

DELTA POWER



Hydraulic Cartridge Valves and HIC Manifolds





SOLENOID DIRECTIONAL CONTROLS

Two-Way Two Position, Normally Closed

	GPM	PSI	LPM	BAR	MODEL	PAGE
	5	3000	19	207	MA-S2A	1.001
	8	3500	30	240	PB-S2A	2.001
	12	3500	45	240	DE-S2A	3.001
	40	3500	151	240	SJ-S2A	5.001
	8	3500	30	240	PB-S2B	2.002
	12	3500	45	240	DE-S2B	3.002
	40	3500	151	240	SJ-S2B	5.002
	.25	3000	.95	207	MA-S2E	1.003
	4	3000	15	207	PB-S2I	2.007
	4	3000	15	207	DE-S2I	3.008
	2.5	1500	9.5	103	MA-S2F	1.004
	6	2500	23	172	PB-S2F	2.008
	6	1000	23	69	DE-S2F	3.005
	2	3000	7.6	207	MA-S2G	1.005
	3	3000	11	207	PB-S2G	2.005
	8	3000	30	207	DE-S2G	3.006

Two-Way Two Position, Normally Open

	GPM	PSI	LPM	BAR	MODEL	PAGE
	5	3000	19	207	MA-S2C	1.002
	8	3500	30	240	PB-S2C	2.003
	12	3500	45	240	DE-S2C	3.003
	40	3000	151	207	SJ-S2C	5.003
	8	3500	30	240	PB-S2D	2.004
	12	3500	45	240	DE-S2D	3.004
	40	3000	151	207	SJ-S2D	5.004
	2	3000	7.6	207	MA-S2H	1.006
	3	3000	11	207	PB-S2H	2.006
	6	3000	23	207	DE-S2H	3.007

Three-Way Two Position, Spool

	GPM	PSI	LPM	BAR	MODEL	PAGE
	2	3000	7.6	207	MC-S3A	1.030
	3	3000	11	207	PP-S3A	2.030
	10	3000	38	207	DF-S3A	3.030
	9	3000	34	207	DF-S3B	3.031
	2	3000	7.6	207	MC-S3X	1.032
	3	3000	11	207	PP-S3X	2.031
	3	3000	11	207	PP-S3D	2.033

Four-Way Two Position, Spool

	GPM	PSI	LPM	BAR	MODEL	PAGE
	1.5	3000	5.7	207	MD-S4A	1.060
	3	3000	11	207	PQ-S4A	2.060
	8	3000	30	207	DG-S4A	3.060
	1.5	3000	5.7	207	MD-S4B	1.061
	3	3000	11	207	PQ-S4B	2.061
	10	3000	38	207	DG-S4B	3.061
	3	3000	11	207	PQ-S4C	2.062
	10	3000	38	207	DG-S4C	3.062
	6	3000	23	207	DG-S4D	3.063
	5	3000	19	207	DG-S4E	3.064

Four-Way Three Position, Open Center

	GPM	PSI	LPM	BAR	MODEL	PAGE
	5	3000	19	207	DG-S4O	3.065

Four-Way Three Position, Closed Center

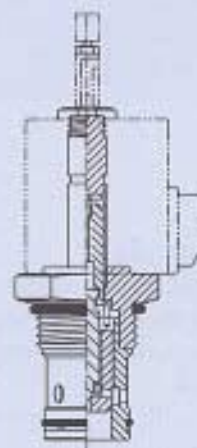
	GPM	PSI	LPM	BAR	MODEL	PAGE
	5	3000	19	207	DG-S4P	3.066

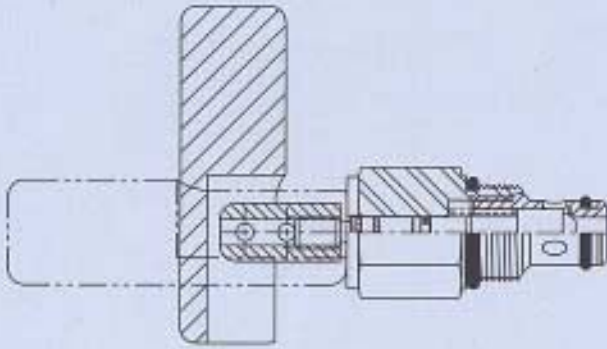
Four-Way Three Position, Tandem Center

	GPM	PSI	LPM	BAR	MODEL	PAGE
	5	3000	19	207	DG-S4N	3.067

Note:

- Model M* = (7) Series 5/8-18
- Model P* = (8) Series 3/4-16
- Model D* = (10) Series 7/8-14
- Model T* = (12) Series 1-1/16-12
- Model S* = (16) Series 1-5/16-12





Manual Pull to Open, Two-Way Two Position

	GPM	PSI	LPM	BAR	MODEL	PAGE
	6	3500	23	240	PB-MCA	2.090
	14	3500	53	240	DE-MCA	3.090
	6	1500	23	103	DE-MCF	3.092
	14	3500	53	240	DE-MCS	3.095
	14	3500	53	240	DE-MCB	3.091
	8	3500	30	240	PB-MCL	2.092
	14	3500	53	240	DE-MCL	3.093
	6	3500	23	240	PB-MCI	2.093

Shuttle

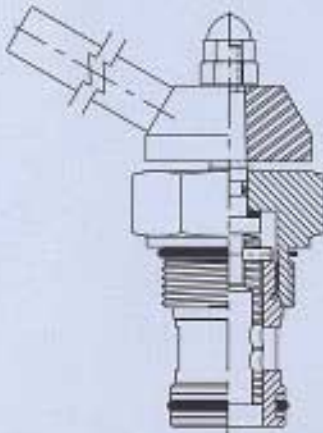
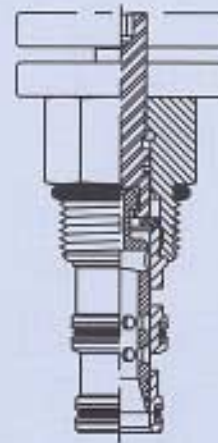
	GPM	PSI	LPM	BAR	MODEL	PAGE
	6	3500	23	240	PP-CSB	2.091
	10	3500	38	240	DF-CSB	3.094

Manual Two-Way, Two Position

	GPM	PSI	LPM	BAR	MODEL	PAGE
	10	3000	38	207	DE-M2G	3.100

Manual Three-Way, Two Position

	GPM	PSI	LPM	BAR	MODEL	PAGE
	10	3000	38	207	DF-M3A	3.096



Manual Four-Way, Two Position

	GPM	PSI	LPM	BAR	MODEL	PAGE
	10	3000	38	207	DG-M4A	3.097
	10	3000	38	207	DG-M4B	3.098
	10	3000	38	207	DG-M4C	3.099

Manual Two-Way, Rotary

	GPM	PSI	LPM	BAR	MODEL	PAGE
	40	3000	151	207	SJ-MRA	5.090

Three-Way, Pilot to Shift

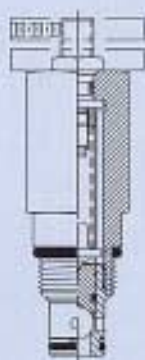
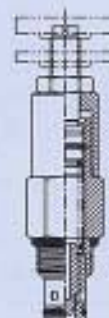
	GPM	PSI	LPM	BAR	MODEL	PAGE
	40	3500	151	240	SO-PTS	5.091
	40	3500	151	240	SO-PTT	5.092



PRESSURE CONTROLS

Relief Valves- Direct & Differential Area

	GPM	PSI	LPM	BAR	MODEL	PAGE
	5	3000	19	207	MA-RVA	1.150
	5	3000	19	207	MA-RVS	1.151
	8	3500	30	240	PB-RVA	2.150
	10	4000	38	275	DE-RVA	3.150
	15	4000	57	275	DE-RWA	3.160
	15	3000	57	207	DE-RCA	3.170
	8	3500	30	240	PB-RVD	2.151
	15	4000	57	275	DE-RVD	3.152
	15	4000	57	275	DE-RWD	3.161
	15	3000	57	207	DE-RCD	3.171



Relief Valves- Pilot Operated

	GPM	PSI	LPM	BAR	MODEL	PAGE
	20	4000	76	275	DE-RVP	3.153
	20	4000	76	275	DE-RWP	3.167
	15	4000	57	275	DE-RVR	3.154
	15	4000	57	275	DE-RWR	3.172
	40	3500	151	240	SJ-RVP	5.150

Relief Valve- Cross Over

	GPM	PSI	LPM	BAR	MODEL	PAGE
	20	4000	76	275	DE-RVC	3.151

Pressure Compensating Regulator

	GPM	PSI	LPM	BAR	MODEL	PAGE
	10	3500	38	240	DF-PCR	3.159
	30	3500	114	240	TR-PCA	4.150
	40	3500	151	240	SL-PCA	5.151
	40	3500	151	240	SL-PCB	5.153
	8	3500	30	240	DF-PCS	3.173
	8	3500	30	240	DF-PCB	3.174



Pressure Reducing

	GPM	PSI	LPM	BAR	MODEL	PAGE
	8	3000	30	207	DF-PRP	3.156
	8	3000	30	207	DF-PWP	3.168
	40	3000	151	207	SK-PRP	5.155

Sequence

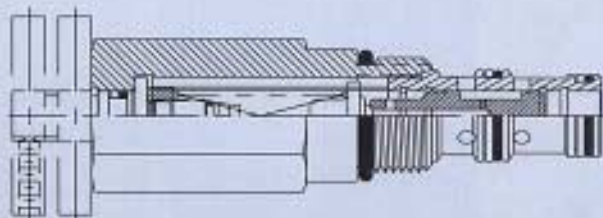
	GPM	PSI	LPM	BAR	MODEL	PAGE
	9	3000	34	207	DG-PSO	3.162
	9	3000	34	207	DG-PSC	3.163
	9	3000	34	207	DF-PWI	3.164
	9	3000	34	207	DF-PWE	3.165
	9	3000	34	207	DG-PSI	3.166

Shut Down

	GPM	PSI	LPM	BAR	MODEL	PAGE
	15	3000	57	207	DE-PSD	3.155

Pump Unloading

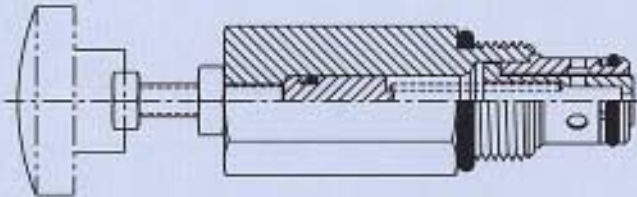
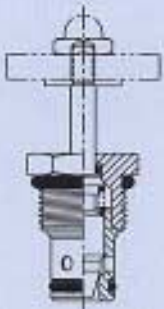
	GPM	PSI	LPM	BAR	MODEL	PAGE
	1	3000	4	207	DF-PUV	3.169





Flow Restrictors, Adjustable (Needle Valve)

	GPM	PSI	LPM	BAR	MODEL	PAGE
	5	3500	19	240	MA-NVA	1.121
	5	3500	19	240	PB-NVB	2.122
	6	3500	23	240	PB-NVA	2.121
	12	3500	45	240	DE-FCH	3.122
	15	3500	57	240	DE-NVA	3.125
	15	3500	57	240	DE-NVB	3.126
	40	3500	151	240	SJ-NVA	5.121



Pressure Compensated

	GPM	PSI	LPM	BAR	MODEL	PAGE
	3	3000	11	207	MA-FCA	1.120
	4	3500	15	240	PB-FCA	2.120
	8	3500	30	240	DE-FCA	3.120
	8	3500	30	240	DE-FCB	3.130
	8	3500	30	240	DE-FCC	3.131
	25	3500	95	240	SJ-FCA	5.120
	8	3500	30	240	DE-FCF	3.121

Priority

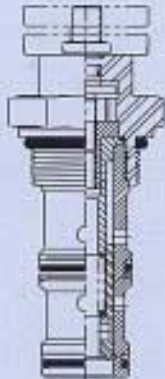
	GPM	PSI	LPM	BAR	MODEL	PAGE
	10	3000	38	207	DF-FCP	3.123
	10	3000	38	207	DF-FCQ	3.124
	25	3500	95	240	SK-FCQ	5.122

Velocity Fuse

	GPM	PSI	LPM	BAR	MODEL	PAGE
	10	3500	38	240	DE-CVF	3.128

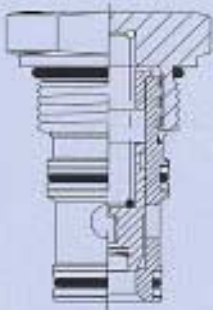
Flow Divider/Combiner

	GPM	PSI	LPM	BAR	MODEL	PAGE
	8	3500	30	240	DG-FDH	3.129
	12	3500	45	240	DG-FDA	3.127
	12	3500	45	240	DG-FDT	3.132



LOGIC ELEMENTS

	GPM	PSI	LPM	BAR	MODEL	PAGE
	40	3500	151	240	SL-PLA	5.152
	40	3500	151	240	SL-PLB	5.154
	40	3500	151	240	SL-PLC	5.156





CHECK VALVES

Direct Acting

	GPM	PSI	LPM	BAR	MODEL	PAGE
	5	3500	19	240	MA-CVA	1.180
	15	3500	57	240	DE-CVA	3.180
	40	3500	151	240	SJ-CVA	5.180
	15	3500	57	240	DE-CVB	3.181
	8	3500	30	240	PB-CVC	2.180
	15	3500	57	240	DE-CVC	3.182
	2.5	1500	9.5	103	MA-CVS	1.181
	2.5		9.5		PB-CVS	2.181
	6	1000	23	69	DE-CVS	3.183
	15	3500	30	240	DE-CVR	3.186

PRE-ENGINEERED BLOCKS

Single Pilot Operated

	GPM	PSI	LPM	BAR	MODEL	PAGE
	5	3000	12.9	207	MS-POC	8.330
	8	3000	30	207	PS-POC	8.350
	15	3000	57	207	DS-POC	8.331
	40	3000	151	207	SS-POC	8.352

Double Pilot Operated

	GPM	PSI	LPM	BAR	MODEL	PAGE
	5	3000	12.9	207	MD-POC	8.349
	8	3000	30	207	PD-POC	8.351
	15	3000	57	207	DD-POC	8.332
	40	3000	151	207	SD-POC	8.353

SPECIAL VALVES

Overcenter- (Counterbalance)

	GPM	PSI	LPM	BAR	MODEL	PAGE
	15	4000	57	275	QS-CBA	6.210
	15	4000	57	275	QS-CBB	6.211

In-Line Valves

	GPM	PSI	LPM	BAR	MODEL	PAGE
	8	3000	30	207	IM-CVA	6.240
	6	3500	23	240	IM-CVF	6.241
	6	3500	23	240	IM-CVF	6.242
	10	3500	38	240	IM-CSB	6.243

Special Application Valves

	GPM	PSI	LPM	BAR	MODEL	PAGE
	30	3000	114	207	QS-RVA	6.270
	350 in 300/2000				DE-HPA	6.271
	10	400	38	28	QS-RVB	6.272
	25	3000	95	207	QS-MRS	6.273

Pilot Operated - Pilot to Open

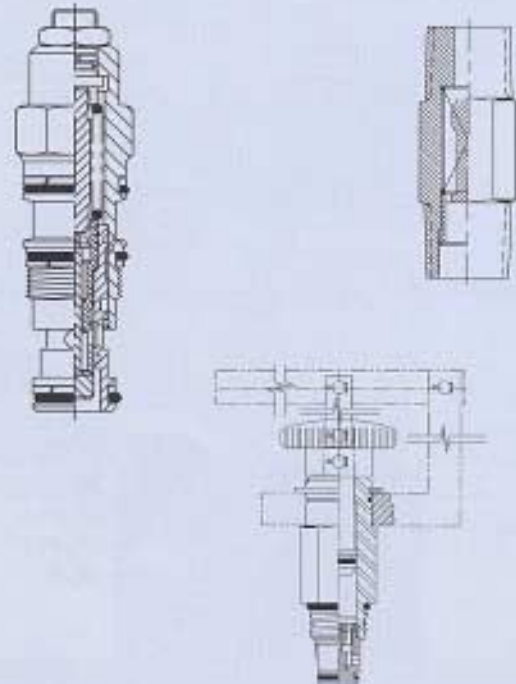
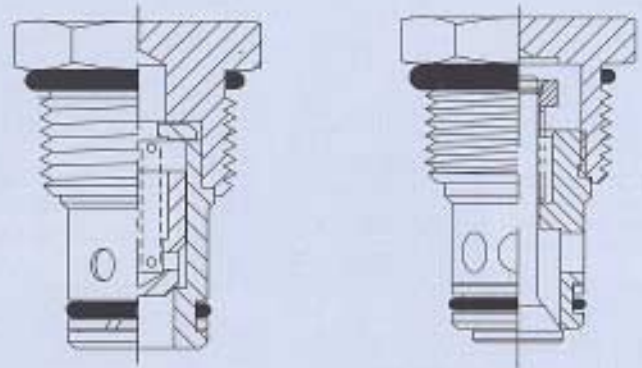
	GPM	PSI	LPM	BAR	MODEL	PAGE
	6	3500	23	240	PP-CPB	2.182
	8	3500	30	240	DF-CPB	3.184
	8	3500	30	240	DF-CPC	3.185

Pilot Operated - Pilot to Close

	GPM	PSI	LPM	BAR	MODEL	PAGE
	10	3500	38	240	DF-CPD	3.188
	40	3500	151	240	SL-CPD	5.181

With Thermal Relief

	GPM	PSI	LPM	BAR	MODEL	PAGE
	15	4000	57	275	DE-CVT	3.187





PRE-ENGINEERED CIRCUIT MIZER BLOCKS

FROM JUST A FEW MIZER'S TO OVER A THOUSAND CIRCUITS ARE POSSIBLE...

Block A*

20200001

Page 8.333

8-15 gpm - 3500 psi

AA- Load holding, solenoid operated

AB- Relief valve w/ adj. pressure comp. flow control

AC- Relief valve w/ fixed pressure comp. flow control

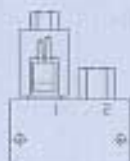
AD- Unloading w/ flow control

AE- Lift circuit w/ relief valve

AF- Relief valve w/ flow control

AG- Unloading w/ fixed pressure comp. flow control

AH- Speed control



Block B*

20200002

Page 8.334

12 gpm - 3500 psi

BA- Lift, check & dump

BB- Start up circuit

BC- Lift, check & dump



Block C*

20200003

Page 8.335

7-15 gpm - 3000-4000 psi

CA- Dual relief

CB- Dump

CC- Flow divider

CD- Motor speed control

CE- Selector



Block D*

20200004

Page 8.336

7-20 gpm - 3000-4000 psi

DA- Normally closed poppet valve

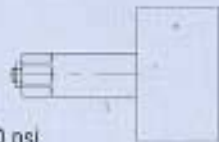
DB- Single relief valve

DC- Needle flow control

DD- Flow control w/ free flow check

DE- Normally open spool valve

DF- Crossover relief valve



Block E*

20200005

Page 8.337

8-12 gpm - 3500 psi

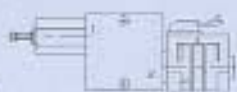
EA- Dual speed

EB- Dual speed

EC- Pressure comp. flow control w/ check

ED- Dual speed

EE- Dual speed



Block F*

20200006

Page 8.338

9 gpm - 3000 psi

FA- Dual sequence w/ dual checks



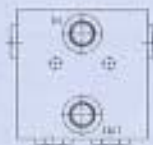
Block G*

20200007

Page 8.339

15 gpm - 3500 psi

GA- Rectifier circuit



Block H*

20200008

Page 8.340

8 gpm - 3000 psi

HA- 4-way 3-position open center

HB- 4-way 3-position closed center



Block I*

20200009

Page 8.341

12 gpm - 3500 psi

IA- Dual 3-way

IB- Manual lift, check & dump

IC- Normally closed w/ relief

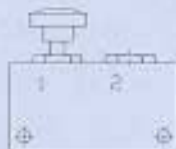
ID- Lift, check & dump

IE- Pump, check & relief

IF- Needle flow control w/ check

IG- Normally open w/ check

IH- Normally open w/ relief



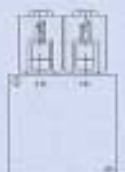
Block J*

20200010

Page 8.342

8 gpm - 3000 psi

JA- 4-way 3-position tandem center



Block K*

20200011

Page 8.343

8-12 gpm - 3500 psi

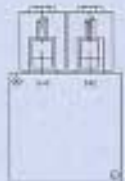
KA- Dual normally closed

KB- Normally open w/ needle flow control

KC- Normally open w/ normally closed

Normally closed w/ pressure comp.

flow control



Block L*

20200012

Page 8.344

15 gpm - 4000 psi

LA- Dual counterbalance



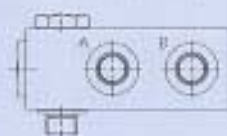
Block M*

20200013

Page 8.345

12 gpm - 3500 psi

MA- Check, 4:1 ratio, banjo bolt



Block N*

20200014

Page 8.346

7-15 gpm -

3000-3500 psi

NA- Banjo bolt,

velocity fuse

NB- Banjo bolt, normally closed 2-way

NC- Banjo bolt, flow control

ND- Banjo bolt, needle

NE- Banjo bolt, Normally open 2-way



Block O*

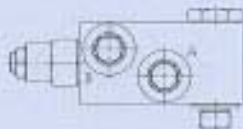
20200015

Page 8.347

12 gpm - 4000 psi

OA- Banjo bolt,

counterbalance



Block P*

20200017

Page 8.348

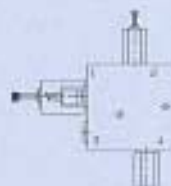
12 gpm - 3500 psi

PA- Lift circuit w/ needle & relief valve

PB- Lift circuit w/ by-pass & needle

PC- Lift circuit w/ pressure comp. & relief valve

PD- Lift circuit w/ pressure comp. & by-pass



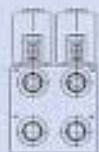
Block Q*

20200018

Page 8.355

8 gpm - 3000 psi

QA- Dual 3-way 2-position selector



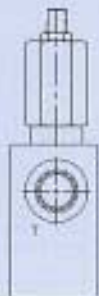
Block R*

20200019

Page 8.356

20 gpm - 4000 psi

RA- In-line relief valve





Two-Way

	GPM	PSI	LPM	BAR	MODEL	PAGE
	6	300	23	30	EE-P2A	11.001
	.25	3000	.95	207	EB-PRA	11.002

Three-Way

	5	300	19	20	EG-PRZ	11.030
	.25	300	.95	20	EP-P3A	11.031

Pre-Engineered Circuit Block Assy.

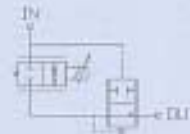
	Priority Flow Control	ED-FCA	11.330
	Restrictive Flow Control	ED-FCB	11.331
	Bypass Flow Control	ED-FCC	11.332

Electronic Accessories

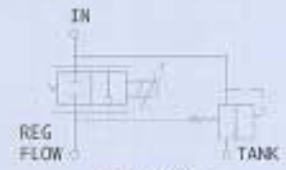
	Control Board	EC-S01	11.390
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ED-FCA



ED-FCB



ED-FCC

MLT/FD-FBK and MLT/CE-FBK multi-function, electro-hydraulic, proportional remote control for truck mounted cranes.

- closed loop proportional actuator system.
- each actuator has self-contained electronics, with closed-loop feedback to assure that the desired spool position is maintained relative to joystick input.
- version FD mounts directly to existing manual control valve – domestic or international.
- version CE mounts to control rods on cranes with dual manual controls.
- allows for proportional remote control as well as manual control.

TCN/FD-L1S/6F single function, electro-hydraulic, proportional remote control for truck mounted cranes

- the desired function is selected through electro-hydraulic, on/off style actuators.
- pump flow is metered to the manual valve stack, via a pressure compensated, proportional flow control.
- PWM electronic control board included in pistol grip-style controller.
- allows for proportional remote control as well as manual control.

Joysticks

		MODEL	PAGE
	Single Axis	FTC-L2S & MS-L2S	11.400
	Multi-Axis	JSM-4D & JLS-4D	11.400

PRO-OPERATOR



Worldwide Manufacturing and Distribution



With manufacturing operations in Rockford, Illinois, USA and Modena, Italy as well as strong International Distribution in virtually all corners of the world, Delta Power is able to market and support their products globally, thereby assuring all customers the service and satisfaction that they have come to expect and deserve.

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