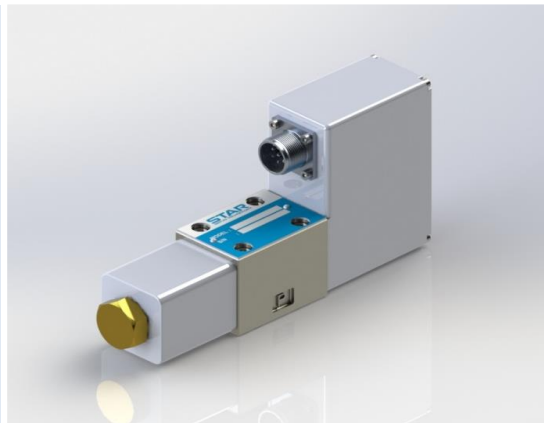


series  
**DD3**  
Servo proportional valve  
Rated flows up to 40 l/m



### Features

- Direct drive bi-directional linear motor
- Maximum operating pressure 350 bar
- 3-way or 4-way options
- Linear & dual-gain flow curve options
- Spool in bushing design
- 3 command signal options
- High temperature version



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ST-DD3-2017.3-En

## Technical data

### Hydraulic

Nominal flow ratings [ $\pm 10\%$ ]	at 70 bar $\Delta p$	1, 2, 5, 10, 20, 40 l/m
Operating pressure (max)	Ports	P, A, B 350 bar
		T without Y 250 bar
		T with Y 350 bar
Fluid viscosity range (recommended)		10 to 360 mm <sup>2</sup> /s (cSt)
Fluid type		Mineral oil to ISO 11158, DIN 51524 or equivalent others on request
Filter rating (recommended)	Pressure line Off-line	Beta 10 = 200 (10 $\mu$ m abs), non by-pass & indicator Beta 2 = 1000 (2 $\mu$ m abs)
Fluid cleanliness	ISO 4406: 1999 minimum recommended	18/ 15/ 12 17/ 14/ 11

### Operational parameters

Hysteresis		$\leq 0.2\%$
Threshold		$\leq 0.1\%$
Null shift	$\Delta T$ 40°C	$\leq 1.5\%$
Internal leakage	140 bar supply (0.5% overlap) 5, 10, 20 l/m 40 l/m	$\leq 0.6$ l/min $\leq 1.0$ l/min
Load pressure difference	1% input	$\geq 30\%$ of supply pressure can be as high as 100%
Response time	0-100% rated spool stroke	< 12 ms
Max. valve flow		75 l/m
Mounting pattern		ISO 4401-03-03-0-94
Mounting position		Any, fixed or movable
Weight	DD3S DD3T	2 kg 1.7 kg
Design protection	EN 60529	IP 67
Shipping protection		Sealed base plate
Seal material options		NBR, FPM
Temperature range	DD3S DD3T	-20 to 70 °C -20 to 160 °C

# Technical data - Electrical details

## Model DD3S

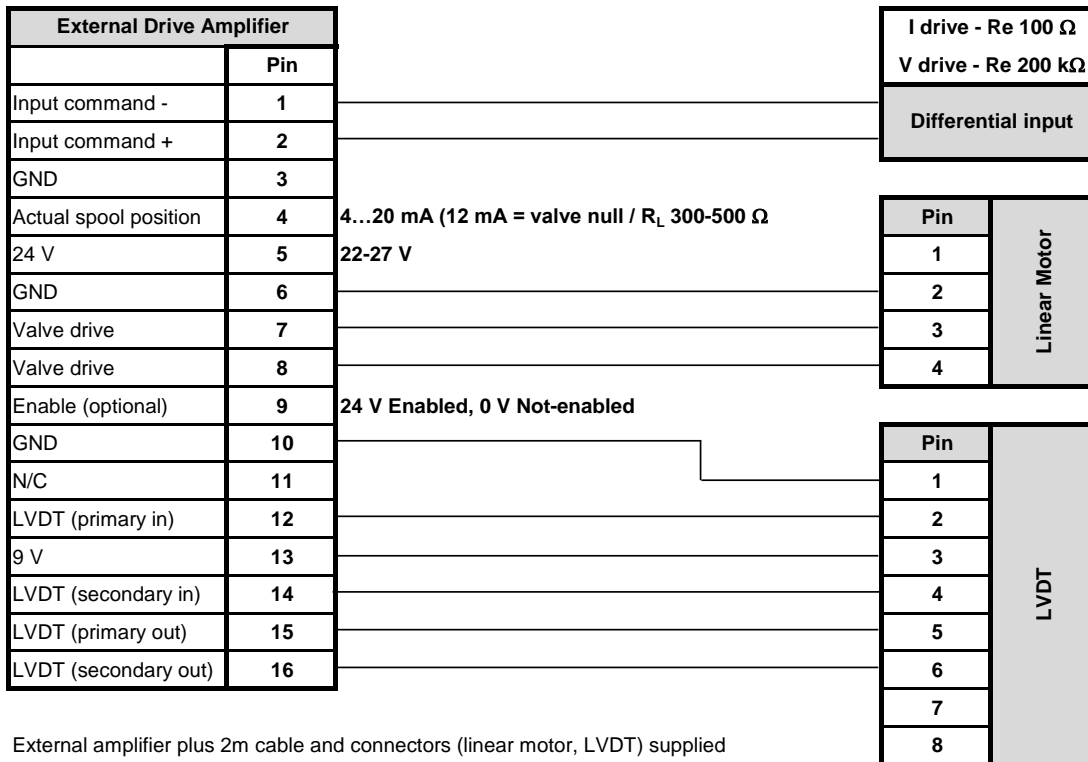
Factory set options are as follows

Pin	Function	Values
A	Supply	24 Vdc (22...27 Vdc)
B	GND	0 V
C	Not used	
D	Input rated command (differential)	±10 V, ±10 mA, 4...20 mA
E	<i>Inverse bi-polar command signals</i>	
F	Actual spool position	4...20 mA
PE	Protective earth	

Valve connector type MIL-C-5015 or DIN 43563 6+PE

Mating connector not supplied

## Model DD3T

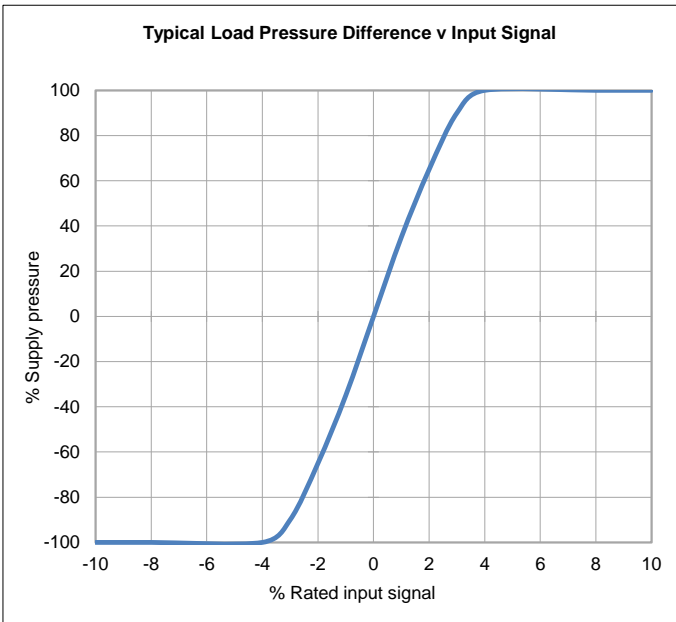
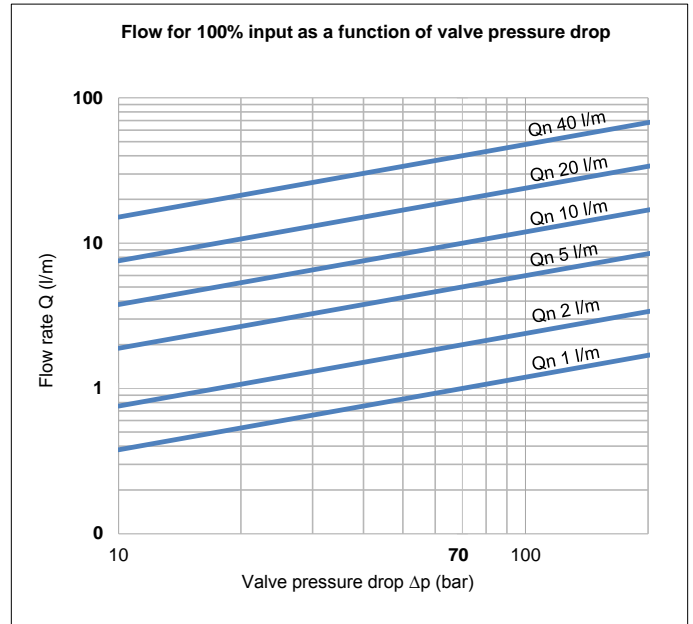
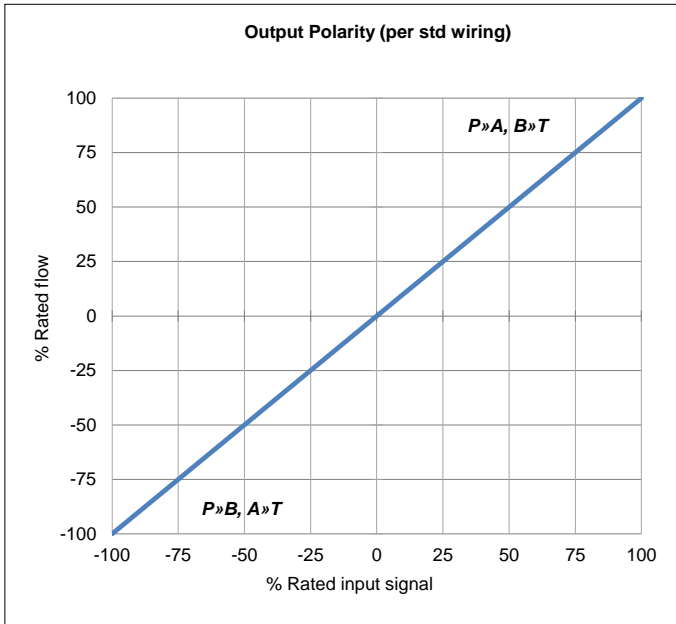


External amplifier plus 2m cable and connectors (linear motor, LVDT) supplied

## Power supply

Current consumption (max.) 1.8 A

# Technical data

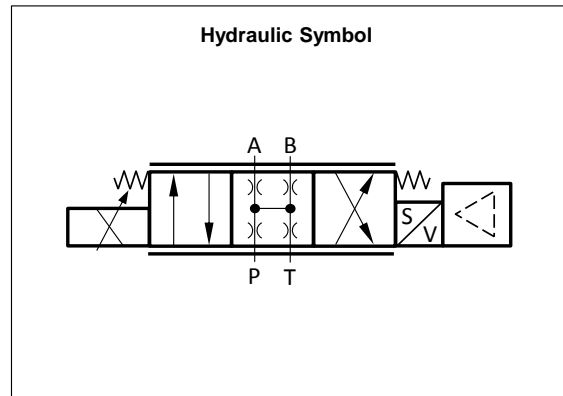
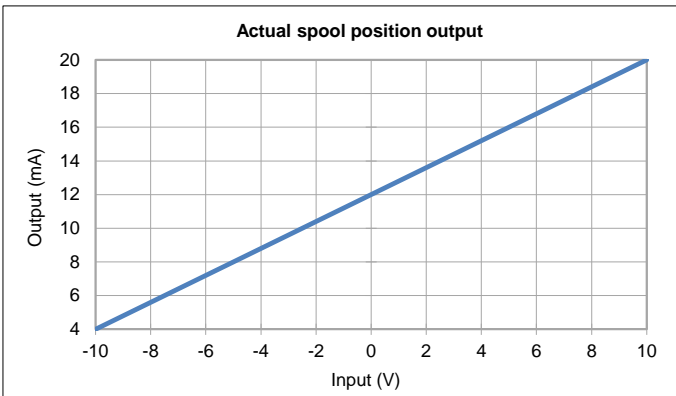


The flow tolerance for is  $\pm 10\%$  of the rated flow at 100% rated input signal.

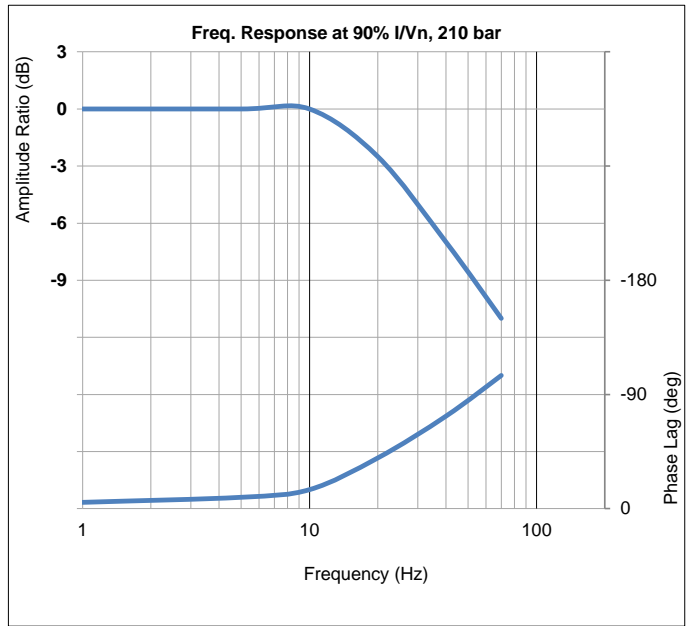
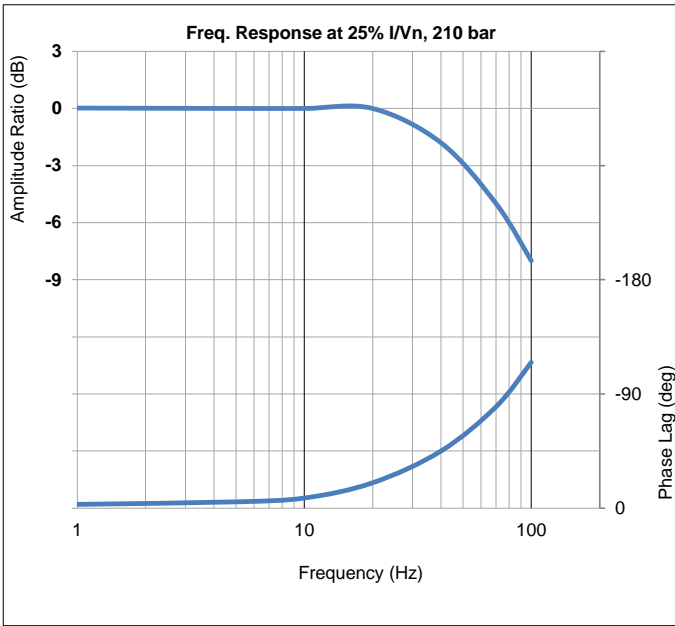
Rated Signal [ $V_n$ ] is the specified input voltage or current ( $I_n$ ) of either polarity to produce rated flow. Rated input does not include null bias values.

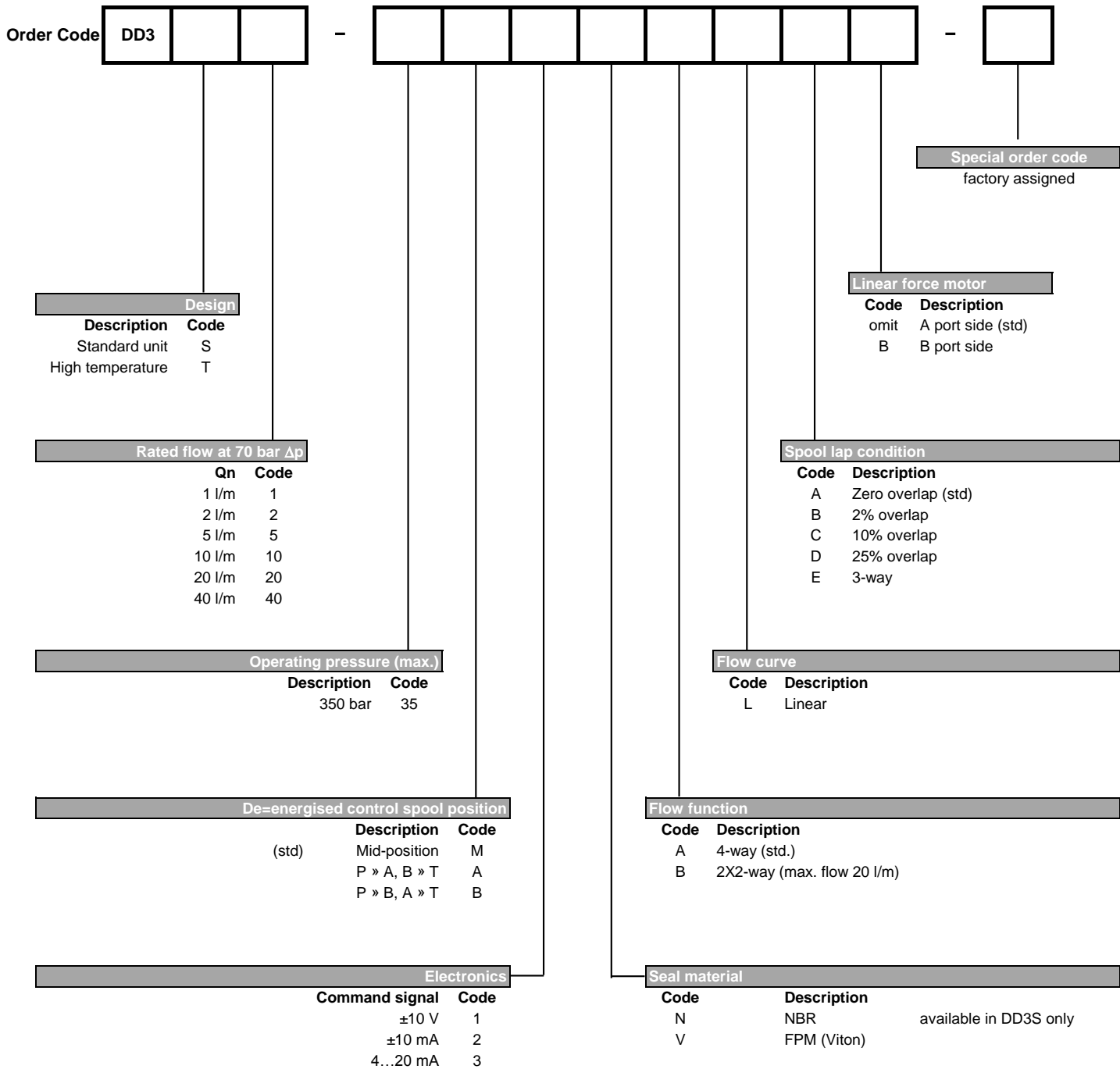
Rated flow corresponds to the flow at rated input at 10 bar or 70 bar, with no load, therefore in 4-way valves there will be a pressure drop of 5 bar or 35 bar respectively across each land.

Load pressure difference versus input signal indicates typical differential pressure gain between ports A and B for standard lap spools. Positive overlap changes this characteristic significantly.



Technical data

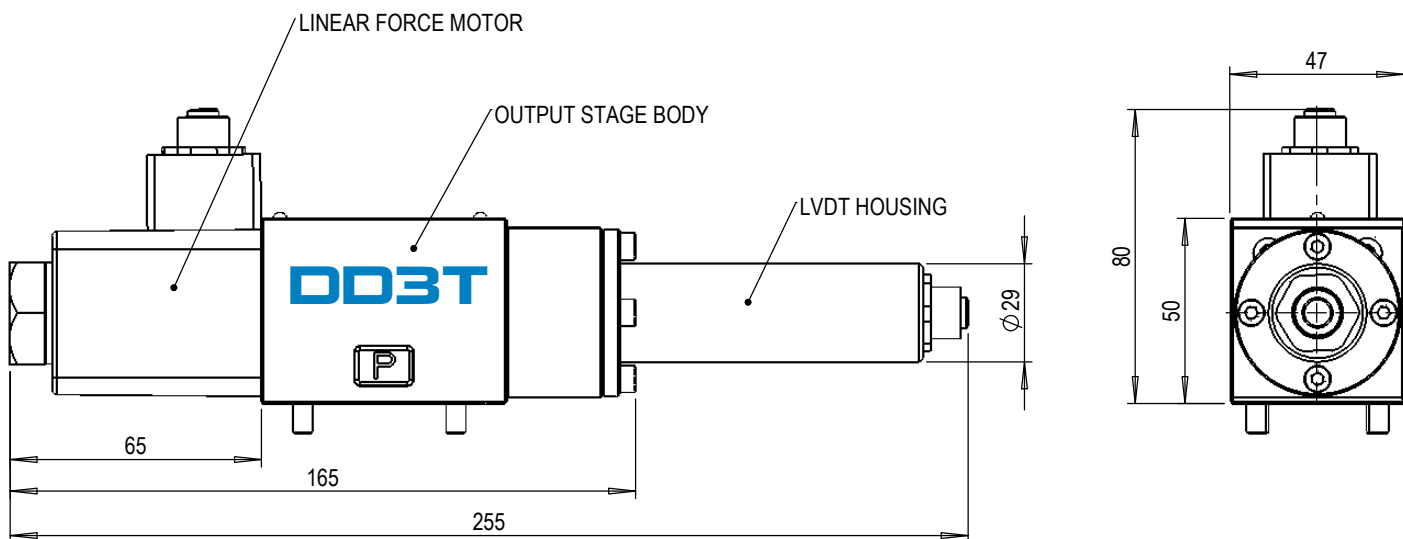
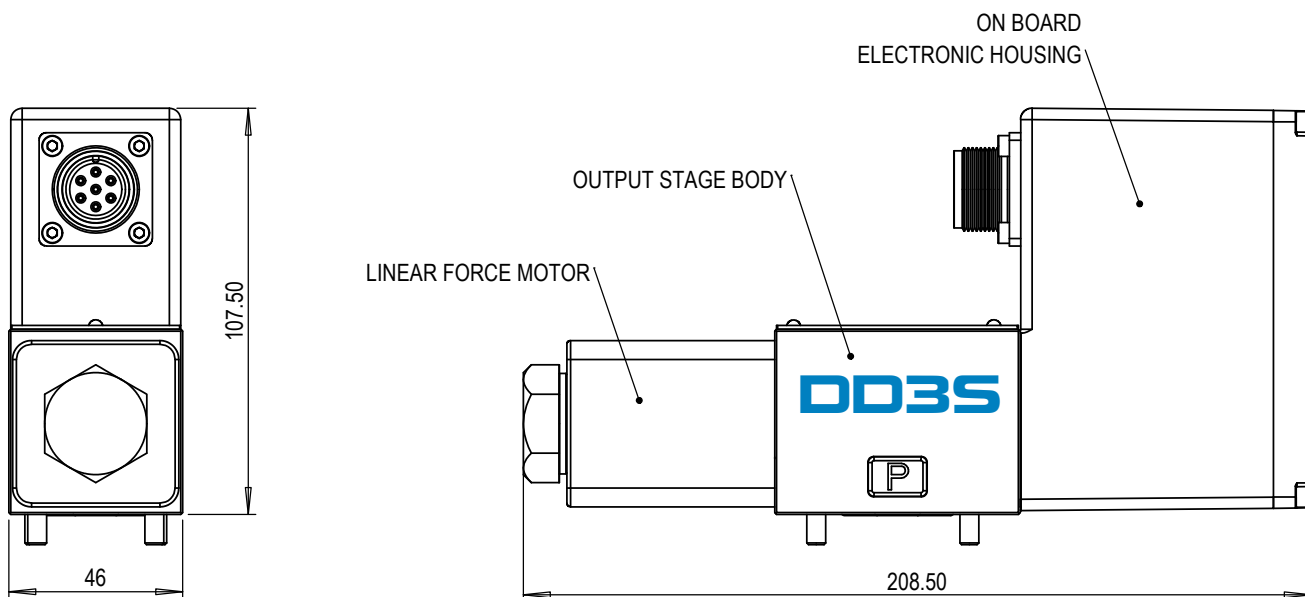




DD3S & DD3T series  
INSTALLATION DETAILS



Mounting screws	Skt head cap screws M5 x 50 10.9 ISO 4762
Porting details	P, A, B, T ports $\varnothing 7.5$ , $\perp$ $\varnothing 11.10$ $\nabla 1.40$
Interface seals	Ports P, A, B, T - ID 8.0 x $\varnothing 1.5$ O-Ring
Linear force motor orientation	As shown below linear force motor positioned on port A side as standard, available on B port with special order code 'B'



Mounting interface conforms to ISO 4401-03-03-0-94 (G not required)								
	P	A	B	T	F1	F2	F3	F4
size	$\varnothing 7.5$	$\varnothing 7.5$	$\varnothing 7.5$	$\varnothing 7.5$	M5	M5	M5	M5
x	21.50	12.70	30.20	21.50	0	40.50	40.50	0
y	25.90	15.50	15.50	5.10	0	-0.75	31.75	31
Surface flat within 0.01 / 100 : finish better than 0.8 $\mu\text{m}$								

