Voith Turbo

VOITH

Installation and Operating Manual

(Original installation and operating manual)

91800268710 en

Hydraulic Removal Device for Voith Turbo Couplings with constant fill Sizes 422 - 1150

ATTENTION!
Please read this manual, at any rate, prior to installation and commissioning, and keep it for further use!

Coupling size	Size of puller thread	Material No. of puller spindle [1)]
422 – 487 T	G 1 ¼ (zylindrisches Whitworth-Rohrgewinde)	TCR.10063480
562 – 650 T	G 1 ½ (zylindrisches Whitworth-Rohrgewinde)	TCR.10450060
750 – 1150 T	G 2 ¼ (zylindrisches Whitworth-Rohrgewinde)	TCR.10668200
Issued by	amded-Hipp	2015-02-09
Checked by	amde - MPre	2015-02-09

Please consult Voith Turbo in case that the data on the cover sheet are incomplete.

[1)] Please indicate the material number in any correspondence.

Contents

Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

1 Preface

1.1 General Information

This manual will support you in using the removal device with pulley in a safe and proper way.
If you observe the information contained in this manual, you will

– increase the reliability and lifetime of the removal device,
– avoid any risks
– reduce repairs and downtimes

This manual must

– **always be available at the removal device site,**
– **be read and used by every person who transports the coupling, works on the coupling or commissions the same.**

The removal device has been manufactured according to the latest design standard and approved safety regulations. Nevertheless, the user's or third party's life may be endangered or the machine or other property impaired in case of improper handling or use.

This manual has been issued with the utmost care. However, in case you need any further information, please contact:

Voith Turbo GmbH & Co. KG
Division Mining & Metals
Voithstr. 1
74564 Crailsheim
GERMANY
Tel. +49 7951 32-0
Fax +49 7951 32-480
startup.components@voith.com
www.voith.com/fluid-coupling

Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0, Printed in Germany.
Subject to modification due to technical development.

2 Safety

2.1 Notes and Symbols

The safety notes contained in this operating manual are particularly marked with safety symbols according to DIN 4844.

Damage/ harm to...	Signal word	Definition	Consequences	Symbol
Persons, Property	EX-PROTEC-TION!	Notes to Ex-protection	Danger of explosion	
Persons	DANGER!	Imminent danger	Fatal or serious injuries (crippling)	
Persons	WARNING!	Potentially dangerous situation	Fatal or serious injuries possible	
Persons	CAUTION!	Less dangerous situation	Minor or moderate injuries possible	
Persons, Property	Suspended loads!	Potentially dangerous situation	Fatal or serious injuries possible	
Persons	Duty to wear a helmet!	Potentially dangerous situation	Head injury	
Persons	Use a face shield!	Potentially dangerous situation	Face injury	
Material	ATTEN-TION!	Potentially harmful situation	Possible damage to – the product – its environment	
–	Note! Information!	Application details and other useful information	Efficient in operation	

Marking with the Ex-symbol (Ex) indicates possible hazards which have to be observed only for the use in potentially explosive atmospheres.

Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

2.2 Proper use

The removal device serves to remove the turbo coupling from the shaft and must not be used for other purposes.

Proper use also incluses observing the installation and operating manual of the turbo coupling.

The manufacturer is **not** liable for damages resulting from improper use. The risk has to be borne solely by the user.

2.3 Improper use

Please see the corresponding information as to dangerous situations in the respective chapters.

2.4 Constructional modifications

DANGER!
It is not allowed to do constructional modifications on the removal device as these may cause personal injury and damage to property!

2.5 General information with regard to dangerous situations

For all work performed on the turbo coupling, please observe the local regulations for the prevention of accidents!

DANGER!

– **<u>Hazards while working on the turbo coupling:</u>**

There is the risk of injury by cutting, squeezing and cold burns in case of minus degrees.
Never touch the turbo coupling without wearing protective gloves!

Start to work on the coupling only after it has cooled down to below 40 °C, as otherwise there is a risk of burns!

Ensure that there is sufficient light, a sufficiently big working space and good ventilation when working on the turbo coupling.

Switch off the system in which the coupling is installed and secure the switch against inadvertent switch-on.

For all work performed on the turbo coupling ensure that both, drive motor and driven machine have stopped running and startup is absolutely impossible!

Installation and Operating Manual. 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

– **Operating fluid which leaks out:**

If operating fluids leaks out of the turbo coupling, immediately remove the same to prevent hazards (e.g. risk of slipping, risk of fire)!

Collect operating oil leaking out to prevent contact with parts (motor, belt) which might ignite or catch fire.

Please provide a catch pan of sufficient size, if required!

Please pay attention to the information contained in the safety data sheets!

– **Fire hazard:**

After the fusible plugs responded, spraying off oil may ignite on hot surfaces causing fire, as well as releasing toxic gases and vapor. There is a risk of burning and intoxication, as well as a risk of harm to machines, environment and property.

Immediately switch off the driving machine when the fusible plugs respond.

Please pay attention to the information contained in the safety data sheets!

– **Checking the methane content before working on the turbo coupling:**

In order to guarantee the safety during underground installation, maintenance and removal when working on the turbo coupling with a housing of aluminum alloy and the protective cover removed, the methane content has to be checked locally using appropriate instruments. Before starting and while performing this work, the methane content in the area of the turbo coupling must not exceed the permissible limit value (e.g. 1 % vol. in Russia). Should this value be exceeded, the work has to be stopped until the value falls again below the limit value.

– **Spindle breakage:**

Be careful if the thrust bolt has to be turned with great force.
Very high hydraulic pressures occur that may result in a component failure (spindle thread) in case of mal-operation or defective spindle.

In case of a spindle breakage, the spindle fraction may be thrown out.
Wear helmet, face shield and safety goggles!

2.6 Remaining risks

DANGER!

Improper use or mal-operation may cause death, serious injuries or minor injuries as well as damage to property and the environment.

Only persons who are sufficiently qualified, trained and authorized are allowed to work on or with the turbo coupling!

Please observe the warnings and safety information!

Installation and Operating Manual, 91800268710 en. 2015-01 / Rev. 0. Printed in Germany. Subject to modification due to technical development.

2.7 What to do in case of accidents

WARNING!
Please observe the local codes of practice!

2.8 Staff qualification

Only qualified and authorized professional staff are allowed to perform work, such as transportation, storage, installation, electrical connection, commissioning, operation, maintenance, servicing and repair.

Qualified professional staff in the sense of this basic safety information are persons who are familiar with transportation, storage, installation, electrical connection, commissioning, maintenance, servicing and repair and who have got the necessary qualifications relevant to their job performed.

This staff must be trained, instructed and authorized to:
– operate and service machines in a professional manner in accordance with the technical safety standards
– use lifting appliances, slings (ropes, chains, etc.) and lifting points in an expert manner
– professionally dispose of media and their components, e.g. lubricating grease
– service and use safety devices in a manner ensuring compliance with safety standards
– prevent accidents and provide first aid.

Staff to be trained may only perform work on the turbo coupling under supervision of a qualified and authorized person.

The staff in charge of any work to be done on the coupling must
– be reliable,
– be of the legal minimum age,
– be trained, instructed and authorized with regard to the intended work.

3 Lifting, Transport and Storage of the Turbo Coupling

In this connection, please refer to the respective chapters in the manual for turbo coupling 3626-011000.

DANGER!

Do not walk under suspended loads!

After removal, carefully set the coupling down on a wooden board / pallet, and secure it against tilting.

ATTENTION!
When storing couplings of type "TW" below 0°C, drain the water! Danger of frost!

Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0, Printed in Germany.
Subject to modification due to technical development.

4 Working principle

The new hydraulic removal device works hydrostatically, i.e. a very high pressure is generated in the housing of the removal device with a small piston that then acts on a bigger piston and thus presses off the turbo coupling.

5 Design

The removal device consists of the following main components:

- Thrust bolt with wrench
- Cylindrical housing
- Pressure medium
- Piston with piston rod and pressure cap

Except for the wrench which is attached as loose part, all components are connected and sealed with lead with each other. In order to ensure a troublefree functioning of the removal device, it is not allowed to arbitrarily open the removal device.

6 Application of the removal device

The puller thread of the removal device on the bottom end of the housing is:

Size of puller thread	Usable for coupling size
G 1 ¼ (cylindrical Whitworth pipe thread)	422 – 487 T
G 1 ½ (cylindrical Whitworth pipe thread)	562 – 650 T
G 2 ¼ (cylindrical Whitworth pipe thread)	750 – 1150 T

Press-off procedure of turbo coupling is as follows:

See **Chapter 7.2** Removal.

Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

7 Coupling Disassembly

DANGER!
Please observe, in particular, Chapter 2 (Safety) when working on the turbo coupling!

Unauthorized or unintentional switching on of the machine could result in death or serious injury!

Before beginning to work on the turbo coupling, switch off the main switch of the drive motor and secure it against being switched on!

For all work performed on the turbo coupling ensure that both, the drive motor and the driven machine have stopped running and a start-up is absolutely impossible.

Note!
This chapter describes the disassembly of turbo couplings of **basic type T**.
Couplings of **basic type TN** are disassembled in reverse order according to Installation and Operating Manual 3626-011000_Rev.9, **Chapter 9, Page 37**.

7.1 Preparation

- Prepare suitable tools and lifting appliances; observe the turbo coupling weight!

Note!
The weight of the turbo coupling is indicated on the cover sheet. The weight is also stamped with figure stamps on the outer diameter of the coupling flange, if it exceeds 100 kg.

WARNING!
Damaged load carrying attachments or those with insufficient carrying capacity may break under load, with the consequence of serious or even fatal injuries!

Check the lifting appliances and load carrying attachments for
- **sufficient carrying capacity (for weight, see cover sheet),**
- **sound condition.**

Do not walk under suspended loads!

- Fix the coupling to a suitable lifting appliance.

→ **For lifting appliances, see Manual 3626-011000 Rev.9 Chapter 5.4**

7.2 Removal

CAUTION!
It is not allowed to use an impact screwdriver to apply the torque!

→ **For removal devices, see Chapter 7.2.1**

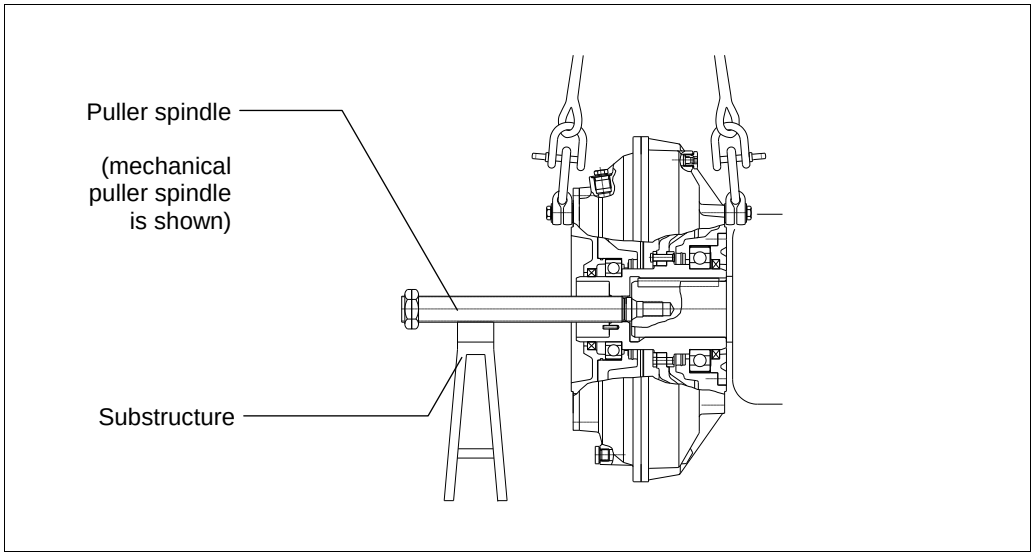


Fig. 1

7.2.1 Removal using the hydraulic removal device

Very high forces with a low torque can be applied with the hydraulic removal device so that no substructure below the removal device (Fig. 1) is necessary for absorbing the force.

Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

Hydraulic removal devices available at Voith Turbo for turbo couplings of basic type T:

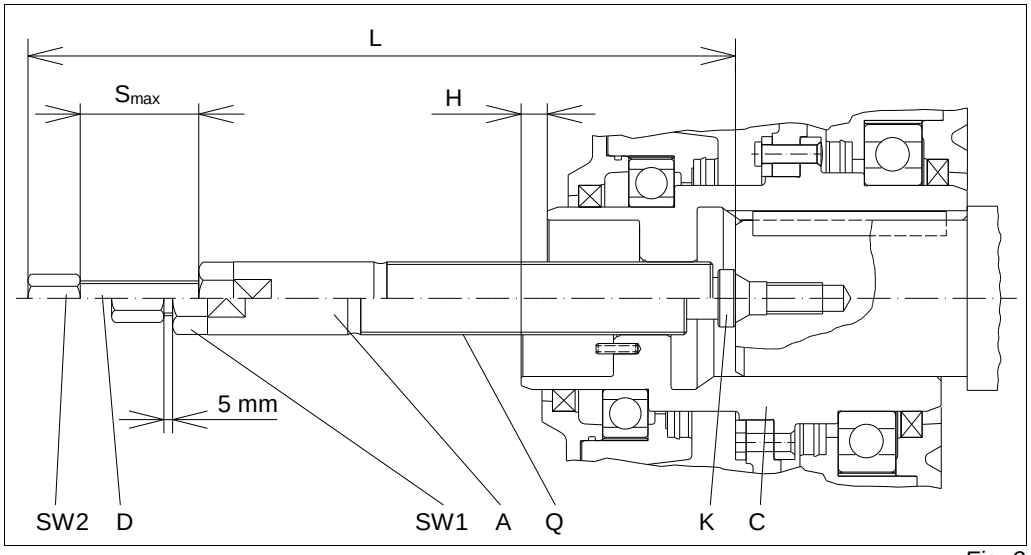


Fig. 2

A: Puller spindle
C: Coupling hub
D: Thrust bolt
H: Stroke
K: Piston
L: Total length
Q: Dimension of puller spindle thread
S_{max} maximum insertion of thrust bolt
SW1: Width across flats (spindle)
SW2: Width across flats (thrust bolt)

Coupling sizes	L in mm	H in mm	Q in inch	SW1 in mm	SW2 in mm	S_{max} in mm	Material No. of puller spindle
422, 487	406	15	G 1-¼	36	24	66	TCR.10063480
562, 650	580	15	G 1-½	36	–	125	TCR.10450060
750, 866, 1000, 1150	1161	15	G 2-¼	36	36	310	TCR.10668200

Procedure:

1. Loosen and unscrew the fixing bolt (50) of the turbo coupling.
2. Unscrew the thrust bolt (D) until reaching the maximum removal dimension **S_{max}** (by hand only, do not use an impact wrench!).
3. Check the spindle thread (Q) for dirt and damages.
4. Apply lubricant to the thread of puller spindle (A) and to the thread of thrust bolt (D).
5. Screw the puller spindle (A) via SW1 hexagon, up to the stop, into the thread of coupling hub (C), i.e. until the piston rests on the gear shaft or puller disk.

→ **For lubricants, see Chapter 7.3**

WARNING!
If the dimension 5 mm is not observed, there is the risk of seizing of the thread (wear).
The pressure chamber of the hydraulic removal device is subject to high pressure and must not be opened!

6. Screw in the thrust bolt (D), stop 5 mm before the limit stop.
   This generates the pressure required for pressing off the turbo coupling and the turbo coupling is pressed off.
7. Unscrew the thrust bolt (D).
8. Screw the puller spindle (A) via SW1 hexagon, up to the stop, into the thread of coupling hub (C).
9. Repeat steps 6 to 8 until the coupling can be easily removed with SW1.

After pressing off, turn back the thrust bolt and the piston into the outer end position (by hand only, do not use an impact wrench!).

*Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0, Printed in Germany.
Subject to modification due to technical development.*

7.3 Lubricants

Note!

Use a lubricant with the following characteristics:

– Operating temperature range: -20 °C…+180 °C,
– water and wash-out resistant,
– protection against fretting corrosion and corrosion.

– **Proposed lubricants:**

Supplier	Designation	Note
Dow Corning	Molykote G-N Plus Paste Molykote G-Rapid Plus Paste Molykote TP 42	
Fuchs	gleitmo 815	
Liqui Moly	LM 48 Montagepaste	
Dow Corning	Molykote D 321 R Anti-Friction Coating	**Hazardous substance!**
Castrol Optimol	Paste White T Paste MP 3	

Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

8 Drawings - Hydraulic Removal Devices

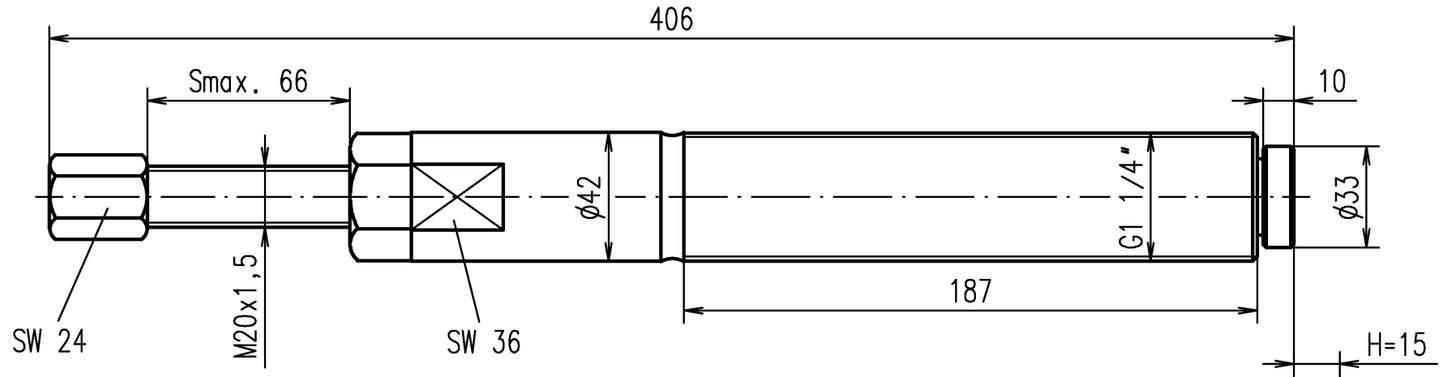
Coupling size	Drawing No.	Puller thread - size	Maximum compressive force
422 - 487	91500842010	G 1 ¼ (cylindrical Whitworth pipe thread)	30 t
562 - 650	91500842110	G 1 ½ (cylindrical Whitworth pipe thread)	50 t
750 - 1150	91500842210	G 2 ¼ (cylindrical Whitworth pipe thread)	90 t

Installation and Operating Manual. 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

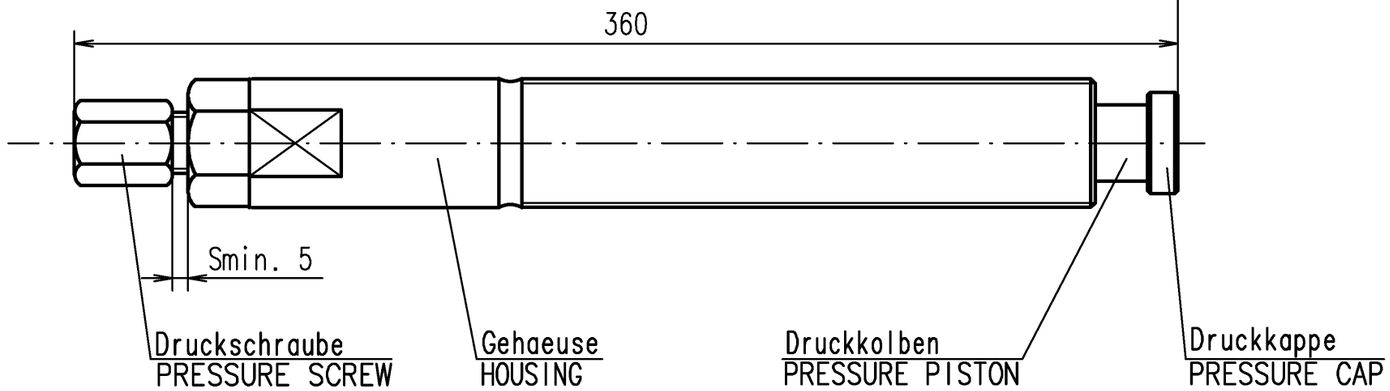
- blank page -

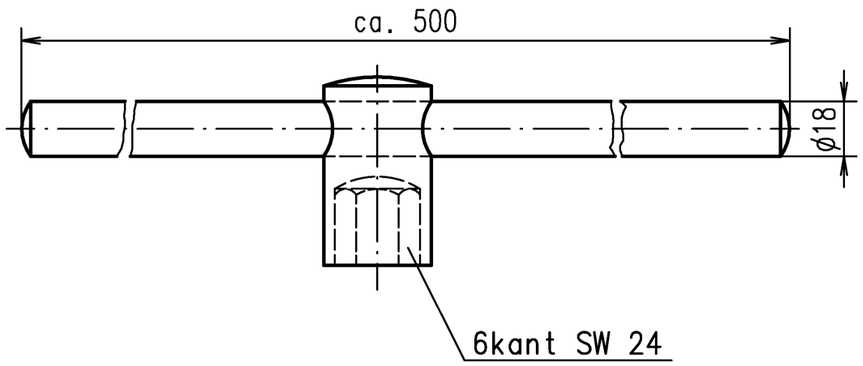
Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

Anfangsstellung (vor dem Druecken)
INITIAL POSIOTION (PRIOR TO PRESSING)



Endstellung (nach dem Druecken)
END POSITION (AFTER PRESSING)





Druckkraft max. 30t
FORCE OF PRESSURE max. 30t

Rev.	Iss.	Revision-Nr.	Rev. descr. (shop and eng. info only)	Index	Date: draw.	Name	Check.

Dimension | Tolerances

VTK 422 u. 487

CAD | Released for microl.

Language: DE

Chamfers: ISO 13715 (+1,6 / -0,2)
Gen. tolerances: Tolerancing ISO 14405
Surface quality: R_a in µm

Scale of orig.: 1:2
Mass: 4 kg
Material:
Pattern / Die No.:
Blank-No.:

	Date	Name
Draw.	2014-12-23	MPre
Check.	2014-12-23	WoW
Dept.	amde	Appr.
Stand.		

Doc. type:

Title: Hydraulische Abdrueckvorrichtung

VOITH

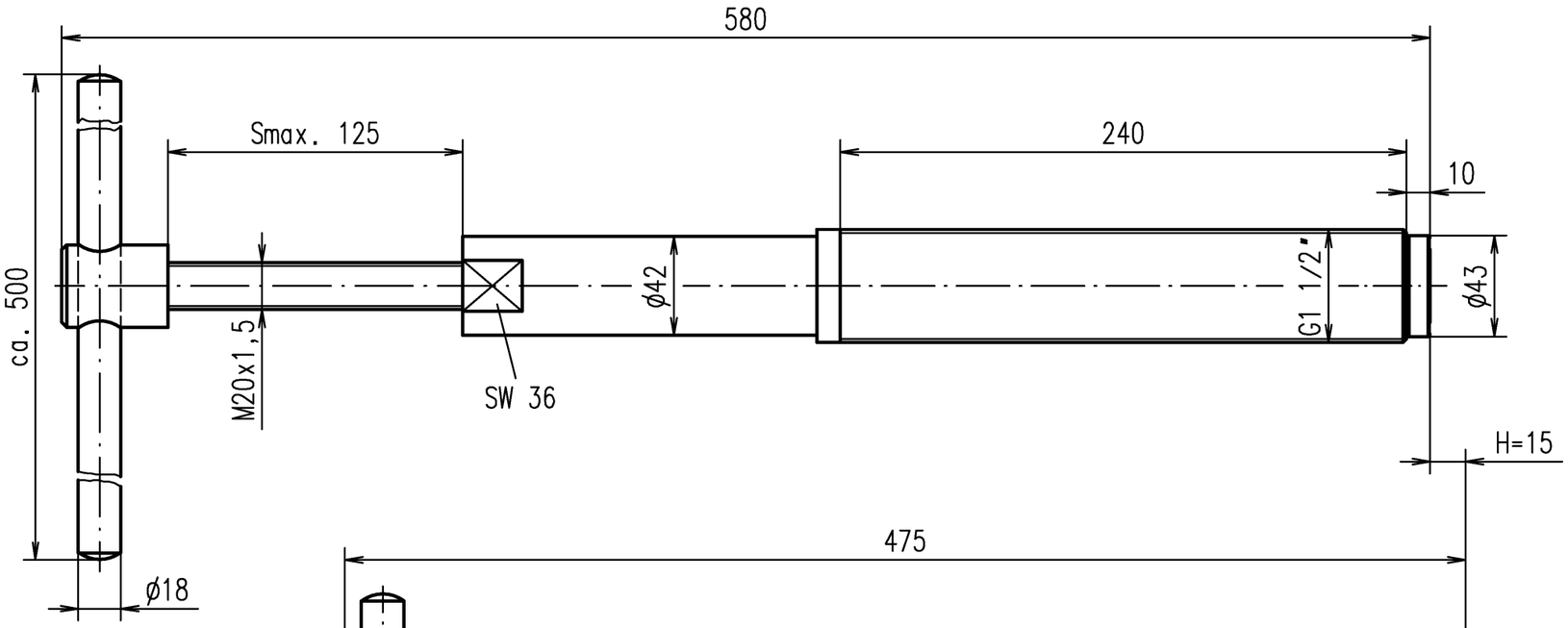
Drawing No. / Docu-No.: 91500842010

Sheet 1 of 1 Sh.

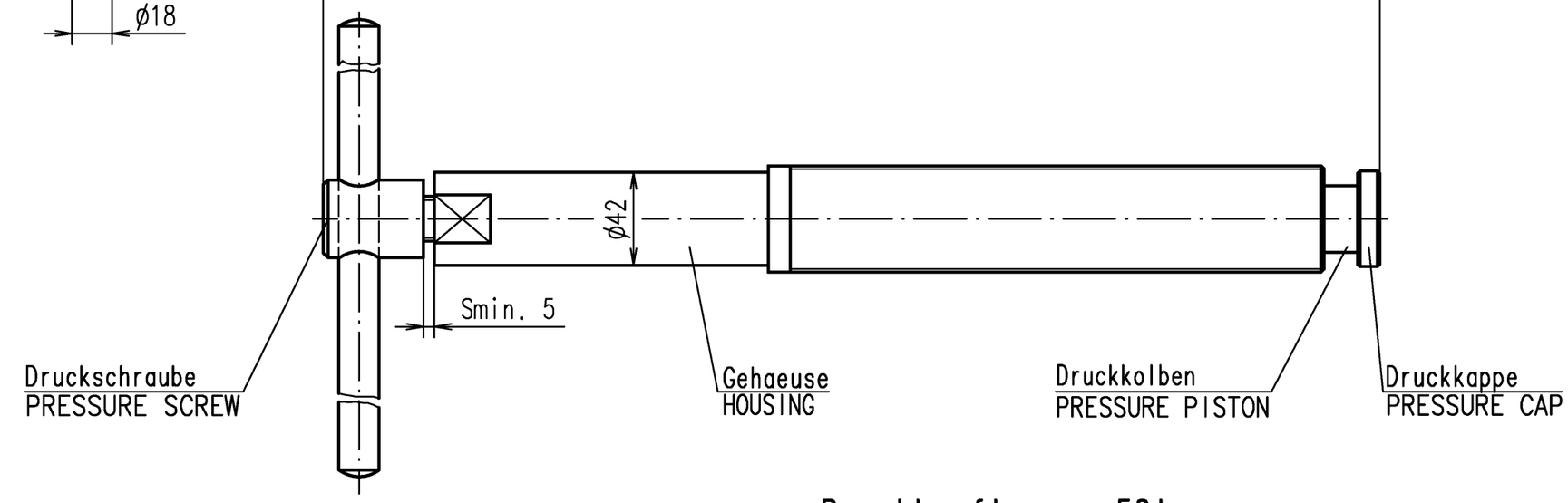
Refer. | Reply for | Repl. by

DIN A3

Anfangsstellung (vor dem Druecken)
INITIAL POSIOTION (PRIOR TO PRESSING)



Endstellung (nach dem Druecken)
END POSITION (AFTER PRESSING)



Druckkraft max. 50t
FORCE OF PRESSURE max. 50t

Rev.	Iss.	Revision-Nr.	Rev. descr. (shop and eng. info only)	Index	Date: draw.	Name	Check.

Dimension | Tolerances

VTK 562 u. 650

CAD | Released for microl.

Language: DE

Chamfers ISO 13715 (I+1,6 I-0,2) | Gen. tolerances | Tolerancing ISO 14405 | Surface quality R_a in µm

Scale of orig. 1:2,5 | Mass 5,7 kg

Material

Pattern / Die No. | Blank-No.

	Date	Name	Doc. type
Draw.	2014-12-23	MPre	
Check.	2014-12-23	WoW	
Dept.	amde	Appr.	
Stand.			

Title: Hydraulische Abdrueckvorrichtung

VOITH

Drawing No. / Docu-No. 91500842110

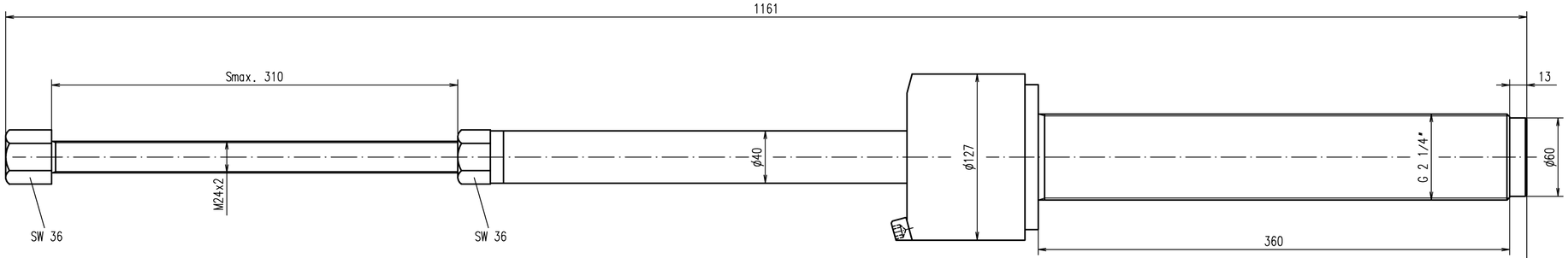
Sheet 1 of 1 Sh.

Refer. | Reply for | Repl. by

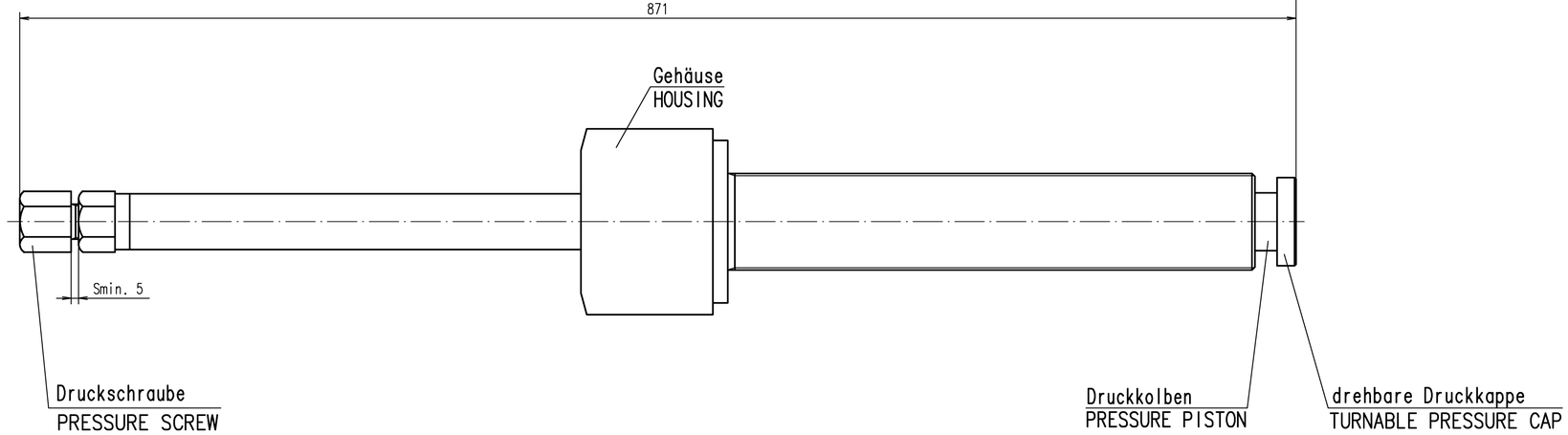
DIN A3

Info:Zeichnung=Aufziehvorrichtung --- Nummer=1 006348 0_001 --- Projekt=CA.1_00 --- Bibliothek=1 006 --- ID: 7/4

Anfangsstellung
(vor dem Drücken)
INITIAL POSITION
(PRIOR TO PRESSING)



Endstellung
(nach dem Drücken)
END POSITION
(AFTER PRESSING)



Druckkraft max. 80t
FORCE OF PRESSURE max. 80t

Rev.	Iss.	Revision-Nr.	Rev. descr. (shop and eng. info only)	Index	Date: drew.	Name	Check.

Dimension | Tolerances

VTK 750 - 1150 T		CAD	Released for microf.
		Language DE	
Chamfers ISO 13715	Gen. tolerances Tolerancing ISO 14405	Surface quality R_a in µm	Scale of orig. 1:2 / Mass 21,175 KG
			Material
			Pattern / Die No. / Blank-No.

	Date	Name	Doc. type
Drew.	2014-12-23	MPre	Title: Hydraulische Abdrueckvorrichtung
Check.	2014-12-23	MPre	
Dept.	amde	Appr.	
Stand.			

VOITH

Drawing No. / Docu-No. 91500842210 | Sheet 1 of 1 Sh.

Refer. | Reply for | Repl. by

DIN A1

9 Representatives - Voith Turbo GmbH & Co. KG

West-Europe:

Germany (VTCR):
Voith Turbo GmbH & Co. KG
Start-up Components
Voithstr. 1
74564 CRAILSHEIM
GERMANY
Phone: +49-7951 32-409
Fax: +49-7951 32-480
e-mail: startup.components@voith.com
www.voithturbo.com/startup-components

Service:
Phone: +49 7951 32-1020
Fax: +49 7951 32-554
e-mail: vtcr-ait.service@voith.com

Emergency Hotline (24/7):
Phone: +49 7951 32-599

Austria:
Indukont Antriebstechnik GmbH
Badenerstraße 40
2514 TRAISKIRCHEN
AUSTRIA
Phone: +43-2252-81118-22
Fax: +43-2252-81118-99
e-mail: info@indukont.at

Belgium (VTBV):
Voith Turbo S. A. / N. V.
Square Louisa 36
1150 BRÜSSEL
BELGIUM
Phone: +32-2-7626100
Fax: +32-2-7626159
e-mail: voithturbo.be@voith.com

Denmark (VTDK):
Voith Turbo A/S
Egegårdsvej 5
4621 GADSTRUP
DENMARK
Phone: +45-46 141550
Fax: +45-46 141551
e-mail: postmaster@voith.dk

Faroe Islands:
see Denmark (VTDK)

Finland (Masino):
Masino Oy
Kärkikuja 3
01740 VANTAA
FINLAND
Phone: +358-10-8345 500
Fax: +358-10-8345 501
e-mail: sales@masino.fi

France (VTFV):
Voith Turbo S. A. S.
21 Boulevard du Champy-Richardets
93166 NOISY-LE-GRAND CEDEX
FRANCE
Phone: +33-1-4815 6903
Fax: +33-1-4815 6901
e-mail: voithfrance@voith.com

Great Britain (VTGB):
Voith Turbo Limited
6, Beddington Farm Road
CRO 4XB CROYDON, SURREY
GREAT BRITAIN
Phone: +44-20-8667 0333
Fax: +44-20-8667 0403
e-mail: Turbo.UK@voith.com

Emergency Hotline (24/7):
Phone: +44-20-8667 0333

Greece:
see Germany (VTCR)

Greenland:
see Denmark (VTDK)

Ireland:
see Great Britain (VTGB)

Italy (VTIV):
Voith Turbo s.r.l.
Via G. Lambrakis 2
42122 REGGIO EMILIA
ITALY
Phone: +39-05-2235-6714
Fax: +39-05-2235-6790
e-mail: info.voithturbo@voith.com

Liechtenstein:
see Germany (VTCR)

Luxembourg:
see Belgium (VTBV)

Netherlands (VTNT):
Voith Turbo B.V.
Koppelstraat 3
7391 AK TWELLO
THE NETHERLANDS
Phone: +31-571-2796-00
Fax: +31-571-2764-45
e-mail: voithnederland@voith.com

Norway (VTNO):
Voith Turbo AS
Lahaugmoveien 30A
2013 SKJETTEN
NORWAY
Phone: +47 6384 7020
Fax: +47 6384 7021
e-mail: info.turbo.norway@voith.com

Portugal:
see Spain (VTEV)

Spain (VTEV) :
Voith Turbo S. A.
Avenida de Suiza 3
P.A.L. Coslada
28820 COSLADA (MADRID)
SPAIN
Phone: +34-91-6707816
Fax: +34-91-6707841
e-mail: info.voithturbo@voith.com

Sweden (VTSN):
Voith Turbo AB
Finspångsgatan 46
16353 SPÅNGA-STOCKHOLM
SWEDEN
Phone: +46-8-564-755-50
Fax: +46-8-564-755-60
e-mail: voiththurbo.sweden@voith.com

Switzerland:
see Germany (VTCR)

East-Europe:

Albania:
see Hungary (VTHU)

Bosnia Herzegowina:
see Hungary (VTHU)

Bulgaria:
see Hungary (VTHU)

Croatia:
see Hungary (VTHU)

Czech Republic (VTCZ):
Voith Turbo s.r.o.
Hviezdoslavova 1a
62700 BRNO
CZECH REPUBLIC
Phone: +420-543-176163
Fax: +420-548-226051
e-mail: info@voith.cz

Estonia:
see Poland (VTPL)

Hungary (VTHU):
Voith Turbo Kft.
Felvég Útca 4
2051 BIATORBÁGY
HUNGARY
Phone: +36-23-312 431
Fax: +36-23-310 441
e-mail: vthu@voith.com

Kosovo:
see Hungary (VTHU)

Latvia:
see Poland (VTPL)

Lithuania:
see Poland (VTPL)

Macedonia:
see Hungary (VTHU)

Poland (VTPL):
Voith Turbo sp.z o.o.
Majków Duży 74
97-371 WOLA KRZYSZTOPORSKA
POLAND
Phone: +48-44 646 8848
Fax: +48-44-646 8520
e-mail: voiththurbo.polska@voith.com

Emergency Hotline (24/7):
Phone: +48-44 646 8519

Romania (VTRO):
Voith Turbo S.R.L.
Strada Barbu Vacarescu nr. 13
etaj 3 si 4
020271 BUCHAREST
ROMANIA
Phone: +40-31-22 36100
Fax: +40-21-22 36210
e-mail: voith.romania@voith.com

Russia (VTRU):
Voith Turbo O.O.O.
Branch Office Moskau
Nikolo Yamskaya ul. 21/7, str. 3
109240 MOSKAU
RUSSIA
Phone: +7 495 915-3296 ext. 122
Fax: +7 495 915-3816
mobil Herr Bulanzev: +7 919 108 2468
e-mail: voithmoscow@Voith.com

Voith Turbo
Branch Office Novokusnetsk
(Shcherbinin, Anatoliy)
Skorosnaya ul. 41, Liter B1
654025 NOVOKUSNETSK
Kemerovskaya oblast
RUSSIA
Phone/Fax: +7 3843 311 109
mobil: +7 9132 802 110
e-mail: voith22@bk.ru

Serbia:
see Hungary (VTHU)

Slovak Republic:
see Czech Republic (VTCZ)

Slovenia:
see Hungary (VTHU)

Ukraine (VTUA):
Voith Turbo Ltd.
Degtyarivska 25, Building 1
04119 KIEV
UKRAINE
Phone: +380-44-581 4760
Fax: +380-44-581 4761
e-mail: Dmitriy.Kalinichenko@Voith.com

see also Poland (VTPL)

Installation and Operating Manual. 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

North America:

Canada (VTC):
Voith Turbo Inc.
171 Ambassador Drive, Unit 1
L5T 2J1 MISSISSAUGA, ONTARIO
CANADA
Phone: +1-905-670-3122
Fax: +1-905-670-8067
e-mail: information@voithusa.com
e-mail: Info@voithusa.com

Emergency Hotline (24/7):
Phone: +1-905-738-1829

Mexico (VTX):
Voith Turbo S.A. de C.V.
Alabama No.34
Col. Nápoles Delg. Benito Juarez
C.P. 03810 MÉXICO, D.F.
MÉXICO
Phone: +52-55-5340 6970
Fax: +52-55-5543 2885
e-mail: vtx-info@voith.com

U.S.A. (VTI):
Voith Turbo Inc.
25 Winship Road
YORK, PA 17406-8419
UNITED STATES
Phone: +1-717-767 3200
Fax: +1-717-767 3210
e-mail: VTI-Information@voith.com

Emergency Hotline (24/7):
Phone: +1-717-767 3200
e-mail: VTIServiceCenter@vti.com

Southern- + Middle Amerika:

Brazil (VTPA):
Voith Turbo Ltda.
Rua Friedrich von Voith 825
02995-000 JARAGUÁ, SÃO PAULO - SP
BRAZIL
Phone: +55-11-3944 4393
Fax: +55-11-3941 1447
e-mail: info.turbo-brasil@voith.com

Emergency Hotline (24/7):
Phone: +55-11-3944 4646

Colombia (VTKB):
Voith Turbo Colombia Ltda.
Calle 17 No. 69-26
Centro Empresarial Montevideo
110931 BOGOTÁ, D.C.
COLOMBIA
Phone: +57 141-17664
Fax: +57 141-20590
e-mail: voith.colombia@voith.com

Chile (VTCI):
Voith Turbo S. A.
Av.Pdte.Eduardo Frei Montalva 6115
8550189 SANTIAGO DE CHILE (CONCHALI)
CHILE
Phone: +56-2-944-6900
Fax: +56-2-944-6950
e-mail: VoithTurboChile@voith.com

Ecuador:
see Colombia (VTKB)

Peru (VTPE):
Voith Turbo S.A.C.
Av. Argentinia 2415
LIMA 1
PERU
Phone: +51-1-6523014
e-mail: Lennart.Kley@Voith.com

see also Brazil (VTPA)

Venezuela:
see Colombia (VTKB)

Africa:

Algeria:
see France (VTFV)

Botswana:
see South Africa (VTZA)

Egypt:
Copam Egypt
33 El Hegaz Street, W. Heliopolis
11771 CAIRO
EGYPT
Phone: +202-22566 299
Fax: +202-22594 757
e-mail: copam@datum.com.eg

Gabon:
see France (VTFV)

Guinea:
see France (VTFV)

Ivory Coast:
see France (VTFV)

Lesotho:
see South Africa (VTZA)

Marocco (VTCA):
Voith Turbo S.A.
Rue Ibnou El Koutia, No. 30
Lot Attawfiq – Quartier Oukacha
20250 CASABLANCA
MAROCCO
Phone: +212 522 34 04 41
Fax. +212 522 34 04 45
e-mail: allal.elfassi@voith.ma

Mauretania:
see Spain (VTEV)

Mozambique:
see South Africa (VTZA)

Namibia:
see South Africa (VTZA)

Niger:
see France (VTFV)

Senegal:
see France (VTFV)

South Africa (VTZA):
Voith Turbo Pty. Ltd.
16 Saligna Street
Hughes Business Park
1459 WITFIELD, BOKSBURG
SOUTH AFRICA
Phone: +27-11-418-4000
Fax: +27-11-418-4080
e-mail: info.VTZA@voith.com

Emergency Hotline (24/7):
Phone: +27-11-418-4060

Swaziland:
see South Africa (VTZA)

Tunesia:
see France (VTFV)

Zambia:
see South Africa (VTZA)

Zimbabwe:
see South Africa (VTZA)

Near + Middle East:

Bahrain:
see United Arabian Emirates (VTAE)

Iran (VTIR):
Voith Turbo Iran Co., Ltd.
1st Floor, No. 215
East Dastgerdi Ave.
Modarres Highway
19198-14813 TEHRAN
IRAN
Phone: + 98-21-2292 1524
Fax: + 98-21-2292 1097
e-mail: voithturbo.iran@voith.ir

Iraq:
see United Arabian Emirates (VTAE)

Israel (VTIL):
Voith Turbo Israel Ltd.
Tzvi Bergman 17
Segula Ind. Zone
49279 PETACH-TIKVA
ISRAEL
Phone: +972-3-9131 888
Fax: +972-3-9300 092
e-mail: tpt.israel@voith.com

Jordan,
Kuwait,
Lebanon,
Oman,
Qatar,
Saudi Arabia,
Syria:
Yemen:
see United Arabian Emirates (VTAE)

Turkey (VTTR):
Voith Turbo Güç Aktarma Tekniği Ltd. Şti.
Armada İş Merkezi Eskişehir Yolu
No: 6 A-Blok Kat: 13
06520 SÖĞÜTÖZÜ -ANKARA
TURKEY
Phone: +90 312 495 0044
Fax: +90 312 495 8522
e-mail: voith-turkey@voith.com

United Arabian Emirates (VTAE):
P.O.Box 263461
Plot No. TP020704
Technopark, Jebel Ali
DUBAI
UNITED ARAB EMIRATES
Phone: +971-4 810 4000
Fax: +971-4 810 4090
e-mail: voith-middle-east@voith.com

Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

Australia:

Australia (VTAU):
Voith Turbo Pty. Ltd.
Branch Office Sydney
503 Victoria Street
2164 WETHERILL PARK, NSW
AUSTRALIA
Phone: +61-2-9609 9400
Fax: +61-2-9756 4677
e-mail: vtausydney@voith.com

Emergency Hotline (24/7):
Phone: +61-2-9609 9400
e-mail: vtau_spare_parts@voith.com

New Zealand (VTNZ):
Voith Turbo NZ Pty. Ltd.
295 Lincoln Rd.
Waitakere City
0654 AUCKLAND
NEW ZEALAND
Phone: +11 64 9838 1269
Fax: +11 64 9838 1273
e-mail: VTNZ@voith.com

South-East Asia:

Brunei:
see Singapore (VTSG)

India (VTIP):
Voith Turbo Private Limited
Transmissions and Engineering
P.O. Industrial Estate
500 076 NACHARAM-HYDERABAD
INDIA
Phone: +91-40-27173 561+592
Fax: +91-40-27171 141
e-mail: info@voithindia.com

Emergency Hotline (24/7):
Phone: +91-99-4906 0122
e-mail: vtip.service@voith.com

Indonesia:
PT Voith Turbo
Jl. T. B. Simatupang Kav. 22-26
Talavera Office Park, 28th. Fl.
12430 JAKARTA
INDONESIA
Phone: +62 21 7599 9848
Fax: +62 21 7599 9846
e-mail: vike.aryanti@voith.com

Malaysia:
see Singapore (VTSG)

Myanmar:
see Singapore (VTSG)

Singapore (VTSG)
Voith Turbo Pte. Ltd.
10 Jalan Lam Huat
Voith Building
737923 SINGAPORE
SINGAPORE
Phone: +65-6861 5100
Fax: +65-6861-5052
e-mail: sales.singapore@voith.com

Thailand:
see Singapore (VTSG)

Vietnam:
see Singapore (VTSG)

East Asia:

China:
see Hongkong (VTEA)

Voith Turbo Power Transmission
(Shanghai) Co., Ltd. (VTCB)
Bejing Branch
18 Floor, Tower F, Phoenix Place
5A Shuguang Xili, Chaoyang District
100028 BEIJING
P.R. CHINA
Phone: +86-10-5665 3388
Fax: +86-10-5665 3333
e-mail: VT_Industry_China@Voith.com

Voith Turbo Power Transmission
(Shanghai) Co. Ltd. (VTCN)
Representative Office Shanghai
No. 265, Hua Jin Road
Xinzhuang Industry Park
201108 SHANGHAI
CHINA
Phone: +86-21-644 286 86
Fax: +86-21-644 286 10
e-mail: VTCN@Voith.com

Service Center (VTCT):
Voith Turbo Power Transmission
(Shanghai) Co. Ltd.
Taiyuan Branch
No. 36 Workshop, TISCO,
No. 73, Gangyuan Road
030008 TAIYUAN, SHANXI
P.R. CHINA
Phone: +86 351 526 8890
Fax: +86 351 526 8891
e-mail: VT_Industry_China@Voith.com

Emergency Hotline (24/7):
Phone: +86 21 4087 688
e-mail: Hongjun.Wang@voith.com

Hongkong (VTEA):
Voith Turbo Ltd.
908, Guardforce Centre,
3 Hok Yuen Street East,
HUNGHOM, KOWLOON
HONG KONG
Phone: +85-2-2774 4083
Fax: +85-2-2362 5676
e-mail: voith@voith.com.hk

Japan (VTFC):
Voith Turbo Co., Ltd.
9F, Sumitomo Seimei Kawasaki Bldg.
11-27 Hlgashida-chou, Kawasaki-Ku,
Kawasaki-Shi,
210-0005 KANAGAWA
JAPAN
Phone: +81-44 246 0555
Fax: +81-44 246 0660
e-mail: Satoshi.Masuda@Voith.com

Korea (VTKV):
Voith Turbo Co., Ltd.
Room # 1717, Golden Tower
Officetel 191
Chungjung-Ro 2-Ka
Saedaemoon-Ku
120-722 SEOUL
SOUTH KOREA
Phone: +82-2-365 0131
Fax: +82-2-365 0130
e-mail: sun.lee@voith.com

Macau:
see Hongkong (VTEA)

Mongolia (VTA-MON):
Voith Turbo GmbH & Co. KG
2nd Floor Serkh Bogd Co. Ltd.
Office Building United Nations Street 4,
Khoroo Chingeltei District
ULAANBAATAR
MONGOLIA
Phone: +976 7010 8869
e-mail: Daniel.Bold@Voith.com

Philippines:
see Taiwan (VTTI)

Taiwan (VTTI):
Voith Turbo Co. Ltd.
Taiwan Branch
No. 3 Taitang Road,
Xiaogang District
81246 KAOHSIUNG
TAIWAN, R.O.C.
Phone: +886-7-806 1806
Fax: +886-7-806 1515
e-mail: sue.ou@voith.com

Installation and Operating Manual. 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

- blank page -

Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0. Printed in Germany.
Subject to modification due to technical development.

10 Index

Installation and Operating Manual, 91800268710 en.
2015-01 / Rev. 0, Printed in Germany.

Voith Turbo GmbH & Co. KG
Division Mining & Metals
Voithstr. 1
74564 Crailsheim
GERMANY
Tel. +49 7951 32-0
Fax +49 7951 32-480
startup.components@voith.com
www.voith.com/fluid-coupling

VOITH

Engineered reliability.