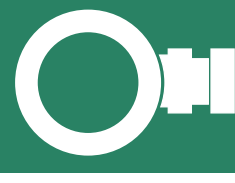


Valve actuator  
**HyRAV®Flex**



Reliable even  
under extreme  
conditions

**ECKART®**  
HYDRAULIK · PNEUMATIK

[eckart-hydraulics.com](http://eckart-hydraulics.com)

# “Precision, wear resistance and robustness. That distinguishes us - for 50 years.”

Markus Eckart, Managing Director

## Applications

### Power

Power plants (coal, gas, oil,nuclear)  
Hydroelectric- , Geothermal- ,  
Solar thermal power plants  
Biogas power plants



### Oil & gas

Exploration, offshore  
Refineries  
Pipelines  
Tank farms



### Water

Steel hydraulics construction  
Water treatment plants  
Sewage treatment plants  
Drinking water distribution



### Industrial & special solutions

Shipbuilding & submarines  
Chemical / pharmaceutical industry  
Food industry  
Air conditioning  
Steel mills



## HyRAV®Flex Valve actuator



# More powerful, compact, safer

The hydraulic valve actuators HyRAV of Eckart, form a full series of double-acting actuators or spring return actuators according to the principle of helical gears.

The compact and concentric design of the valve has proven to be excellent in practice and provides the customer with space savings as well as reliability.



single acting



double acting

### Advantages at a glance:

- 15 actuator sizes
- Torques up to 250.000 Nm at 210 bar
- By concentric design are no radial forces transmitted to the valve
- Optimum cushioning protects the valve and actuator
- Easy installation and adjustment to each valve
- Maintenance free, no lubrication required
- Suitable for on/off, control and failsafe operation
- High repeat accuracy and very simple control of the flow rates
- Extremely trip possible (eg. 90° in 0,2 sec.)
- Robust against extreme environmental conditions
- Durable against vibrations

### Typical applications



Butterfly valve



Ball valve



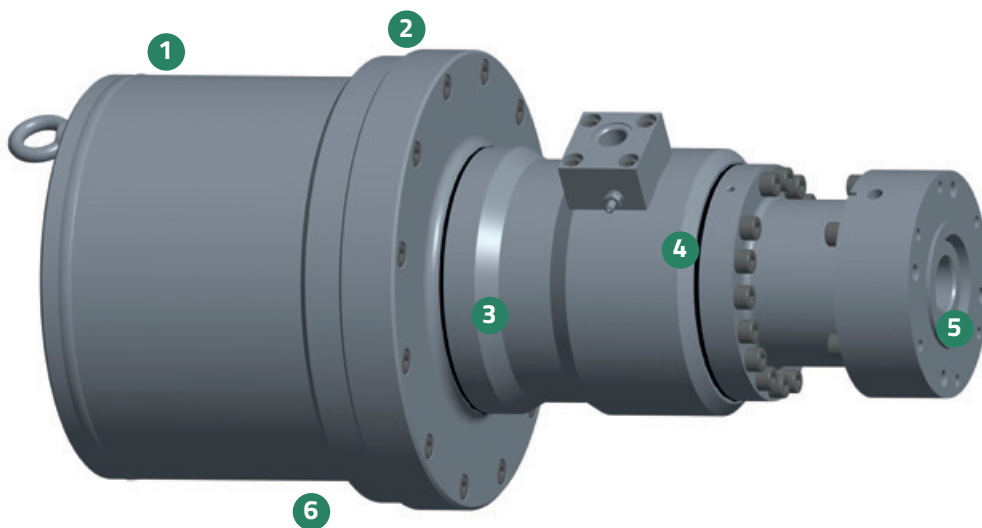
Other valves



Moreover, the HyRAV series can be applied in the most severe conditions, i.e. from high vibrations to severe environmental locations, and further, provides a powerful, safe solution for automation of valves. Additionally, the series is easily adapted to all types of valves, what is a result of the generous design of the hollow shaft and adaptable flange types.

## HyRAV®Flex<sub>+</sub> single acting

up to 30.000 Nm / 210 bar



### 1 from 20 bar economically applicable

- through precise combined helical gears and low friction seals, is the HyRAV flex already from 20 bar economically applicable

### 2 210 bar operating pressure

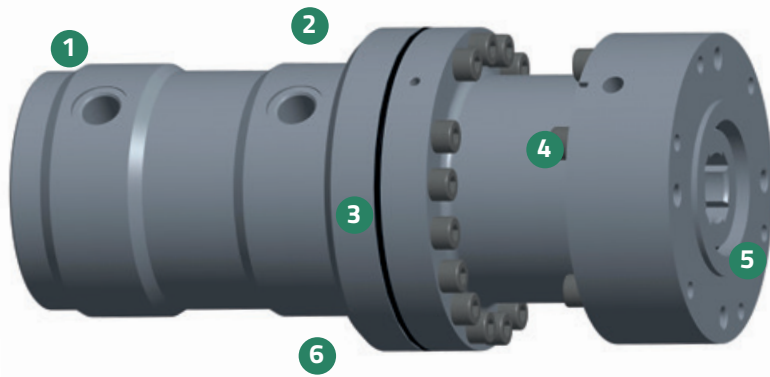
- high performance in a very compact unit resulting in space and cost savings
- increased safety margin

### 3 modern sealing technology

- extended service life of seals
- increased safety, also with regard to the environment
- suitable for most fluids
- all o-rings featuring anti-extrusion back-up rings
- no internal leakages through solid seals enabling the load to be held in any intermediate position



## HyRAV<sup>®</sup>Flex<sub>+</sub> double acting up to 250.000 Nm / 210 bar



### 5 through shaft

- Direct measurement of the position possible

### 6 ... over time

- short delivery times through flexible storage
- individual solutions for your product
- quality assurance according to DIN EN ISO 9001

### 4 wear- resistant moving parts

- long service life of the rotary actuator through extended-period nitriding
- excellent sliding characteristics of the gears

# HyRAV®Flex+ Technical data



single acting

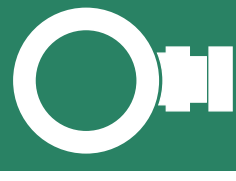


double acting

## Type overview

HyRAV Type	Valve attachment flange EN ISO 5211		Valve attachment flange EN ISO 5211	Hollow shaft with feather keys	Hollow shaft with square	weight double acting
	Standard	Torque [Nm] *		[mm]	[mm]	[kg]
AS000	F10	500	F 07 – F 10 – F 12	max. Ø 28 H9	max. ◇ 22 H11	20
AS001	F12	1000	F 10 – F 12 – F 14	max. Ø 36 H9	max. ◇ 27 H11	30
AS002	F14	2000	F 12 – F 14 – F 16	max. Ø 48 H9	max. ◇ 36 H11	45
AS004	F16	4000	F 14 – F 16 – F 25	max. Ø 60 H9	max. ◇ 46 H11	55
AS006 sa	F25	6000	F 16 – F 25 – F 30	max. Ø 72 H9	max. ◇ 55 H11	550
AS008	F25	8000	F 16 – F 25 – F 30	max. Ø 72 H9	max. ◇ 55 H11	115
AS012	F30	16000	F 25 – F 30 – F 35	max. Ø 85 H9	max. ◇ 70 H11	160
AS016	F30	16000	F 25 – F 30 – F 35	max. Ø 98 H9	max. ◇ 75 H11	200
AS024	F35	24000	F 30 – F 35 – F 40	max. Ø 115 H9	max. ◇ 100 H11	350
AS032	F35	32000	F 30 – F 35 – F 40	max. Ø 130 H9	max. ◇ 115 H11	450
AS063	F40	63000	F 35 – F 40 – F 48	max. Ø 165 H9	max. ◇ 130 H11	580
AS100	F48	100000	F 40 – F 48	max. Ø 200 H9	max. ◇ 165 H11	900
AS125	F48	125000	F 40 – F 48	max. Ø 220 H9	max. ◇ 180 H11	1100
AS185	F60	185000	F 48 – F 60	max. Ø 250 H9	max. ◇ 200 H11	1500
AS250	F60	250000	F 48 – F 60	max. Ø 280 H9	max. ◇ 220 H11	2000

\* Torques are variable and can be adapted to the customer needs.



## HyRAV® Flex<sub>+</sub>Options

As options can be supplied:

- Control boxes
  - mechanically
  - inductive
  - Potentiometer
- manual operation
- Valve blocks
- HPU (power units)

We would be pleased to advise you personally.

## Technical data (standard – others on request)

Valve actuator type	helical gear – double acting or single acting (spring return)
max. allowable operating pressure	210 bar
min. operating pressure required	5 bis 10 bar
Angle of rotation	Quarter turn / 90°
ositioning accuracy	< 0,5° of full scale
Medium	recommended: mineral oil of group HLP/DIN 51524
Ambient temperature	-25° C bis + 70° C
Protection class	IP65
Valve attachment flange	EN ISO 5211
Lifetime	double acting: > 100.000 operations single acting (fail safe): dependent on the desired spring package
Duty rating	S1 – 100%
Operating time range OPEN/CLOSE	0,5 sek. bis 200 sek.
max. time range Fail Safe OPEN/CLOSE	till 0,2 sec. (dependend on the valve actuator size)
Certificates/approvals	ATEX, SIL2, further in processing/planning
Materials	Steel, GGG
Seals	PU / NBR



Your contact for HyRAV products

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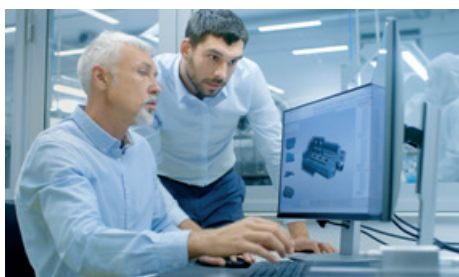
# Our drive is your solution – worldwide



## The Company

Eckart is an innovative and dynamic mechanical engineering company, providing solutions for limited rotatory movements and combined rotary-linear movements. As one of the leading manufacturers worldwide, Eckart develops, designs and manufactures valve actuators, rotary actuators, rotary-linear combinations, linear cylinders and special equipment. With more than 50 years of experience, the name Eckart stands for innovation, reliability and success.

As a family operated company the foundations of our work are a solid commercial activity and partnership cooperation. With competent staff and partners we create customized solutions that help to make business of all sizes and industries to streamline their processes and products and to establish themselves as successful in the market.



## Optimum results are not a matter of luck.

We have a clear concept: products giving the highest benefit. Eckart uses the latest technologies and extremely high standard of performance. Our products are known for their precision, high availability, robustness, capacity of resistance to wear, economic efficiency and high flexibility. Due to the modular design we are in the position to solve customer specific technical problems individually and rationally. From product development, manufacturing, to final product testing Eckart has an integrated production and quality system that is optimized continually.



## Worldwide.

Eckart maintains close relationships with leading companies around the world. To a specialist in customer-oriented solutions, a company needs strong partners. Our recipe for success is „Eckart competence network“, which means we provide quality alliances, which transfer our product potential optimal to our customer needs. Thus, our customers are always advised by „domestic“ partners, who know the exact requirements of each market.

## Product overview



- Rotary actuators
- Valve actuator HyRAV

- Pneumatic actuators
- Linear-rotary actuator and Special



ENGINEERED & MADE IN  
**GERMANY**

Innovation characterizes us

# ECKART®

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