M16		M16		M55 x 2	
	G2	M12	M16	M12	M16	M16	M20	M20	M24
	G3	M12 x 20		M16 x 24		M20 x 30		M24 x 45	
	H	42		54		70		110	
Push rod face driver min. / max.	L	55 / 40	20 / 5	96.5 / 51.5	121.5 / 106.5	106 / 91	140 / 125	119 / 104	154 / 139
Min. / max.	M	55 / -4	20 / -39	96.5 / 26.5	121.5 / 51.5	106 / 26.8	140 / 60.8	119 / 24.4	154 / 56.5
	N	30		42		42		42	
	P	15.5	22	18	21	24	26	26	34
	R	30		45		50		50	
	S <sub>16</sub>	15		16.5		16.5		56.5	
Push rod pos. check dimension	T	22		29		46		60	
	U	10		15		15		15	
Axial movement / jaw carrier	Z	44		53		58		65	
Piston stroke for jaw clamping	Z1	15		17		22		32.5	
Opening / residual stroke angle	a1/a2	4.5° / 1.5°		4.5° / 1.3°		4.5° / 1.3°		5° / 2°	
Opening / residual stroke at distance h1	h1	4.0 / 1.3		4.5 / 1.3		5.7 / 1.9		7.7 / 3.1	
Max. jaw stroke at distance h*	mm	5.3		5.8		7.6		10.8	
Max. compensating / jaw Type C	mm	± 0.6		± 1.0		± 1.5		± 3.3	
	b	30		36		44		52	
	d	65		78		96.5		150.5	
Reference height	h	50		57		72		88	
Oil volume horizontal use	l	0.25		0.50		0.75		1.50	
Oil volume vertical use	l	0.50		1.00		1.50		3.00	
Max. speed	r.p.m.	5000		4000		3200		1800	
Max. draw pull	kN	30		55		75		100	
Max. grip force at reference distance h*	kN	60		110		150		200	
Moment of inertia	kg·m <sup>2</sup>	0.236	0.271	0.639	0.606	1.872	1.734	9.35	8.91
Weight (without top jaws)	kg	40	45	75	70	140	127	364	336

\* When exceeding distance h gripping force/speed must be reduced accordingly.



JAWS-CATALOG

Request or  
download:  
[www.smw-autoblok.de](http://www.smw-autoblok.de)

# Shaft chuck Ø 215 - 460 mm

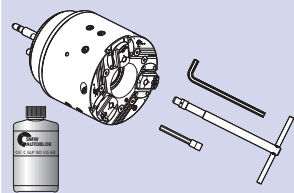
**W**

Shaft chuck with retractable jaw carrier  
Face driver

## Ordering review

### Supply range:

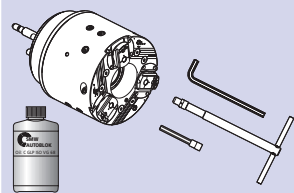
Compensating clamping (Type C) chuck with mounting bolts and mounting keys, oil\*



Spindle mounting \ Type C	W-215	W-260	W-325	W-460
A6	069930	069527		
A8	069932	069444	069525	
A11		069815	068981	069602
A15				069600

### Supply range:

Self centering clamping (Type S) chuck with mounting bolts and mounting keys, oil\*



Spindle mounting \ Type S	W-215	W-260	W-325	W-460
A6	069934	069542		
A8	069936	069546	069552	
A11		069817	069554	069606
A15				069604

### \* Attention:

The W-chucks in this ordering review are for the use of power operated face drivers only (Type 1).

To use face drivers with spring loaded center, a different chuck (Type 2) has to be used.

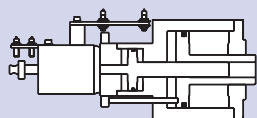
Please ask our engineers for the corresponding Id. No. and the matching cylinders.

Power operated face drivers and face drivers with spring loaded center **cannot** be used alternating on the same chuck.

### Attention:

Shaft chuck for vertical machines on request

## Actuating cylinder



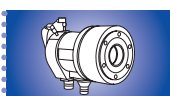
Double piston cylinder \ Type	W-215	W-260	W-325	W-460
ZHVD-SZ	68-17	110-25	110-25 / 240-40	240-40
Id. No.	044429	045297	045297 / 045298	045298
DCN			170-40 / 95-50	
Id. No.			33705215	

## Oil



### Oil for permanent oil bath lubrication

Oil specification	CGLP ISO VG 68
Contents	1 liter/1.05 quart (U.S.)
Id. No.	197859



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