

### +++ Valves compatibility

Whether you want to fit Hydraulic or Electro-hydraulic Power brake valves on your tractor/trailer, you can pick and choose any of our products.  
The here under matrix should help you select the appropriate product for your needs.  
It is possible to mix and match hydraulic and electro-hydraulic components.

Valve Selection Guide	HYDRAULIC OPTION				ELECTRO-HYDRAULIC OPTION			
	Tractor			Trailer	Tractor			Trailer
	Service Brake	Parking Brake	Service and Parking Brake	Service Brake	Service Brake	Parking Brake	Service and Parking Brake	Service Brake
VB-0B0	■		■		■		■	
VB-0D0	■		■		■		■	
VB-002		■	■					
VB-00E*						■	■	
VB-100	■	■				■	■	
VB-200			■			■	■	
VFR-200**					■	■	■	
VFR-0HX				■				
VFR-0EX*								■

\* Indicates Electro-hydraulic valves

\*\* VFR-200 is equipped with an electro-valve that allows accumulator charging only once the engine has started

### +++ Valves modularity

On request, Poclain Hydraulics can design specific Power Brake Valves for your tractor application.  
We will study any request to answer your needs regarding space constraints, functions integration and/or develop specific performance characteristics.  
As an example, Poclain Hydraulics is able to provide modular solutions for easy integration on the tractor interface.



The units could be flanged on the tractor distribution block, either separately (one or the other) or as a combined unit.

# Tractor and Trailer Brake Valves

## 1 | Service brake valve



VB-0B0



VB-0D0

The VB-0B0 and VB-0D0 valves allows:

- Steering assist braking (right/left) for field work (U-turn capability) (with two circuit selectors each associated with one of the pedals)
- Service braking when both pedals are mechanically linked (road mode)

The VB-0B0 and VB-0D0 valves combines:

- A pressure reducer that supplies an output pressure proportional to the pedal stroke
- True force feedback with progressive characteristic

The VB-0D0 valve differences vs VB-0B0:

- VB-0D0 is a double circuit steering assist brake valve, acting on rear and front wheels (VB-0B0 controls the rear wheels)
- VB-0D0 always allows independent braking in case of circuit leakage on one of the axle
- VB-0D0 is available in compact cast design

- Max. Operating pressure: 210 bar [3000 PSI]
- Max. output pressure: 20 to 120 bar [290 to 1740 PSI]

## 2 | Parking and/or emergency brake valves



VB-002



VB-00E

The valves combine two functions in one:

- Releasing the parking brake
- Precise modulation of the braking pressure in case of emergency braking (EU regulation)

It is a 3-way graduated release pressure reducing valve available in a Hydraulic (VB-002) or Electro-hydraulic version (VB-00E). Mechanical actuators can be selected from our technical catalogue (VB valves A06604D).

- Max. Operating pressure: 210 bar [3000 PSI]
- Max. output pressure: 10 to 100 bar [145 to 1450 PSI]

## 3 | Accumulator charging valves



VB-100



VB-200



VFR-200

The ACV allows maintaining the proper level of pressure in the braking system by charging the accumulators.

- VB-100 is a single circuit hydraulic ACV (to drive one Power Brake Valve)
- VB-200 is a dual circuit hydraulic ACV (to drive two Power Brake Valve)
- VFR-200 is an electro-hydraulic ACV (that can drive one or two Power Brake Valves)

The ACV also supplies auxiliary equipment and is therefore equipped with a priority spool in order to feed the accumulators when needed (i.e. Priority is given to the brakes).

- Max. Operating pressure: 210 bar [3000 PSI]
- Cut-in/Cut-out pressures: 110/130 bar [1600/1900 PSI], 120/140 bar [1740/2030 PSI], 135/160 bar [1950/2320 PSI], 160/190 bar [2320/2750 PSI], 170/200 bar [2460/2900 PSI], 180/210 bar [2600/3000 PSI]
- Flow rate to the auxiliaries: 30, 45, 120 l/min [8, 12, 32 gpm]
- Flow rate to the accumulators: 2.75, 8, 15 l/min [0.75, 2.1, 4.0 gpm]

## 4 | Trailer Brake Valves

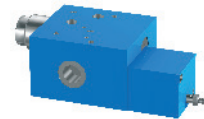
The Trailer Brake Valves (TBV) allow piloting the trailer Brake pressure.

Poclain Hydraulics offers two products:

- VFR-0HX is a hydraulic valve piloted by a Master cylinder or Power Brake Valve.
- VFR-0EX is an electro-hydraulic valve that is piloted by the tractor's ECU.

The TBV also supplies auxiliary equipment and is therefore equipped with a priority spool in order to supply the trailer brakes when needed (i.e. Priority is given to the brakes).

- Max Operating pressure: 210 bar [3000 PSI]
- Max output pressure: 20 to 150 bar [290 to 2175 PSI]
- Flow to trailer brakes: 50 l/min [13 gpm]
- Throughput (supply to auxiliaries): 200 l/min [53 gpm]
- Braking ratio: Various settings programmable with electro-hydraulic version.



VFR-0HX



VFR-0EX

## 5 | Italian Trailer Brake Valve

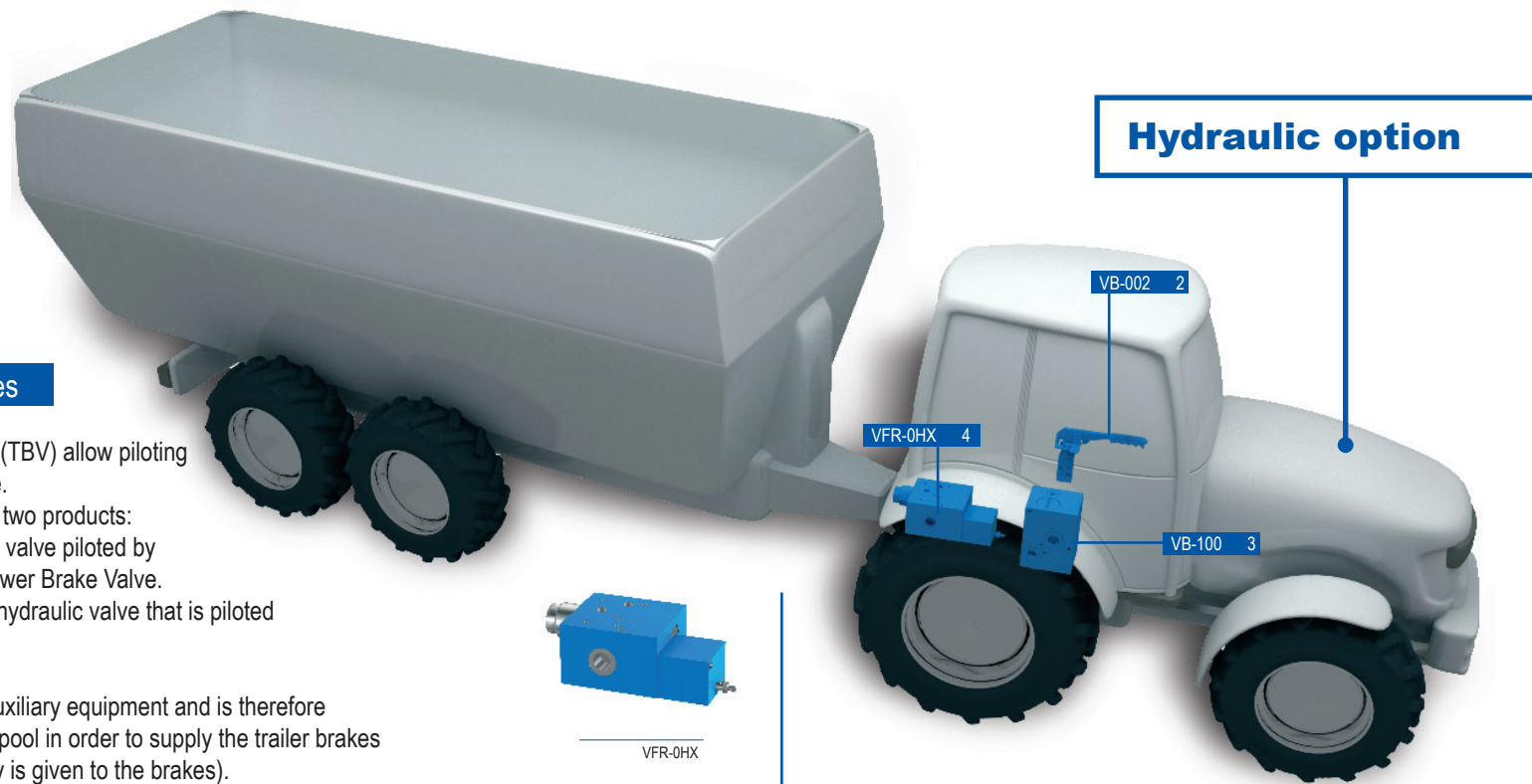
The perfect module to comply with the Italian legislation:

- Parking/emergency brake (0-10 bar [0-145 PSI]).
- Free wheel (10-15 bar [145-217 PSI]).
- Trailer service brake (15-150 bar [217-2175 PSI]).

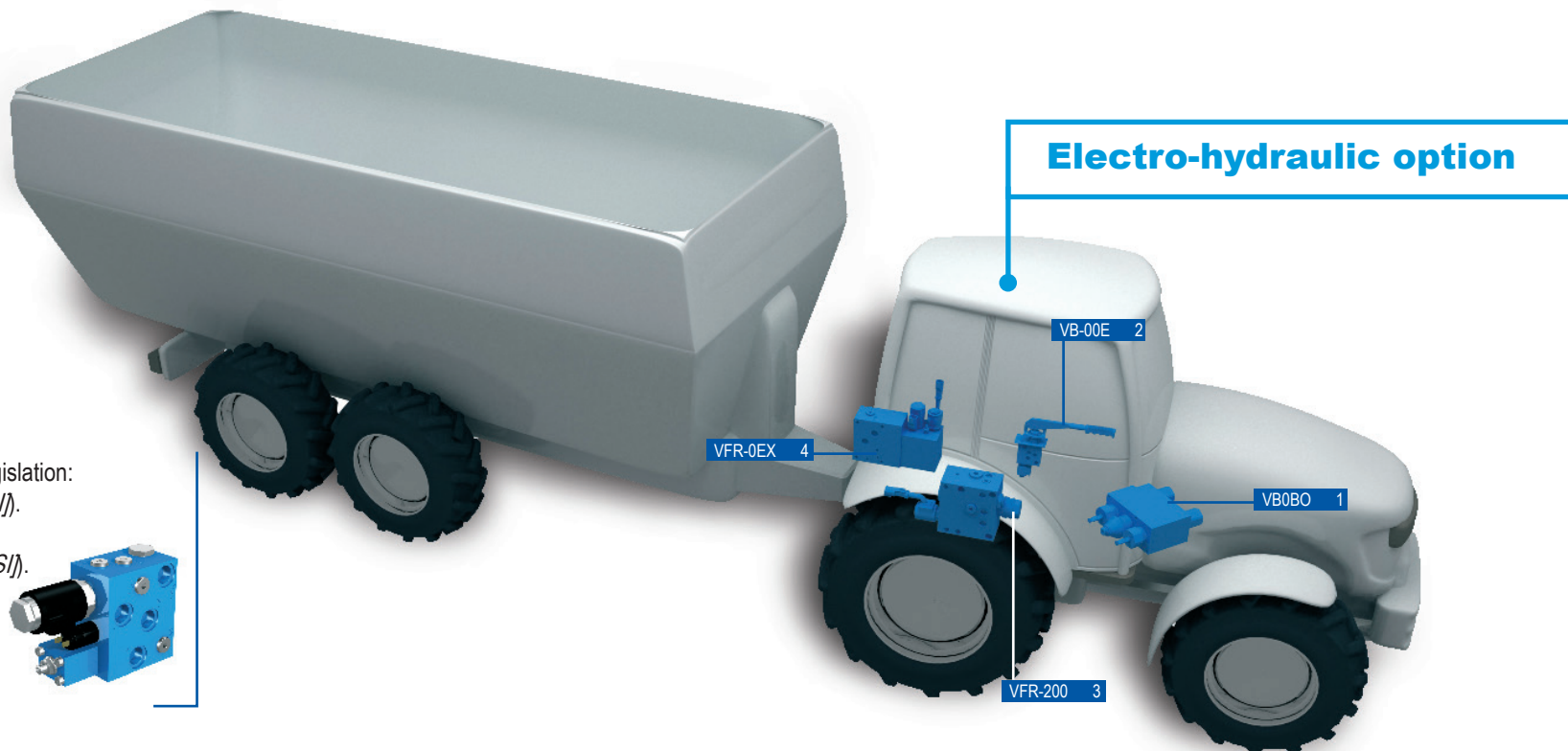
Comes as a stand-alone item.



### Hydraulic option



### Electro-hydraulic option





Ask for technical support  
send your braking circuit request

Fax : +389 (0)4 5192 234 e-mail : info-slovenia@poclain-hydraulics.com

COMPANY INFORMATION

A1	Company Name .....	Contact and title .....
A2	Address .....	Telephone .....

COMMERCIAL INFORMATION

B1	Type of machine .....	Name, model .....
B2	Estimated annual production .....	
B3	Estimated prototype date    __ / __ / __	Estimated date of production    __ / __ / __
B4	Type of business <input type="checkbox"/> New application <input type="checkbox"/> Replacement : current supplier .....	Product P/N .....

VEHICLE SPECIFICATION

C1	Countries of use .....	Braking standards & regulations .....
C2	Maximum speed    km/h <i>mph</i> .....	
C3	Empty weight Front    kg <i>lbs</i> .....	Empty weight Rear    kg <i>lbs</i> .....
	Max. weight Front    kg <i>lbs</i> .....	Max. weight Rear    kg <i>lbs</i> .....

HYDRAULIC BRAKE CIRCUIT SPECIFICATION

Please attach your hydraulic circuit diagram of the braking system and all drawings available and useful to the installation.

D1	Service Brake <input type="checkbox"/> Single-circuit .....	Maximum service brake pressure    bar <i>psi</i> .....
	<input type="checkbox"/> Dual-circuit .....	
D2	Parking Brake <input type="checkbox"/> On-Off valve .....	Maximum parking brake pressure    bar <i>psi</i> .....
	<input type="checkbox"/> Modulating valve .....	
	<input type="checkbox"/> Without .....	
D3	Trailer Brake <input type="checkbox"/> Hydraulic .....	Maximum parking brake pressure    bar <i>psi</i> .....
	<input type="checkbox"/> Electro-hydraulic .....	
D4	ACV (*) <input type="checkbox"/> No <input type="checkbox"/> Yes .....	Cut-in / Cut-out pressure bar <i>psi</i> .....
		Load Sensing port required on ACV <input type="checkbox"/> Yes <input type="checkbox"/> No
D5	Pump flow    l/min <i>gpm</i> - Low idle .....	- High idle .....
D6	Pump speed    tr/min <i>rpm</i> - Low idle .....	- High idle .....
	Pump displacement    cm <sup>3</sup> <i>in<sup>3</sup></i> .....	
D7	Available pressure from pump or pump pressure relief valve    bar <i>psi</i> .....	
D8	Other components supplied by the same pump .....	Required auxiliary flow    l/min .....
	<input type="checkbox"/> Steering <input type="checkbox"/> Auxiliaries (type of component) .....	Required priority: <input type="checkbox"/> Priority brakes
		<input type="checkbox"/> Priority steering
D9	Accumulator calculation requested .....	<input type="checkbox"/> Yes <input type="checkbox"/> No
D10	Total service brake actuation volume .....	<input type="checkbox"/> Front axle .....
	requirements per braked axle cm <sup>3</sup> <i>in<sup>3</sup></i> .....	<input type="checkbox"/> Rear axle .....

REMARKS

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\* ACV: Accumulator Charging Valve



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Tractor and Trailer  
Brake Valves

Hydraulic and Electro-Hydraulic Brake Systems



Tractor

Heavily implied in the Power Brake Valve market, Poclain Hydraulics is involved in the development of future braking needs for agricultural tractors, such as products to fulfil the requirements of the upcoming EU Directive regarding: Tractor and trailers designed for speeds up to 40 km/h.

Advantages of Power Brake Valves are numerous  
when compared to air braking system:

- No need for an additional supply source (air compressor). Valves are fed by the hydraulic source on the tractor.
- Hydraulic accumulators are smaller than air reservoirs.
- Faster response time.
- True pedal feedback.
- Fewer risks of system contamination. No need for additional filters.

Hydraulic brake systems

The underlying concept of Poclain Hydraulics braking systems can be adapted to handle your specific braking requirements.

