

Versions

- EPP electric water test pumps
- KLK compact air compressor

Leak testing

- Gas supply according to G469 (A) A2, B2, B3, C3 and D2
- Drinking water supply according to W400-2, Part 16 and DIN EN 805
- Engineering / industry / process technology
- Long-distance heat lines
- Cable protection tubes
- Geothermal probes
- Sewers



PMS EPP/KLK



Electric powered test pumps
Compact air compressor for leak testing

PMS EPP/CLK Overview

The electric powered test pumps of the EPP series and the compact air compressor of the CLK series are used to build up pressure during leak tests in pipeline and plant construction: For the various application areas with water and air as test media, four model variants are available:

- EPP15-04-170 – test medium: water
- EPP15-14-055 – test medium: water
- EPP50-50-040 – test medium: water
- CLK1030 – test medium: air

PUMPS/COMPRESSOR

Application	Delivery volume / pressure	Standard	Type
High pressure water	4 liter/min / 170 bar	G469 (A) A2, B2, D2 Plant , Process engineering	EPP15-04-170
Medium pressure water	14 liter/min / 55 bar	W400-2, Part 16 Accel. standard procedure Standard procedure	EPP15-14-055
Medium pressure water	50 liter/min / 40 bar	W400-2, Part 16 Accel. standard procedure Standard procedure	EPP50-50-040

CLK COMPACT COMPRESSOR

Low pressure Air	30 liter/min / 5 bar	G469 (A) B3 Gas home connection	CLK1030
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Table 1: Overview of pumps / compressor

Device variants

The various EPP powered test pumps are designed so that all fields of application are covered for tests with water.

The **EPP15-04-170** is a lightweight, portable, powered test pump with reliable, mechanical pressure regulation - specially for tests in the high-pressure range of the gas supply lines, in vessel and plant construction, and in process engineering.

The **EPP15-14-055** in a portable tubular frame is used for testing with the contraction procedure and the accelerated standard procedure for smaller and medium dimensions according to DVGW regulation W400-2, Part 16. Due to the high pressure capacity of 55 bar, tests in long-distance water supplies are ensured. This powered test pump is electronically controlled. The test pressure and the start-up pressure can be set in increments of 100 mbar.

The **EPP50-50-040** is mounted on a chassis with large rubber wheels and is suitable for use at construction sites. Due to the high delivery capacity of 50 liters/min, it is also possible to test large-sized pipelines with the contraction procedure or standard procedure. The test pressures of up to 40 bar also permit the testing of long-distance water supplies.

Control is performed electronically as described for the EPP15-14-055. By setting the test pressure and start-up pressure, a hysteresis can be realized during pressure build-up as required in the DVGW regulations.

All powered test pumps have a mechanical, infinitely variable safety valve for protecting against overpressure in a pipeline, e.g., with expandable pipe materials.

Excerpt from the DVGW regulations W 400-2, Part 16:

For leak tests with the contraction procedure, the test pressure should be built up with electric test pumps for volumes greater than 0.1 m³.

This corresponds to the majority of pipelines that are to be tested.

Note: High-pressure cleaners are not test pumps. The delivery volume for the contraction procedure (pressure build-up within 10 minutes) is too low and the risk of damaging the pipeline through uncontrolled advancing is too great.

The **CLK1030** is a portable, oil-free compact compressor mounted in a stainless steel tubular frame. The frame serves as back-cooling for the compressed air and protects the compressor unit and the attachments from damage. The field of application is the leak testing of building gas connections according to DVGW regulations G 469 (A), test method B3.

Technical data

Weight	Approx. 12 kg
Dimensions: W x H x D [mm]	427 x 251 x 207
Test pressure	0 - 10 bar
Delivery volume	5 bar at 30 l/min
Power supply	230 V / 50 Hz
Current consumption / power	2,9 A / 0,54 KW
Compressed air	Quick coupling
Compressed air	Plug nipple open
Pressure regulation	Adjustable pressure reducer
Operating temperature:	+5 to +40 degrees C
Protection class	IP 54

Table 2: CLK1030 technical data

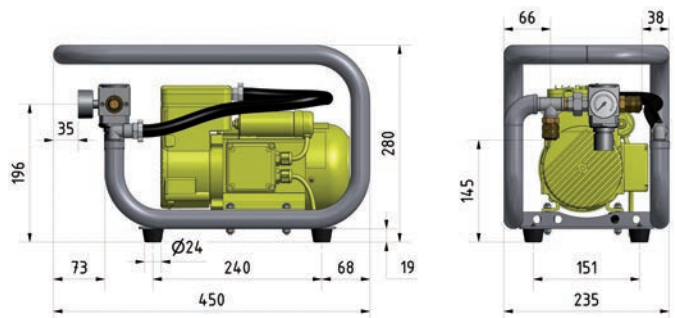


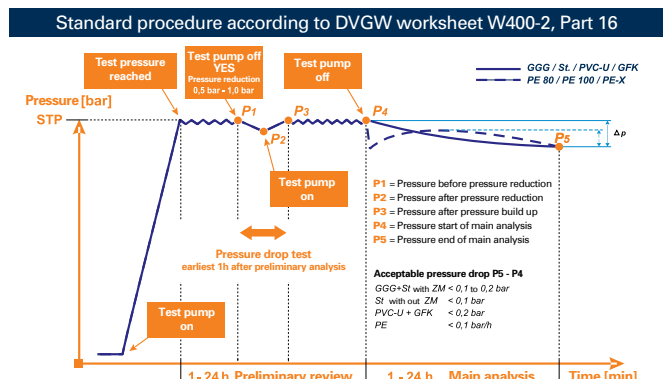
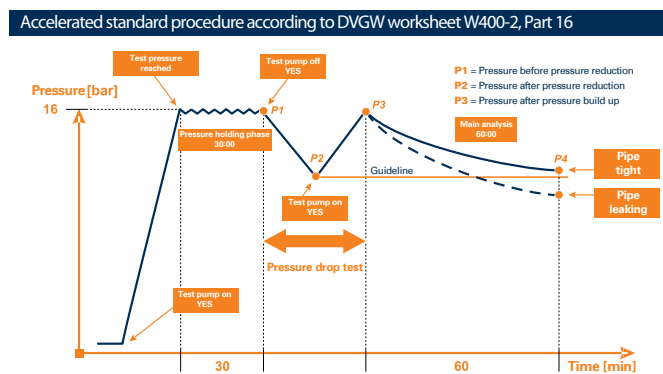
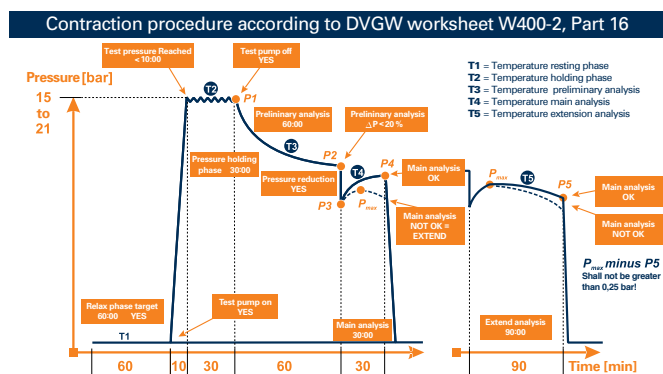
Figure 1: CLK1030 compact air compressor

Fields of application

Line lengths in m to be tested for Contraction procedure – Pressure build-up within 10 minutes – PE 100 SDR 11

DA	EPP15-04-170 Delivery volume: 4 liter / min Pressure range: 0 – 170 bar		EPP15-14-055 Delivery volume: 14 liter / min Pressure range: 0 – 55 bar		EPP50-50-040 Delivery volume: 50 liter / min Pressure range: 0 – 40 bar	
	STP 16 bar	STP 21 bar	STP 16 bar	STP 21 bar	STP 16 bar	STP 21 bar
	Line length (m)					
110	465	355	1630	1250	5800	4400
125	365	275	1270	970	4500	3450
140	285	215	1000	765	3600	2700
160	220	165	780	590	2750	2100
180	175	130	680	465	2180	1650
200	140	105	495	375	1750	1350
225	105	85	390	295	1400	1060
250	90	65	315	240	1130	855
280	70	50	250	190	900	685
315	55	40	195	150	710	540
355	40	30	155	115	560	425
400	35	25	120	90	435	335
450	25	20	95	70	345	265
500	22	17	75	60	280	210
560	18	13	63	48	225	170
630	14	10	49	38	175	135

Table 3: Guide values for pressure build-up with the DVGW W400-2, Part 16 Contraction procedure



Figures 2, 3, 4: Sequence W400-2, Part 16 Pressure drop methods

Technical data

Weight	35 kg
Dimensions: W x H x D [mm]	570 x 430 x 350
Test pressure	0 - 170 bar
Delivery volume	4 Liter / min
Power supply – power	230 V / 50 Hz – 1,5 kW
Water connection	Geka coupling
Pressure connection	Plug coupling open
Pressure regulation	Mechanical
Safety valve	Infinitely variable

Table 4: EPP15-04-170 technical data

Weight	58 kg
Dimensions: W x H x D [mm]	570 x 580 x 390
Test pressure	0 - 55 bar
Delivery volume	14 Liter / min
Power supply – power	230 V / 50 Hz – 1,5 kW
Water connection	Storz C coupling
Pressure connection	Plug coupling open
Pressure regulation	Electronic
Safety valve	Infinitely variable

Table 5: EPP15-14-055 technical data

Weight	75 kg
Dimensions: W x H x D [mm]	840 x 760 x 480
Test pressure	0 - 40 bar
Delivery volume	50 Liter / min
Power supply – power	400 V / 50 Hz – 5 kW
Water connection	Storz C coupling
Pressure connection	Plug coupling open
Pressure regulation	Electronic
Safety valve	Infinitely variable

Table 6: EPP50-50-040 technical data



About UNION Instruments

UNION Instruments, founded in 1919, is a specialized supplier of measuring instruments in the areas of calorimetry, gas composition and leak testing. Its user and customer base includes biogas producers, the chemical industry, and energy and water suppliers. The company has its headquarters in Karlsruhe and subsidiaries in Lübeck as well as in Berlin. With approximately 30 international distributors, UNION Instruments operates worldwide. The company's core businesses include development and production as well as maintenance, service, and support.

Our service performance



Support

The **UNION-hotline** helps to solve all inquiries and urgent issues fast and easy. Device specific concerns can be solved worldwide within minutes by direct communication via TEAMVIEWER.



Original spare parts

Original spare parts for the majority of UNION's products are on stock directly at site and ready for dispatch within a few hours.



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UNION offers individual in-house training or on-site seminars for installation, use and maintenance of our devices even at the customer's premises. Training is individually adapted to the client's requirements.



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Since 20 years we have implemented the ISO9001 system. UNION's products are certified to ATEX and UL/CSA directives accordingly. Industrial safety "**Safety with System**" is part of UNION's company policy.



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In the last decades UNION compiled a very high level to the state of the art that covers many market segments. So a wide range of possible solution approaches is on hand.



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As part of maintenance and service UNION provides the validation and re-calibration of measuring devices in conformity with certified custody transfer instruments and / or traceable perpendicular.

www.union-instruments.com

UNION Instruments GmbH ■ Zeppelinstrasse 42, 76185 Karlsruhe, Germany
 Phone: +49 (0) 721-68 03 81 0 ■ Fax: +49 (0) 721-68 03 81 33
 E-Mail: info@union-instruments.com