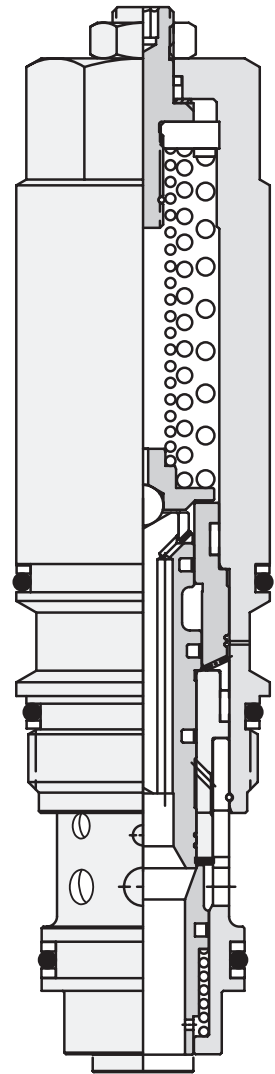


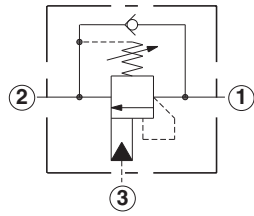
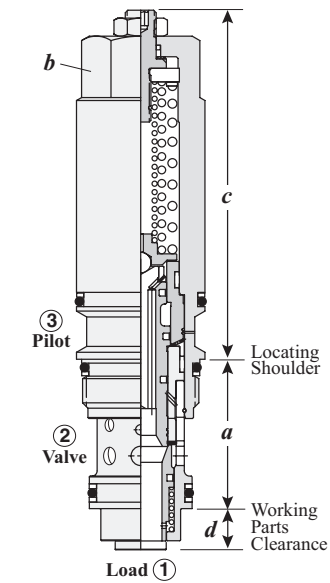
# Load Control: Load Reactive Cartridge Valves

	<i>Cartridge Type</i>	<i>Page</i>
	Non-vented, 3:1, 1.5:1, 4.5:1 Pilot Ratios	64
	Non-vented, Fixed Setting, 3:1, 1.5:1, 4.5:1 Pilot Ratios	65
	Vented, 3:1, 1.5:1, 4.5:1 Pilot Ratios	66
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## Load Control: Load Reactive Valves

### NON-VENTED, 3:1, 1.5:1, 4.5:1 PILOT RATIOS



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions				Installation Torque (Nm)
			a	b	c	d	
120 L/min.	MBEA – LHN	T-2A	35,1	28,6	92,7	7,1	60 - 70
240 L/min.	MBGA – LHN	T-17A	46,2	31,8	107,5	9,4	200 - 215
480 L/min.	MBIA – LHN	T-19A	63,5	41,3	124,0	5,8	465 - 500

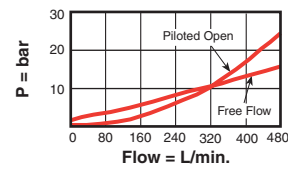
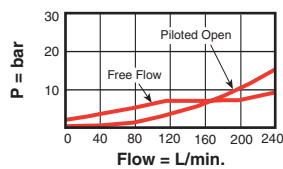
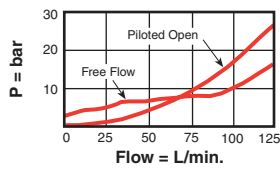
#### Performance Curves

##### MBE\*-L

##### MBG\*-L

##### MBI\*-L

#### Free Flow and Piloted Open Pressure Drop



- Maximum recommended load pressure at maximum setting = 260 bar.
- Maximum setting = 350 bar.
- Factory pressure setting established at 30 cc/min.
- Maximum valve leakage at reseal = 0,3 cc/min.
- Reseat = >85% of set pressure.
- Reverse flow check cracking pressure = 2 bar.
- Load reactive load control valves should be set at least 1.3 times the maximum load induced pressure.
- Full clockwise lowest setting is 70 bar for the H range and 140 bar for the J range.
- Back pressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the back pressure.
- This valve is functionally a 3 port counterbalance valve. It seats as a poppet valve and modulates as a spool valve.

#### OPTION ORDERING INFORMATION

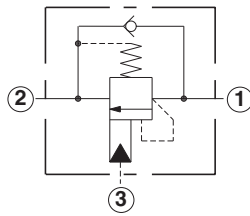
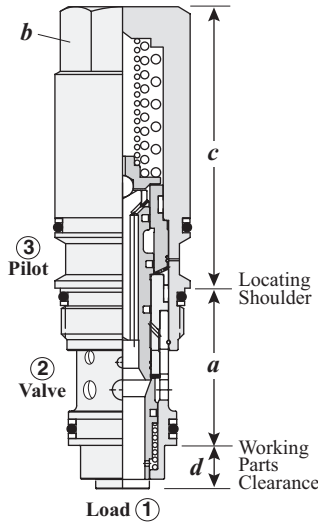
Nominal Capacity	Version	Control	Functional Setting Range	Seal Material
E 120 L/min.	A 3:1 Pilot Ratio	L Standard Screw Adjustment	H 70 - 280 bar Standard set at 210 bar	N Buna-N
G 240 L/min.	B 1.5:1 Pilot Ratio	MBEA, MBEB, MBEG only:	J 140 - 350 bar Standard set at 210 bar	V Viton
I 480 L/min.	G 4.5:1 Pilot Ratio	C* Tamper Resistant Factory Set		

\* Special setting required. Specify at time of order.

Customer specified special setting stamped on hex.

Visit [www.sunhydraulics.com](http://www.sunhydraulics.com) for current list pricing and complete technical information on all Sun products.

**NON-VENTED, FIXED SETTING, 3:1, 1.5:1, 4.5:1 PILOT RATIOS**



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions				Installation Torque (Nm)
			a	b	c	d	
120 L/min.	<b>MBEA – XLN</b>	T-2A	35,1	28,6	67,6	7,1	60 - 70
240 L/min.	<b>MBGA – XLN</b>	T-17A	46,2	31,8	82,6	9,4	200 - 215
480 L/min.	<b>MBIA – XLN</b>	T-19A	63,5	41,3	124,0	5,8	465 - 500

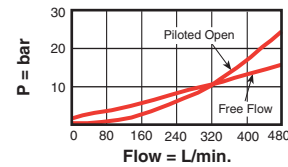
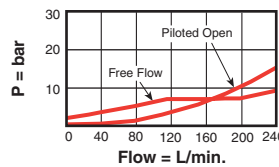
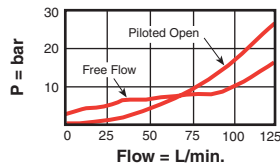
Performance Curves

**MBE\*-X**

**MBG\*-X**

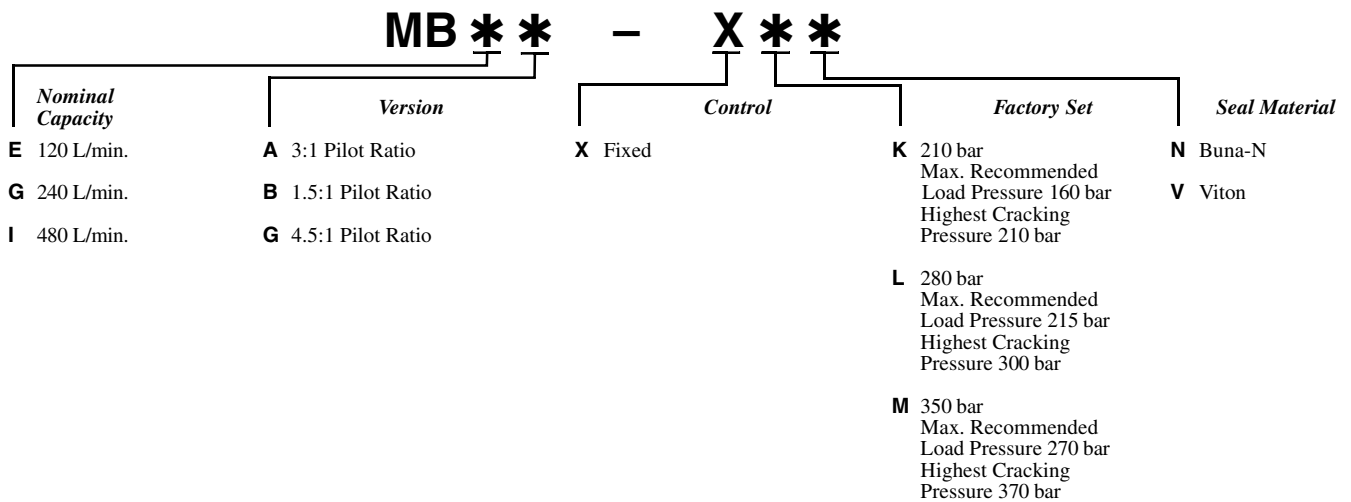
**MBI\*-X**

Free Flow and Piloted Open Pressure Drop



- Factory pressure setting established at 30 cc/min.
- Maximum valve leakage at reseal = 0,3 cc/min.
- Reseat = >85% of set pressure.
- Reverse flow check cracking pressure = 2 bar.
- Load reactive load control valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the back pressure.
- Fixed setting valves have much wider cracking pressure ranges than adjustable setting valves, which can be set to within +/- 3,5 bar. The valve-to-valve cracking pressure for fixed setting valves can be large either side of the mean pressure, as indicated in the range selected.
  - 210 bar fixed setting: +20/-35 bar
  - 280 bar fixed setting: +20/-60 bar
  - 350 bar fixed setting: +20/-70 bar
- This valve is functionally a 3 port counterbalance valve. It seats as a poppet valve and modulates as a spool valve.

**OPTION ORDERING INFORMATION**

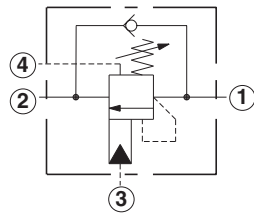
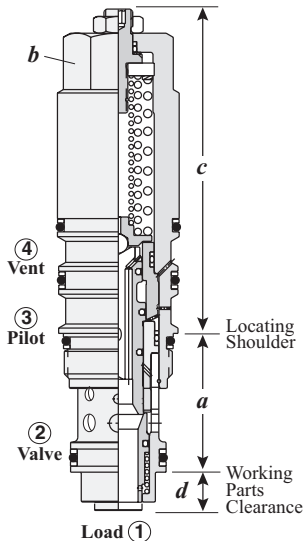


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## Load Control: Load Reactive Valves

### VENTED, 3:1, 1.5:1, 4.5:1 PILOT RATIOS



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions				Installation Torque (Nm)
			a	b	c	d	
120 L/min.	MWEA-LHN	T-22A	35,1	28,6	92,7	7,1	60 - 70
240 L/min.	MWGA-LHN	T-23A	46,2	31,8	107,5	9,4	200 - 215
480 L/min.	MWIA-LHN	T-24A	63,5	41,3	124,0	5,8	465 - 500

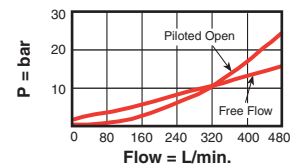
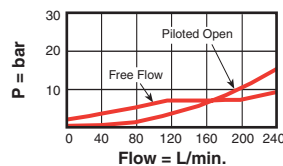
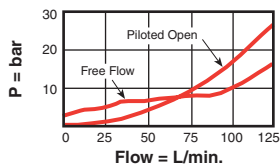
### Performance Curves

#### MWE\*-L

#### MWG\*-L

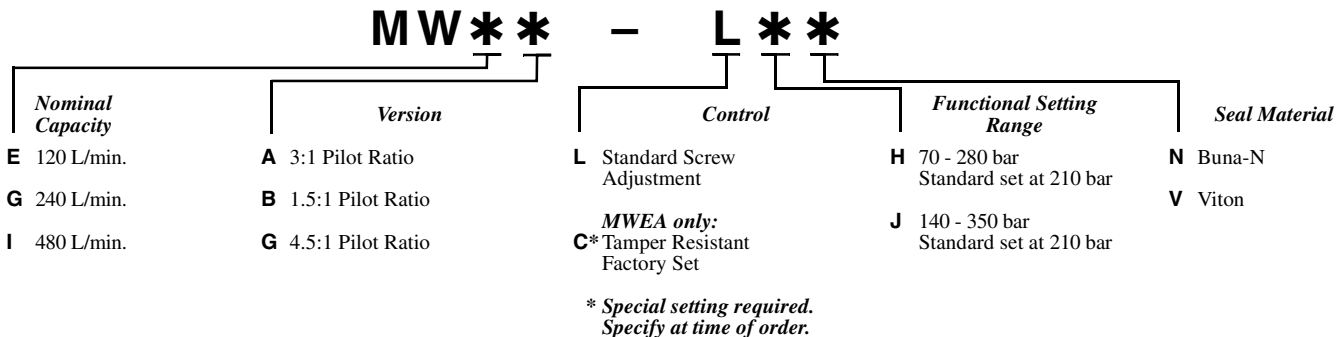
#### MWI\*-L

#### Free Flow and Piloted Open Pressure Drop



- Maximum recommended load pressure at maximum setting = 260 bar.
- Maximum setting = 350 bar.
- Factory pressure setting established at 30 cc/min.
- Maximum valve leakage at reseal = 0,3 cc/min.
- Reseat = >85% of set pressure.
- Reverse flow check cracking pressure = 2 bar.
- Load reactive load control valves should be set at least 1.3 times the maximum load induced pressure.
- This valve is functionally a 4 port counterbalance valve. It seats as a poppet valve and modulates as a spool valve.
- Full clockwise lowest setting is 70 bar for H range and 140 bar for J range.

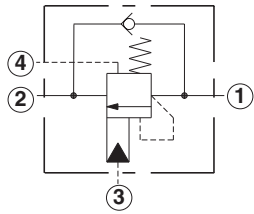
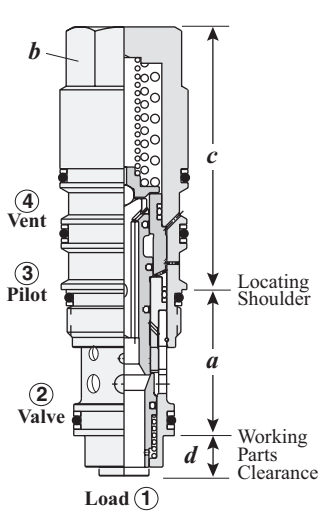
### OPTION ORDERING INFORMATION



Customer specified special setting stamped on hex.

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**VENTED, FIXED SETTING, 3:1, 1.5:1, 4.5:1 PILOT RATIOS**



Capacity	Typical Cartridge Model Code	Cavity	Cartridge Dimensions				Installation Torque (Nm)
			a	b	c	d	
120 L/min.	MWEA-XLN	T-22A	35,1	28,6	67,6	7,1	60 - 70
240 L/min.	MWGA-XLN	T-23A	46,2	31,8	82,6	9,4	200 - 215
480 L/min.	MWIA-XLN	T-24A	63,5	41,3	114,3	5,8	465 - 500

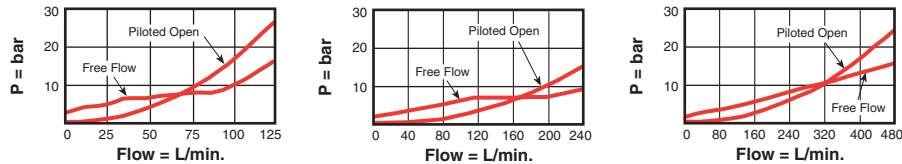
**Performance Curves**

**MWE\*-X**

**MWG\*-X**

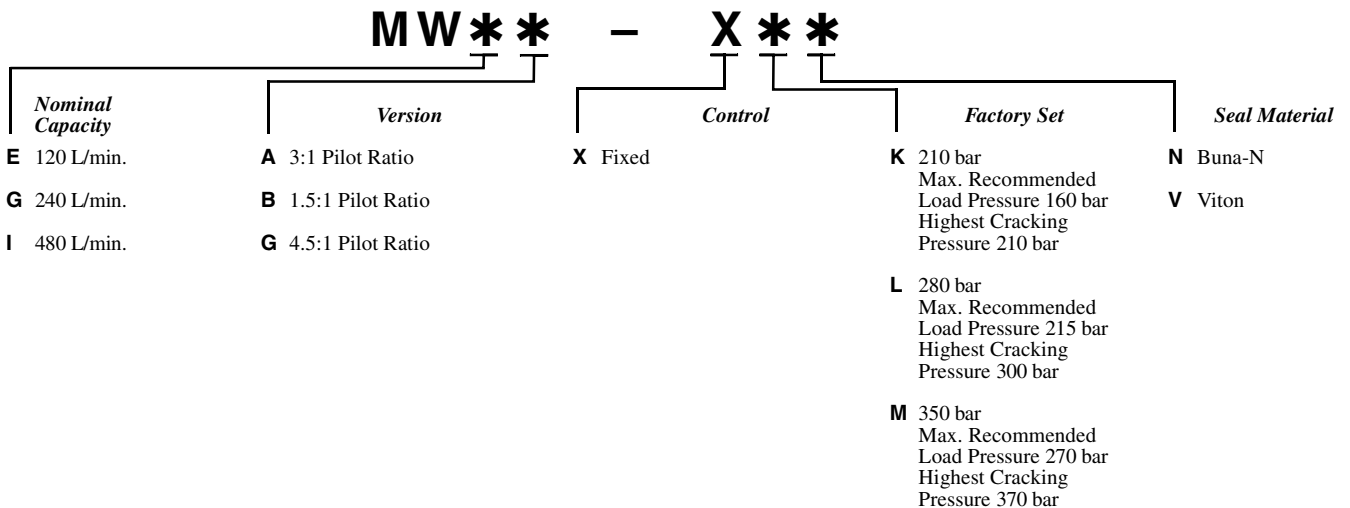
**MWI\*-X**

**Free Flow and Piloted Open Pressure Drop**



- Factory pressure setting established at 30 cc/min.
- Maximum valve leakage at reseal = 0,3 cc/min.
- Reseat = >85% of set pressure.
- Reverse flow check cracking pressure = 2 bar.
- Load reactive load control valves should be set at least 1.3 times the maximum load induced pressure.
- Back pressure at port 2 adds to the effective relief setting at a ratio of 1 plus the pilot ratio times the back pressure.
- Fixed setting valves have much wider cracking pressure ranges than adjustable setting valves, which can be set to within +/- 3,5 bar. The valve-to-valve cracking pressure for fixed setting valves can be large either side of the mean pressure, as indicated in the range selected.
  - 210 bar fixed setting: +20/-35 bar
  - 280 bar fixed setting: +20/-60 bar
  - 350 bar fixed setting: +20/-70 bar
- This valve is functionally a 4 port counterbalance valve. It seats as a poppet valve and modulates as a spool valve.

**OPTION ORDERING INFORMATION**



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**NOTES**