Solutions from NEM ...

... for Construction Machinery
1 - 8 Ton excavators

Hydraulic integrated circuits
XA12 series: 5 L/min / 50 bar
Installation: In-line
Quick start / Smooth stop; Main control valve (MCV) pilot pressure dynamic management

Selector valves
XA series: 10 L/min / 50 bar
Installation: In line
Switching of 2 or 4 pilot lines (6 or 8 ways), with Internal / External drain

Joystick feeding units
XA12 series: 20 L/min / 350 bar
Installation: In-line
Pressure reducing /relieving for feeding pilot pressure lines

Hydraulic integrated circuits
XA12 series: 5 L/min / 210 bar
Controlled pressure 30 bar
Installation: In-line / Customizable
Piloting main control valves auxiliary sections

Directional control valves
NVD2 series: 50 L/min / 350 bar / for fix and LS pump
Electro proportional control; multifunctional operation; Flow Sensing concept
Controlled functions: auxiliary attachments

Load lowering control valves (ISO 8643)
Y50 / Y10 / Y15 series: 40 - 180 L/min / 420 bar
Installation: In line / Flanged
Boom and positioning cylinders

Counterbalance valves
H30; H50 series: 40 / 70 L/min / 350 bar / p.r. 9,5:1
Installation: In-line
Blade cylinders

Priority flow regulator with electric activation
6F3 series: 100 - 400 L/min / 350 bar
Reg. flow max. 85 - 300 L/min
Single and double inlet pumps (P ports)
Auxiliary tools: breakers, cutter heads, crusher buckets

Hydraulic integrated circuits
XA12 / 7423... series: 30 L/min / 350 bar
Installation: In line / Customizable
Extendable undercarriage control
### Solutions for Construction Machinery

#### 9 - 20 Ton excavators

**Joystick feeding units**  
XA12 series: 20 L/min / 350 bar  
Installation: In-line  
Pressure reducing / relieving for feeding pilot pressure lines

**Hydraulic integrated circuits**  
XA12 series: 5 L/min / 210 bar  
Controlled pressure 30 bar  
Installation: In-line / Customizable  
Piloting main control valves auxiliary sections

**Selector valves**  
XA series: 10 L/min / 50 bar  
Installation: In line  
Switching of 2 or 4 pilot lines (6 or 8 ways), with Internal / External drain

**Load lowering control valves (ISO 8643)**  
Y10 / Y15 / Y25 series: 75 - 400 L/min / 420 bar  
Installation: Flanged from 1/2" to 1-1/4" SAE 6000 psi  
Boom and positioning cylinders

**Priority flow regulator with electric activation**  
6F3 series: 100 - 400 L/min / 350 bar  
Reg. flow max. 85 - 300 L/min  
Single and double inlet pumps (P ports)  
Auxiliary tools: breakers, cutter heads, crusher buckets

### Wheel excavators

**Joystick feeding units**  
XA12 series: 20 L/min / 350 bar  
Installation: In-line  
Pressure reducing / relieving for feeding pilot pressure lines

**Hydraulic integrated circuits**  
XA12 series: 5 L/min / 210 bar  
Controlled pressure 30 bar  
Installation: In-line / Customizable  
Piloting main control valves auxiliary sections

**Selector valves**  
XA series: 10 L/min / 50 bar  
Installation: In line  
Switching of 2 or 4 pilot lines (6 or 8 ways), with Internal / External drain

**Load lowering control valves (ISO 8643)**  
Y10 / Y15 / Y25 series: 75 - 400 L/min / 420 bar  
Installation: Flanged from 1/2" to 1-1/4" SAE 6000 psi  
Boom and positioning cylinders

**Counterbalance valves**  
H54 / H10 series: 70 - 110 L/min / 410 bar / p.r. 9:1  
Installation: Flanged  
Blade

**Priority flow regulator with electric activation**  
6F3 series: 100 - 400 L/min / 350 bar  
Reg. flow max. 85 - 300 L/min  
Single and double inlet pumps (P ports)  
Auxiliary tools: breakers, cutter heads, crusher buckets
**Telescopic handlers**

- **Counterbalance valves**
  - H15 series: 180 L/min / 350 bar
  - Installation: Flanged / In-line
  - Back pressure compensated; damped piloting; quick response time (VIP02 patented)

- **Counterbalance valves**
  - H10 / H15 series: 110-180 L/min / 410 bar
  - Installation: Flanged / In-line
  - Back pressure compensated; damped piloting; quick response time (VIP02 patented)

- **Load lowering control valves**
  - Y15 series: 180 L/min / 420 bar
  - Installation: Flanged / In-line
  - With and without embedded suspension systems

**Telescopic wheel loaders**

- **Counterbalance valves**
  - H15 series: 180 L/min / 350 bar
  - Installation: Flanged / In-line
  - Back pressure compensated; damped piloting; quick response time (VIP02 patented)

- **Counterbalance valves**
  - H10 / H15 series: 110-180 L/min / 410 bar
  - Installation: Flanged / In-line
  - Back pressure compensated; damped piloting; quick response time (VIP02 patented)

- **Load lowering control valves**
  - Y15 series: 180 L/min / 420 bar
  - Installation: Flanged / In-line
  - With and without embedded suspension systems

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- **Hydraulic integrated circuits**
  - XA series: 60 L/min / 350 bar
  - Installation: Flanged / Customizable
  - Rear axles lock

- **Counterbalance valves**
  - H50 series: 70 L/min / 350 bar / p.r. 9.5:1
  - Installation: In-line
  - Self-leveling cylinders / Lifting force control

- **Counterbalance valves**
  - H50 series: 70 L/min / 350 bar / p.r. 4:1
  - Installation: Flanged 40x48, 20x55
  - Outriggers and frame levelling cylinders; low pressure drop characteristics
**Solutions for Construction Machinery**

### Skid steer loader

#### Counterbalance valves (ISO 8643)
- H10 series: 110 L/min / 350 bar / p.r.4:1
- Installation: In-line
- Boom and bucket cylinders; back pressure compensated

#### Hydraulic integrated circuits
- XA12 series: 5 L/min / 210 bar
- Controlled pressure 30 bar
- Installation: In-line / Customizable
- Piloting main control valves auxiliary sections

#### Joystick feeding units
- XA01 series: 40 L/min / 350 bar
- Pressure relieving for feeding pilot pressure lines

### Wheel loaders

#### Counterbalance valves
- H10 series: 110 L/min / 410 bar
- Installation: Flanged / In-line
- Back pressure compensated; damped piloting; quick response time (VIP02 patented)

#### Hydraulic integrated circuits
- XA series: 60 L/min / 350 bar
- Installation: Customizable
- Boom suspension systems

#### Load lowering control valves
- Y10 series: 75 L/min / 350 bar
- Installation: In-line
- Joystick operated; fine metering plungers; with and without electric by-pass

#### Counterbalance valves
- H50 - H10 series: 70-110 L/min / 350 bar
- Installation: Flanged / In-line
- Back pressure compensated; with electric by-pass; damped piloting; quick response time (VIP02 patented)
Backhoe loaders

Counterbalance valves (for manual operated DCVs)
H15 series: 180 L/min / 410 bar / p.r. 8:1 - 13:1
Installation: In-line
Boom and arm cylinders; back pressure compensated; damped piloting; quick response time (VIP02 patented)

Load lowering control valves (ISO 8843)
Y15 series: 180 L/min / 420 bar
Installation: In-line
Boom and arm cylinders; joystick operated; fine metering plungers

Pilot operated check valves
6D series: 60 L/min / 350 bar
Installation: Flanged / In-line
Outrigger and crossbar cylinders; single and double acting; hardened seats on request

Hydraulic integrated circuits
XA series: 60 L/min / 350 bar
Installation: Customizable
Boom suspension systems

Counterbalance valves
H10 / H15 series: 110-180 L/min / 410 bar
Installation: Flanged / In-line
Back pressure compensated; damped piloting; quick response time (VIP02 patented)

Load lowering control valves (ISO 8843)
Y10 series: 75 L/min / 350 bar
Installation: In-line
Joystick operated; fine metering plungers; with and without electric by-pass

Counterbalance valves
H50 / H10 series: 70-110 L/min / 350 bar
Installation: Flanged / In-line
With electric by-pass; damped piloting; quick response time (VIP02 patented)

Drilling

Counterbalance valves
H50 series: 70 L/min / 350 bar / p.r. 4:1
Positioning cylinders

Counterbalance valves
H25 series: 350 L/min / 420 bar / p.r. 13:1
Installation: Flanged 3/4" - 1" SAE6000
Winch motors; with brake releasing port (C3)

Directional control valves
NV02 series: 50 L/min / 350 bar / for fix and LS pump
Electro proportional control; multifunctional operation; Flow Sensing concept
Controlled functions: main and auxiliary function

Joystick feeding units
XA12 series: 20 L/min / 350 bar
Installation: In-line
Pressure reducing /relieving for feeding pilot pressure lines

Motion control valves
XA03 series: 120 L/min / 210 bar
Installation: In-line
Slewng motor
Concrete pumps

**Counterbalance valves**

H50 series: 70 L/min / 350 bar / p.r. 1.6:1-2.6:1 (PBO)
Installation: Flanged 40 x 48
Boom cylinders

H53 series: 70 L/min / 420 bar / p.r. 2.5:1 (PBO)
Installation: Banjo bolt M20x1.5 / M22x1.5
Boom cylinders; fine control plungers available on request

H50 series: 70 L/min / 350 bar / p.r. 1.6:1-2.6:1 (PBO)
Installation: Flanged 40 x 48
Boom cylinders

LHD-Y series

NEM’s range of load lowering control valves (ISO 8643)

NEM’s joystick operated load lowering control valves, the Y series (EN474; ISO 8643), are definitely a step forward in matching the directional valve spool metering characteristics without any compromise. Extended plunger strokes and accurate fine metering allow to fix their opening pilot pressure closest to the joystick’s starting position. This way the operators can operate safely without feeling any difference in comparison with the standard versions without load lowering control valves.

VIP-02

Valve to Intercept Pilot signals
European patent - EP2342253

When the machine’s boom lowering stability is an issue, NEM can provide a patented pilot damping device that ensures the stability of hydraulic lifting equipment during lowering manoeuvres, especially on those applications characterized by load sensing flow control systems or by variable displacement pumps.

This device (VIP-02) allows a stable piloting and quick opening in order to reach a stable performance and a fast response time regardless of oil viscosity.

U-valves concept

Energy saving & electrification from NEM motion control valves

Energy saving and electronics Vs reliability, a challenge that NEM engineers are ready to play by the U-valves program.

The U-valves program promotes functional principles that: bring the gravity to drive load lowering operations and the motion control valves electrification.

Through the U-valves program NEM’s engineers support our customers in developing innovative energy saving solutions.

NVD2

New: flow sensing control valve with on-off actuation

NVD2 is a highly innovative directional control valve, its technology (patented) impressively joins constructive simplicity and high functional performance.

The flow sensing working principle which characterizes the NVD2 valves makes the flow control independent from simultaneous loads with a great stability.

In addition to the typical electro-proportional controls, is now available an On/Off actuated version, which allows to simplify the electric control without compromising the Flow Sensing multifunctional working features.
NEM, founded in 1995, is a valve manufacturer specialising in the development of hydraulic solutions for mobile, agricultural and industrial applications.

Our goal is to be a reliable partner, providing our customers a state of the art service, delivered by highly qualified technical staff, to achieve customized solutions.

At NEM we are aware that the future of the hydraulic industry is in system engineering. Therefore we are developing and manufacturing top quality products, which can be fully integrated into many different applications. NEM components ensure the highest level of performance and safety in any application; this, together with our focus on innovation, has gained us the trust and appreciation of leading machine manufacturers worldwide.

NEM’s products can count on a wide range of options, from cartridge valves and hydraulic integrated circuits to Parts-In-Body counterbalance valves and flow control valves.

All our products can be selected from our catalogues or customised by NEM’s application engineers to develop a selection of valves specifically designed for different applications in order to respond to any of our customer needs.

Last but not least, NEM can also provide its own range of compact directional control valves, rated for metered flows up to 70 L/min.

All these products, together with our innovative solutions for load and flow sensing control valves demonstrate our attitude towards engineering fluid power solutions.

### Products to fit any of your needs

Ideas to enhance your performance

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