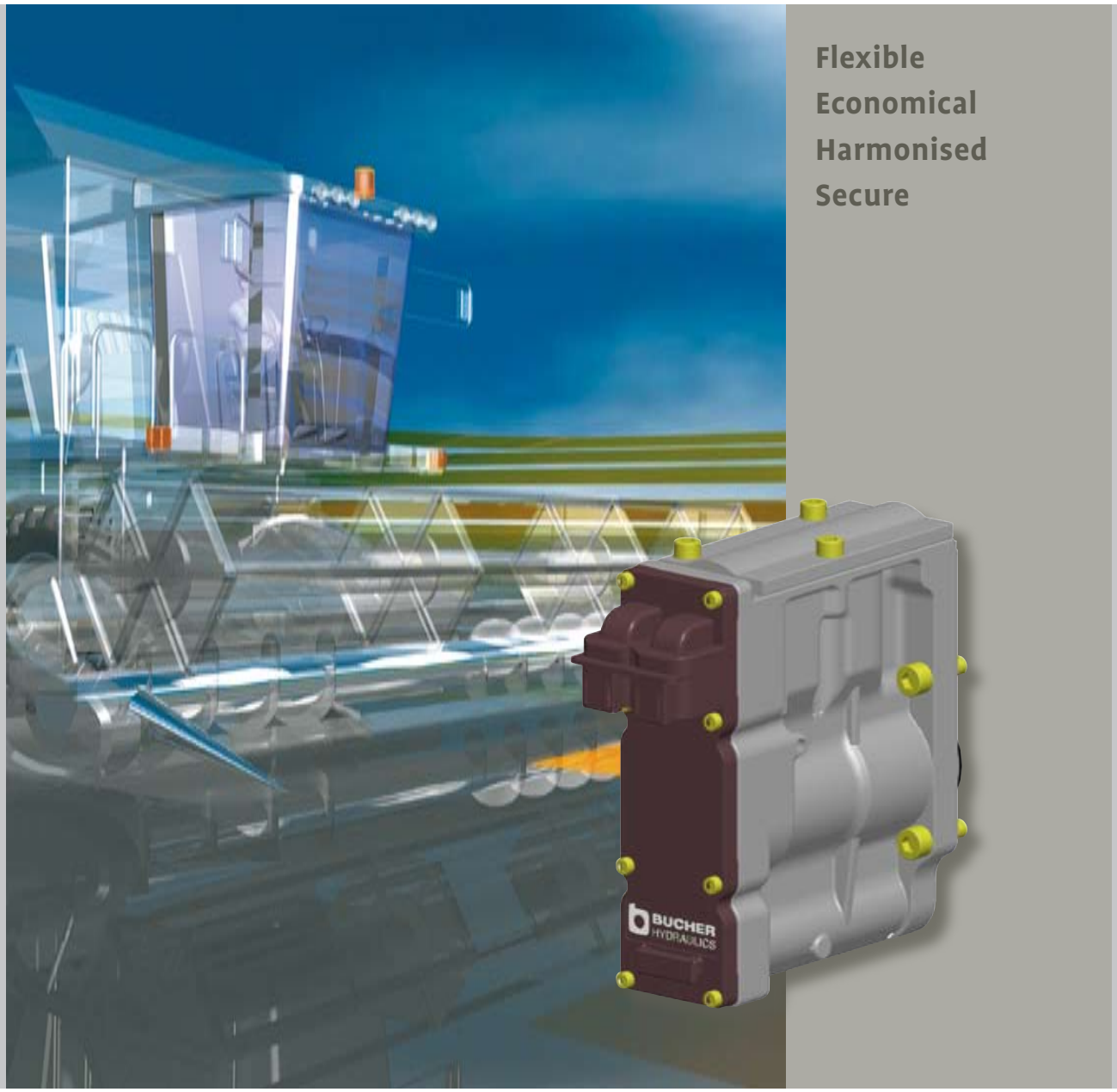
BUCHER HYDRAULICS

The LVS Directional Valve with Digital Pilot Control

A New Generation

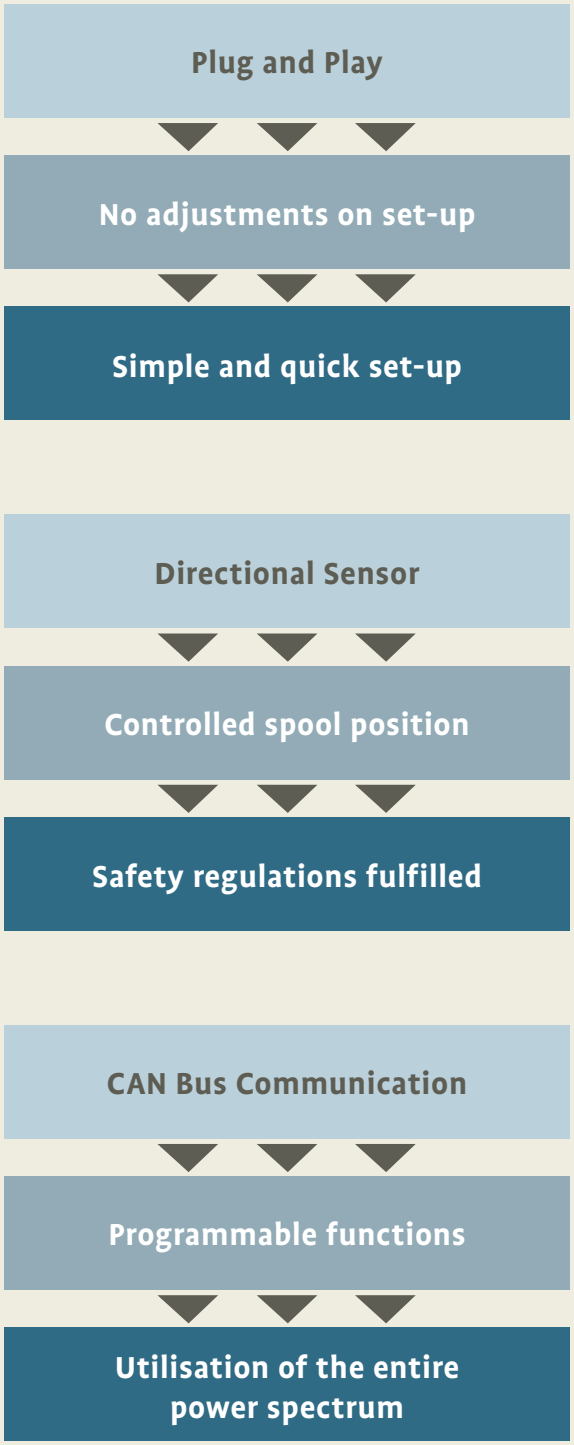


Flexible
Economical
Harmonised
Secure

motion and progress

"Harmoniously Combined"

Hydraulics, Sensors, Electronics



Flexible
- Parameters easy to alter
- Configuration aligned to machine
- Simple upgrading

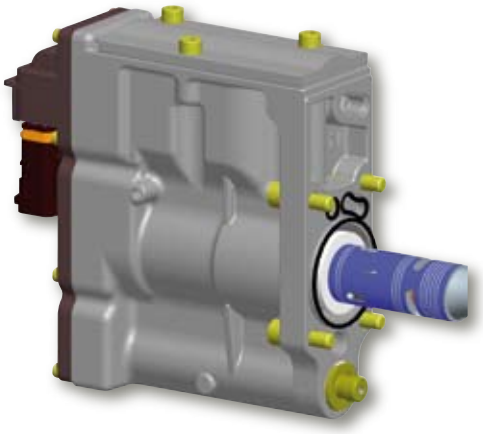
Economical
- No adjustments necessary on set-up
- Reduced wiring costs
- Simple, time-saving diagnosis

Harmonised
- Integrated sensors
- High-performance software
- Application know-how

Secure
- Protection rating IP67 level
- Sensor monitored functions
- Safety regulations fulfilled

“Intelligent Safety”

On-board Electronics



Two 6-pin Deutsch Plugs

Rapid Switch Valves

Electronic Circuit Board

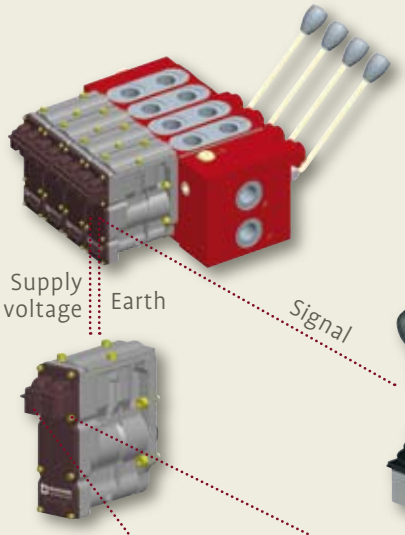
Software (control system)

Directional Sensor

Optional Pressure Sensor

“Basis with Added Value”

Analogue



Plug No. 1

5	6	1
4	3	2

1 Ext. sensor
2 Earth
3 Earth$_{reference}$
4 CAN low
5 CAN high
6 Voltage$_{battery}$

Plug No. 2

5	6	1
4	3	2

1 Directional sensor signal
2 Voltage$_{reference}$ 5V (20mA)
3 Earth
4 CAN low
5 CAN high
6 Voltage$_{battery}$

Setting parameters, diagnosis via terminal or laptop

Functions

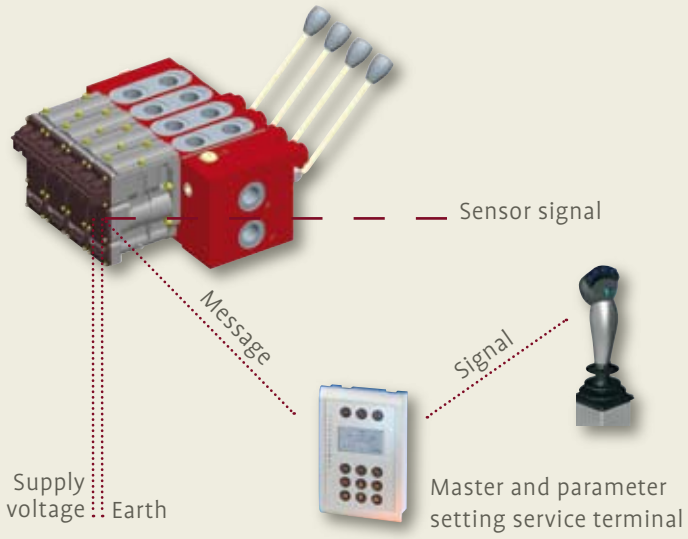
- Analogue communication by cable
- All on-board electronics supplied by separate control cables
- Power supply can be connected in series from pilot to pilot
- No interdependence between individual valves
- Directional sensor signal (if necessary to lead through)
- Control pulse 2,5 ± 2V
- Power consumption 0,6A at 12V

Communication via CAN Bus Interface

- Flow rate limitation
- Flow rate characteristic line
- Alteration of maximum quantity
- Ramp (adjustable start/finish rate)
- Diagnosis possible via CAN Bus

“Advanced Intelligence”

CAN Bus



Functions

- Communication via CAN Bus interface and master module
- CAN Bus and power supply looped from pilot head to pilot head
- Intelligent system control
- Directional sensor signal (if necessary to lead through)
- Control pulse 2,5 ± 2V Analogue or CAN protocol
- Adaptable analogue sensor

Communication via CAN Bus

- Flow rate limitation
- Flow rate characteristic line
- Ramp (adjustable start/finish rate)
- Diagnosis possible via CAN Bus
- System Intelligence

“Focus on Pressures”

Pressure Sensor Functions

Flow Limitation
“Software based pressure control”
If operating pressure exceeds the selected limitation pressure the system switches to its pressure control mode. The flow rate to the load outlet is reduced for as long as it takes for the selected pressure to be maintained at a constant level.

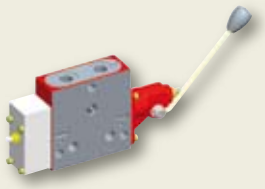
Pressure Control
In the pressure control mode the load quantity is reduced in accordance with a pre-set characteristic line whenever the pressure rises.

Kick-out
Once the pre-set pressure is reached the spool returns to its neutral position.

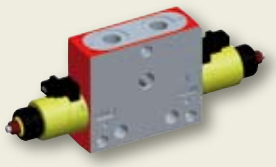
“Mature Technology”

LVS Directional Valves

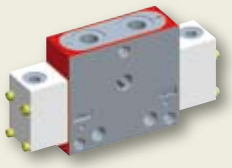
Manually operated



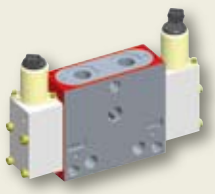
Direct solenoid actuation



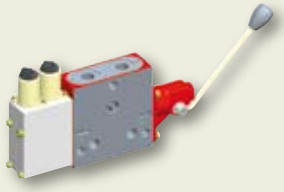
Hydraulically pilot operated



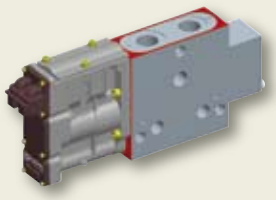
Two-stage electro-hydraulically operated



Combined with additional manual actuation



On-board electronics



- Downstream pressure compensation
- Service port relief
- Make-up function
- 2 flow control functions
- Tank edge apportioning
- Additional manual actuation

System functions

- Suitable for all pump types
- Pressure compensating function
- Priority function

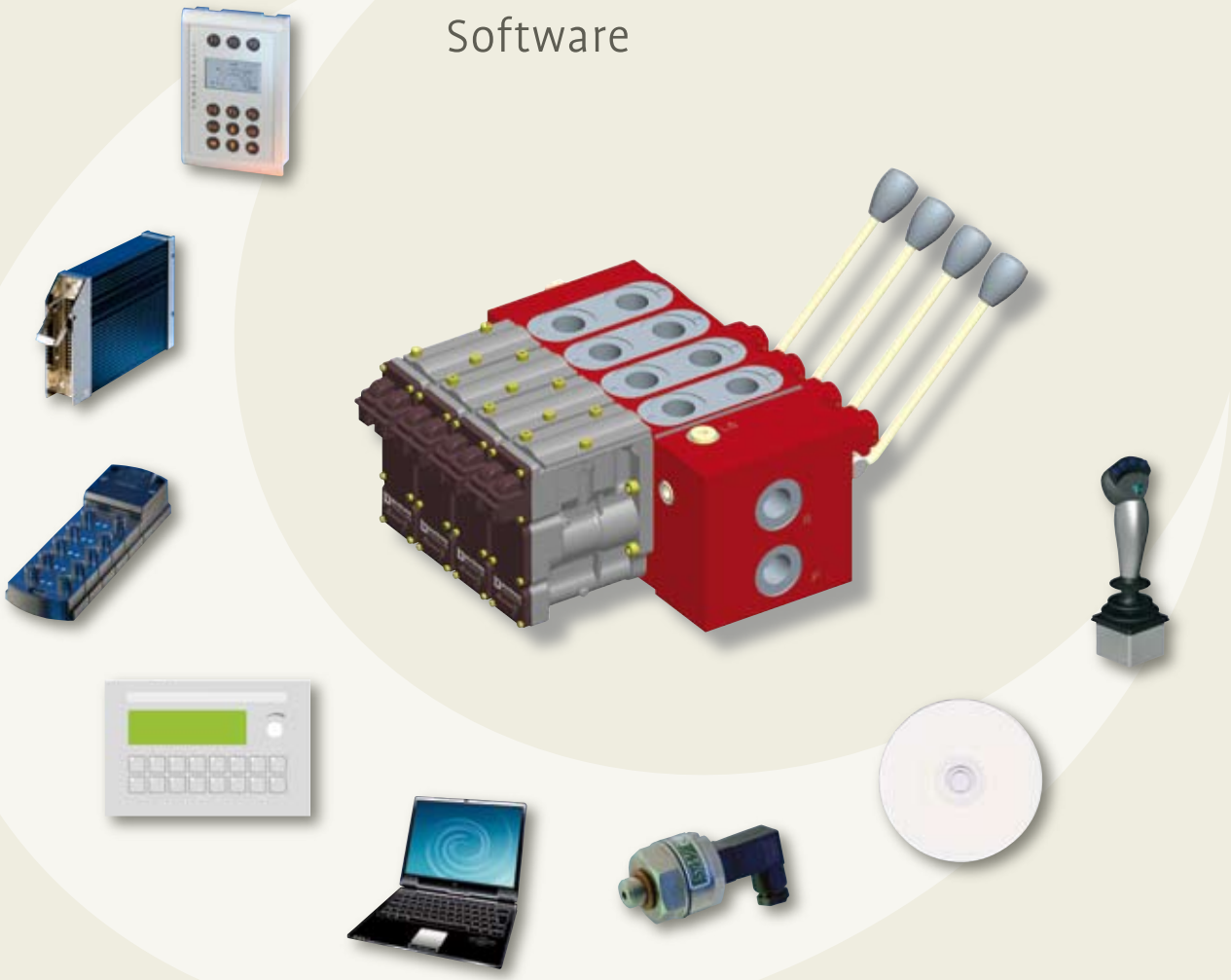
P_{input}	bar	350
P_{load}	bar	400
Maximum Q_{closed}	l/min	260
Q_{tank}	l/min	300
Maximum Q_{load}	l/min	180
Spool flow rating	l/min	16, 25, 40, 63, 80, 100, 125, 150, 180

BUCHER HYDRAULICS

ICS by Bucher Hydraulics

Intelligent Coordinated System

Hydraulic Components
Electronic Components
Joysticks
Terminals
Software



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