

### **BIAS PROPORTIONING VALVE INSTALLATION GUIDE**

### What is a Bias Proportioning Valve?

A Bias Proportioning Valve (or more commonly known as a Bias Valve) is a small compact hydraulic component that enables you to adjust the brake pressure to a particular area.

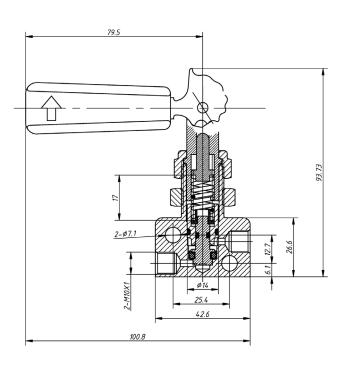
The bias valve comes into action when operating at a high pressure and once adjusted to your desired position. For example, when left neutral the component works at a 1:1 ratio meaning the pressure entering and leaving the bias valve is equal. However, when you adjust the knobs on the bias valve, it allows you to control how much pressure exits the bias valve.

We have either a lever type or screw type bias valves available with either having their own benefits, the screw type bias valves allow you to finer tune the adjustment whereas the lever type is a 7 click adjustment.

### <u>Lever Type Bias Valve - OBPBV02</u>

- 7 Click Adjustment Operation
- M10x1 Inlet / Outlet
- CNC Machined Aluminium
- Supports a pressure of 16MPA (2,175 PSI)





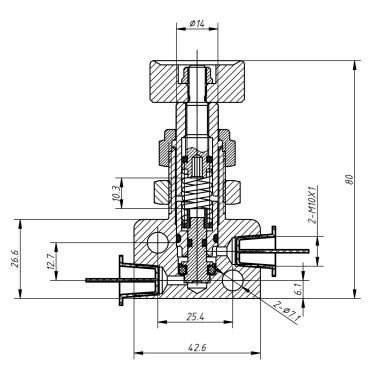
PRESSURE	OBPBV02 PRESSURE CHART											
	14MPA	13MPA	12MPA	11MPA	9MPA	8MPA	7MPA	6MPA	5MPA	4MPA	3МРА	2MPA
1 click	40.50%	41.80%	40.90%	42.40%	43.20%	43.00%	44.10%	43.70%	45.00%	95.50%	61.30%	80.00%
2 click	43.60%	45.20%	46.80%	48.20%	48.30%	49.00%	53.00%	52.70%	56.20%	63.30%	79.30%	92.00%
3 click	47.20%	47.80%	49.90%	51.10%	52.00%	54.50%	55.60%	58.20%	63.60%	74.50%	85.30%	99.35%
4 click	49.60%	50.70%	51.70%	53.40%	55.80%	58.00%	61.70%	66.70%	76.40%	87.80%	98.00%	100.00%
5 click	52.90%	55.60%	57.80%	60.00%	60.70%	64.10%	68.60%	76.80%	89.20%	97.30%	100.00%	100.00%
6 click	100.00%	100.00%	100.00%	97.00%	95.20%	95.50%	93.00%	94.00%	100.00%	100.00%	100.00%	100.00%
7 click	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%



## <u>Screw Type Bias Valve - OBPBV01</u>

- Fine Tuning
- M10x1 Inlet / Outlet
- CNC Machined Aluminium
- Supports a pressure of 16MPA (2,175 PSI)



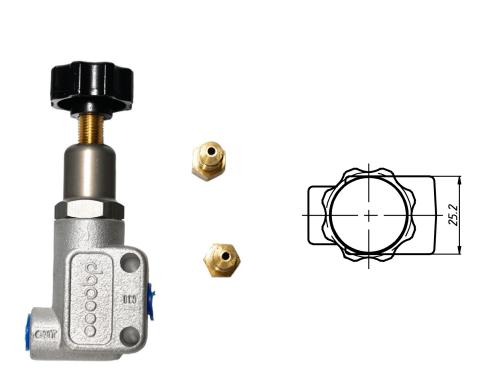


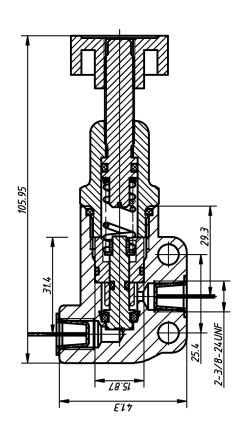
PRESSURE	OBPBV01 PRESSURE CHART												
VALUE MPA	15MPA	14MPA	13MPA	12MPA	11MPA	9МРА	8MPA	7MPA	6MPA	5MPA	4MPA	3МРА	2MPA
MAX	49.00%	48.10%	49.20%	49.20%	49.10%	50.00%	47.40%	51.10%	51.00%	52.00%	52.30%	61.00%	76.00%
1/2	49.70%	51.60%	51.40%	51.30%	52.90%	50.70%	49.40%	52.90%	52.70%	54.40%	57.50%	67.70%	84.00%
1	51.00%	51.90%	52.70%	53.30%	54.40%	53.30%	52.30%	56.40%	54.80%	56.40%	60.30%	71.00%	86.00%
1 1/2	51.70%	53.30%	54.20%	54.90%	55.80%	54.60%	53.80%	58.30%	57.50%	60.00%	63.00%	75.00%	91.50%
2	52.20%	54.30%	55.60%	56.00%	57.30%	56.80%	57.10%	60.10%	60.00%	64.00%	69.80%	78.70%	97.50%
2 1/2	54.00%	55.40%	56.70%	57.50%	58.40%	61.30%	59.80%	63.90%	63.80%	69.00%	73.00%	86.00%	100.00%
3	57.00%	56.80%	58.20%	59.00%	60.50%	63.80%	61.60%	66.10%	65.20%	72.00%	80.00%	93.30%	100.00%
3 1/2	58.50%	58.60%	59.50%	60.50%	62.50%	66.30%	64.10%	69.70%	69.30%	75.80%	83.50%	97.30%	100.00%
4	59.70%	60.30%	61.50%	62.20%	63.90%	67.80%	66.00%	70.70%	72.30%	80.20%	89.30%	100.00%	100.00%
4 1/2	60.20%	61.20%	62.70%	64.00%	65.80%	70.30%	68.80%	73.60%	74.70%	85.00%	92.30%	100.00%	100.00%
5	62.10%	63.10%	64.20%	65.30%	67.30%	72.00%	71.00%	75.70%	80.00%	88.00%	97.30%	100.00%	100.00%
5 1/2	62.80%	64.10%	65.40%	67.40%	69.10%	73.00%	72.60%	78.60%	82.80%	92.00%	99.80%	100.00%	100.00%
6	64.10%	66.30%	66.90%	68.60%	70.50%	75.00%	74.50%	82.10%	88.30%	96.00%	100.00%	100.00%	100.00%
6 1/2	65.00%	66.60%	67.80%	70.70%	72.70%	76.10%	76.30%	85.00%	90.80%	99.00%	100.00%	100.00%	100.00%
7	65.70%	67.90%	70.10%	71.50%	74.10%	78.30%	78.80%	88.00%	94.50%	101.40%	100.00%	100.00%	100.00%
7 1/2	66.70%	68.60%	70.80%	73.80%	75.30%	79.40%	81.30%	91.40%	97.00%	100.00%	100.00%	100.00%	100.00%
8	67.30%	69.50%	72.70%	74.60%	77.30%	80.90%	85.30%	95.40%	98.70%	100.00%	100.00%	100.00%	100.00%
8 1/2	68.00%	70.00%	74.20%	76.80%	78.90%	86.70%	87.60%	97.10%	99.70%	100.00%	100.00%	100.00%	100.00%
9	70.70%	73.90%	75.80%	77.30%	80.40%	89.00%	89.90%	99.30%	100.00%	100.00%	100.00%	100.00%	100.00%
9 1/2	71.30%	74.50%	78.50%	79.50%	82.50%	93.30%	93.90%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
10	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
10 1/2	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
MIN	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%



# <u>Screw Type Bias Valve - OBPCB012</u>

- Fine Tuning
- 3/8" UNF Inlet & Outlet
- M10x1 Brass Adaptors Included
- CNC Machined Aluminium
- Supports a pressure of 16MPA (2,175 PSI)





PRESSURE	OBPBV01 PRESSURE CHART												
VALUE MPA	15MPA	14MPA	13MPA	12MPA	11MPA	9МРА	8MPA	7MPA	6МРА	5MPA	4MPA	3МРА	2MPA
MAX	49.00%	48.10%	49.20%	49.20%	49.10%	50.00%	47.40%	51.10%	51.00%	52.00%	52.30%	61.00%	76.00%
1/2	49.70%	51.60%	51.40%	51.30%	52.90%	50.70%	49.40%	52.90%	52.70%	54.40%	57.50%	67.70%	84.00%
1	51.00%	51.90%	52.70%	53.30%	54.40%	53.30%	52.30%	56.40%	54.80%	56.40%	60.30%	71.00%	86.00%
1 1/2	51.70%	53.30%	54.20%	54.90%	55.80%	54.60%	53.80%	58.30%	57.50%	60.00%	63.00%	75.00%	91.50%
2	52.20%	54.30%	55.60%	56.00%	57.30%	56.80%	57.10%	60.10%	60.00%	64.00%	69.80%	78.70%	97.50%
2 1/2	54.00%	55.40%	56.70%	57.50%	58.40%	61.30%	59.80%	63.90%	63.80%	69.00%	73.00%	86.00%	100.00%
3	57.00%	56.80%	58.20%	59.00%	60.50%	63.80%	61.60%	66.10%	65.20%	72.00%	80.00%	93.30%	100.00%
3 1/2	58.50%	58.60%	59.50%	60.50%	62.50%	66.30%	64.10%	69.70%	69.30%	75.80%	83.50%	97.30%	100.00%
4	59.70%	60.30%	61.50%	62.20%	63.90%	67.80%	66.00%	70.70%	72.30%	80.20%	89.30%	100.00%	100.00%
4 1/2	60.20%	61.20%	62.70%	64.00%	65.80%	70.30%	68.80%	73.60%	74.70%	85.00%	92.30%	100.00%	100.00%
5	62.10%	63.10%	64.20%	65.30%	67.30%	72.00%	71.00%	75.70%	80.00%	88.00%	97.30%	100.00%	100.00%
5 1/2	62.80%	64.10%	65.40%	67.40%	69.10%	73.00%	72.60%	78.60%	82.80%	92.00%	99.80%	100.00%	100.00%
6	64.10%	66.30%	66.90%	68.60%	70.50%	75.00%	74.50%	82.10%	88.30%	96.00%	100.00%	100.00%	100.00%
6 1/2	65.00%	66.60%	67.80%	70.70%	72.70%	76.10%	76.30%	85.00%	90.80%	99.00%	100.00%	100.00%	100.00%
7	65.70%	67.90%	70.10%	71.50%	74.10%	78.30%	78.80%	88.00%	94.50%	101.40%	100.00%	100.00%	100.00%
7 1/2	66.70%	68.60%	70.80%	73.80%	75.30%	79.40%	81.30%	91.40%	97.00%	100.00%	100.00%	100.00%	100.00%
8	67.30%	69.50%	72.70%	74.60%	77.30%	80.90%	85.30%	95.40%	98.70%	100.00%	100.00%	100.00%	100.00%
8 1/2	68.00%	70.00%	74.20%	76.80%	78.90%	86.70%	87.60%	97.10%	99.70%	100.00%	100.00%	100.00%	100.00%
9	70.70%	73.90%	75.80%	77.30%	80.40%	89.00%	89.90%	99.30%	100.00%	100.00%	100.00%	100.00%	100.00%
9 1/2	71.30%	74.50%	78.50%	79.50%	82.50%	93.30%	93.90%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
10	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
10 1/2	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
MIN	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%



### Installing the Bias Valves

- 1. Choose a location for the bias valve where it can be easily adjusted and has enough access to mount the brake lines through and from the valve.
- 2. Drill 2 x holes large enough to mount the bias valve and bolt the valve accordingly by using suitable hardware and locking nuts.
- 3. When routing the brake hoses through the vehicle, ensure there is a smooth flow of the hose without any tight bends and avoiding any heated sources.
- 4. Once plumbed in, check for any leaks prior to adjusting the valve.
- 5. Turn/ pull the lever to full increase
- 6. Turn the valve to full decrease (counting the number of turns / pulls)
- 7. Turn the valve to half the number of turns in step 6.
- 8. This is your start of adjustment it is important to check for any leaks around the fittings at this stage.
- 9. Continue to adjust valve to your desired pressure setting.

You are also able to bolt these units through the bulkhead. To do this remove the bulkhead locking nut and fit the valve through the bulkhead before locking the it in place by re-inserting the locking nut.

### **USUAL APPLICATIONS**

More Rear pressure & reduced Front:

- Rally
- Dirt
- Off Road

Reduced Right Front:

- DIRT
- ASPHALT

More Front pressure & reduced Rear:

- Road Racing
- Circuit Racing
- Trucks
- Oval Racing

Reduced Left Front, No Right Front:

- Dirt Racing
- Sprint Racing