

TYPE-EXAMINATION CERTIFICATE

1. Type-examination Certificate (Module A)
2. Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)



3. Type examination certificate Nr **ITS14ATEX18067X R.1**

4. **Product:** Hydra-Cell Industrial Pumps T100 and Q155 Series

5. **Manufacturer:** Wanner Engineering

Applicant: Wanner International

6. **Address:** 1204 Chestnut Avenue, Minneapolis, MN
55403, USA

Address: 8 & 9 Fleet Business Park, Sandy
Lane, Church Crookham, Hampshire,
GU52 8BF, England

7. This product and any acceptable variation thereto are specified in the schedule to this certificate and therein referred to.

8. INTERTEK ITALIA S.p.A., certifies that the equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.

The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. 101673397CHE-001 dated February 2015, 103250047CHE-001 dated 14 October 2019 and 103250047CHE-002 dated 14 September 2022.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN ISO 80079-36:2016 and EN ISO 80079-37:2016 except in respect of those requirements referred to at item 16 of the Schedule

10. If the sign X is placed after the certificate number, it indicates that the product is subject to Special Conditions for Safe Use specified in the schedule to this certificate.

11. This Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12. The marking of the product shall include the following:



II 3/2 G Ex h IIC T5...T4 Gc/Gb

Tamb: *°C ÷ +40°C

* See schedule for lower ambient

15 September 2022

Certificate issue date



Fabrizio Massei

Certification Officer

Intertek Italia S.p.A.



This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

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SCHEDULE

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13. DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM

T100 High Pressure

The T100 High Pressure is a reciprocating positive displacement hydraulically balanced triplex diaphragm pump intended for pumping hard to handle liquids and abrasive slurries. Maximum external dimensions are 1017x739x473mm. Inlet ports are 3 ½" ANSI RF Flanges or 2 ½" NPT, discharge ports are either 1 ½" ANSI RF flanges or 1 ½" NPT. Flow rate is variable from 43.6 to 98 litres per minute depending upon shaft RPM. Maximum power input is 75kW. Maximum discharge pressure is 345bar and maximum inlet pressure is 34.5bar. The pump housing is constructed from ductile cast iron and the pump head is constructed from either Nickel Aluminium Bronze, Stainless Steel or Hastelloy C. Diaphragm material can be FKM, EPDM, or Nitrile rubber.

T100 Medium Pressure

The T100 Medium Pressure is a reciprocating positive displacement hydraulically balanced triplex diaphragm pump intended for pumping hard to handle liquids and abrasive slurries. Maximum external dimensions are 1038x739x441mm. Inlet ports are either 3 ½" ANSI RF Flanges or 2 ½" NPT, discharge ports are either 1 ½" ANSI RF flanges or 1 ½" NPT. Flow rate is variable depending upon shaft RPM and plunger choice. Maximum power input is 75kW. Maximum RPM for all variants is 450 RPM. Maximum discharge pressure is up to 241bar depending on plunger choice and maximum inlet pressure is 34.5bar. The pump housing is constructed from ductile cast iron and the pump head can be constructed from Nickel Aluminium Bronze, Stainless Steel or Hastelloy C. Diaphragm material can be FKM, EPDM, or Nitrile rubber.

T100 Low Pressure

The T100 Low Pressure is a reciprocating positive displacement hydraulically balanced triplex diaphragm pump intended for pumping hard to handle liquids and abrasive slurries. Maximum external dimensions are 1038x739x494mm. Inlet ports are 3 ½" ANSI RF Flanges, discharge ports are 2" ANSI RF flanges. Flow rate is variable depending upon shaft RPM and plunger choice. Maximum RPM for all variants is 450 RPM. Maximum power input is 75kW. Maximum discharge pressure is up to 145bar depending on plunger choice and maximum inlet pressure is 34.5bar. The pump housing is constructed from ductile cast iron and the pump head can be constructed from Nickel Aluminium Bronze, Stainless Steel or Hastelloy C. Diaphragm material can be FKM, EPDM, or Nitrile rubber.

Q155 Low Pressure

The Q155 Low Pressure is a reciprocating positive displacement hydraulically balanced triplex diaphragm pump intended for pumping hard to handle liquids and abrasive slurries. Maximum external dimensions are 1038x739x494mm. Inlet ports are 4" proprietary flanges with a range of flange and weld neck adapters available, discharge ports are 3" proprietary flanges with a range of flange and weld neck adapters available. Flow rate is variable depending upon shaft RPM and plunger choice with an absolute maximum flow rate of 595L/min. Maximum RPM for all variants is 450 RPM. Maximum power input is 120kW. Maximum discharge pressure is up to 145bar depending on plunger choice and maximum inlet pressure is 34.5bar. The pump housing is constructed from ductile cast iron and the pump head can be constructed from Nickel Aluminium Bronze, Stainless Steel or Hastelloy C. Diaphragm material can be FKM, EPDM, or Nitrile rubber.



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Q155 Medium Pressure

The Q155 Medium Pressure is a reciprocating positive displacement hydraulically balanced triplex diaphragm pump intended for pumping hard to handle liquids and abrasive slurries. Maximum external dimensions are 1038x739x494mm. Inlet ports are 4" proprietary flanges with a range of flange and weld neck adapters available, discharge ports are 2" proprietary flanges with a range of flange and weld neck adapters available. Flow rate is variable depending upon shaft RPM and plunger choice with an absolute maximum flow rate of 295L/min. Maximum RPM for all variants is 450 RPM. Maximum power input is 120kW. Maximum discharge pressure is up to 241bar depending on plunger choice and maximum inlet pressure is 34.5bar. The pump housing is constructed from ductile cast iron and the pump head can be constructed from Nickel Aluminium Bronze, Stainless Steel or Hastelloy C. Diaphragm material can be FKM, EPDM, or Nitrile rubber.

Lower ambient temperature (*°C) is based on the below table.

Diaphragm Material	Minimum Service Temperature (°C)
Aflas	30
EPDM	-20
FKM	5
HNBR	-5

14. DRAWINGS AND DOCUMENTS

TITLE	DOCUMENT Nr	LEVEL	DATE
T100 pump with Earthstud and baffle.	ATEX T-100	D	22/08/2019
Q155 ATEX pump with Earthstud	Q155-MP-ATX	D	22/08/2019
Q100 Medium Pressure – ATEX	Q155-MP-ATX	A	06/08/2018
T100 High Pressure – ATEX	T100 HP ATX	A	03/08/2018
Q155 Low Pressure – ATEX	Q155-LP-ATX	A	06/08/2018
Assy, Q155 Pump, Low Pressure	Q155-L	B	11/29/2016
Assy, Q155 Pump, Medium Pressure	Q155-M	B	5/16/2016
Assy, T100 Pump, High Pressure	T100-HR	N	11/16/2016
Assy, T100 Pump, Low Pressure	T100-LR	G	11/14/2016
Assy, T100 Pump, Medium Pressure, NPT	T100-MA	L	11/14/2016
Assy, T100 Pump, Medium Pressure, Flange	T100-MR	L	11/16/2016



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TITLE	DOCUMENT Nr	LEVEL	DATE
*ATEX T & Q Series Pumps Directive 2014/34/EU Covers – Category 2 Zone 1 requirements	-	B	07/09/2022
*High Horse Power Data Plate - T100 / Q155	177-198 REV 14 W ENTRY	D	07/09/2022

Note: An * is included before the title of documents that are new or revised.

Copies of the above listed documents are kept at Intertek Italia S.p.A. archive.

15. SPECIFIC CONDITIONS OF USE

- Hydrostatic/hydrokinetic equipment shall comply with the requirements of EN ISO 4413.
- All lubricants and/or coolants must be suitable for +5°C to +103°C temperature range and have an ignition temperature of at least 153°C.
- To avoid electrostatic charging steps must be taken to ensure the equipotential bonding is maintained.
- The end user must monitor and control the temperature of the internal process fluid. An additional temperature rise above the ambient or process temperature (whichever is the higher) of 21K must be accounted for, hence the following resulting temperature classes (T-classes) apply:

Process Temperature	Resultant T-Class
Less than or equal to 49°C	T5
Less than or equal to 82°C <i>Note: Process temperatures above 82°C are not permitted for this equipment.</i>	T4

16. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

The relevant Essential Health and Safety Requirements have been identified and assessed in Intertek Report Nr. 103250047CHE-001 Dated 14 October 2019.

17. ROUTINE (FACTORY) TESTS

None.

18. DETAIL OF CERTIFICATE CHANGES

R.1 (15 September 2022)

- Re-issue to correct coding.
- Updating of label drawing and user manual to amend coding.