

## BIFFI HLA/HLDA, HLAS/HLDAS HYDRAULIC ACTUATORS

Double acting and single acting hydraulic linear actuators for on-off and regulating service



### FEATURES

- Electroless nickel plated and polished cylinder for corrosion resistance and minimal friction.
- Hard chromium plated and polished piston rod in stainless steel for corrosion resistance and minimum friction.
- Piston rod support bushing in bronze with sintered PTFE provides minimal friction and extended service life.
- HLAS totally enclosed spring cartridge ensures personnel safety during assembly or disassembly.
- Compact design available to allow space footprint reduction without reducing requested thrust value.
- Fabricated carbon steel adapter spool with accessories provision designed specifically for adaptation to any type of valve.
- Accept an extensive range of accessories:
  - Complete control panel
  - Emergency tank
  - Manual hand pump
  - PST device
  - Regulating device (ECU1000)
- Special coatings for offshore or corrosive environments.
- Special versions with built-in dump valve and damper for 'quick spring operation'.
- Double cylinder available to increase output capability.
- Housing in painted carbon steel.
- Spool in painted carbon steel or unpainted SS316 as option.

### GENERAL APPLICATION

HLA/HLDA, HLAS/HLDAS hydraulic actuators are designed for the control of gate, globe and all other linear valves.

### APPROVALS

Safety integrity level: IEC61508 -1÷7 2010  
Suitable for use in SIL 3 applications

Area classifications: (ATEX) II2GD 135 (T4)

Enclosure standard: (IEC60529)-IP67M ANSI/NEMA250 NEMA 4-4X-6

Pressure equipment directive: PED 97/23/EC

Machinery directive: 2006/42/EC

### TECHNICAL DATA

Design pressure: 100 barg

Supply medium: Mineral oil or synthetic fluids

Output thrust:

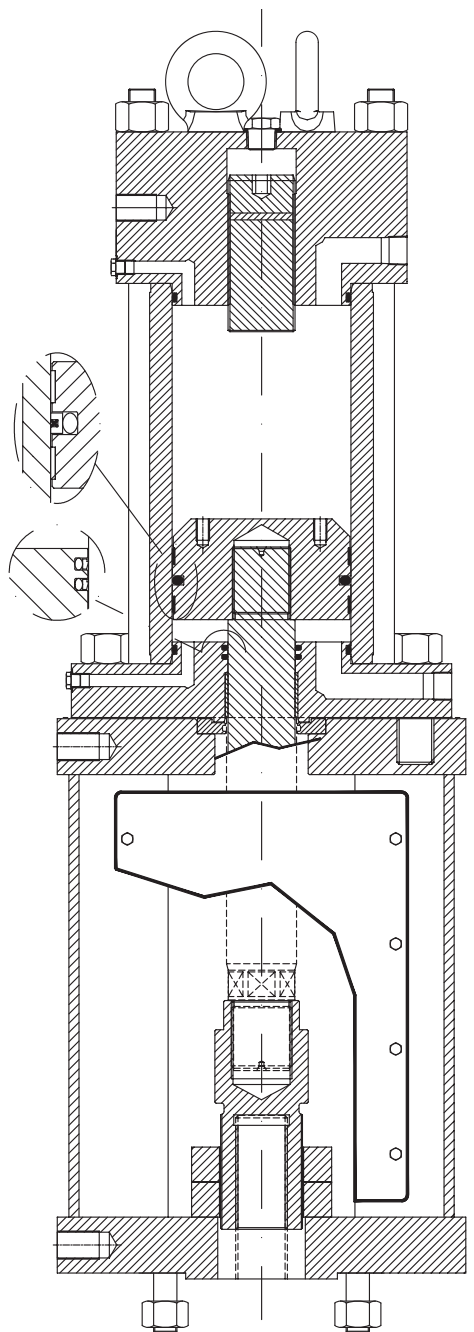
HLA/HLDA: Double acting thrust up to 8,000,000 N

HLAS/HLDAS: Spring ending thrust up to 350,000 N  
Spring starting thrust 530,000 N

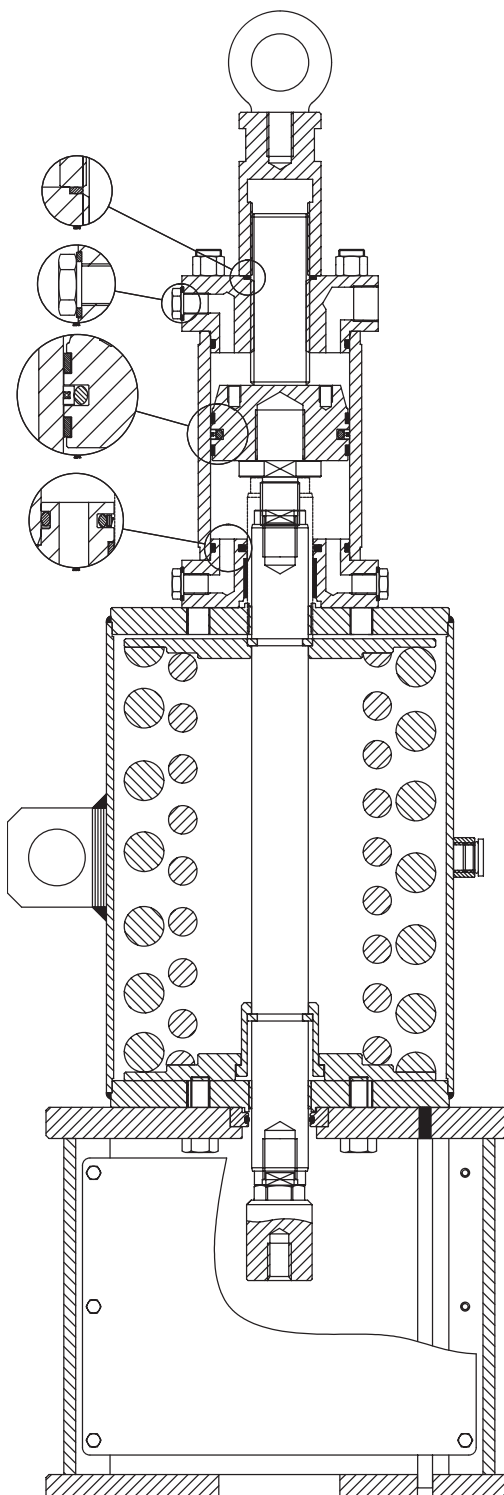
Ambient temperature: From -60°C to 100°C

## SECTIONAL DRAWINGS

HLA DOUBLE ACTING



HLAS SPRING RETURN



**Note:** dimensions are according to requested valve stroke and thrust.

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### APPLICATIONS

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#### HIGH THRUST CAPABILITY SOLUTION



#### COMPACT DESIGN LINEAR ACTUATOR



## BIFFI HLA/HLDA, HLAS/HLDAS HYDRAULIC ACTUATORS

### SELECTION GUIDE

#### HYDRAULIC DOUBLE ACTING ACTUATOR

| Example: | HLA                       | 250K | 135 | 300 | MHP |
|----------|---------------------------|------|-----|-----|-----|
| HLA      | Actuator series           |      |     |     |     |
| 250K     | Max. allowable thrust (N) |      |     |     |     |
| 135      | Cylinder diameter (mm)    |      |     |     |     |
| 300      | Stroke (mm)               |      |     |     |     |
| MHP      | Manual override           |      |     |     |     |

#### HYDRAULIC DOUBLE CYLINDER DOUBLE ACTING ACTUATOR

| Example: | HLDA                      | 250K | 135 | 300 | MHP |
|----------|---------------------------|------|-----|-----|-----|
| HLDA     | Actuator series           |      |     |     |     |
| 250K     | Max. allowable thrust (N) |      |     |     |     |
| 135      | Cylinder diameter (mm)    |      |     |     |     |
| 300      | Stroke (mm)               |      |     |     |     |
| MHP      | Manual override           |      |     |     |     |

#### HYDRAULIC SPRING RETURN ACTUATOR

| Example: | HLAS                      | 250K | 135 | 100K | CL | 300 | MHP |
|----------|---------------------------|------|-----|------|----|-----|-----|
| HLAS     | Actuator series           |      |     |      |    |     |     |
| 250K     | Max. allowable thrust (N) |      |     |      |    |     |     |
| 135      | Cylinder diameter (mm)    |      |     |      |    |     |     |
| 100K     | Spring ending thrust (N)  |      |     |      |    |     |     |
| CL       | Spring action             |      |     |      |    |     |     |
| 300      | Stroke (mm)               |      |     |      |    |     |     |
| MHP      | Manual override           |      |     |      |    |     |     |

#### HYDRAULIC COMPACT SPRING RETURN ACTUATOR

| Example: | HLASC                     | 250K | 135 | 100K | CL | 300 | MHP |
|----------|---------------------------|------|-----|------|----|-----|-----|
| HLASC    | Actuator series           |      |     |      |    |     |     |
| 250K     | Max. allowable thrust (N) |      |     |      |    |     |     |
| 135      | Cylinder diameter (mm)    |      |     |      |    |     |     |
| 100K     | Spring ending thrust (N)  |      |     |      |    |     |     |
| CL       | Spring action             |      |     |      |    |     |     |
| 300      | Stroke (mm)               |      |     |      |    |     |     |
| MHP      | Manual override           |      |     |      |    |     |     |

#### HYDRAULIC DOUBLE CYLINDER SPRING RETURN ACTUATOR

| Example: | HLDAS                     | 250K | 135 | 300 | MHP |
|----------|---------------------------|------|-----|-----|-----|
| HLDAS    | Actuator series           |      |     |     |     |
| 250K     | Max. allowable thrust (N) |      |     |     |     |
| 135      | Cylinder diameter (mm)    |      |     |     |     |
| 300      | Stroke (mm)               |      |     |     |     |
| MHP      | Manual override           |      |     |     |     |



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