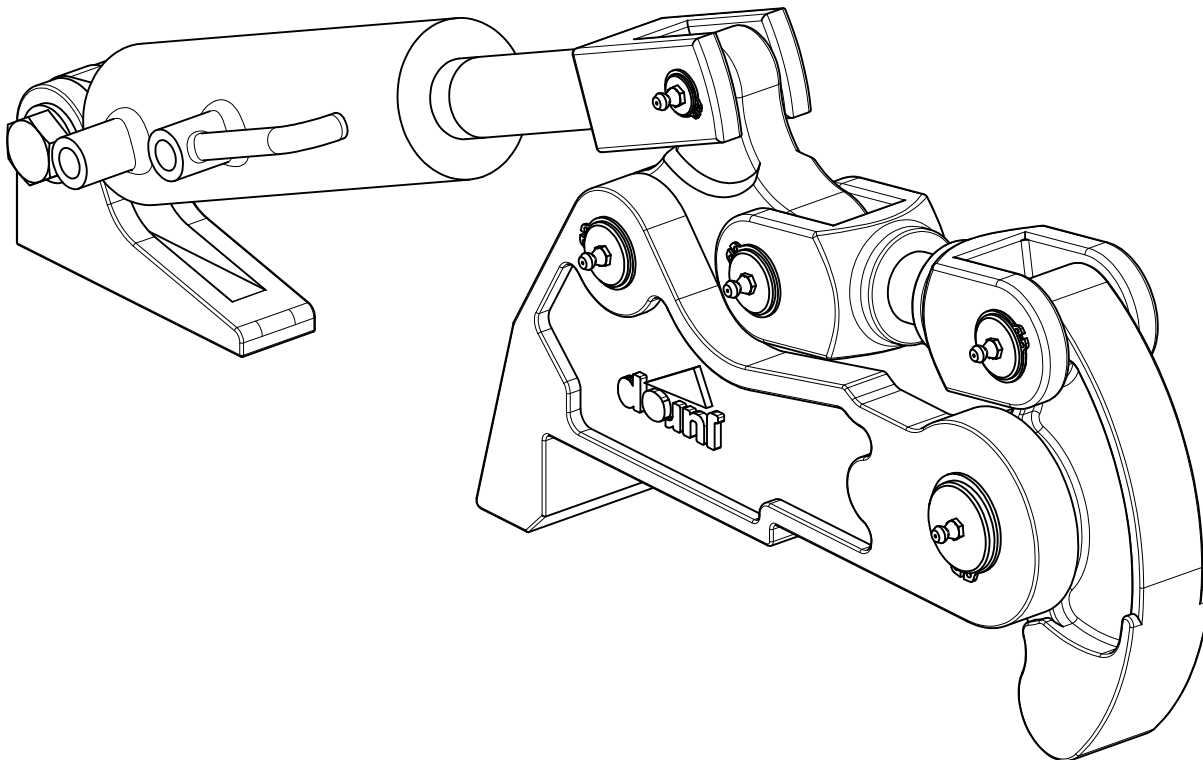


ORIGINAL INSTRUCTIONS



TECHNICAL DATA SHEET

CODE 18300 008 10  
CODE 18300 009 10



Rev. 03  
04-03-2015

COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= ISO 9001 =

## 1. General warnings

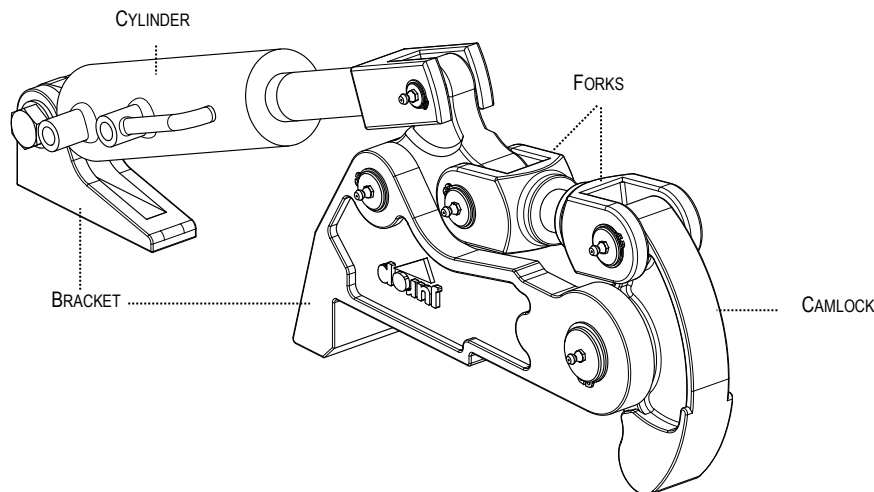
This technical data sheet contains technical information concerning hydraulic clamps and the main installation and maintenance instructions.

Complying with the instructions contained in this technical data sheet is crucial for the recognition of warranty against defective parts. Upon receiving the goods, ensure that they are intact and have not been accidentally damaged during transport.

In the event parts of the accessory must be replaced, **use only genuine spare parts.**

## 2. Technical data

Hydraulic clamps are positive safety devices (i.e., they remain locked in the absence of fluid power) designed to close open bottom tanks. Hydraulic clamps are operated by hydraulic pressure that must be supplied by the machine they are installed on. The following figure shows a schematic diagram of a hydraulic clamp.



Hydraulic clamps are available in two versions:

- **Mild steel hydraulic clamps**, code 18300 008 10, with weldable parts (pos. 3 and pos. 4) made of **FeG70**;
- **Stainless steel hydraulic clamps**, code 18300 009 10, made of **ASTM A743 CA-6NM**.

In order to ensure greater protection, the details of the hydraulic clamp undergo cold electro-galvanising treatment and subsequent transparent paint sealing. The metal components of the clamp are made by mould casting.

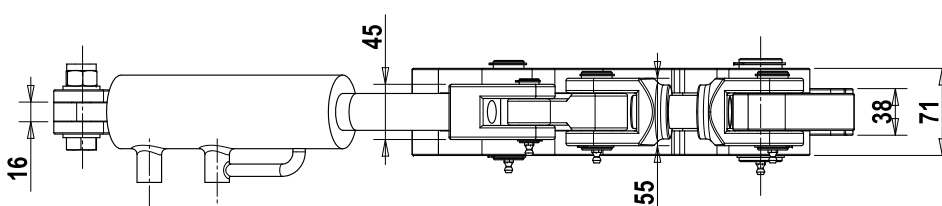
The following table shows the main operating parameters relative to the maximum mechanical strength of the hydraulic clamp and to the maximum hydraulic oil pressure to ensure proper operation. The weight is also indicated.

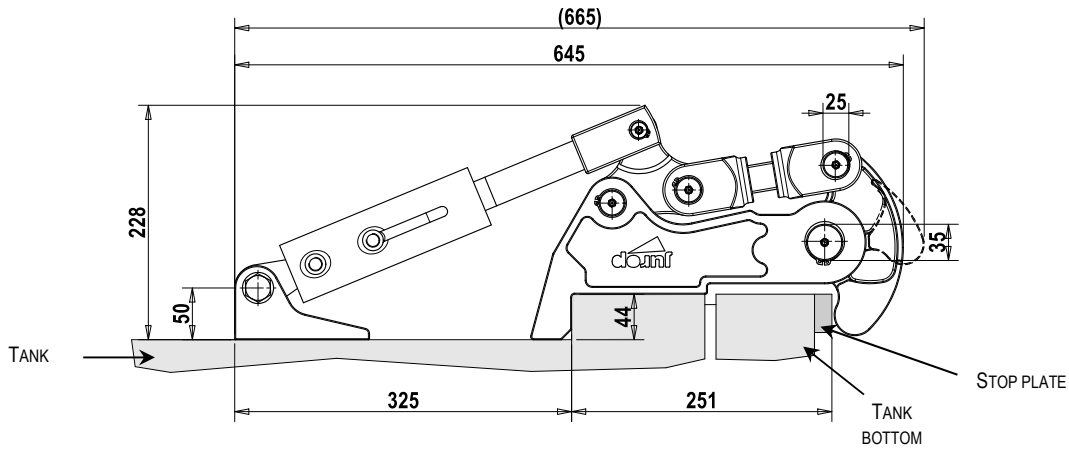
### Operating parameters

Parameter	aximum value
MAXIMUM MECHANICAL STRENGTH	187920 N
HYDRAULIC PRESSURE	70 bar
WEIGHT	20 Kg

We recommend using **ISO VG 46 mineral hydraulic oil**.

The following figures show the overall dimensions of the hydraulic clamp.





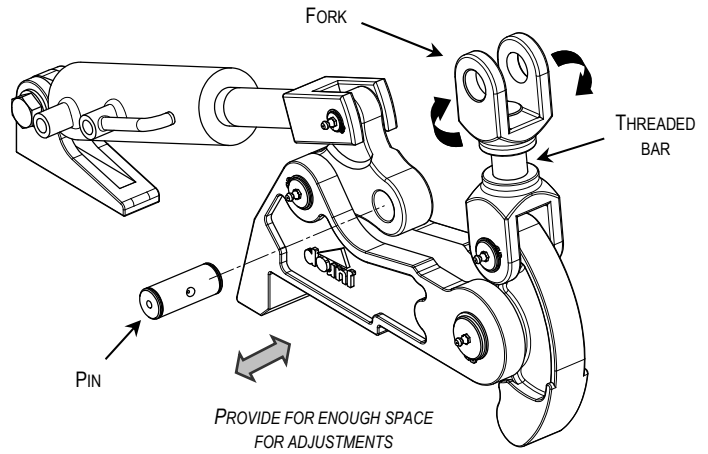
**Note:** the dimension between brackets refers to clamp in open condition.

### 3. Installation and adjustment

Hydraulic clamps must be installed and welded to the tank (in particular to the rear reinforcement ring of the tank). Once installed/welded to the tank, it is important to verify its proper adjustment (of every single hydraulic clamp) and the proper locking of the tank bottom. Adjustments are made via the threaded bar (pos. 11) located in correspondence of the two upper forks.

To adjust the clamps proceed as follows.

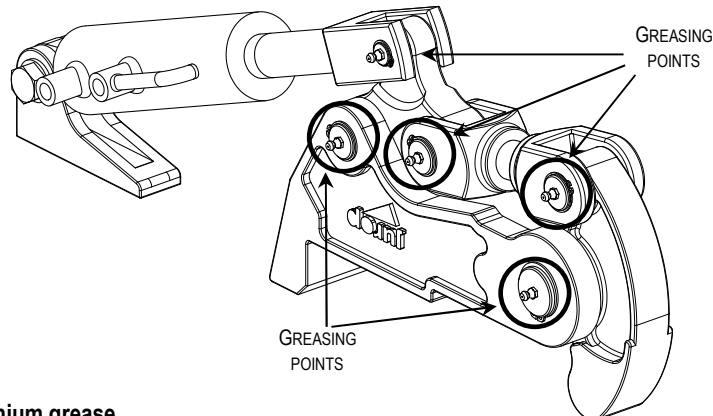
- Use the hydraulic clamps to close the tank bottom.
- Where possible, create a vacuum in the tank: this way the bottom will be perfectly closed (the bottom seal will be evenly pressed against the tank).
- Ensure that all the bottom hydraulic clamps (in closed position) are perfectly tight and lined up against the stop plates.
- If not, remove the closing pin (pos. 6) and tighten or loosen the fork (pos. 2). Adjust until the cam is perfectly in contact with the stop plate.
- Restore the closing pin (pos. 6) and the relative Seeger rings (pos. 18).



To easily adjust the clamps, during installation, it is important to leave enough space to remove the pin and one of the forks.

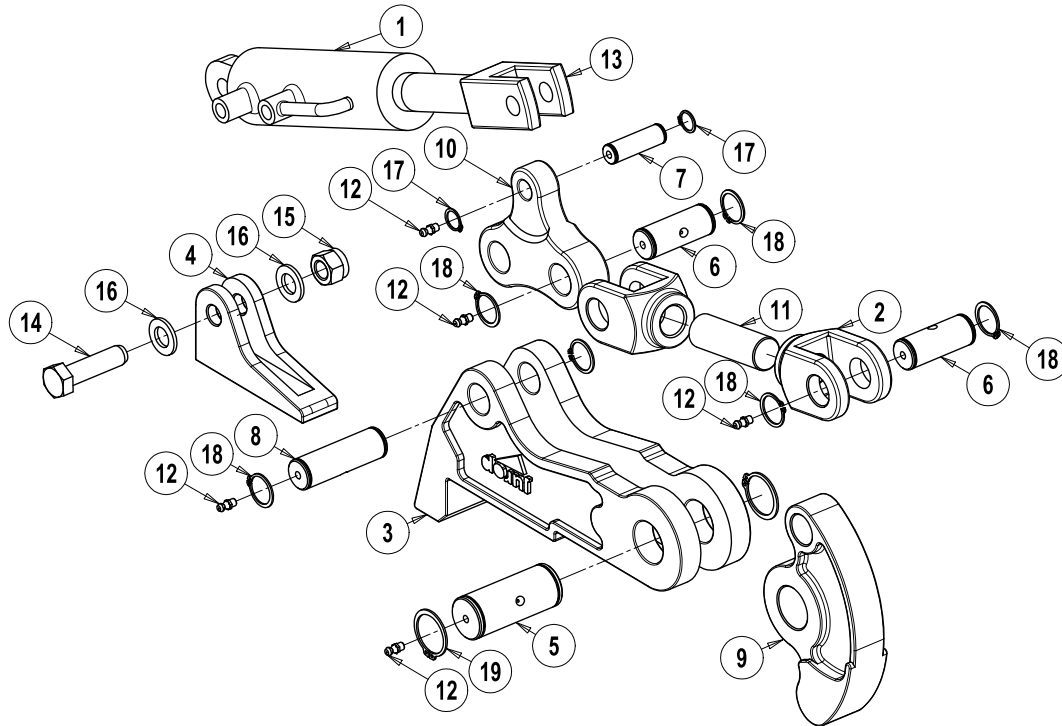
### 4. Greasing

Proper clamp operation requires routine lubrication of the moving joints. Grease when required until the grease leaks from both sides of the single pins. The following figure shows the greasing points on the hydraulic clamp.



We recommend using **NLGI EP 2 lithium grease**.

**HYDRAULIC CLAMPS**



**Iron hydraulic clamp – code 18300 008 10**

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1430201800	HYDRAULIC CYLINDER 50X30X100	1	11	1671000900	GALVANISED THREADED BAR M27X3 L. 80	1
2	1604000610	HYDRAULIC CLAMP FORK	2	12	4022100100	STRAIGHT SPHERICAL GREASE NIPP.M6X1	5
3	1612005310	BRACKET FOR IRON HYDR. CLAMP G70	1	13	4025330105	GALV. FORK	1
4	1617000510	BRACKET FOR IRON HYDR. CLAMP G70	1	14	4026103214	GALVANISED HEX SCREW 8.8 M16X60	1
5	1622006600	GALV. AUTOM. CLOS. PIN D.35X83	1	15	4026305512	SELF-LOCKING HEX NUT M16	1
6	1622006700	GALV. AUTOM. CLOS. PIN D.25X64	2	16	4026357009	GALV. FLAT WASHER M16	2
7	1622006800	GALV. AUTOM. CLOS. PIN D.16X52	1	17	4026510014	SEEGER RING E 16	2
8	1622006900	GALV. AUTOM. CLOS. PIN D.25X80	1	18	4026510022	SEEGER RING E 25	6
9	1628000210	OPEN BOTTOM CAMLOCK	1	19	4026510027	SEEGER RING E 35	2
10	1632001010	CLAMP REFERENCE	1				

**Stainless steel hydraulic clamp – code 18300 009 10**

Pos.	Code	Description	Qty	Pos.	Code	Description	Qty
1	1430201800	HYDRAULIC CYLINDER 50X30X100	1	11	1671000900	GALV. THREADED BAR M27X3 L.80	1
2	1604000610	HYDRAULIC CLAMP FORK	2	12	4022100100	STRAIGHT SPHERICAL GREASE NIPP.M6X1	5
3	1612006310	BRACKET FOR HYDRAULIC CLAMP	1	13	4025330105	GALV. FORK	1
4	1617002110	HYDR. PIS. CONN. BRACKET	1	14	4026150814	STAINLESS STEEL 304 HEX SCREW M16X60	1
5	1622006600	GALV. AUTOM. CLOS. PIN D.35X83	1	15	4026305408	STAINLESS STEEL 304 SELF-LOCK.NUT M16	1
6	1622006700	GALV. AUTOM. CLOS. PIN D.25X64	2	16	4026358109	STAINLESS STEEL 316 WASHER M16	2
7	1622006800	GALV. AUTOM. CLOS. PIN D.16X52	1	17	4026510014	SEEGER RING E 16	2
8	1622006900	GALV. AUTOM. CLOS. PIN D.25X80	1	18	4026510022	SEEGER RING E 25	6
9	1628000210	OPEN BOTTOM CAMLOCK	1	19	4026510027	SEEGER RING E 35	2
10	1632001010	CLAMP REFERENCE	1				