



SINCE 1893

Condor Riding Ground Controls

AGAINST MUD & DUST



...FOR OPTIMUM GROUND CONDITIONS



Riding ground controls CRS2-, CRS4- and CRS8-TFT

Water management for riding ground technology



...for optimum ground conditions, plus cost savings and easy maintenance.

Not only during daily training, but also for national and international equestrian tournaments, high demands are placed on the condition of riding grounds.

With a Condor riding ground control in combination with the "ebb and flow system", an optimum and balanced ground moisture can be obtained, which is important for intensive use and for ensuring uniform training conditions.

Riding ground controls from Condor for optimum ground moisture reduce the dust load and result in high surefootedness – for the benefit of rider and horse.

Whether indoor or outdoor, the control system ensures a constant and uniform moisture, thereby keeping the ground elastic and easy to maintain. **Optimum ground conditions under different weather influences** speak for themselves – in this way, the riding ground is always ready for use, also when it rains. Downtimes and the associated costs are reduced. The comprehensive configuration of the new riding ground controls CRS2-, CRS4- and CRS8-TFT (for 1-2 pumps, 1-4 pumps and 1-8 pumps) ensure reliable system operation.

Benefits

- Automatic irrigation and drainage of riding grounds and riding arena floors, therefore optimum ground conditions under different weather influences
- Individually selectable ground moisture adapted to all equestrian disciplines and requirements
- Winter operation selectable, either manually (by entering the date) or automatically (with frost monitor)
- Housing with protection class IP66 (CRS4 and CRS8), therefore suitable for outdoor use (an additional protective roof is recommended)
- High-quality basic configuration (e.g. heating, overvoltage protection, external switches for manual pump-out/infeed, maintenance function acc. to date and operating hours, ...) - see Table.
- Simple and self-explanatory operation via the illuminated touch TFT colour display
- Easy servicing and maintenance – automatic error messages
- Subsequent use of space reserves
You plan a riding ground in two construction phases, and decide to use a CRS8 riding ground control (1-8 pumps). Hereby, four pumps are connected in the first construction phase, and the remaining space reserve is used in the second phase.

Versions



CRS4-TFT Condor riding ground control for 1-4 pumps with TFT display



CRS4-TFT Condor riding ground control for 1-4 pumps with TFT display, installed in a 455 outdoor cabinet



CRS8-TFT Condor riding ground control for 1-8 pumps with TFT display, installed in a 590 outdoor cabinet

Riding ground irrigation using the ebb and flow principle

What exactly is the "ebb and flow system"?

As with the tides on the seashore, the sand is dry during ebb (low tide) and therefore loose and deep. During flow (high tide), the sand is damp or even wet and the ground is soft and muddy. In both cases, the ground is difficult to walk or ride on.

However, there is a water level between ebb and flow, during which the riding ground exhibits an optimum firmness without being too dusty or muddy. The aim is to find and maintain this optimum water level.

A riding ground constructed with the "ebb and flow system" has the purpose to obtain a uniform ground moisture.

The underlying basic principle is easy to explain:

If the riding ground is too dry (adjustable parameter range), additional water is injected; if the ground is too wet (adjustable parameter range), water is removed. This happens without visible and limiting measures.

Constant and uniform moisture keeps the ground elastic and easy to maintain.

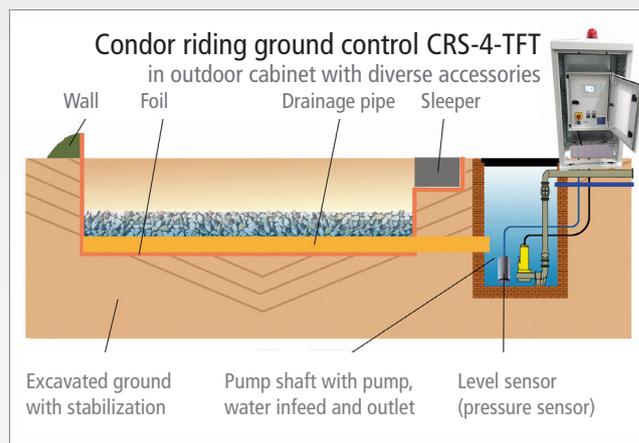
Design of the "ebb and flow system"

Following substrate levelling and ground preparation, a special foil is used to create an oversized trough. The necessary drainage and collecting pipes are then installed in this trough and connected to one or more compensating shafts.

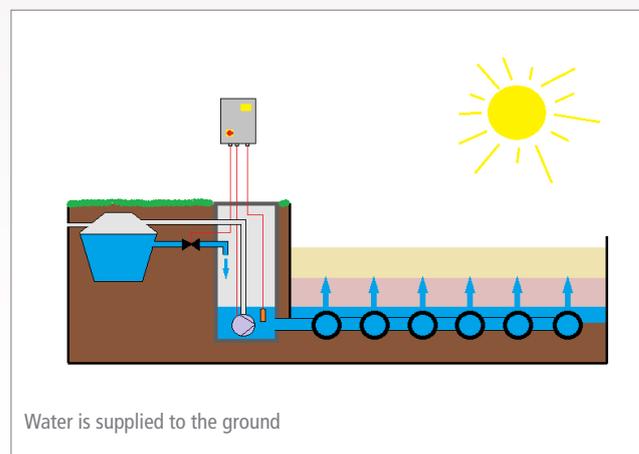
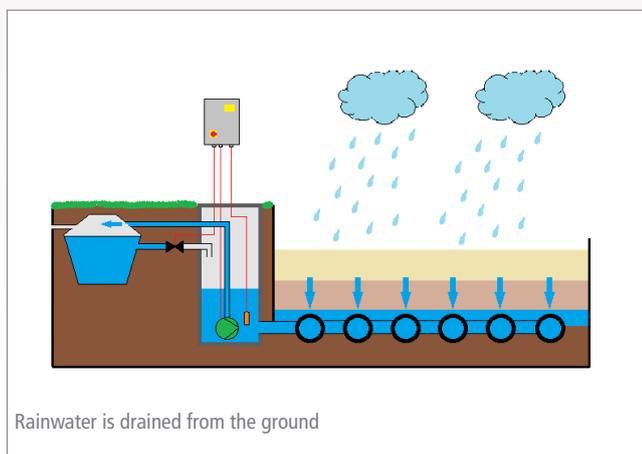
Via the compensating shaft(s), the water level in the riding ground's subsoil is kept constant by adding or pumping out water.

Several layers consisting of drainage sand, drainage mat and a special footing layer are then installed.

Additives such as felt, fibre and textile cuttings prevent extreme evaporation of ground moisture in summer and freezing in winter. Simultaneously, the ground's tread resistance is increased.



Automatic irrigation / drainage, depending on weather conditions.



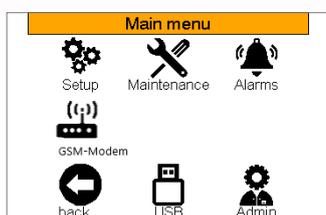
Riding ground controls CRS2, CRS4, and CRS8

System features

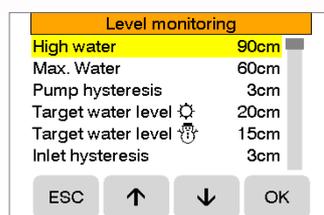
Operation, displays and housing	Riding Ground Control CRS2-TFT* 1-2 pumps / 1 solenoid valve	Riding ground control CRS4-TFT 1-4 pumps / up to 2 solenoid valves	Riding ground control CRS8-TFT 1-8 pumps / up to 4 solenoid valves
Touch TFT colour display / illuminated	•	•	•
Menu operation by means of touch function & symbols	•	•	•
Master switch 32 A / 5.5 kW	•	•	-
Master switch 32 A / 9.5 kW	○	○	•
Residual-current circuit breaker 40 A / 300 mA	•	•	•
Overvoltage protection	-	•	•
Housing 200x400x140 mm / ABS	•	-	-
Housing 300x400x200 mm / Polyester / Door with viewing panel	-	•	-
Housing 400x600x230 mm / Polyester / Door with viewing panel	-	-	•
Protection class	IP 54	IP 66	IP 66
Lockable housing viewing door	-	•	•
Cabinet heating 20 W with thermostat	•	•	-
Cabinet heating 30 W with thermostat	-	-	•
Pressure equalisation fitting M12 / IP 66 / 120 l/h	•	•	-
Pressure equalisation fitting M40 / IP 66 / 1200 l/h	-	-	•
External Manual-Off-Automatic switch for infeed	•	•	•
External Manual-Off-Automatic switch for pump-out	-	•	•
Level measurement			
High water level float switch	•	•	•
Hydrostatic measuring sensor / Analogue input 4-20 mA	•	•	•
Connection options			
Supply 1L/N/PE 230 VAC 50-60 Hz / 1x16 A	•	-	-
Supply 1L/N/PE 230 VAC 50-60 Hz / 1x25 A	-	•	○
Supply 3L/N/PE 400 VAC 50-60 Hz / 3x25 A	-	-	•
Pump supply 230 VAC / 0.5 kW / 2.5 A	2	4	8
Solenoid valve supply 24 VAC / 9.5 VA / 0.4 A	1	2	4
Potential-free alarm relay (changeover) 250 VAC / 2 A	3	3	3
Signalling input 24 VDC, external switch-off / frost monitor	•	•	•
Signalling input 24 VDC, external fault	•	•	•
Voltage output 24 VDC / 0.5 A	1	1	1
Analog output 4...20 mA	1	1	1
Battery module 2x lithium 2100 mAh	○	○	○
GSM module	○	○	○
LED signal lamp 24 VDC	○	○	○
• Series ○ Option - not available			

* Special version: Has fewer standard features; Protection class IP 54...

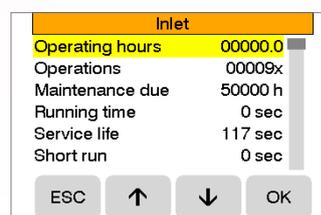
Simple, self-explanatory menu guidance and operation



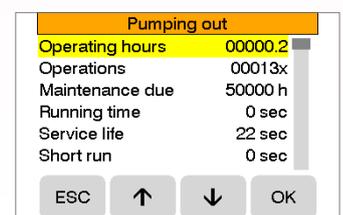
Main menu



Sub-men / Level measurement



Sub-menu / Infeed



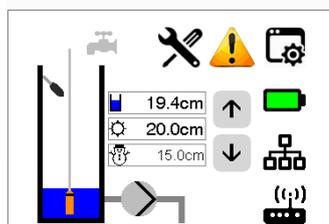
Sub-menu / Pump out

Riding ground controls CRS2, CRS4 and CRS8

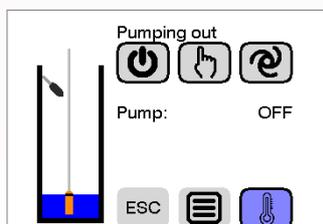
System features

Adjustable and readable control parameters	Riding Ground Control CRS2-TFT* 1-2 pumps / 1 solenoid valve	Riding ground control CRS4-TFT 1-4 pumps / up to 2 solenoid valves	Riding ground control CRS8-TFT 1-8 pumps / up to 4 solenoid valves
Pump-out menu – Off-Manual-Automatic function	•	•	•
Infeed menu – Off-Manual-Automatic function	•	•	•
Operating hours	•	•	•
Switching cycles	•	•	•
Alarm messages	•	•	•
Maintenance function acc. to date or operating hours	•	•	•
Rundown time: Pump-out / infeed	•	•	•
Blocking time: Pump-out / infeed	•	•	•
Runtime monitor: Pump-out / infeed	•	•	•
Short start-up after longer standstill: Pump-out / infeed	•	•	•
High water	•	•	•
Max. water level	•	•	•
Pump-out hysteresis	•	•	•
Setpoint for summer water level	•	•	•
Setpoint for winter water level	•	•	•
Infeed hysteresis	•	•	•
Min. water level	•	•	•
Dry run	•	•	•
Maintenance schedule	•	•	•
GSM modem	•	•	•
Battery menu	•	•	•
Alarm menu	•	•	•
Languages: German, English, Dutch, French, Italian...	D,E,NL,IT	D,E,NL,IT	D,E,NL,IT
Winter operation	•	•	•
Frost monitor	•	•	•
Date / time	•	•	•
Automatic summer/winter switchover	•	•	•
Password protection	•	•	•
Delayed mains switch-on	•	•	•
Unit for level mm, cm	•	•	•
Measuring range 1-4000 mm, 1-400 cm	•	•	•
USB menu for software update	•	•	•
	• Series	○ Option	- not available

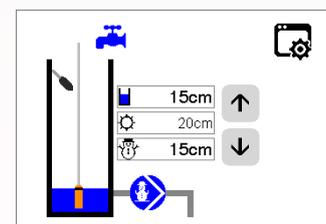
* Special version: Has fewer standard features; Protection class IP 54...



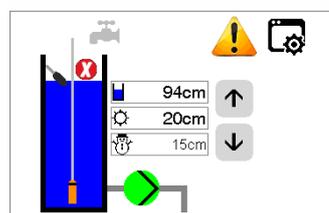
Main display / Complete



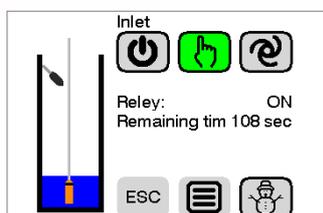
Frost monitor / Winter operation



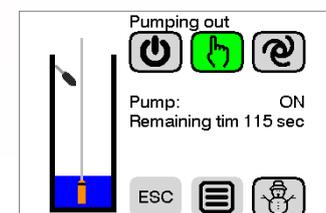
Main display / Winter operation



Fault



Manual-Off-Automatic / Infeed



Manual-Off-Automatic / Pump-out

CONDOR – YOUR COMPETENT PARTNER

FOR CONTROL TECHNOLOGY



Solving your problems is our business.

Our team consults you competently about every possibility for solving your specific problem. Simply contact us. We provide professional, targeted, and solution-oriented support when implementing your project in accordance with your specifications.

Since four generations filled with passion, pioneering spirit, and innovative power, Condor has been developing market-oriented solutions in the fields of pressure and control technology, with a focus on the compressor and pump industries.

For further information please contact us or visit our website - www.condor-cpc.com.



YouTube



Condor pressure switch



Condor pump controls

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