A PASSION FOR PERFECTION

PFEIFFER VACUUM

PM 071 142 -X

HiPace - ACP Connection Cable

Operating Instructions

EN

Translation of the original instructions

PT 0400 BEN/A (1202)

Table of contents

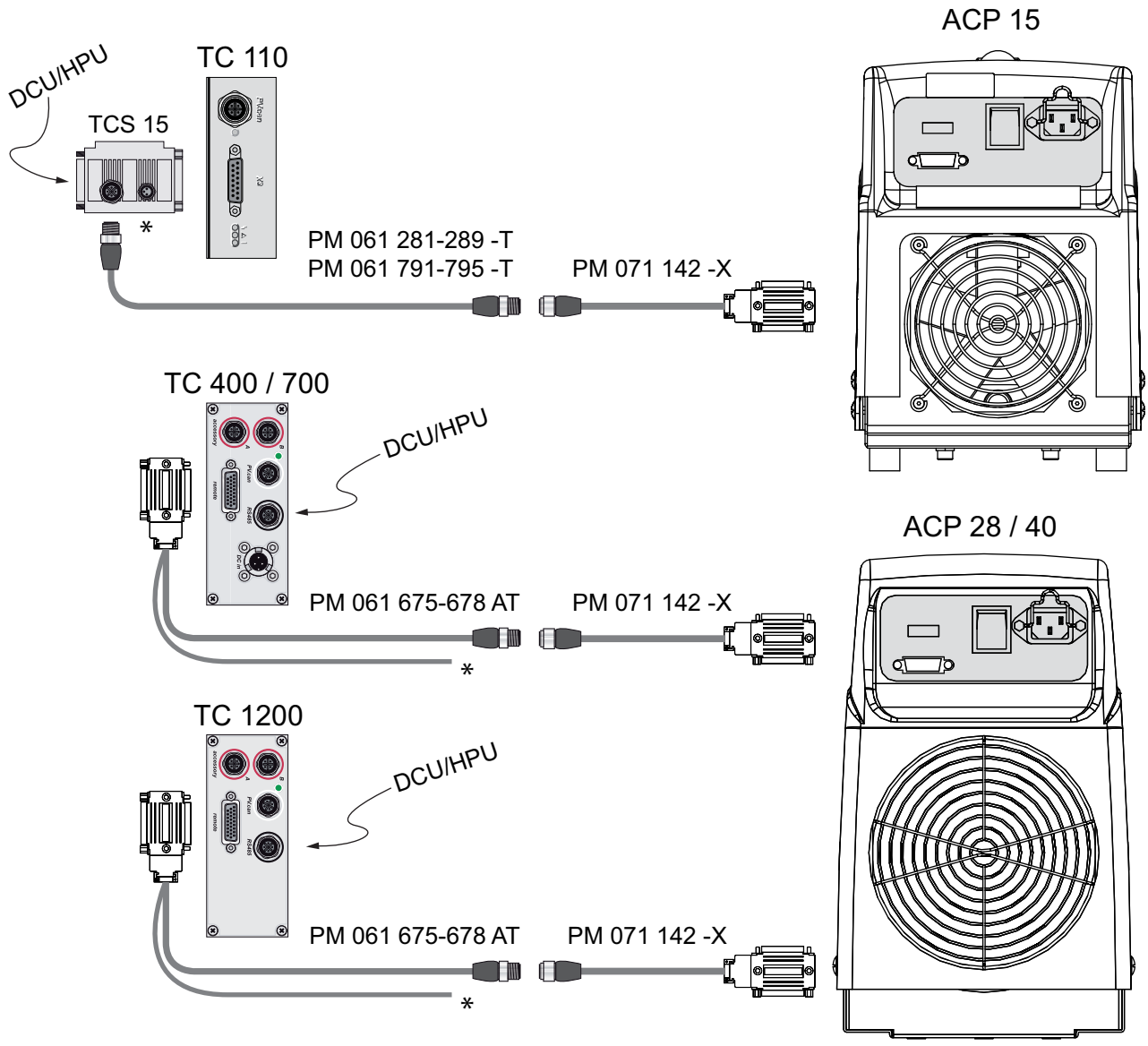
1 Validity

Use these instructions for connecting and controlling a dry compressing backing pump type ACP on HiPace turbopumps using connection cable PM 071 142 -X.

1.1 Required components

- Pfeiffer Vacuum HiPace turbopump
- adixen dry compressing backing pump type ACP
- Connection cable PM 071 142 -X
- Connecting cable and control cable available in different lengths plus connecting adaptor, depending on the available electronic drive unit
- Display and operating unit DCU or HPU

2 Connections diagram



* = Control connection for a fore-vacuum valve (optional)

3 Installation

WARNING

Danger - Electrical installation

Safe operation after installation is the responsibility of the operator.

➔ Do not independently modify or change the pump and electrical equipment.
➔ Make sure that the system is integrated in an emergency off safety circuit.
➔ Consult Pfeiffer Vacuum for special requirements.

➔ Before carrying out any work disconnect all associated installations safely from the mains.

3.1 Connection to electronic drive unit TC 110

➔ Remove the plug-in connector from the 15-pole remote-control connection for the backing pump.
➔ Insert connection cable PM 071 142 -X into the remote-control connection for the backing pump and fasten in place.
➔ Plug in pumping station control TCS 15 (PM 061 685 -X) into the *X3* connector on the electronic drive unit TC 110 and fasten in place.
➔ Connect connection cable PM 071 142 -X and pumping station control with cable M12 available in different lengths from the Pfeiffer Vacuum range of accessories.
➔ Install fore-vacuum valve as an optional extra between turbopump and backing pump. Valve activation via the connection (M8) to the pumping station control TCS 15.
➔ Connecting a Pfeiffer Vacuum display and operating unit (DCU or HPU) via the pumping station control.

3.2 Connecting to electronic drive unit TC 400 / TM 700 / TC 1200

➔ Remove the plug-in connector from the 15-pole remote-control connection for the backing pump.
➔ Insert connection cable PM 071 142 -X into the remote-control connection for the backing pump and fasten in place.
➔ Insert control cable available in different lengths (PM 061 675 to 678 AT) into the *remote* connector on the electronic drive unit and fasten in place.
➔ Connect connection cable PM 071 142 -X and control cable using plug-in connector M12.
➔ Install fore-vacuum valve as an optional extra between turbopump and backing pump. Produce valve activation via the control cable (PM 061 675 to 678 AT).
➔ Connecting a Pfeiffer Vacuum display and operating unit (DCU or HPU) to the electronic drive unit.

4 Configuration

➔ Consider the following manuals for configuration and operation:
- Operating instructions "DCU"
- Operating instructions "HPU"
- Operating instructions "Electronic drive unit" of the respective turbopump
- Operating instructions "Backing pump"

➔ Switch on operating unit and electronic drive unit.
➔ Do not loosen any plug connection during operations.

4.1 TC 110

➔ Parameter **[P:794]** = 1 (Displaying the extended parameter set at the DCU)
➔ Parameter **[P:019]** = 13 (Configuration output DO2 = Backing pump)
➔ Parameter **[P:024]** = 15 (Configuration output DO1 = Pumping station)
➔ Parameter **[P:025]** = 1 (Backing pump mode = Interval mode)
➔ Parameter **[P:710]** = 10 W (Backing pump switch-off threshold in Interval mode)
➔ Parameter **[P:711]** = 20 W (Backing pump switch-on threshold in Interval mode)

4.2 TC 400 / TM 700 / TC 1200

➔ Parameter **[P:794]** = 1 (Displaying the extended parameter set at the DCU)
➔ Parameter **[P:025]** = 1 (Backing pump mode = Interval mode)
➔ Parameter **[P:046]** = 15 (Configuration relay 2 = Pumping station)
➔ Parameter **[P:047]** = 13 (Configuration relay 3 = Backing pump)

Turbopump	Switch-off threshold backing pump [P:710]	Switch-on threshold backing pump [P:711]
HiPace 300 / TC 400	50 W	70 W
HiPace 400 / TC 400	65 W	110 W
HiPace 700 / TC 400	65 W	110 W

4.3 Backing pump

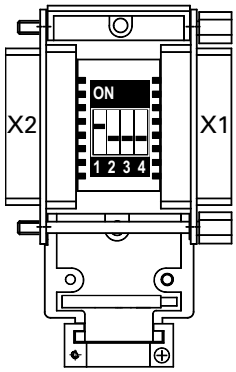
Depending on the power consumption of the turbopump the electronic drive unit can control the backing pump operation. A relation to the supplied fore-vacuum pressure is derived from the power consumption. Standby operation of the backing pump can reduce the overall power consumption of the pumping system and the operating temperature of the backing pump as well.

NOTE

Standby control for backing pump

The backing pump standby speed is preset in the connection cable connecting plug in the factory.

➔ Switch position 4 (S1) may not be changed for controlling the backing pump via the turbopump electronic drive unit!
➔ Changes to settings at your own risk and only based on the operating instructions for the backing pump!



Connecting plug	Default	Equivalent to backing pump, remote-control connector ACP
1	ON	S3
2	OFF	S4
3	OFF	S5
4	OFF	S1

Factory setting of DIL switches in the connecting plug for the connection cable

5 Operation

5.1 Switching on

The function "pumping station" comprises turbopump operation with control of all connected accessories (e.g. backing pump).

➔ Parameter **[P:023]** = 1

➔ Parameter **[P:010]** = 1

Ongoing (and removed) error messages are reset. After a successfully completed self-test, the electronic drive unit sets the turbopump motor and all connected accessories into operation depending on their configuration.

If the power consumption of the turbopump falls short of the preset switch-off threshold, the backing pump will switch to Standby mode.

When the pumping station is activated, the motor of the turbopump can be switched off and on via the function **[P:023]**.

5.2 Switching off

➔ Parameter **[P:010]** = 0

The electronic drive unit switches off the turbopump and activates preset accessory options (e.g. venting, backing pump).

A PASSION FOR PERFECTION

PFEIFFER VACUUM

Leading. Dependable. Customer Friendly

Pfeiffer Vacuum stands for innovative and custom vacuum solutions worldwide. For German engineering art, competent advice and reliable services.

Ever since the invention of the turbopump, we´ve been setting standards in our industry. And this claim to leadership will continue to drive us in the future.

You are looking for a perfect vacuum solution? Please contact us:

Germany
Pfeiffer Vacuum GmbH
Headquarters
Tel.: +49 (0) 6441 802-0
info@pfeiffer-vacuum.de

Benelux
Pfeiffer Vacuum GmbH
Sales & Service Benelux
Tel.: +800-pfeiffer
benelux@pfeiffer-vacuum.de

China
Pfeiffer Vacuum
(Shanghai) Co., Ltd.
Tel.: +86 21 3393 3940
info@pfeiffer-vacuum.cn

France
Pfeiffer Vacuum France SAS
Tel.: +33 169 30 92 82
info@pfeiffer-vacuum.fr

Great Britain
Pfeiffer Vacuum Ltd.
Tel.: +44 1908 500600
sales@pfeiffer-vacuum.co.uk

India
Pfeiffer Vacuum India Ltd.
Tel.: +91 40 2775 0014
pfeiffer@vsnl.net

Italy
Pfeiffer Vacuum Italia S.p.A.
Tel.: +39 02 93 99 05 1
contact@pfeiffer-vacuum.it

Korea
Pfeiffer Vacuum Korea Ltd.
Tel.: +82 31 266 0741
sales@pfeiffer-vacuum.co.kr

Austria
Pfeiffer Vacuum Austria GmbH
Tel.: +43 1 894 17 04
office@pfeiffer-vacuum.at

Sweden
Pfeiffer Vacuum Scandinavia AB
Tel.: +46 8 590 748 10
sales@pfeiffer-vacuum.se

Switzerland
Pfeiffer Vacuum (Schweiz) AG
Tel.: +41 44 444 22 55
info@pfeiffer-vacuum.ch

United States
Pfeiffer Vacuum Inc.
Tel.: +1 603 578 6500
contact@pfeiffer-vacuum.com

www.pfeiffer-vacuum.com