



**ROEMHELD**  
HILMA ■ STARK

# Booster Record 40 / 80 bar

Operating instructions

WM-020-062-11-en BA Booster Record

**precise, fast and powerful**



## Booster Record 40 / 80 bar

Art. No.: S804-411 / S804-412



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## 2 Identification of the partly completed machinery

Product:	Booster
Function:	Conversion of pneumatic pressure into hydraulic pressure, for releasing fast closing clamping system
Product group:	Booster
Article number:	S804-411, S804-412
Trade name:	As per product group, see above

## 3 User information

### 3.1 Purpose of the document

These operating instructions

- Describe the function, the operation and the maintenance of the device
- Provide important information for the safe and efficient usage of the device

### 3.2 Change history

Date	Change	Name
27.08.2018	Initial version	wavo
17.11.2020	Addition to 6.3.1 item 3. Term SPEEDY replaced by STARK. New order number system	japr

### 3.3 Reference documents

Document	Version	Prepared by
Operating instructions for the related clamping system	-	Stark Spannsysteme GmbH
Assembly drawings with parts lists	-	Stark Spannsysteme GmbH



### 3.4 Presentation of safety instructions

Safety instructions are marked with a pictogram. The respective signal word describes the significance and severity of the impending risk.



#### **DANGER**

**Immediate** risk to life and health of personnel (serious injuries or fatality). It is imperative you follow these instructions and procedures!



#### **CAUTION**

**Possibly** hazardous situation (minor injuries or damage). It is imperative you follow these instructions and procedures!



#### **INFORMATION**

Application tips and particularly useful information



#### **INSTRUCTION**

Obligation related to specific conduct or to undertake a specific action for the safe use of the machine.



## 4 Essential safety instructions

### 4.1 Proper use



The booster is used to release fast closing clamping devices.

Proper use also includes:

- Following all instructions in these operating instructions
- Undertaking the inspection and maintenance work
- Using only genuine parts.

### 4.2 Foreseeable misuse



Any usage other than that stipulated in chapter

"4.1 Proper useroper use" or a usage beyond that is considered improper use!

If used improperly, risks may arise. Improper use includes e.g.:

- Exceeding the specifications defined for normal operation

The operator/owner bears the sole responsibility for damage due to improper use. The manufacturer will not accept any liability whatsoever.

### 4.3 Modifications or changes



If any modifications or changes are made without authorisation, any liability or warranty on the part of the manufacturer will be rendered void!

For this reason do not make any changes or additions without consultation with and the written agreement of the manufacturer.

### 4.4 Spare parts and wearing parts, as well as auxiliary materials



The usage of spare parts and wearing parts from other manufacturers can result in risks. Only use genuine parts or parts

approved by the manufacturer. The manufacturer accepts no liability for damage resulting from the use of spare parts, wear parts or auxiliary materials not approved by the manufacturer.

### 4.5 Obligation by the operator/owner



The operator/owner undertakes the obligation only to allow to work on the booster personnel who

- Are familiar with the essential health and safety regulations
- Have been instructed on the operation of the booster and have read and understood these operating instructions.

The requirements of the EC directive on the usage of work equipment at work 2007/30/EC are to be met.

### 4.6 Residual risks



Attention is to be paid to the occurrence of mechanical, hydraulic and pneumatic residual energy on the booster as well as the pressure in cylinders and valves after switching off the booster!

### 4.7 Hazard due to overpressure

Pipes or hoses bursting due to overpressure can place personnel at risk.

Action:

- Protect hydraulic lines with overpressure valves.
- Observe data on pressure limits

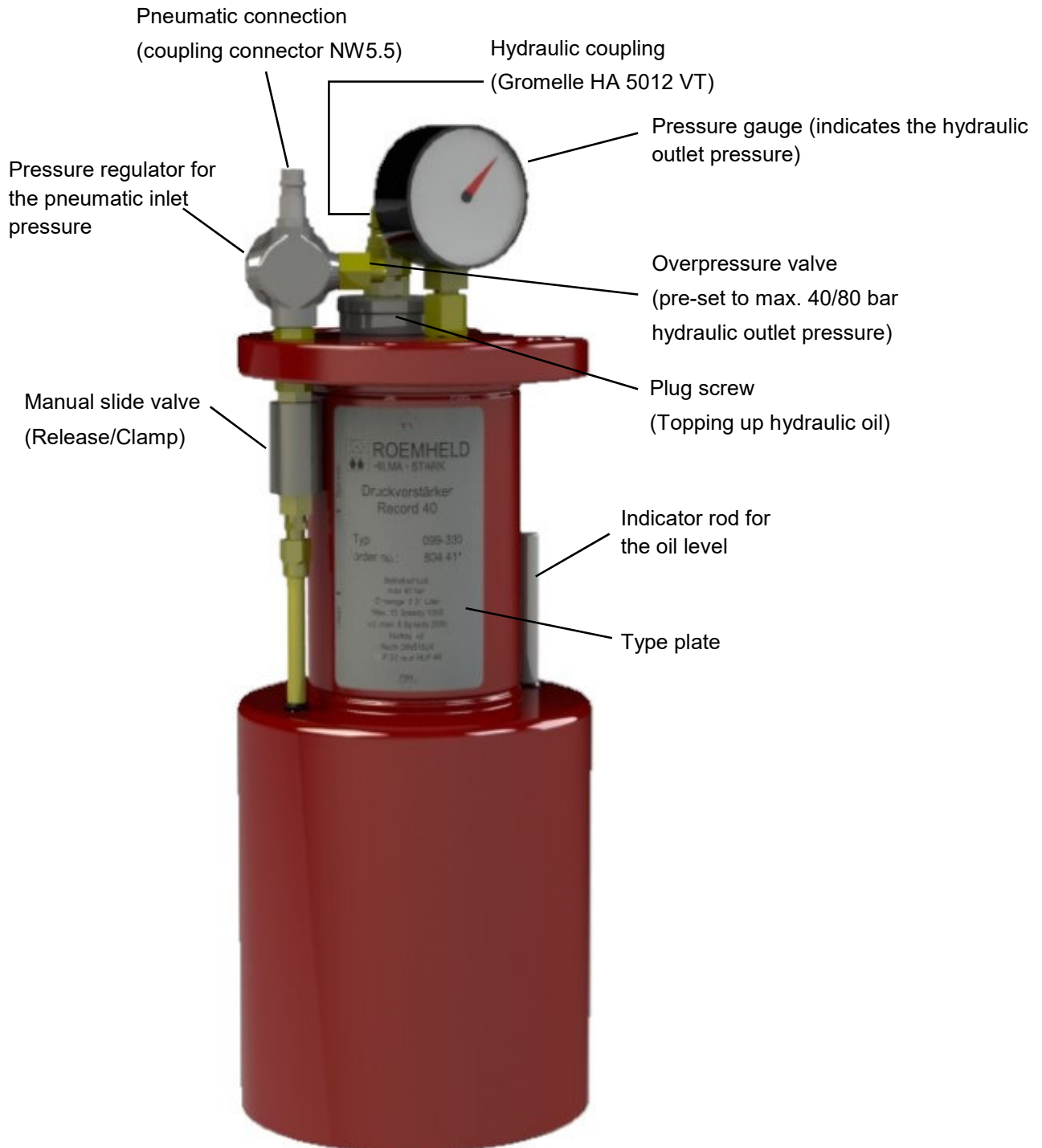


## 5 Description of the booster

### 5.1 General

The booster proportionally converts pneumatic inlet pressure into hydraulic outlet pressure

### 5.2 Overview





## 6 Putting into operation, operating and operation

### 6.1 Putting into operation

1. Unpack device and check for damage
2. Set up the booster such that the hoses required do not cause a tripping hazard; optionally the M6 bore in the middle on the underside can be used to fasten the pressure booster
3. Check whether the male pneumatic coupling is compatible with your female couplings; otherwise it must be replaced (male coupling with G1/8" external thread)
4. Set manual slide valve to "Clamp" position (up)
5. Couple compressed air, set manual slide valve to "Release" (down)
6. You can set the required hydraulic pressure at the pressure regulator; the overpressure valve has been adjusted before delivery such that 40/80 bar cannot be exceeded or can only be exceeded for a short time;



The hydraulic outlet pressure must be adjusted to the related clamping system! Press in the rotary knob on the pressure regulator to lock it to prevent unintentional adjustment!



### 6.2 Releasing / clamping fast closing clamping devices

1. Manual slide valve in "Clamp" position (up)
2. Connect compressed air
3. Clean hydraulic couplings (soiling (e.g. swarf) must not be allowed to enter the system)
4. Couple hydraulic hose to the booster and to the fast closing clamping device
5. Set manual slide valve to "Release" (down) → fast closing clamping device is unlocked, pallet can be changed
6. Set manual slide valve to "Clamp" → fast closing clamping device is locked, hydraulic hose can be disconnected at both ends
7. If not in use, the manual slide valve must be set to "Clamp", for longer periods without use, disconnect compressed air

### 6.3 Maintenance / service



Maintenance work is only allowed to be undertaken on the depressurised device and only by trained personnel!

Regularly check oil level: in the "Clamp" position the "min" marking on the gauge must not be exceeded, in the "Release" position the "max." mark must not be exceeded (the markings are printed on the type plate).

In the first case, top up hydraulic oil (see below), in the second case hydraulic oil is to be drained using the plug screw (only in the depressurised state!).



### 6.3.1 Topping up hydraulic oil

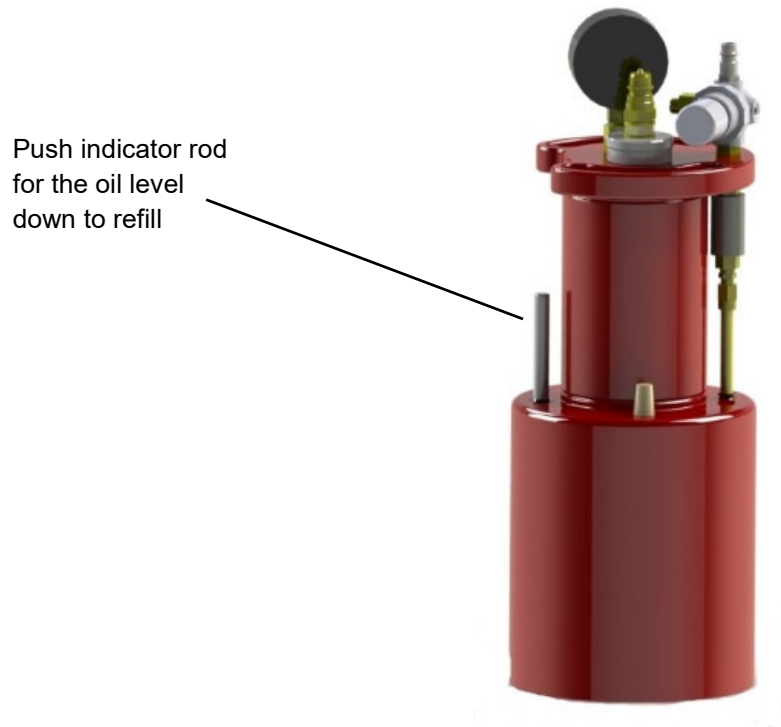
You will find information on the oil used and the quantities in the section Specifications.



Unsuitable lubricants and oils can damage the seals!  
 It is not allowed to mix oils!

Procedures:

1. Disconnecting the air and hydraulic hose
2. Clean the device, particularly in the area of the plug screw
3. Remove plug screw, push the piston with indicator rod for the oil level down
4. top up oil to the bottom edge of the plug screw
5. Insert the plug screw and fasten finger-tight



When pushing down the indicator rod for the oil level, make sure not to damage or deformed the rod.  
 Under NO circumstances, use a hammer to perform the above!



If one and the same booster is used to release and clamp several fast closing clamping devices, the following problems may arise:

Because an undefinable amount of oil always remains in the fast closing clamping device after a releasing – clamping process (among other aspects depending on the number of STARK fast clamps and the line lengths), the quantity of oil in the booster may drop so far that a fast closing clamping device can no longer be released correctly.

If the booster is then topped up with hydraulic oil, the opposite may occur in that it is no longer possible to clamp a fast closing clamping device because the oil is blocking the stroke of the clamping cylinder.





### 6.3.2 Cleaning

The device only needs to be cleaned externally; particular attention is to be paid to clean hydraulic and pneumatic couplings.



The booster is allowed to be blown off using compressed air, however it is recommended to wipe it off or use a vacuum cleaner.

#### Damage to parts



The product must not come into contact with corrosive or caustic materials or media. Cleaning agents with organic solvents (e.g. cellulose thinners, acetone,...) are not allowed to be used (damage to seals).

### 6.3.3 Storage

- Store the booster dry and free of dust in its original packaging until it is used for the first time
- If the booster is not required and an extended period, it is to be cleaned and protected against corrosion
- After an extended period without use (approx. 3 years), the seals are to be changed before renewed use

### 6.3.4 Disposal / recycling

All parts and substances in the booster are to be separated by material and disposed of in accordance with local regulations and guidelines.

### 6.3.5 Spare parts and wear parts

You will find the description and STARK article numbers for all parts in the assembly drawings with parts lists. If you need spare parts or wear parts, please always have this information available!



## 7 Specifications

### 7.1 Booster RECORD 40 bar (oil volume 0.31 l)

Order No.	Oil type	Releases e.g. approx.	System pressure [bar]	P pneum. max. [bar]
S804-411	Castrol Hyspin AWS 46	15 pcs. FCC elements 6.7 kN or 8 pcs. FCC elements 20 kN	40	8

The following pressure translations were determined in tests:

Pneumatic inlet pressure [bar]	Hydraulic outlet pressure [bar]
5.0	30
5.5	33
6.0	36
6.5	39.5
7.0	42

### 7.2 Booster RECORD 80 bar (oil volume 0.148 l)

Order No.	Oil type	Releases e.g. approx.	System pressure [bar]	P pneum. max. [bar]
S804-412	Castrol Hyspin AWS 46	7 pcs. FCC elements 10 kN	80	8

The following pressure translations were determined in tests:

Pneumatic inlet pressure [bar]	Hydraulic outlet pressure [bar]
5.0	65
5.5	72
6.0	79
6.5	84

## Info: New order numbers!

In the course of a system modification within the ROEMHELD Group, the order numbers for STARK Spannsysteme have been adapted and standardised.

- NEW: all order numbers start with **S**
- NEW: hyphen - instead of blank space

**S5000-104**  
 instead of  
 5000 104

### Examples

New order number	Old order number	Modifications
<b>S04342</b>	S04342	No modification
<b>S5000-104</b>	5000 104	<b>S</b> as prefix, hyphen - instead of blank space



## 8 Manufacturer's declaration

### Declaration of Conformity Konformitätserklärung

We / Wir

**Stark Spannsysteme GmbH  
Römergrund 14  
A-6830 Rankweil  
Austria**

declare under our sole responsibility that the product  
erklären in alleiniger Verantwortung, dass das Produkt

**Type: Booster  
No: S804-411, S804-412**

to which this declaration relates corresponds to the following standards  
auf das sich diese Erklärung bezieht, mit den folgenden Normen übereinstimmt

2006/42/EG                      Machines, addendum II A / Maschinen, Anhang II A

and the following standards were applied.  
und dass die folgenden Normen zur Anwendung gelangten.

DIN EN ISO 4413              Safety of Machinery - Safety Requirements for Fluid Power Systems and Their  
Components - Hydraulics  
Sicherheit von Maschinen - Sicherheitstechnische Anforderungen an fluidtechnische  
Anlagen und deren Bauteile – Hydraulik

A technical documentation exists completely. The instruction manual for the product is available.  
Eine technische Dokumentation ist vollständig vorhanden. Die zum Produkt gehörende Betriebsanleitung liegt vor.

Stark Spannsysteme GmbH

Rankweil, am 17.11.2020

**Martin Greif**  
\_\_\_\_\_  
Managing Director / Geschäftsführer