



# SATURN BLOCK



**Stucchi**<sup>®</sup>

A CONSTANT FLOW OF SOLUTIONS



# SERIES: SATURN BLOCK

**PATENTED**

**INTERCHANGE:** ISO 16028

## MAIN APPLICATIONS

- Skid steer
- Excavators
- Mobile construction equipment

Saturn Block is the latest Stucchi innovation designed to meet the requirements of the mobile equipment market. Designed with the feedback from the market and with the major OEM collaboration, it has a residual pressure relief system which allows an operator to connect and disconnect the two circuit lines with residual pressure, both in the male and in the female.

Saturn Block is equipped with ISO 16028 interchangeable flat face couplings, has a modular design for multiple port options, and allows for a wide range of coupler sizes:  $\frac{1}{2}$ ,  $\frac{5}{8}$ , and  $\frac{3}{4}$  (A13, A15, and A17)

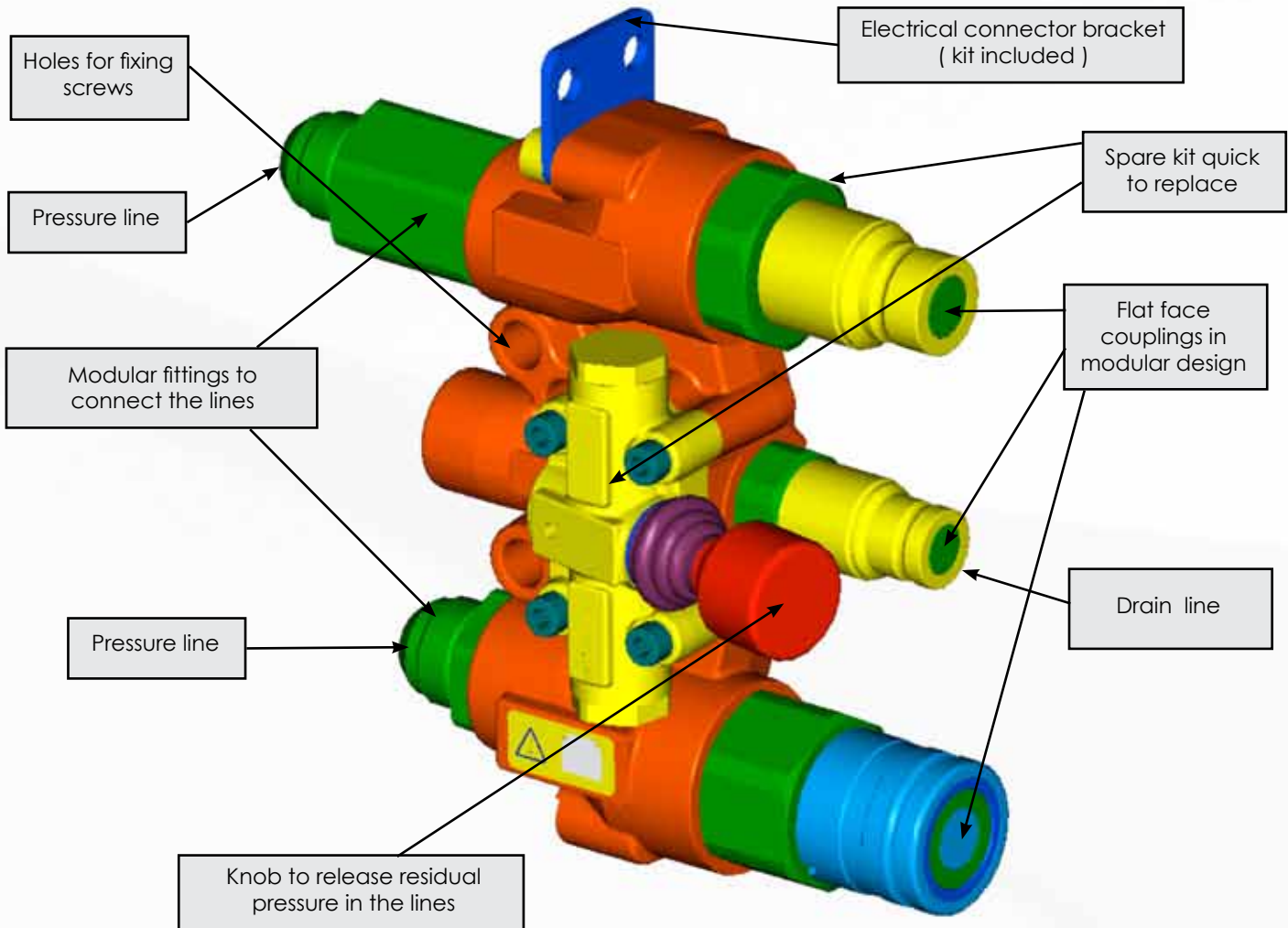


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## TECHNICAL FEATURES AND OPTIONS

- Interchangeability of couplings : equipped with ISO 16028 couplings available in different configuration and different dimensions .
- Couplings type : Flat face
- Mechanical connection of couplings : Locking balls
- Connection system : Push to connect
- Disconnection system: Pulling back the sleeve of the female coupling
- Connection with residual pressure: After draining the pressure with the knob
- Disconnection with residual pressure: After draining the pressure with the knob
- Threads available: ¼ Jic for pressure lines , 3/8 sae for drain line.
- Threads on request: Metrics DIN, ORFS, SAE , BSP and others.
- Is possible to mount different configuration of couplings.
- Construction material: High resistance carbon steel
- Surface treatment: CrIII zinc plated
- External springs: AISI 302
- Internal springs: C72 steel
- Locking ball material: Hard steel 100 C6
- Seals: standard in NBR (Nitrile) , POM
- Anti-extrusion rings: PTFE



## BENEFITS

- User friendly relief system allows for easy connection and disconnection with residual pressure.
- It drain the residual pressure before connection and disconnection , allowing the connection without pressure and without effort in safety condition , in order to reduce injury risk .
- Flat face is easy to clean, helping to reduce the inclusion of contamination to the hydraulic circuit.
- Minimal fluid loss during connection / disconnection, reducing fluid loss to the environment.
- Minimal air inclusion during connection / disconnection, enhancing correct function of the circuit.
- Patented internal coupling's valve design creates minimal pressure drop, maintaining circuit efficiency in the system
- Good resistance at impulse pressures .
- Low cost field replacement spare kits for couplers and valve.
- Compact slim and flexible design ( it allow to use different size of couplings ) .
- Safe and simple to use.
- Bracket for electrical connector ( kit plate + screw included in the box ) .

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## HOW TO USE

- Before to couple clean the flat mating surface of quick coupling to avoid the inclusion of dirty in the circuit.
- Drain the residual pressure pulling the knob out and: up to drain the residual pressure of upper coupling, down to drain the residual pressure of lower coupling.
- To couple push the male half towards the female half or viceversa.
- To uncouple pull back the sleeve of the female.

Important: in case of residual pressure , before uncoupling drain the residual pressure pulling the knob out and: up to drain the residual pressure of upper coupling , down to drain the residual pressure of lower coupling.

## WARNING!

- Do not relieve pressure:
  - When the attachment is not in the rest position
  - During operation of the attachment  
( due to danger of unexpected movement of the attachment)
- Do not use the female coupling disconnected with high impulse pressure frequency.
- Do not couple-uncouple with flow and/or pump pressure in the circuit.  
Dis / Connection only allowed with residual pressure.
- Do not couple-uncouple when the temperature inside of the circuit is higher than 80 °C (176 °F).
- When the couplings are disconnected, it is suggested to use the protection caps.
- It is important to limit contamination in the circuit to avoid compromising the function of the internal valves.
- It is important to have a drain line for connecting the line in the middle.
- In case of connection with residual pressure in the attachment side, use proper couplings (example APM male).

## PERFORMANCE

Description	Size	ISO Size	Rated Flow		Max. flow suggested		Spillage*
			l/min	GPM	l/min	GPM	
SATURN DN13	1/2	12,5	45	11,93	90	23,85	0,020
SATURN DN15	5/8	16	74	19.61	148	39.22	0.026
SATURN DN17	3/4	19	100	26.50	200	53.00	0,032

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## PERFORMANCE

Description	Max. operating pressure					
	Coupled		Male		Female	
	MPa	psi	MPa	psi	MPa	psi
SATURN DN13	35	5075	33	4785	33	4785
SATURN DN15	35	5075	33	4785	33	4785
SATURN DN17	35	5075	33	4785	33	4785

Max. residual pressure during connection and disconnection			
Male		Female	
Mpa	psi	MPa	psi
25	3625	25	3625
25	3625	25	3625
25	3625	25	3625

- Spillage is an indicative value of the fluid loss per couple-uncouple cycle.
- On request , different configuration available ( Example : Saturn with A17+A15 ) .
- Temperature range : Standard seals NBR (Nitrile): from -20 °C to +100 °C ( from -4 °F to +212 °F).

•Tests:

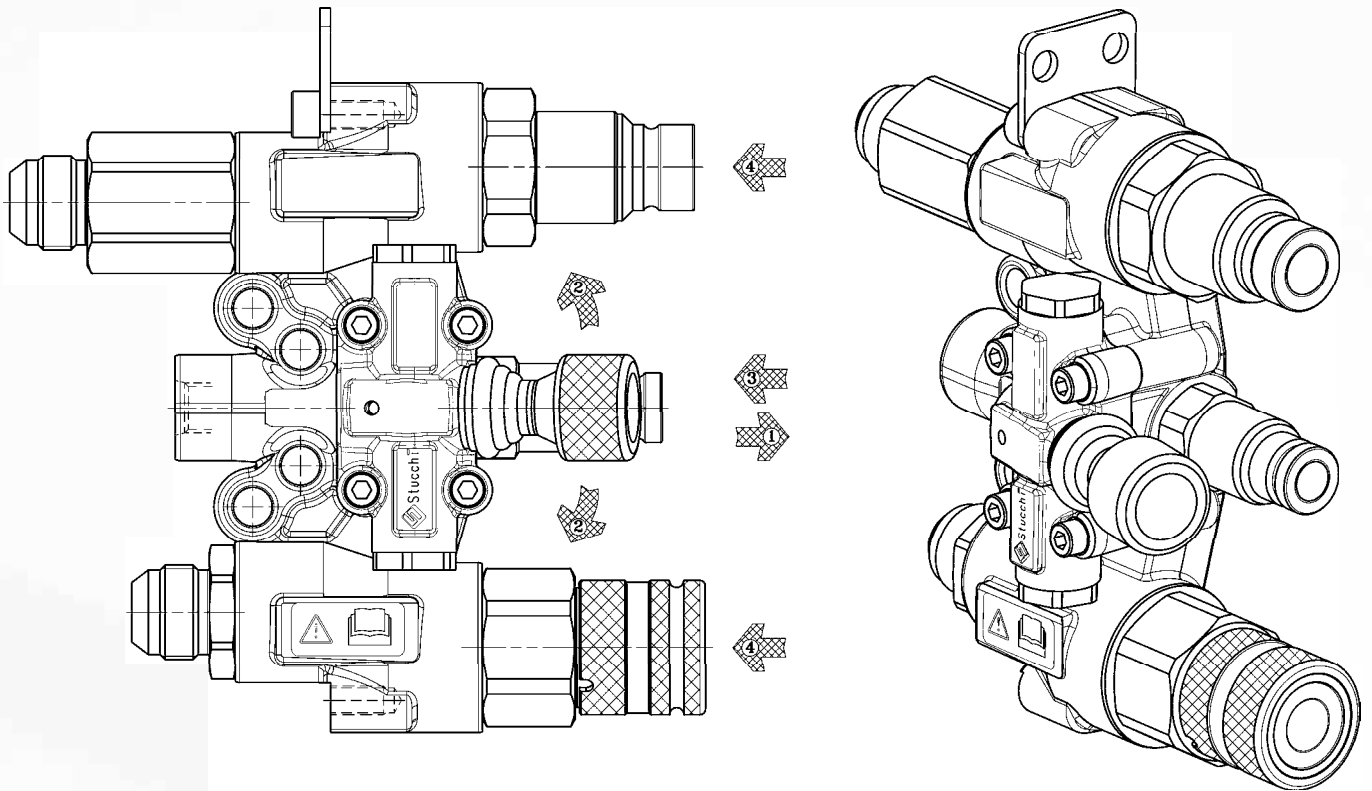
The Saturn Block have been tested at impulse with max. operating pressure for 1.000.000 impulses in according with ISO 7241-2 in connected position.

For the pressure drop of the single coupling in use : please refer to the catalogue of " A " series.

DN 10 = A9 Coupling  
 DN 12.5 = A13 Coupling  
 DN 16 = A15 Coupling  
 DN 19 = A17 Coupling

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## SCHEME OF USE



OPERATION N°1  
PULL THE LEVER TO UNLOCK THE SECURITY SYSTEM

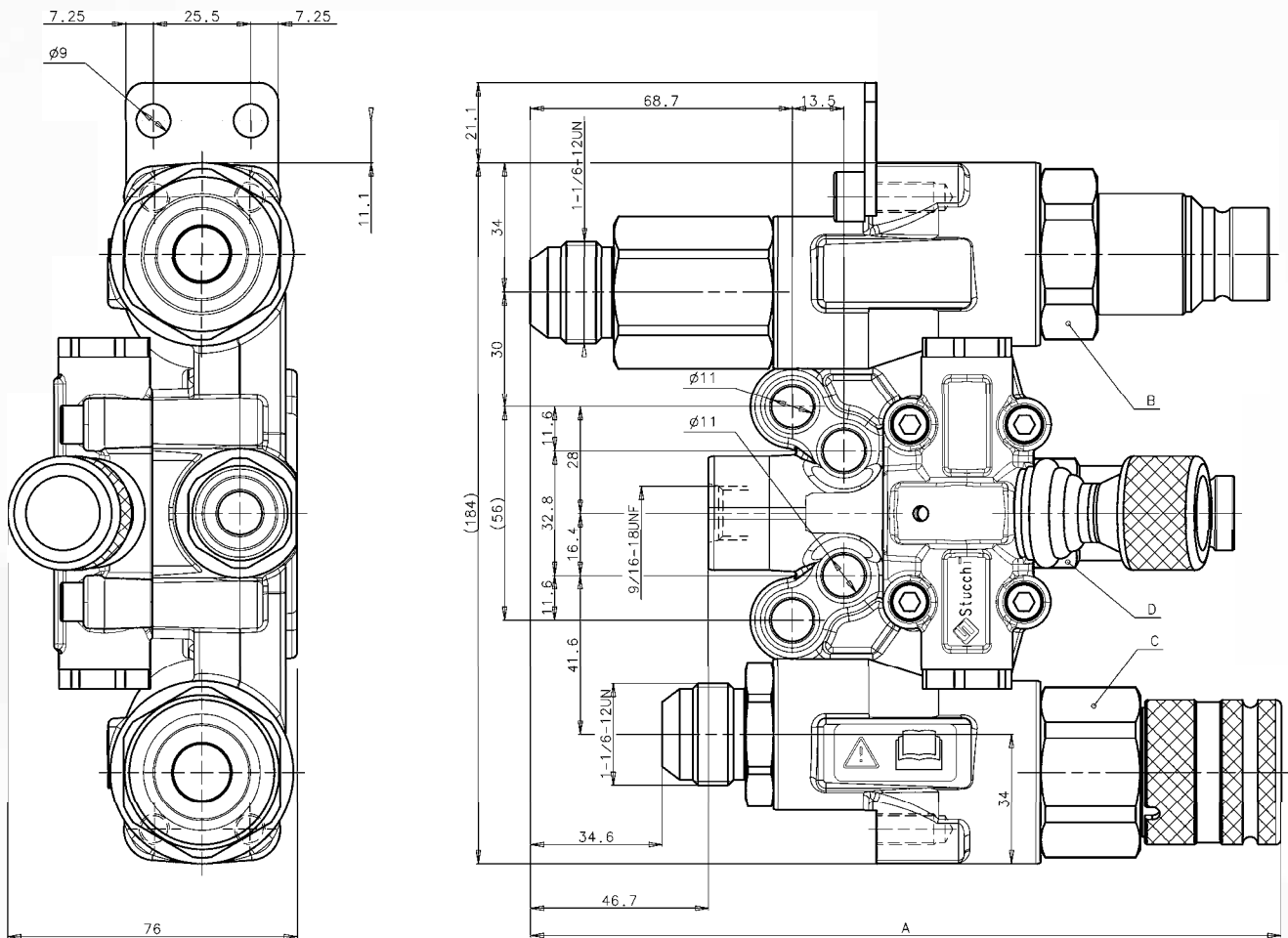
OPERATION N°2  
TO RELEASE THE PRESSURE OF THE UPPER COUPLING PUSH UP THE LEVER  
TO RELEASE THE PRESSURE OF THE LOWER COUPLING PUSH DOWN THE LEVER

OPERATION N°3  
RELEASE THE LEVER

OPERATION N°4  
PROCEED WITH THE CONNECTION OF THE COUPLINGS

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## OVERALL DIMENSION



Description	Unit	A	B	C	D	Up	Drain	Down	Unit	Weight
SATURN DN 13	mm	196.8	41	41	27	DN 12.5	DN 10	DN 12.5	Kg	4.312
	Inch	7.75	1.61	1.61	1.06				lb	9.506
SATURN DN 15	mm	203.7	41	41	27	DN 16	DN 10	DN 16	Kg	4.437
	Inch	8.02	1.61	1.61	1.06				lb	9.782
SATURN DN 17	mm	224	46	46	32	DN 19	DN 12.5	DN 19	Kg	5.052
	Inch	8.82	1.81	1.81	1.26				lb	11.138

The texts, data and illustrations indicated in this catalogue, may be changed by Stucchi S.p.A at any time without notice. (CAT. SATURN-EN REV.00 May 2009).



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