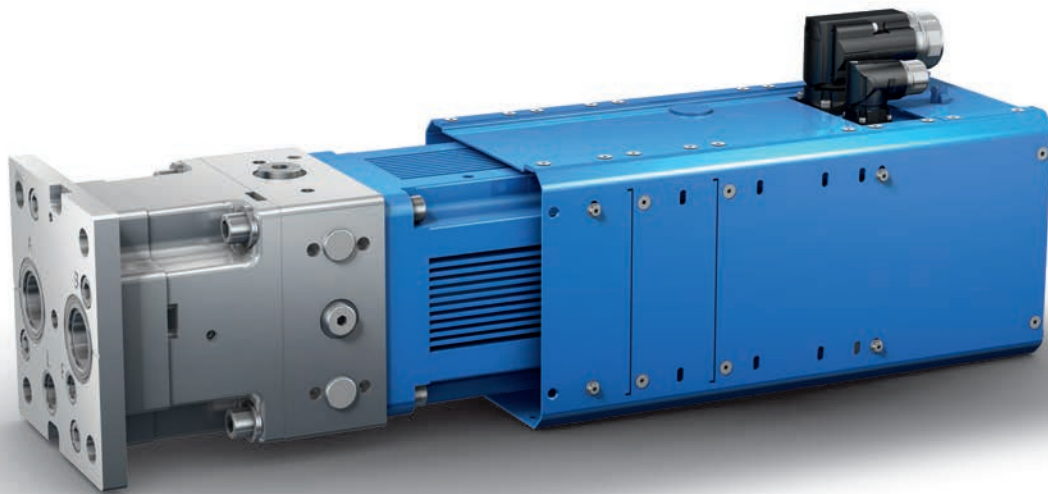


DrivAx IQ4

Variable speed pump drives

Product data sheet



Advantages

- + Energy savings up to 70 %
- + Noise reduction by up to 20 dB(A)
- + Reversible operation
- + Pre-configured motor pump drive
- + Drive unit for self-contained axis

DrivAx servo drives

Efficient drive technology for high productivity

DrivAx servo drives combine the advantages of hydraulics with the advantages of servo drives. The result: energy-efficient drives with low heat and noise emissions and at the same time high robustness, power density and dynamics.

DrivAx servo drives consist of a variable speed pump and a servo motor, which simultaneously serves as drive and control for the actuator.

They are suitable for all linear movements requiring high forces and precision. At the same time, they are highly productive while protecting the environment, climate and resources.

Perfectly adaptable to your requirements, DrivAx servo drives are available in various system configurations:

- Motor pump combination
- Self-contained drives
- Application-specific system solutions

Machine and equipment manufacturer

Why you should rely on DrivAx servo drives?



The allrounder with a modular set-up

DrivAx servo drives supports all common standard interfaces, enabling them to be easily integrated into existing machines. Various pre-configured modules allow optimal dimensioning of the system, precisely matching to your application. Furthermore, the drive can be scaled and synchronized to cover all conceivable force spectra. The allrounder for all applications.



Less is always more – no servo valves required

The drive technology of the future works without a complex infrastructure. DrivAx drives are based on a combination of a servo motor and a variable speed pump. The servo motor drives the system and precisely controls the force, movement, and position of the actuator. Control valves, hydraulic power units and complex piping are no longer required. True to the principle: less is more.



Easily integrated, rapidly enabled

DrivAx drives are compact, optionally self-contained systems and therefore very easy to integrate into machines. A mechanical interface, an electrical connection, and data connections for the sensor system are all that is needed. As there is no need for complex power unit pipings, valve technology cabling, and filtering of the hydraulic fluid, you save a lot of time while designing and commissioning your machine. For lean mechanical engineering without compromise.

DrivAx IPS



2002

DrivAx PSH



2011

DrivAx CLDP



2012

DrivAx CSH



DrivAx PDSC



2014



Operators of machines and plants

Why you should rely on DrivAx servo drives?



Increase productivity, save resources

No proportional valves, but the pump regulates the volume flow and pressure. Only as much electrical energy as the process actually requires is converted into power. Efficiency at its best. And at the same time, electricity costs and CO₂ emissions are reduced. It's not just the environment that benefits.



Intelligent solutions for Industry 4.0

DrivAx servo drives work precisely, with high forces, while paving the way for sustainable, climate-friendly production processes. Intelligent sensors and electronics control, regulate and monitor the drive system, which not only enables high machine productivity but also gives the system diagnostic capability – ready for Condition Monitoring and Predictive Maintenance.



The reliable endurance runner

DrivAx servo drives are compact power packs with a high level of endurance and low maintenance. The actuator is practically wear-free in operation, while proven pump technology and reduced system complexity guarantee long maintenance intervals. Compared to electromechanical solutions, the lifetime is increased by 80%, even in highly demanding operating conditions.



Less oil, good for the environment

DrivAx servo drives only consume as much energy as is currently needed in the process. This not only reduces electricity costs, but also the heat input into the hydraulic medium and the necessary cooling effort are reduced. Hydraulic fluid can be reduced by up to 90%. Green light for clean technology.

DrivAx CLCP



2016

DrivAx RQ4



2021

DrivAx IQ4



2022

DrivAx IQ4 is a hydraulic variable speed drive suitable for all applications with high power density and high dynamics

Consisting of a servomotor and a directly mounted internal gear pump, the DrivAx IQ4 variable speed pump drive combines energy efficiency and environmental cleanliness of electromechanical drives with high power density and robustness of hydraulics at a cost that provides highly attractive return on investment within 1 – 2 years.

Unlike conventional, valve controlled hydraulic systems the DrivAx IQ4 offers power on demand. This means flow and pressure are controlled via the electric motor and the internal gear pump. In the part load range and outside the machine cycle, the system can thereby operate at lower speeds or stop operation at all. Thus, DrivAx IQ4 variable speed pump drives reduce not only noise by up to 20 dB(A), but also energy

consumption by up to 70 percent while minimizing the CO₂ footprint significantly. In addition, the lower average pump speed lowers the oil temperature of the system, minimizing the cost and energy required to cool the hydraulic system.

While operators benefit from reduced total cost of ownership (TCO) by up to 35 percent, hydraulic power units and complex piping are a thing of the past for machine builders. The compact design of Voith DrivAx IQ4 offers easy integration and along with reduced cooling and elimination of most noise containment components, DrivAx IQ4 helps machine builders to maintaining a small machine footprint, while increasing functionality.

Content

Technical data

Size 13 – Air-cooled

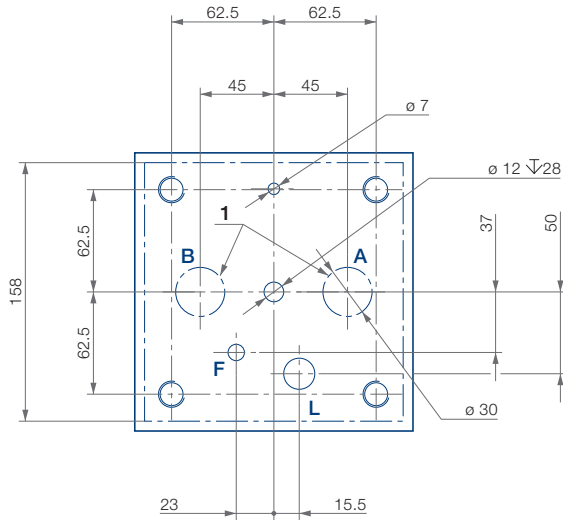
Performance specifications

Size	5	8	13	20
Maximum flow	24 l/min	38 l/min	57 l/min	83 l/min
Maximum pressure ports A and B (1 500 rpm)	345 bar	345 bar	345 bar	320 bar
Maximum pressure ports A and B (n_{\max})	230 bar	230 bar	230 bar	230 bar
Maximum housing pressure	up to 11 bar (absolute)			
Pump version	Internal gear pump, 4-quadrant operation, variable speed			
Motor version	Brushless servo motor, air or liquid cooled			
Temperature range	Ambient: -20 to +60 °C Fluid: -20 to +80 °C			
Seal material	FKM			
Operating fluid	HLP mineral oils to DIN 51524, Part 2 or 3, others upon request For use in self-contained drives Voith PF 700 is mandatory			
Viscosity	10 ... 100 mm ² s ⁻¹ (cSt), up to n_{\max} 10 ... 300 mm ² s ⁻¹ (cSt), up to $n = 1\,800$ rpm			
System filtration	<ul style="list-style-type: none">• NAS 1638, class 9• ISO 4406, class 19/17/14			
Installation position	Any			

Technical data

Size 13 – Air-cooled

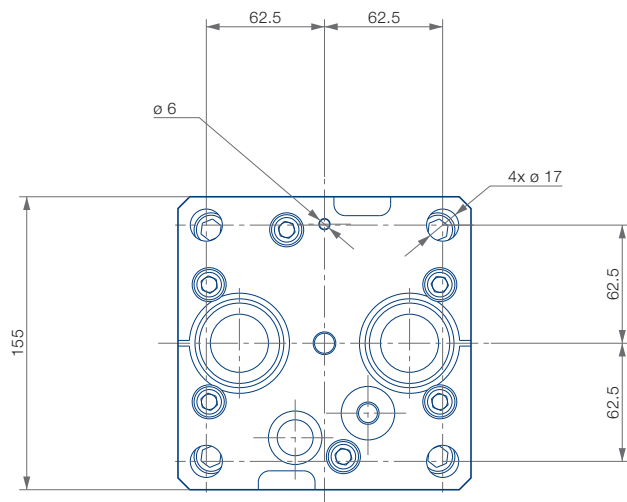
Mounting pattern



Port	Designation	Port dimension in counter surface	
		Minimum ϕ [mm]	Maximum ϕ [mm]
A, B	Operating ports	20	
F	Flushing port	10	
L	Leakage port	17	

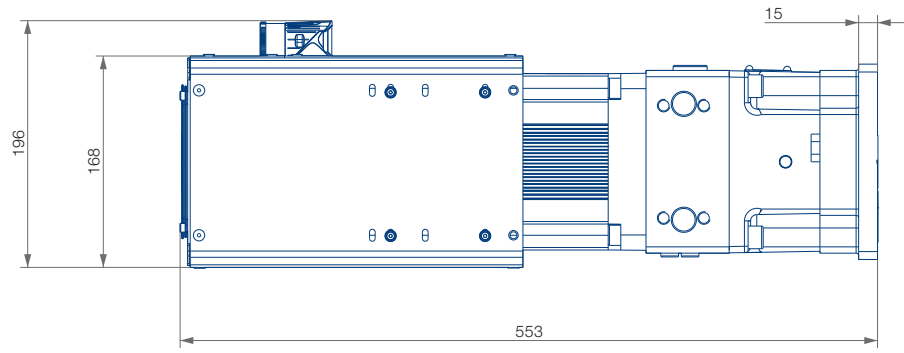
1. Place hole for operating ports inside the marked area

Pump front view

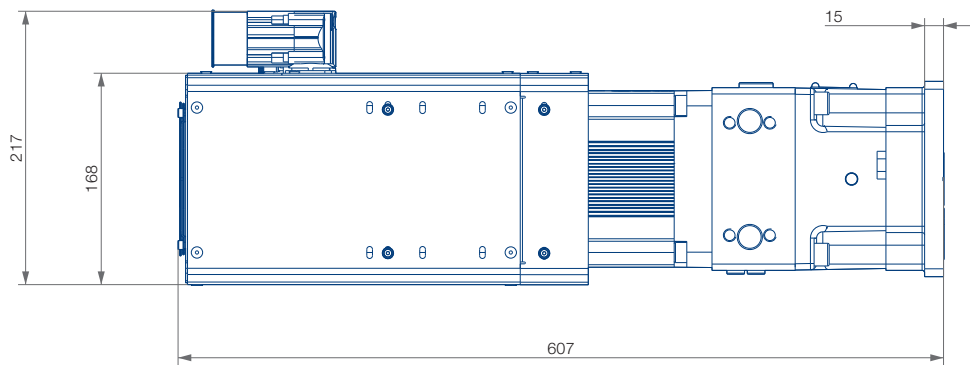


Installation drawings

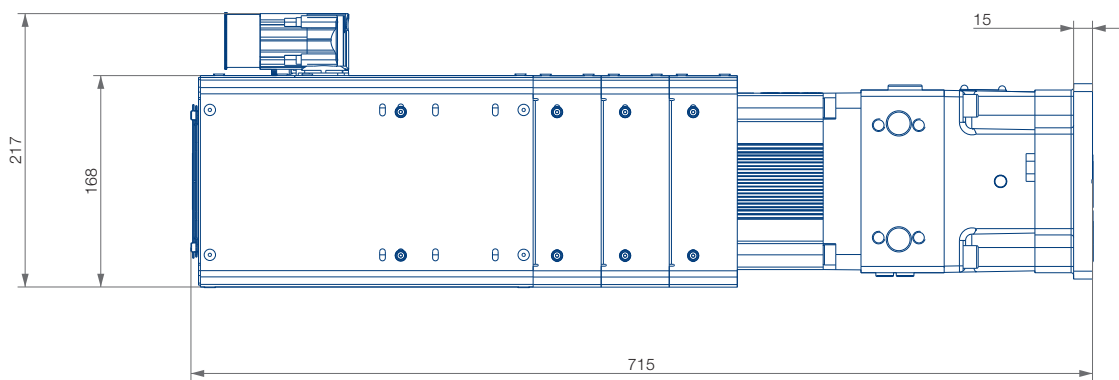
S0 F



M0 F



H0 F



Dimensions in mm.

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