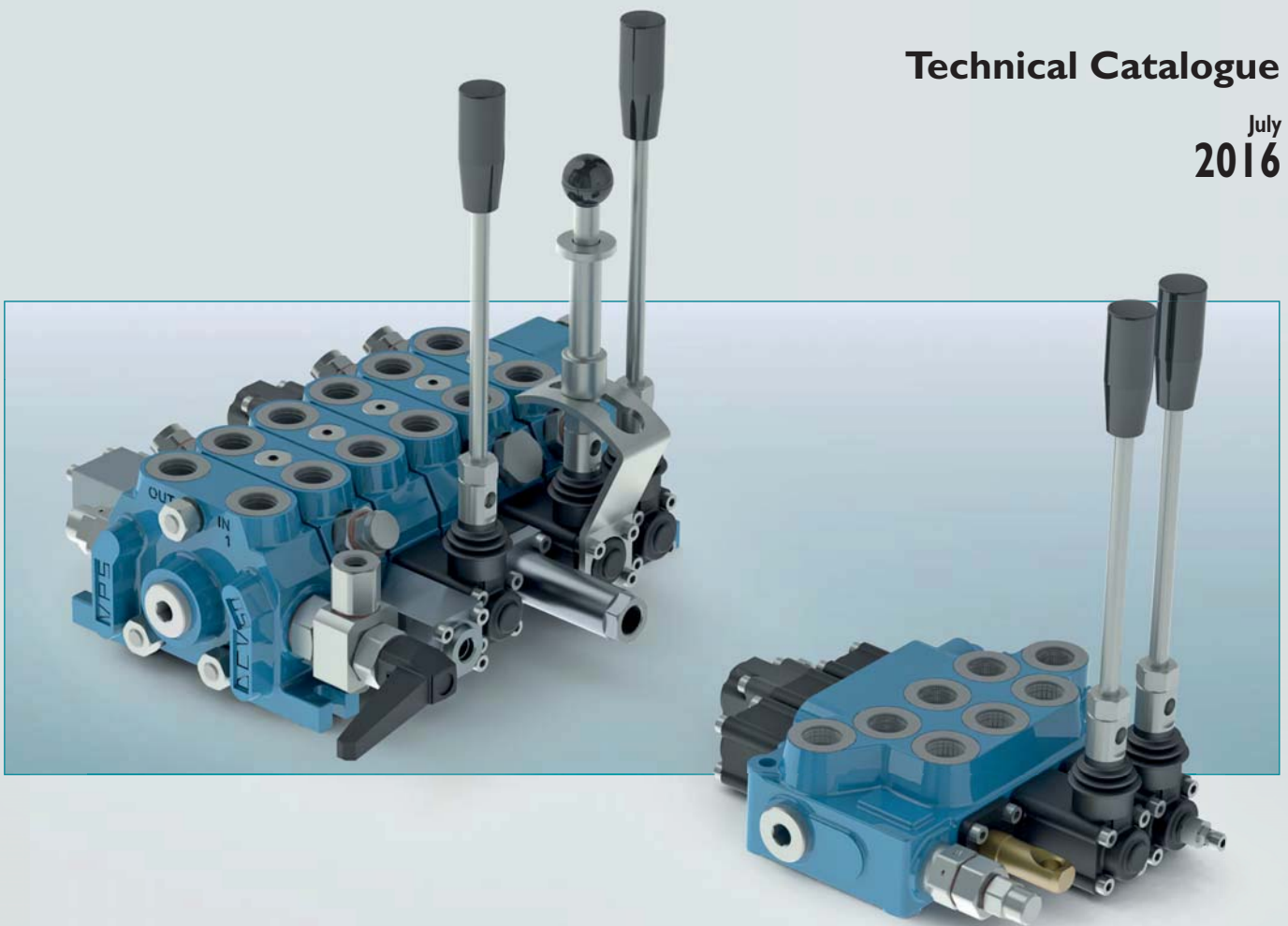


DCV MONOBLOCK AND MODULAR VALVES

Technical Catalogue

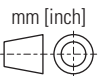
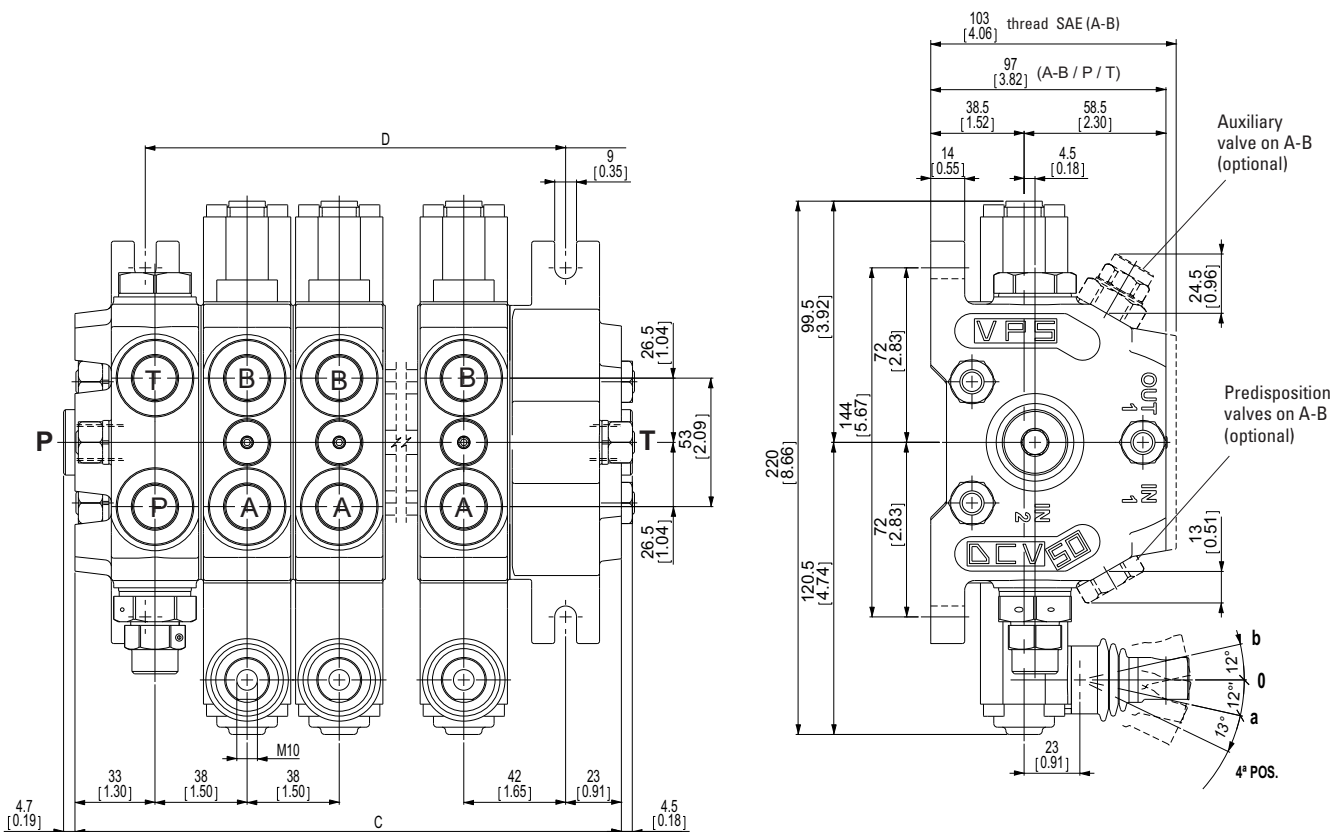
July
2016



Modular valve DCV50



OVERALL DIMENSIONS

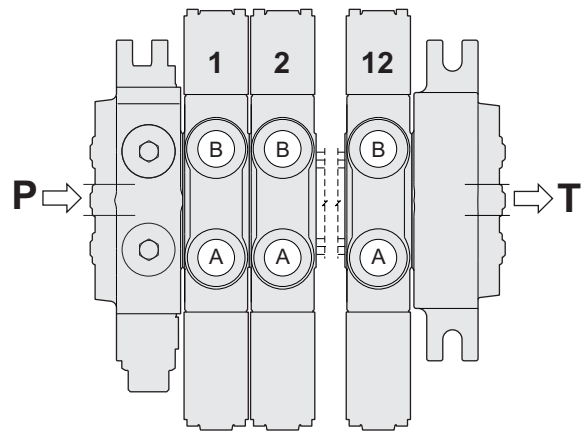
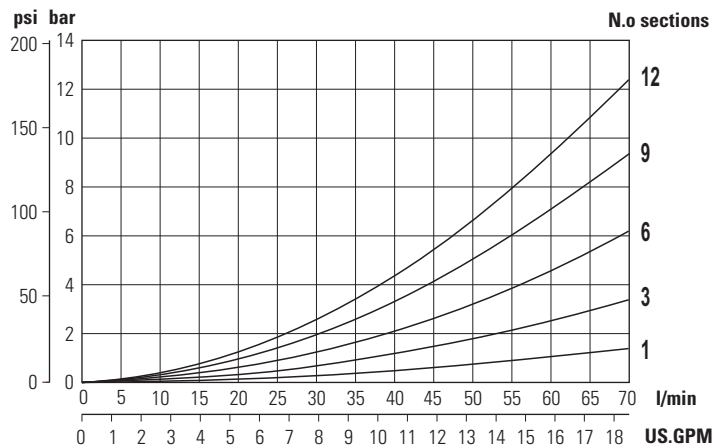


Tie-rod tightening torque: **55 Nm [40.6 lbf.ft]**

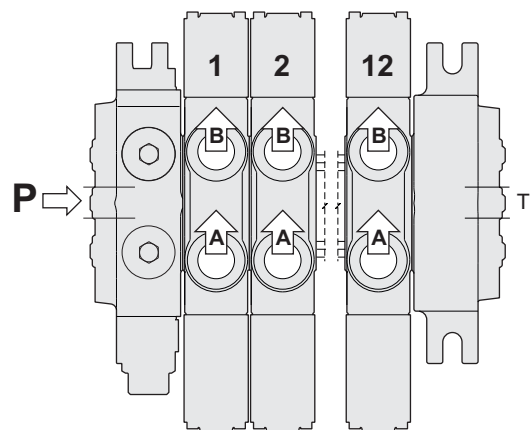
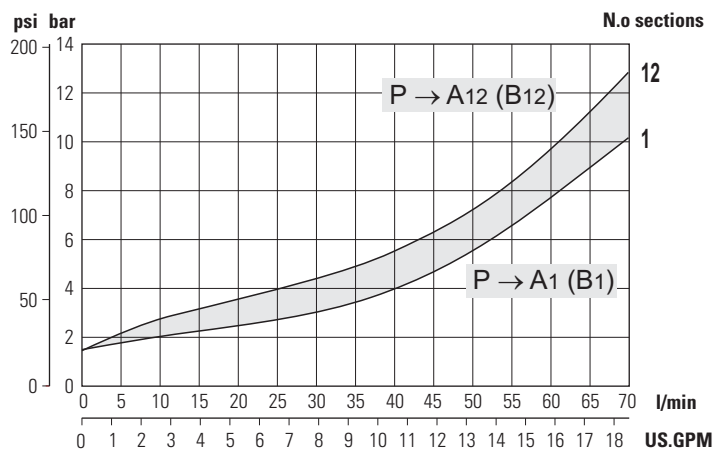
Type	C mm [inch]	D mm [inch]	Weight kg [lb]	Max flow l/min [GPM]	Max pressure BAR [psi]
DCV 50/1	130 [5.12]	84 [3.31]	7.00 [15.40]	70 [18.5]	350 [5075]
DCV 50/2	168 [6.61]	122 [4.80]	9.60 [21.12]		
DCV 50/3	206 [8.11]	160 [6.30]	12.20 [26.84]		
DCV 50/4	244 [9.61]	198 [7.80]	14.80 [32.56]		
DCV 50/5	282 [11.10]	236 [9.29]	17.40 [38.28]		
DCV 50/6	320 [12.60]	274 [10.79]	20.00 [44.00]		
DCV 50/7	358 [14.09]	312 [12.28]	22.60 [49.72]		
DCV 50/8	396 [15.59]	350 [13.78]	25.20 [55.44]		
DCV 50/9	434 [17.09]	388 [15.28]	27.80 [61.16]		
DCV 50/10	472 [18.58]	426 [16.77]	30.40 [67.88]		
DCV 50/11	510 [20.08]	464 [18.27]	33.00 [72.60]		
DCV 50/12	548 [21.57]	502 [19.76]	35.60 [78.32]		

CHARACTERISTIC PRESSURE DROP FLOW CURVES

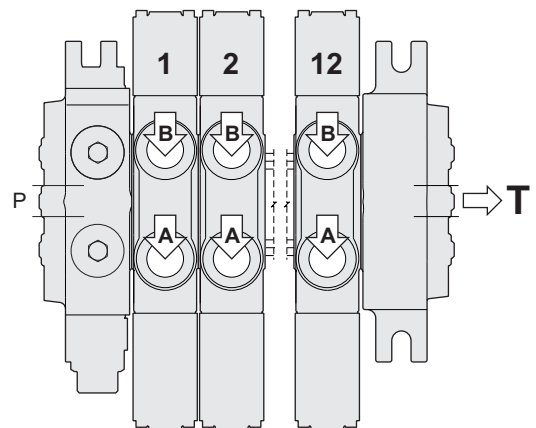
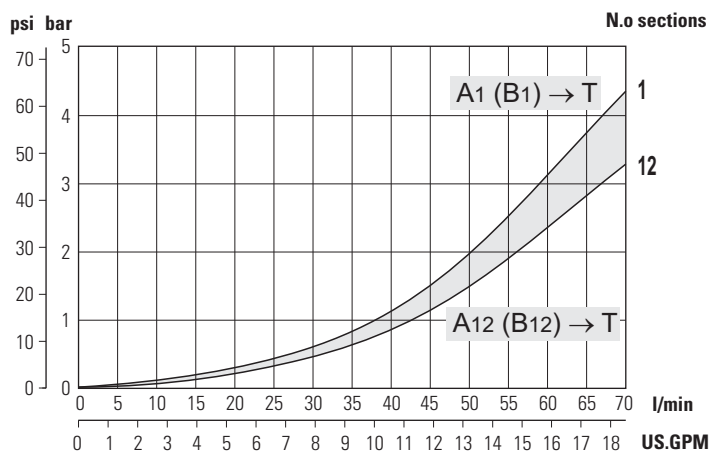
Inlet pressure drop between P → T
spool in central position



Inlet pressure drop between P → A (B)
spool in working position



Inlet pressure drop between A (B) → T
spool in working position

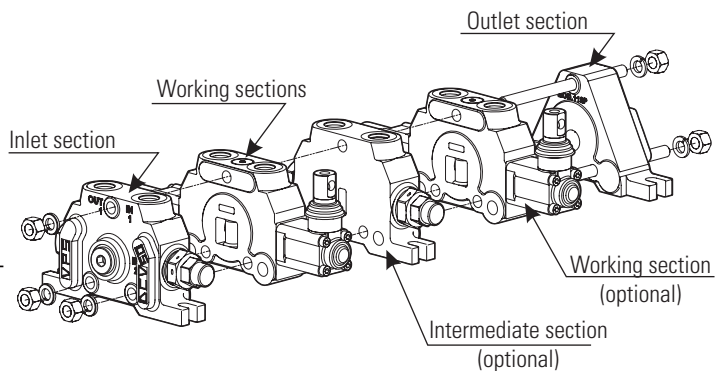
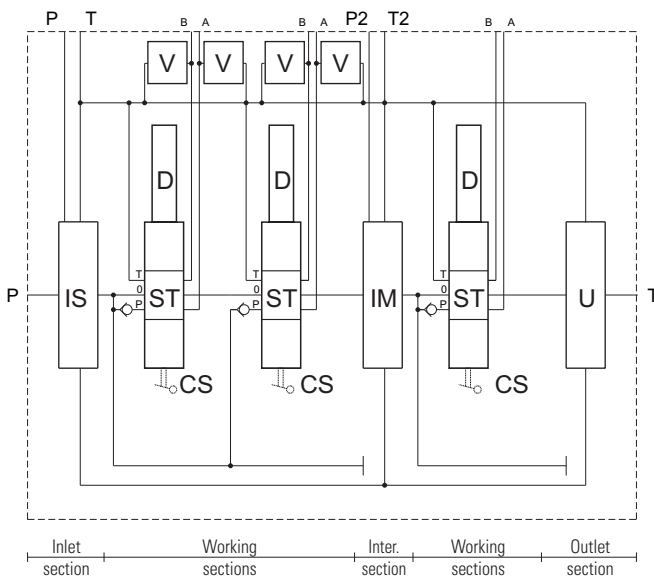


Metering curves are different for each type of spool. Therefore particular curves are supplied on request
The curves are obtained using standard double acting spool (cod. ST1) with oil at 50°C and viscosity 36 mm² / s

		Model	Inlet section		Working sections (repeat for any section)														Interm. section	(1)	Outlet section																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		DCV	**	/	*	I	*	***	(***)	*	F	ST	**	CS	**	D	**	VA	(**)	VB	(**)	AP	*	F	*	W	*	Xn	IM	*	F	*	(1)	U	*	F	*																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Description Size (30 50 80 MG) N.o working sections Inlet type Valves arrangement Main relief valve setting (1) Port location Threads Spool Spool control side A Positioning / Control side B Auxiliary valve on port A (1) Auxiliary valve on port B (1) Circuit Threads Hand lever (1) Working section repeated for n. times Intermediate (1) Threads Others working section (1) Outlet Threads	Page 26-28 30-32 36 37 37 38 38 39 40 45 50 50 51 53 53 53 54 58 — 59 62																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</

(1) ----- Optional fields. Not specify if not required.

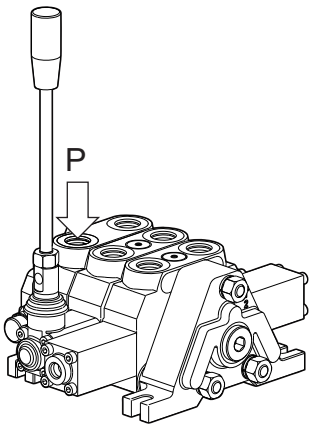
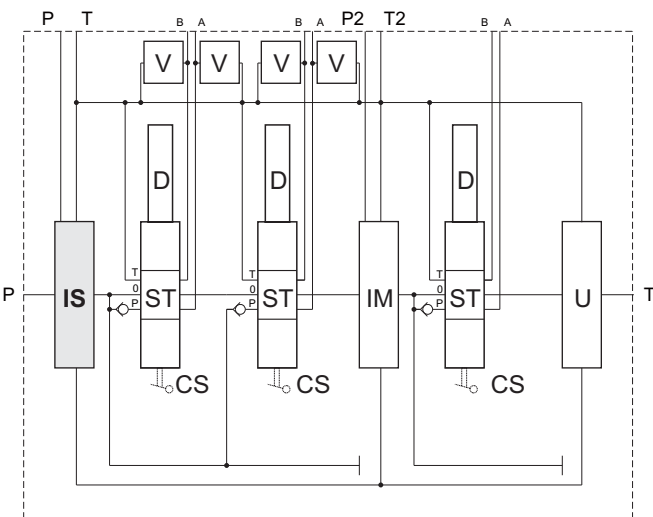
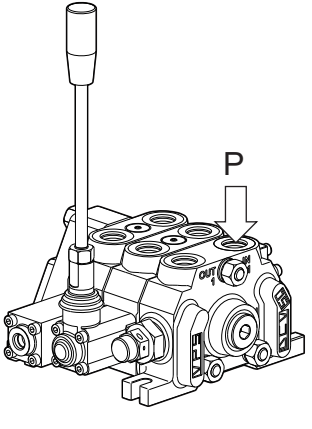
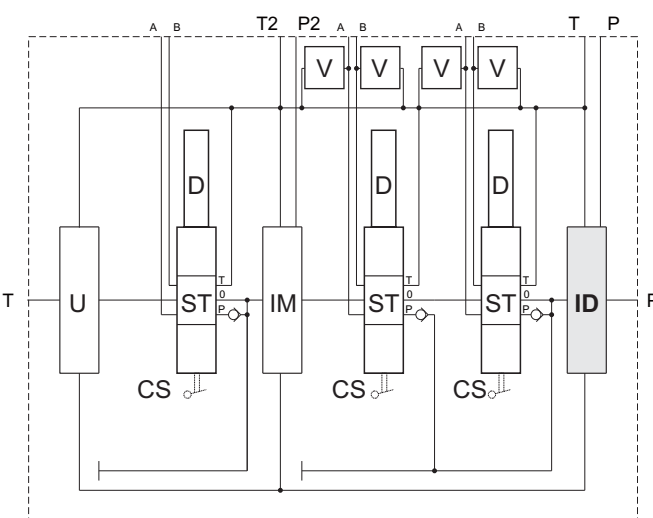
HYDRAULIC SCHEME



Inlet type

DCV ** / * **I*** *** (***) * F* ST** CS** D** VA**(**) VB**(**) AP* F* W* Xn IM* F* .. U* F*

I* Inlet type

*	Description	Drawing
IS	Left hand inlet	 
ID	Right hand inlet	 

MODULAR

Valves arrangement	
Main relief valve setting (bar)	
DCV ** / *	I* ***1(***)* F* ST** CS** D** VA**(**) VB**(**) AP* F* W* Xn IM* F* ... U* F*

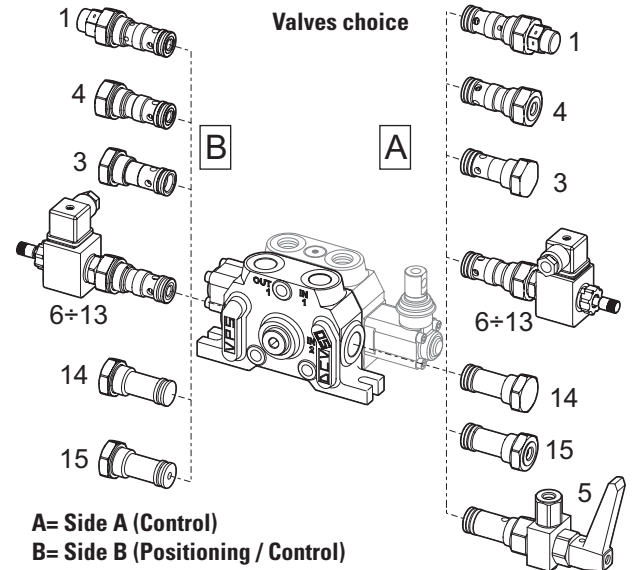
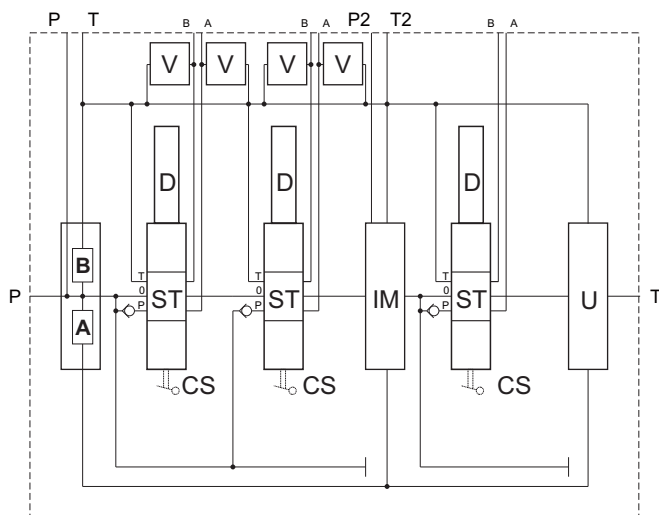
*** (**) Valves arrangements and main relief valve setting

***	(**)	Arrangements A*	B*
060	(1)	A1	B3
057	(1)	A1	B4
002	(1)	A1	B6 (2)
003	(1)	A1	B7 (2)
004	(1)	A1	B8 (2)
005	(1)	A1	B9 (2)
006	(1)	A1	B10 (2)
007	(1)	A1	B11 (2)
008	(1)	A1	B12 (2)
009	(1)	A1	B13 (2)
001	(1)	A1	B14
010	(1)	A1	B15
021	—	A4	B3
022	—	A4	B6 (2)
023	—	A4	B7 (2)
024	—	A4	B8 (2)
025	—	A4	B9 (2)
026	—	A4	B10 (2)
027	—	A4	B11 (2)
028	—	A4	B12 (2)
029	—	A4	B13 (2)
030	—	A4	B14
031	—	A4	B15
051	—	A5	B1
052	—	A5	B14
053	—	A5	B15
032	(1)	A6	B1
033	(1)	A7	B1
034	(1)	A8	B1
035	(1)	A9	B1

***	(**)	Arrangements A*	B*
036	(1)	A10	B1
037	(1)	A11	B1
038	(1)	A12	B1
039	(1)	A13	B1
059	(1)	A14	B1
013	—	A14	B6 (2)
014	—	A14	B7 (2)
015	—	A14	B8 (2)
016	—	A14	B9 (2)
017	—	A14	B10 (2)
018	—	A14	B11 (2)
019	—	A14	B12 (2)
020	—	A14	B13 (2)
011	—	A14	B14
012	—	A14	B15
040	(1)	A15	B1
042	—	A15	B3
041	—	A15	B4
043	—	A15	B6 (2)
044	—	A15	B7 (2)
045	—	A15	B8 (2)
046	—	A15	B9 (2)
047	—	A15	B10 (2)
048	—	A15	B11 (2)
049	—	A15	B12 (2)
050	—	A15	B13 (2)
058	—	A15	B14

(1) Specify pressure relief valve setting (from 20 to 400 bar). In the order it is suggested specify the flow rate.

(2) Can not be used with electro-hydraulic control D15 ÷ D18. Mount the electric valve on side A.



A= Side A (Control)

B= Side B (Positioning / Control)

1 (3)	Pilot-operated main relief valve	
3	Anticavitation valve	
4	External pilot-operated valve	
5	Cross or hydraulic brakes lock valve	
6 (4)	Solenoid dump valve 12V work NORMALLY OPEN	
8 (4)	Solenoid dump valve 24V work NORMALLY OPEN	
10 (4)	Solenoid dump valve 26V work NORMALLY OPEN	
12 (4)	Solenoid dump valve 30V work NORMALLY OPEN	
7 (4)	Solenoid dump valve 12V work NORMALLY CLOSED	
9 (4)	Solenoid dump valve 24V work NORMALLY CLOSED	
11 (4)	Solenoid dump valve 26V work NORMALLY CLOSED	
13 (4)	Solenoid dump valve 30V work NORMALLY CLOSED	
14	Valve seat with plug	
15	Pressure gauge connection	

(3) Direct operated main valve only for DCV30

(4) Solenoid features	12 Vdc	24 Vdc	26 Vdc	30 Vdc
Nominal power	17 W	20 W	20 W	17 W
Connector	DIN 43650 ISO 4400			
Protection degree	IP65			
Ambient temperature	-30 +60 °C			

Port location

DCV ** / * | * *** (***) * F* ST** CS** D** VA**(**) VB**(**) AP* F* W* Xn IM* F* .. U* F*

* Port type

*	Description	Drawing
S	Top inlet	DCV 30 DCV 50 DCV 80 DCV MG Scheme with left hand inlet
L	Side inlet	DCV 30 DCV 50 DCV 80 DCV MG Scheme with left hand inlet

----- (1) Only DCV30 - DCV50 - DCV80 (2) Only DCVMG

Threads

DCV ** / * | * *** (***) * F* ST** CS** D** VA**(**) VB**(**) AP* F* W* Xn IM* F* .. U* F*

F* Inlet section threads

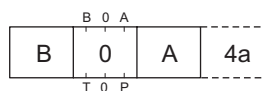
**	Description	DCV 30		DCV 50		DCV 80		DCV MG	
		P	T	P	T	P	T	P	T
F3	3/8" BSP	•	•						
F4	1/2" BSP			•	•	• (3)	• (3)		
F5	3/4" BSP					•	•		
F6	1" BSP							•	—
F31	9/16" - 18UNF (SAE6)	•	•						
F33	7/8" - 14UNF (SAE10)			•	•	• (3)	• (3)		
F34	1" 1/16 - 12UN (SAE12)					•	•		
F36	1" 5/16 - 12UN (SAE16)							•	—

(3) Threads availables on request

Spool

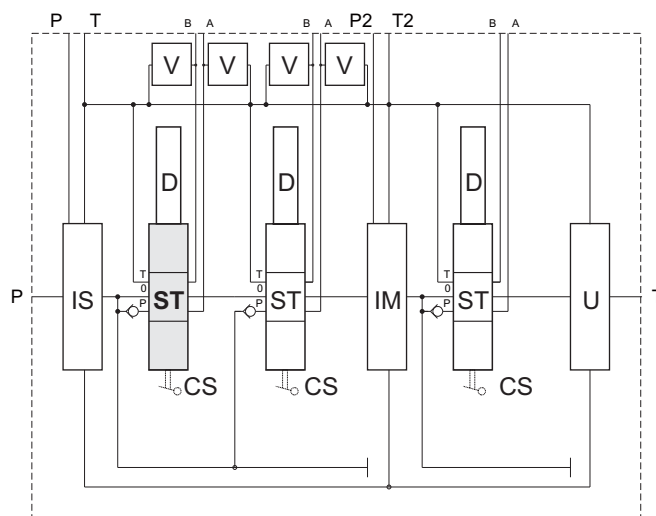
DCV ** / * I* *** (***) * F* **ST**** CS** D** VA**(**) VB**(**) AP* F* W* Xn IM* F* .. U* F*

ST** Spool



**	Description	Symbol
ST1 ST1G (1)(2)	3 positions, double acting	
ST2	3 positions, double acting, - no passage in 0 - A and B open	
ST3	3 positions, double acting, - no passage in 0 - A and B blocked	
ST4 ST4G (1)	3 positions, double acting, - A and B open	
ST5 ST5G (1)	3 positions, double acting, - A open - B blocked	
ST6 ST6G (1)	3 positions, double acting, - A blocked - B open	
ST7	3 positions, single acting in A	
ST8	3 positions, single acting in B	
ST9	3 positions, single acting in A - A open	
ST10	3 positions, single acting in B - B open	
ST11	3 positions, double acting regenerative in A (not standard)	
ST36	3 positions, double acting regenerative in B (not standard)	

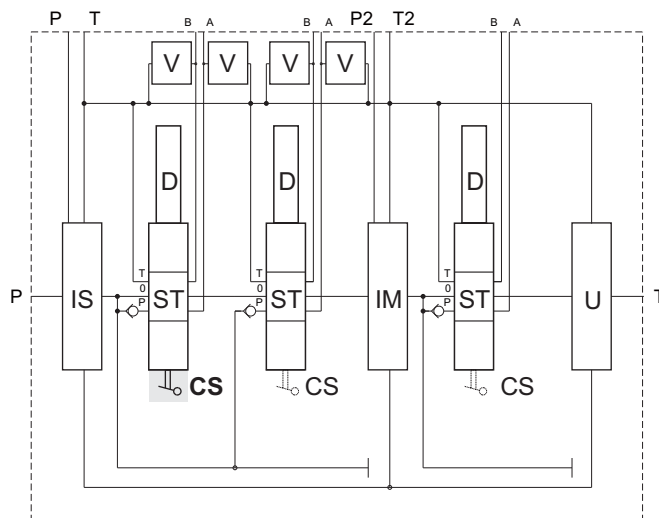
(1) **STG** = Extra metering



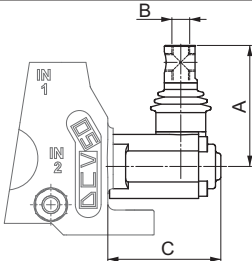
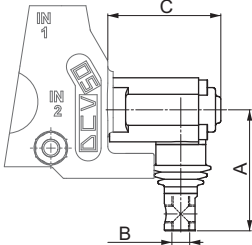
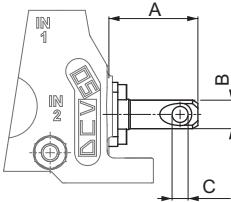
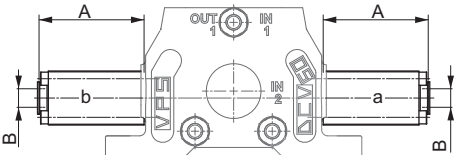
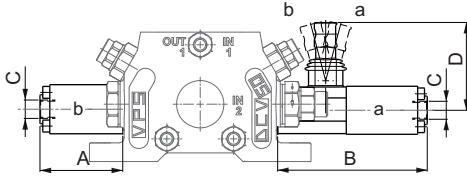
**	Description	Symbol
ST12	4 positions, double acting with 4th float position	
ST23	2 positions with function dead man (unactivated) in "a" position ; working position in "0"	
ST24	2 positions with function dead man (unactivated) in "b" position ; working position in "0"	
ST27	2 positions with function dead man (unactivated) in "0" position ; working position in "b"	
ST28	2 positions with function dead man (unactivated) in "0" position ; working position in "a"	
ST13	3 positions, series circuit double-acting	
ST14	3 positions, series circuit double-acting - A open - B blocked	
ST15	3 positions, series circuit double-acting - A and B open	
ST16	3 positions, series circuit double-acting - A blocked - B open	

Spool control side A

DCV ** / * I* *** (***) * F* ST** **CS**** D** VA**(**) VB**(**) AP* F* W* Xn IM* F* .. U* F*



CS** Spool control side A

**	Description	Drawing																																																								
CS1 CSA1 <i>(1)</i>	Standard handle		<table><tr><th></th><th colspan="2">A</th><th>B</th><th colspan="2">C</th><th colspan="2">CSA1</th></tr><tr><th></th><th>mm</th><th>inch</th><th></th><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>64</td><td>2.52</td><td>M8</td><td>55</td><td>2.17</td><td>—</td><td>—</td></tr><tr><td>DCV 50</td><td>68</td><td>2.68</td><td>M10</td><td>62.5</td><td>2.46</td><td>67.5</td><td>2.66</td></tr><tr><td>DCV 80</td><td>83</td><td>3.27</td><td>M10</td><td>74</td><td>2.91</td><td>79.5</td><td>3.13</td></tr><tr><td>DCV MG</td><td>95</td><td>3.74</td><td>M12</td><td>90</td><td>3.54</td><td>—</td><td>—</td></tr></table>									A		B	C		CSA1			mm	inch		mm	inch	mm	inch	DCV 30	64	2.52	M8	55	2.17	—	—	DCV 50	68	2.68	M10	62.5	2.46	67.5	2.66	DCV 80	83	3.27	M10	74	2.91	79.5	3.13	DCV MG	95	3.74	M12	90	3.54	—	—
		A		B	C		CSA1																																																			
	mm	inch		mm	inch	mm	inch																																																			
DCV 30	64	2.52	M8	55	2.17	—	—																																																			
DCV 50	68	2.68	M10	62.5	2.46	67.5	2.66																																																			
DCV 80	83	3.27	M10	74	2.91	79.5	3.13																																																			
DCV MG	95	3.74	M12	90	3.54	—	—																																																			
CS2 CSA2 <i>(1)</i>	Handle at 180°		<table><tr><th></th><th colspan="2">A</th><th>B</th><th colspan="2">C</th><th colspan="2">CSA2</th></tr><tr><th></th><th>mm</th><th>inch</th><th></th><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>64</td><td>2.52</td><td>M8</td><td>55</td><td>2.17</td><td>—</td><td>—</td></tr><tr><td>DCV 50</td><td>68</td><td>2.68</td><td>M10</td><td>62.5</td><td>2.46</td><td>67.5</td><td>2.66</td></tr><tr><td>DCV 80</td><td>83</td><td>3.27</td><td>M10</td><td>74</td><td>2.91</td><td>79.5</td><td>3.13</td></tr><tr><td>DCV MG</td><td>95</td><td>3.74</td><td>M12</td><td>90</td><td>3.54</td><td>—</td><td>—</td></tr></table>									A		B	C		CSA2			mm	inch		mm	inch	mm	inch	DCV 30	64	2.52	M8	55	2.17	—	—	DCV 50	68	2.68	M10	62.5	2.46	67.5	2.66	DCV 80	83	3.27	M10	74	2.91	79.5	3.13	DCV MG	95	3.74	M12	90	3.54	—	—
		A		B	C		CSA2																																																			
	mm	inch		mm	inch	mm	inch																																																			
DCV 30	64	2.52	M8	55	2.17	—	—																																																			
DCV 50	68	2.68	M10	62.5	2.46	67.5	2.66																																																			
DCV 80	83	3.27	M10	74	2.91	79.5	3.13																																																			
DCV MG	95	3.74	M12	90	3.54	—	—																																																			
CS3	Without handle		<table><tr><th></th><th colspan="2">A</th><th colspan="2">B</th><th colspan="2">C</th></tr><tr><th></th><th>mm</th><th>inch</th><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>41</td><td>1.61</td><td>11</td><td>0.43</td><td>6</td><td>0.24</td></tr><tr><td>DCV 50</td><td>50</td><td>1.97</td><td>16</td><td>0.63</td><td>9</td><td>0.35</td></tr><tr><td>DCV 80</td><td>59.5</td><td>2.34</td><td>17.5</td><td>0.69</td><td>9</td><td>0.35</td></tr><tr><td>DCV MG</td><td>72</td><td>2.83</td><td>0.69</td><td>0.75</td><td>9</td><td>0.35</td></tr></table>									A		B		C			mm	inch	mm	inch	mm	inch	DCV 30	41	1.61	11	0.43	6	0.24	DCV 50	50	1.97	16	0.63	9	0.35	DCV 80	59.5	2.34	17.5	0.69	9	0.35	DCV MG	72	2.83	0.69	0.75	9	0.35						
		A		B		C																																																				
	mm	inch	mm	inch	mm	inch																																																				
DCV 30	41	1.61	11	0.43	6	0.24																																																				
DCV 50	50	1.97	16	0.63	9	0.35																																																				
DCV 80	59.5	2.34	17.5	0.69	9	0.35																																																				
DCV MG	72	2.83	0.69	0.75	9	0.35																																																				
CS4	Hydraulic control - Max pilot pressure 35 bar 508 psi		<table><tr><th></th><th colspan="2">A</th><th colspan="2">B</th></tr><tr><th></th><th>mm</th><th>inch</th><th></th><th></th></tr><tr><td>DCV 30</td><td>59</td><td>2.32</td><td colspan="2">1/4" BSP</td></tr><tr><td>DCV 50</td><td>68</td><td>2.68</td><td colspan="2">1/4" BSP</td></tr><tr><td>DCV 80</td><td>87</td><td>3.43</td><td colspan="2">1/4" BSP</td></tr><tr><td>DCV MG</td><td>80</td><td>3.15</td><td colspan="2">1/4" BSP</td></tr></table>									A		B			mm	inch			DCV 30	59	2.32	1/4" BSP		DCV 50	68	2.68	1/4" BSP		DCV 80	87	3.43	1/4" BSP		DCV MG	80	3.15	1/4" BSP																			
		A		B																																																						
	mm	inch																																																								
DCV 30	59	2.32	1/4" BSP																																																							
DCV 50	68	2.68	1/4" BSP																																																							
DCV 80	87	3.43	1/4" BSP																																																							
DCV MG	80	3.15	1/4" BSP																																																							
CS53	Hydraulic lever control		<table><tr><th></th><th colspan="2">A</th><th colspan="2">B</th><th>C</th><th>D</th></tr><tr><th></th><th>mm</th><th>inch</th><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>59</td><td>2.32</td><td>109</td><td>4.29</td><td>1/4" BSP</td><td>64</td><td>2.52</td></tr><tr><td>DCV 80</td><td>101</td><td>3.98</td><td>119</td><td>4.69</td><td>1/4" BSP</td><td>83</td><td>3.27</td></tr></table>									A		B		C	D		mm	inch	mm	inch	mm	inch	DCV 30	59	2.32	109	4.29	1/4" BSP	64	2.52	DCV 80	101	3.98	119	4.69	1/4" BSP	83	3.27																		
		A		B		C	D																																																			
	mm	inch	mm	inch	mm	inch																																																				
DCV 30	59	2.32	109	4.29	1/4" BSP	64	2.52																																																			
DCV 80	101	3.98	119	4.69	1/4" BSP	83	3.27																																																			

(1) **CSA** = Aluminium version (only DCV50 - DCV80)

CS** Spool control side A

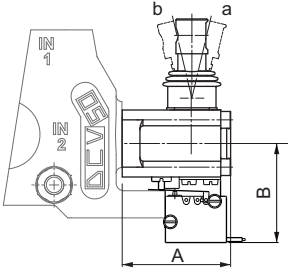
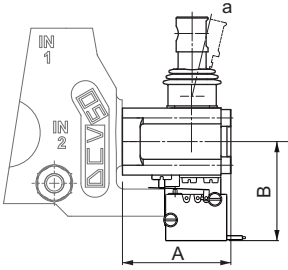
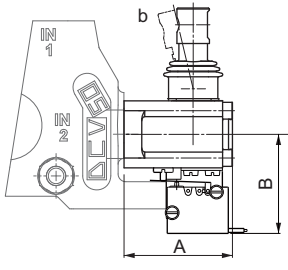
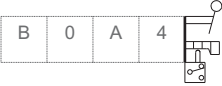
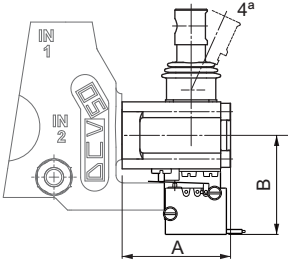
**	Description	Drawing																														
CS12 (CX) (1)	Cloche control at 90° with fulcrum on the downstream for left inlet section and upstream for right inlet section (not available on DCV MG) B 0 A B 0 A	B1 B A1 A A A1-A A1 A1-B B B1-B B1 <table><tr><td></td><td>mm</td><td>L</td><td>inch</td><td>mm</td><td>D</td><td>inch</td></tr><tr><td>DCV 30</td><td>285</td><td>11.22</td><td>3.5</td><td>0.13</td></tr><tr><td>DCV 50</td><td>290</td><td>11.42</td><td>3</td><td>0.11</td></tr><tr><td>DCV 80</td><td>308.5</td><td>12.15</td><td>4</td><td>0.15</td></tr><tr><td>DCV MG</td><td>324</td><td>12.76</td><td>0</td><td>0</td></tr></table>		mm	L	inch	mm	D	inch	DCV 30	285	11.22	3.5	0.13	DCV 50	290	11.42	3	0.11	DCV 80	308.5	12.15	4	0.15	DCV MG	324	12.76	0	0			
	mm	L	inch	mm	D	inch																										
DCV 30	285	11.22	3.5	0.13																												
DCV 50	290	11.42	3	0.11																												
DCV 80	308.5	12.15	4	0.15																												
DCV MG	324	12.76	0	0																												
CS13 (CX) (1)	Cloche control at 90° with fulcrum on the upstream for left inlet section and downstream for right inlet section (not available on DCV MG) B 0 A B 0 A	B1 B A1 A A1 B-A1 A A-A1 B A-B1 B1 B-B1 <table><tr><td></td><td>mm</td><td>L</td><td>inch</td><td>mm</td><td>D</td><td>inch</td></tr><tr><td>DCV 30</td><td>285</td><td>11.22</td><td>3.5</td><td>0.13</td></tr><tr><td>DCV 50</td><td>290</td><td>11.42</td><td>3</td><td>0.11</td></tr><tr><td>DCV 80</td><td>308.5</td><td>12.15</td><td>4</td><td>0.15</td></tr><tr><td>DCV MG</td><td>324</td><td>12.76</td><td>0</td><td>0</td></tr></table>		mm	L	inch	mm	D	inch	DCV 30	285	11.22	3.5	0.13	DCV 50	290	11.42	3	0.11	DCV 80	308.5	12.15	4	0.15	DCV MG	324	12.76	0	0			
	mm	L	inch	mm	D	inch																										
DCV 30	285	11.22	3.5	0.13																												
DCV 50	290	11.42	3	0.11																												
DCV 80	308.5	12.15	4	0.15																												
DCV MG	324	12.76	0	0																												
CS14 (2)	Flexible cable control (2) B 0 A	<table><tr><td></td><td colspan="2">A</td><td colspan="2">B</td></tr><tr><td></td><td>mm</td><td>inch</td><td>mm</td><td>inch</td></tr><tr><td>DCV 30</td><td>285</td><td>11.22</td><td>(2)</td><td>(2)</td></tr><tr><td>DCV 50</td><td>290</td><td>11.42</td><td>(2)</td><td>(2)</td></tr><tr><td>DCV 80</td><td>308.5</td><td>12.15</td><td>(2)</td><td>(2)</td></tr><tr><td>DCV MG</td><td>324</td><td>12.76</td><td>(2)</td><td>(2)</td></tr></table>		A		B			mm	inch	mm	inch	DCV 30	285	11.22	(2)	(2)	DCV 50	290	11.42	(2)	(2)	DCV 80	308.5	12.15	(2)	(2)	DCV MG	324	12.76	(2)	(2)
	A		B																													
	mm	inch	mm	inch																												
DCV 30	285	11.22	(2)	(2)																												
DCV 50	290	11.42	(2)	(2)																												
DCV 80	308.5	12.15	(2)	(2)																												
DCV MG	324	12.76	(2)	(2)																												
CS15 CSA15 (3)	Spool stroke adjustment in "b" B 0 A	<table><tr><td></td><td colspan="2">A</td></tr><tr><td></td><td>mm</td><td>inch</td></tr><tr><td>DCV 30</td><td>78</td><td>3.07</td></tr><tr><td>DCV 50</td><td>82</td><td>3.23</td></tr><tr><td>DCV 80</td><td>99.5</td><td>3.92</td></tr><tr><td>DCV MG</td><td>112</td><td>4.41</td></tr></table>		A			mm	inch	DCV 30	78	3.07	DCV 50	82	3.23	DCV 80	99.5	3.92	DCV MG	112	4.41												
	A																															
	mm	inch																														
DCV 30	78	3.07																														
DCV 50	82	3.23																														
DCV 80	99.5	3.92																														
DCV MG	112	4.41																														
CS16 CSA16 (3)	Spool stroke adjustment, handle at 180° in "b" B 0 A	<table><tr><td></td><td colspan="2">A</td></tr><tr><td></td><td>mm</td><td>inch</td></tr><tr><td>DCV 30</td><td>78</td><td>3.07</td></tr><tr><td>DCV 50</td><td>82</td><td>3.23</td></tr><tr><td>DCV 80</td><td>99.5</td><td>99.5</td></tr><tr><td>DCV MG</td><td>112</td><td>4.41</td></tr></table>		A			mm	inch	DCV 30	78	3.07	DCV 50	82	3.23	DCV 80	99.5	99.5	DCV MG	112	4.41												
	A																															
	mm	inch																														
DCV 30	78	3.07																														
DCV 50	82	3.23																														
DCV 80	99.5	99.5																														
DCV MG	112	4.41																														

(1) **(CX)** code required to use on 2th section

(2) Cable supplied on request. Length cable and control, contact our commercial dept

(3) **CSA** = Aluminium version (only DCV50 - DCV80)

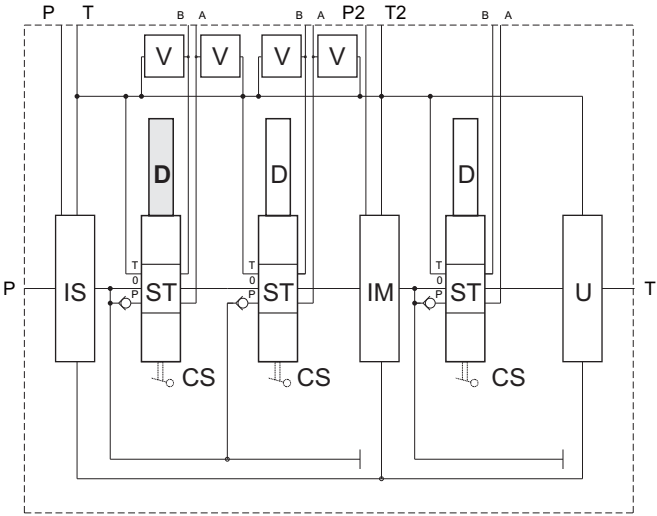
CS** Spool control side A

**	Description	Drawing																																										
CS17 CSA17 <i>(1)</i>	Standard handle with microswitch in “a” and “b” Protection degree: IP67 Nominal rating: 0.1 ÷ 10 A / 250VAC Minimum rating: 1 mA / 4 VDC Operating temperature: -20 ÷ +85°C 	 Cable length: 50 cm [19.69 inch] <table><tr><th></th><th colspan="2">A</th><th colspan="2">CSA17</th><th colspan="2">B</th></tr><tr><th></th><th>mm</th><th>inch</th><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>55</td><td>2.17</td><td>—</td><td>—</td><td>50.5</td><td>1.99</td></tr><tr><td>DCV 50</td><td>62.5</td><td>2.46</td><td>67.5</td><td>2.66</td><td>51.5</td><td>2.03</td></tr><tr><td>DCV 80</td><td>74</td><td>2.91</td><td>79.5</td><td>3.13</td><td>53</td><td>2.09</td></tr><tr><td>DCV MG</td><td>90</td><td>3.54</td><td>—</td><td>—</td><td>58</td><td>2.28</td></tr></table>		A		CSA17		B			mm	inch	mm	inch	mm	inch	DCV 30	55	2.17	—	—	50.5	1.99	DCV 50	62.5	2.46	67.5	2.66	51.5	2.03	DCV 80	74	2.91	79.5	3.13	53	2.09	DCV MG	90	3.54	—	—	58	2.28
	A		CSA17		B																																							
	mm	inch	mm	inch	mm	inch																																						
DCV 30	55	2.17	—	—	50.5	1.99																																						
DCV 50	62.5	2.46	67.5	2.66	51.5	2.03																																						
DCV 80	74	2.91	79.5	3.13	53	2.09																																						
DCV MG	90	3.54	—	—	58	2.28																																						
CS18 CSA18 <i>(1)</i>	Standard handle with microswitch in “a” Protection degree: IP67 Nominal rating: 0.1 ÷ 10 A / 250VAC Minimum rating: 1 mA / 4 VDC Operating temperature: -20 ÷ +85°C 	 Cable length: 50 cm [19.69 inch] <table><tr><th></th><th colspan="2">A</th><th colspan="2">CSA18</th><th colspan="2">B</th></tr><tr><th></th><th>mm</th><th>inch</th><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>55</td><td>2.17</td><td>—</td><td>—</td><td>50.5</td><td>1.99</td></tr><tr><td>DCV 50</td><td>62.5</td><td>2.46</td><td>67.5</td><td>2.66</td><td>51.5</td><td>2.03</td></tr><tr><td>DCV 80</td><td>74</td><td>2.91</td><td>79.5</td><td>3.13</td><td>53</td><td>2.09</td></tr><tr><td>DCV MG</td><td>90</td><td>3.54</td><td>—</td><td>—</td><td>58</td><td>2.28</td></tr></table>		A		CSA18		B			mm	inch	mm	inch	mm	inch	DCV 30	55	2.17	—	—	50.5	1.99	DCV 50	62.5	2.46	67.5	2.66	51.5	2.03	DCV 80	74	2.91	79.5	3.13	53	2.09	DCV MG	90	3.54	—	—	58	2.28
	A		CSA18		B																																							
	mm	inch	mm	inch	mm	inch																																						
DCV 30	55	2.17	—	—	50.5	1.99																																						
DCV 50	62.5	2.46	67.5	2.66	51.5	2.03																																						
DCV 80	74	2.91	79.5	3.13	53	2.09																																						
DCV MG	90	3.54	—	—	58	2.28																																						
CS19 CSA19 <i>(1)</i>	Standard handle with microswitch in “b” Protection degree: IP67 Nominal rating: 0.1 ÷ 10 A / 250VAC Minimum rating: 1 mA / 4 VDC Operating temperature: -20 ÷ +85°C 	 Cable length: 50 cm [19.69 inch] <table><tr><th></th><th colspan="2">A</th><th colspan="2">CSA19</th><th colspan="2">B</th></tr><tr><th></th><th>mm</th><th>inch</th><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>55</td><td>2.17</td><td>—</td><td>—</td><td>50.5</td><td>1.99</td></tr><tr><td>DCV 50</td><td>62.5</td><td>2.46</td><td>67.5</td><td>2.66</td><td>51.5</td><td>2.03</td></tr><tr><td>DCV 80</td><td>74</td><td>2.91</td><td>79.5</td><td>3.13</td><td>53</td><td>2.09</td></tr><tr><td>DCV MG</td><td>90</td><td>3.54</td><td>—</td><td>—</td><td>58</td><td>2.28</td></tr></table>		A		CSA19		B			mm	inch	mm	inch	mm	inch	DCV 30	55	2.17	—	—	50.5	1.99	DCV 50	62.5	2.46	67.5	2.66	51.5	2.03	DCV 80	74	2.91	79.5	3.13	53	2.09	DCV MG	90	3.54	—	—	58	2.28
	A		CSA19		B																																							
	mm	inch	mm	inch	mm	inch																																						
DCV 30	55	2.17	—	—	50.5	1.99																																						
DCV 50	62.5	2.46	67.5	2.66	51.5	2.03																																						
DCV 80	74	2.91	79.5	3.13	53	2.09																																						
DCV MG	90	3.54	—	—	58	2.28																																						
CS20 CSA20 <i>(1)</i>	Standard handle with microswitch in 4th position Protection degree: IP67 Nominal rating: 0.1 ÷ 10 A / 250VAC Minimum rating: 1 mA / 4 VDC Operating temperature: -20 ÷ +85°C 	 Cable length: 50 cm [19.69 inch] <table><tr><th></th><th colspan="2">A</th><th colspan="2">CSA20</th><th colspan="2">B</th></tr><tr><th></th><th>mm</th><th>inch</th><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>55</td><td>2.17</td><td>—</td><td>—</td><td>50.5</td><td>1.99</td></tr><tr><td>DCV 50</td><td>62.5</td><td>2.46</td><td>67.5</td><td>2.66</td><td>51.5</td><td>2.03</td></tr><tr><td>DCV 80</td><td>74</td><td>2.91</td><td>79.5</td><td>3.13</td><td>53</td><td>2.09</td></tr><tr><td>DCV MG</td><td>90</td><td>3.54</td><td>—</td><td>—</td><td>58</td><td>2.28</td></tr></table>		A		CSA20		B			mm	inch	mm	inch	mm	inch	DCV 30	55	2.17	—	—	50.5	1.99	DCV 50	62.5	2.46	67.5	2.66	51.5	2.03	DCV 80	74	2.91	79.5	3.13	53	2.09	DCV MG	90	3.54	—	—	58	2.28
	A		CSA20		B																																							
	mm	inch	mm	inch	mm	inch																																						
DCV 30	55	2.17	—	—	50.5	1.99																																						
DCV 50	62.5	2.46	67.5	2.66	51.5	2.03																																						
DCV 80	74	2.91	79.5	3.13	53	2.09																																						
DCV MG	90	3.54	—	—	58	2.28																																						

(1) **CSA** = Aluminium version (only DCV50 - DCV80)

Positioning / Control side B

DCV ** / * I* *** (***) * F* ST** CS** **D**** VA**(**) VB**(**) AP* F* W* Xn IM* F* .. U* F*



D** Positioning / Control side B

**	Description	Drawing																														
D1 DA1 (1)	3 positions, spring centred spool 		<table><tr><th rowspan="2"></th><th colspan="2">D1</th><th colspan="2">A</th></tr><tr><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>38</td><td>1.5</td><td>—</td><td>—</td></tr><tr><td>DCV 50</td><td>41.5</td><td>1.63</td><td>42</td><td>1.65</td></tr><tr><td>DCV 80</td><td>58</td><td>2.28</td><td>58</td><td>2.28</td></tr><tr><td>DCV MG</td><td>65</td><td>2.56</td><td>—</td><td>—</td></tr></table>		D1		A		mm	inch	mm	inch	DCV 30	38	1.5	—	—	DCV 50	41.5	1.63	42	1.65	DCV 80	58	2.28	58	2.28	DCV MG	65	2.56	—	—
	D1		A																													
	mm	inch	mm	inch																												
DCV 30	38	1.5	—	—																												
DCV 50	41.5	1.63	42	1.65																												
DCV 80	58	2.28	58	2.28																												
DCV MG	65	2.56	—	—																												
D2 DA2 (1)	3 positions, spring centred spool, detent in "a" and "b" 		<table><tr><th rowspan="2"></th><th colspan="2">D2</th><th colspan="2">A</th></tr><tr><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>63.5</td><td>2.5</td><td>—</td><td>—</td></tr><tr><td>DCV 50</td><td>72.5</td><td>2.85</td><td>72.5</td><td>2.85</td></tr><tr><td>DCV 80</td><td>91</td><td>3.58</td><td>91</td><td>3.58</td></tr><tr><td>DCV MG</td><td>110</td><td>4.33</td><td>—</td><td>—</td></tr></table>		D2		A		mm	inch	mm	inch	DCV 30	63.5	2.5	—	—	DCV 50	72.5	2.85	72.5	2.85	DCV 80	91	3.58	91	3.58	DCV MG	110	4.33	—	—
	D2		A																													
	mm	inch	mm	inch																												
DCV 30	63.5	2.5	—	—																												
DCV 50	72.5	2.85	72.5	2.85																												
DCV 80	91	3.58	91	3.58																												
DCV MG	110	4.33	—	—																												
D3 DA3 (1)	3 positions, spring centred spool, detent in "a" 		<table><tr><th rowspan="2"></th><th colspan="2">D3</th><th colspan="2">A</th></tr><tr><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>63.5</td><td>2.5</td><td>—</td><td>—</td></tr><tr><td>DCV 50</td><td>72.5</td><td>2.85</td><td>72.5</td><td>2.85</td></tr><tr><td>DCV 80</td><td>91</td><td>3.58</td><td>91</td><td>3.58</td></tr><tr><td>DCV MG</td><td>110</td><td>4.33</td><td>—</td><td>—</td></tr></table>		D3		A		mm	inch	mm	inch	DCV 30	63.5	2.5	—	—	DCV 50	72.5	2.85	72.5	2.85	DCV 80	91	3.58	91	3.58	DCV MG	110	4.33	—	—
	D3		A																													
	mm	inch	mm	inch																												
DCV 30	63.5	2.5	—	—																												
DCV 50	72.5	2.85	72.5	2.85																												
DCV 80	91	3.58	91	3.58																												
DCV MG	110	4.33	—	—																												
D4 DA4 (1)	3 positions, spring centred spool, detent in "b" 		<table><tr><th rowspan="2"></th><th colspan="2">D4</th><th colspan="2">A</th></tr><tr><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>63.5</td><td>2.5</td><td>—</td><td>—</td></tr><tr><td>DCV 50</td><td>72.5</td><td>2.85</td><td>72.5</td><td>2.85</td></tr><tr><td>DCV 80</td><td>91</td><td>3.58</td><td>91</td><td>3.58</td></tr><tr><td>DCV MG</td><td>110</td><td>4.33</td><td>—</td><td>—</td></tr></table>		D4		A		mm	inch	mm	inch	DCV 30	63.5	2.5	—	—	DCV 50	72.5	2.85	72.5	2.85	DCV 80	91	3.58	91	3.58	DCV MG	110	4.33	—	—
	D4		A																													
	mm	inch	mm	inch																												
DCV 30	63.5	2.5	—	—																												
DCV 50	72.5	2.85	72.5	2.85																												
DCV 80	91	3.58	91	3.58																												
DCV MG	110	4.33	—	—																												
D5 DA5 (1)	4 positions, spring centred spool, detent in 4th position 		<table><tr><th rowspan="2"></th><th colspan="2">D5</th><th colspan="2">A</th></tr><tr><th>mm</th><th>inch</th><th>mm</th><th>inch</th></tr><tr><td>DCV 30</td><td>63.5</td><td>2.5</td><td>—</td><td>—</td></tr><tr><td>DCV 50</td><td>72.5</td><td>2.85</td><td>72.5</td><td>2.85</td></tr><tr><td>DCV 80</td><td>91</td><td>3.58</td><td>91</td><td>3.58</td></tr><tr><td>DCV MG</td><td>110</td><td>4.33</td><td>—</td><td>—</td></tr></table>		D5		A		mm	inch	mm	inch	DCV 30	63.5	2.5	—	—	DCV 50	72.5	2.85	72.5	2.85	DCV 80	91	3.58	91	3.58	DCV MG	110	4.33	—	—
	D5		A																													
	mm	inch	mm	inch																												
DCV 30	63.5	2.5	—	—																												
DCV 50	72.5	2.85	72.5	2.85																												
DCV 80	91	3.58	91	3.58																												
DCV MG	110	4.33	—	—																												

(1) **DA** = Aluminium version (only DCV50 - DCV80)

D** Positioning / Control side B

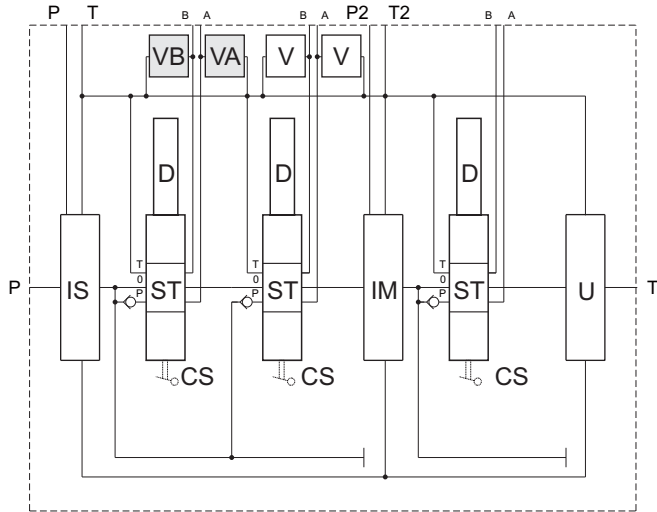
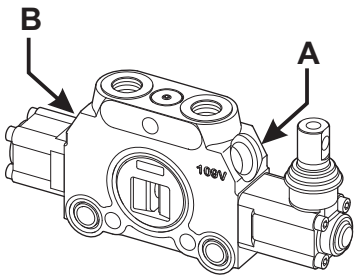
**	Description	Drawing				
D14	ON-OFF pneumatic control - Pilot pressure 5-10 bar 72.5-145 psi					
D15 (1)	Electrohydraulic ON-OFF control. Voltage 12Vdc with pressure reducing valve - Pilot pressure 20 bar 290 psi					
D16 (1)	Electrohydraulic ON-OFF control. Voltage 12Vdc without pressure reducing valve - Pilot pressure 20 bar 290 psi					
D17 (1)	Electrohydraulic ON-OFF control. Voltage 24Vdc with pressure reducing valve - Pilot pressure 20 bar 290 psi					
D18 (1)	Electrohydraulic ON-OFF control. Voltage 24Vdc without pressure reducing valve - Pilot pressure 20 bar 290 psi					

(1) Valid only for the first section with electrohydraulic control.

For proper operation it is required a pressure of 8 bar (116 psi) measured at the input P or P1.

Service port valves predisposition
(standard for DCV80 and DCVMG, optional for DCV30 and DCV50)

DCV ** / * | * *** (**) * F* ST** CS** D** **VA**(**) VB**(())** AP* F* W* Xn IM* F* .. U* F*



VA* VB* Service port valves (2)

VA1 (1)	Overload valve in position "A"	
VA2	Anti-cavitation "A" port	
VA3 (1)	Combined valve in "A" port	
VA4	Prearranged for auxiliary valve in "A" with plug	

VB1 (1)	Overload valve in position "B"	
VB2	Anti-cavitation "B" port	
VB3 (1)	Combined valve in "B" port	
VB4	Prearranged for auxiliary valve in "B" with plug	

(1) Specify the setting valve (from 20 to 350 bar). In the order it is suggested specify the flow rate.
(2) Standard predisposition for DCV80 and DCV MG

Circuit

DCV ** / * | * *** (***) * F* ST** CS** D** VA**(**) VB**(**) **AP*** F* W* Xn IM* F* .. U* F*

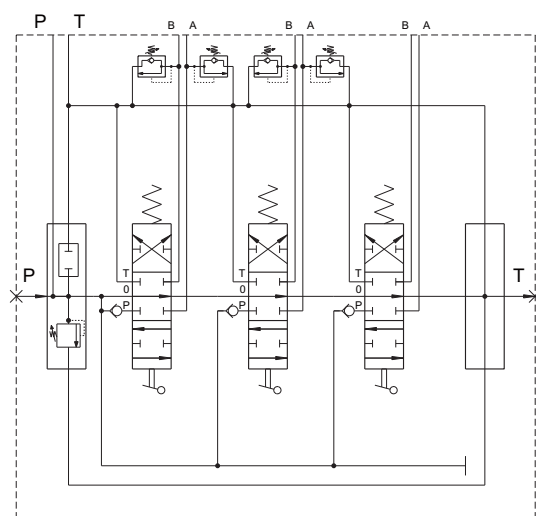
AP* Circuit

*	Description	Hydraulic circuit
AP1	Parallel circuit (standard). All sections are fed in parallel. The section working with lower pressure has priority over the others; are possible simultaneous movements of two or more functions by reducing the oil flow on the others.	
AP2	Serie circuit (use with spool ST13 - ST14 - ST15 - ST16, see page 39). The oil returning from the actuator of the section SERIES can be used to feed the next working sections allowing the simultaneous handling of multiple sections. Working pressures of the individual sections are added together.	
AP3 + AP32 + AP4 (1)	Tandem circuit. It's composed of two or more working sections. The use of a first section (tandem upstream code AP3) has priority over all subsequent (if any other section upstream code AP32 or tandem downstream code AP4), preventing operation even with the spool activated.	

(1) Optional section intermediate into tandem AP3 (upstream) and tandem AP4 (downstream)

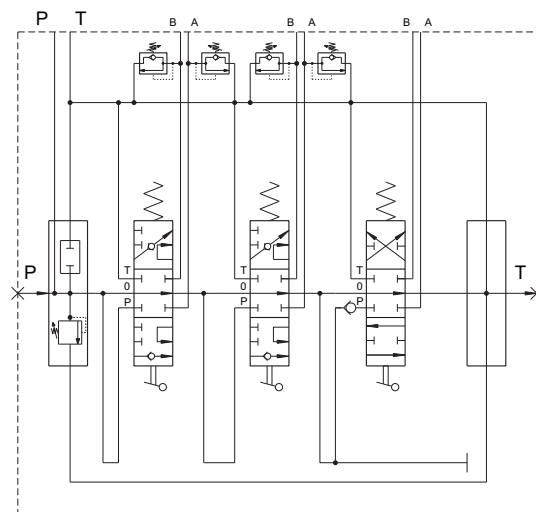
Example **PARALLEL** circuit

AP1 (+ AP1 + AP1)



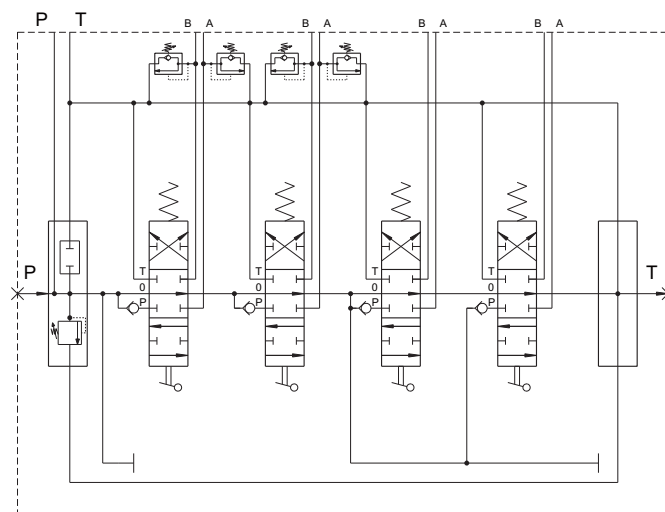
Example **SERIE** circuit

AP2 (+ AP2 + AP1)



Example **TANDEM** circuit

AP3 + AP32 + AP4 (+ AP1)



Threads

DCV ** / * | * *** (***) * F* ST** CS** D** VA**(**) VB*(**) AP* **F*** W* Xn IM* F* .. U* F*

F* Working sections threads

**	Description	DCV 30 A - B	DCV 50 A - B	DCV 80 A - B	DCV MG A - B
F3	3/8" BSP	•			
F4	1/2" BSP		•	• (1)	
F5	3/4" BSP			•	
F6	1" BSP				•
F31	9/16"-18UNF (SAE 6)	•			
F33	7/8"-14UNF (SAE 10)		•	• (1)	
F34	1" 1/16-12UN (SAE 12)			•	
F36	1" 5/16-12UN (SAE 16)				•

(1) Threads availables on request

Handle lever (Optional field)

Working section repeated for n. times (optional filed)

DCV ** / * | * *** (***) * F* ST** CS** D** VA**(**) VB*(**) AP* F* **W*** Xn IM* F* .. U* F*

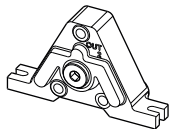
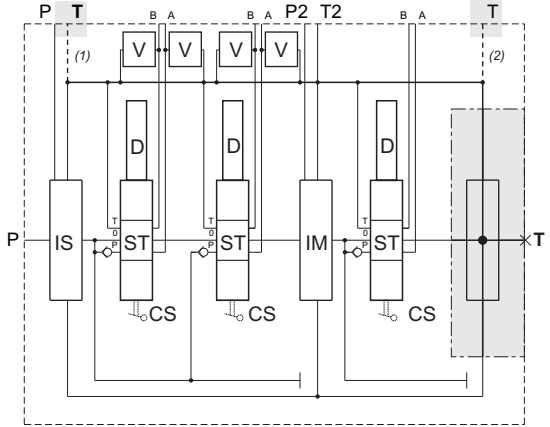
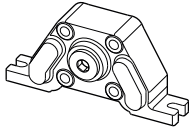
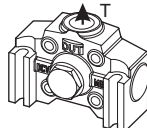
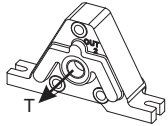
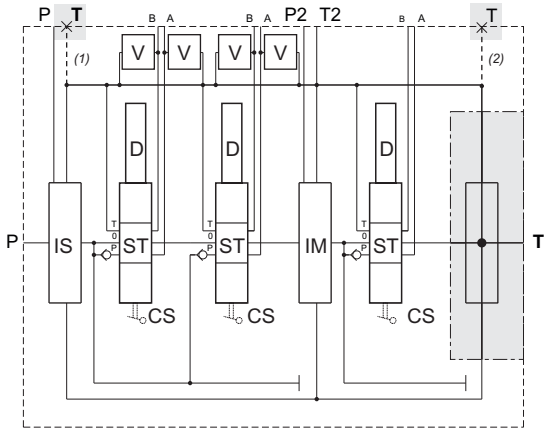
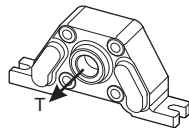
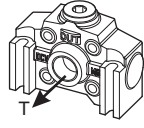
W* Handle lever

**	Description	Drawing
W1	Standard DCV 30 (For cloche control use W2)	
W2	Standard DCV 50 - DCV 80	
W3	Standard DCV MG	

Outlet section

DCV ** / * I* *** (***) * F* ST** CS** D** VA**(**) VB**(**) AP* F* W* Xn IM* F* .. **U*** F*

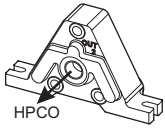
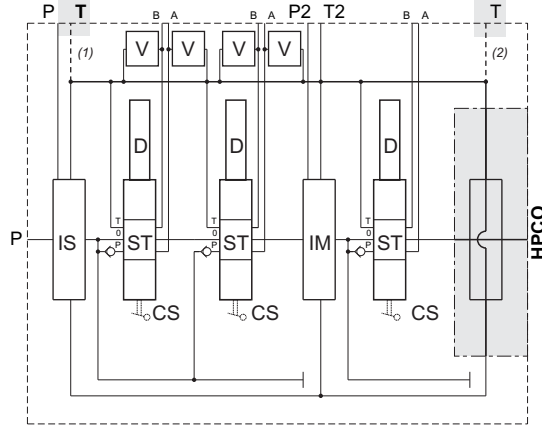
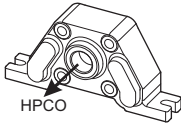
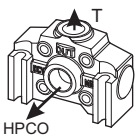
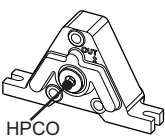
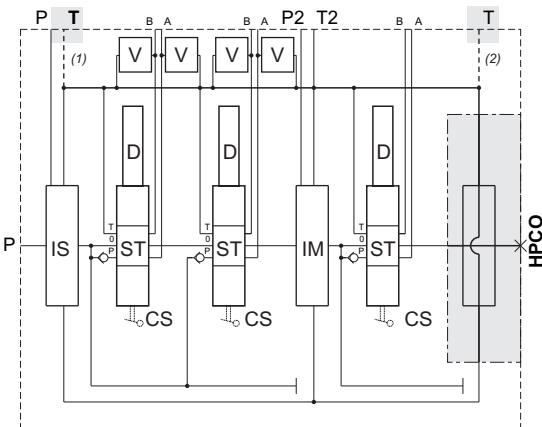
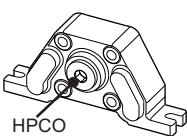
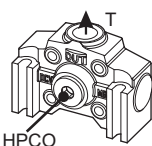
U* Circuit

*	Description	Type	Hydraulic circuit
US	Outlet section with upper T port on the inlet section	DCV 30 / DCV 50 	
		DCV 80 	
	Outlet section with upper T port	DCV MG 	
UL	Outlet section with lateral T port	DCV 30 / DCV 50 	
		DCV 80 	
		DCV MG 	

----- (1) Only DCV30 - DCV50 - DCV80 (2) Only DCV MG

MODULAR

U* *Circuit*

*	Description	Type	Hydraulic circuit
UL2	Outlet section with lateral HPCO port and T port on the inlet section	DCV 30 / DCV 50 	
		DCV 80 	
	Outlet section with lateral HPCO port and upper T port	DCV MG 	
UL2C	Outlet section for center closed (HPCO port closed). T port on the inlet section.	DCV 30 / DCV 50 	
		DCV 80 	
	Outlet section for center closed (HPCO port closed). Upper T port	DCV MG 	

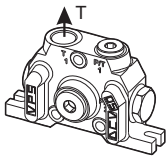
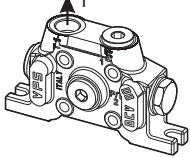
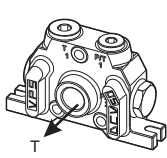
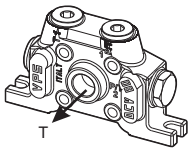
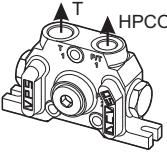
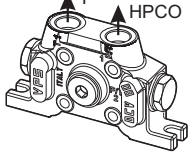
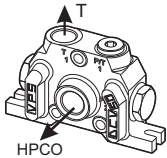
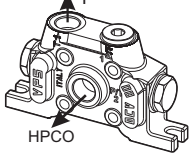
----- (1) Only DCV30 - DCV50 - DCV80 (2) Only DCVMG

Outlet sections

in progress⁽¹⁾



U* Circuit

*	Description	Type	Hydraulic circuit
UB (1)	Outlet section with upper T port	DCV 30 / DCV 50 	
		DCV 80 	
UC (1)	Outlet section with lateral T port	DCV 30 / DCV 50 	
		DCV 80 	
UB2 (1)	Outlet section with T and HPCO upper ports	DCV 30 / DCV 50 	
		DCV 80 	
UC2 (1)	Outlet section with upper T port and HPCO lateral port	DCV 30 / DCV 50 	
		DCV 80 	

(1) Work in progress

Threads

DCV ** / * I* *** (***) * F* ST** CS** D** VA*(**) VB*(**) AP* F* W* Xn IM* F* .. U* **F***

F* Outlet section threads

Tipo	Outlet sections US - UL		Outlet section UL2			Outlet sections UB - UC ⁽¹⁾		Outlet section UB2 ⁽¹⁾			Outlet section UC2 ⁽¹⁾		
	**	T	**	T	HPCO	**	T	**	T	HPCO	**	T	HPCO
DCV 30	F3	3/8" BSP	F3	3/8" BSP	3/8" BSP	F4	1/2" BSP	F40	1/2" BSP	3/8" BSP	F4	1/2" BSP	1/2" BSP
	F31	9/16" - 18UNF (SAE 6)	F31	9/16" - 18UNF (SAE 6)	9/16" - 18UNF (SAE 6)	F32	3/4" - 16UNF (SAE 8)	F50	3/4" - 16UNF (SAE 8)	9/16" - 18UNF (SAE 6)	F32	3/4" - 16UNF (SAE 8)	3/4" - 16UNF (SAE 8)
DCV 50	F4	1/2" BSP	F4	1/2" BSP	1/2" BSP	F5	3/4" BSP	F41	3/4" BSP	1/2" BSP	F5	3/4" BSP	3/4" BSP
	F33	7/8" - 14UNF (SAE 10)	F33	7/8" - 14UNF (SAE 10)	7/8" - 14UNF (SAE 10)	F34	1" 1/16 - 12UN (SAE 12)	F51	1" 1/16 - 12UN (SAE 12)	7/8" - 14UNF (SAE 10)	F34	1" 1/16 - 12UN (SAE 12)	1" 1/16 - 12UN (SAE 12)
DCV 80	F5	3/4" BSP ⁽²⁾	F5	3/4" BSP ⁽²⁾	3/4" BSP	F5	3/4" BSP	F5	3/4" BSP	3/4" BSP	F5	3/4" BSP	3/4" BSP
	F34	1" 1/16 - 12UN (SAE 12) ⁽²⁾	F34	1" 1/16 - 12UN (SAE 12) ⁽²⁾	1" 1/16 - 12UN (SAE 12)	F34	1" 1/16 - 12UN (SAE 12)	F34	1" 1/16 - 12UN (SAE 12)	1" 1/16 - 12UN (SAE 12)	F34	1" 1/16 - 12UN (SAE 12)	1" 1/16 - 12UN (SAE 12)
DCV MG	F6	1" BSP	F6	1" BSP	1" BSP								
	F36	1" 5/16 - 12UN (SAE 16)	F36	1" 5/16 - 12UN (SAE 16)	1" 5/16 - 12UN (SAE 16)								

⁽¹⁾ Work in progress

⁽²⁾ Threads availables on request