



DSC030P

Electro-Proportional Directional Control Valve

Compact electro-proportional actuated load-independent directional control valve
Applications: Specially designed for lifting machines; suitable for various applications requiring precise and controlled movements.

KEY FEATURES

- INLET FLOW CAPACITY: Maximum inlet flow: 50 L/min (with standard inlet section)
- WORKING SECTIONS FLOW REGULATION: Maximum regulated flow: 30 L/min
- ARCHITECTURE:
- o Light and compact design
 - o Combines SAE10 ES104P cartridges
 - o Aluminum bodies

FLOW SIZING: Different maximum flow sizes available to regulate the speed of actuators

PRESSURE COMPENSATION PRINCIPLE:

- o Maintains constant ΔP (pressure drop) across the cartridge spool control
- o Flow rate regulation is independent of load variations
- o Ensures precision and stability in movement control



ADVANTAGES

- PRECISION AND MOVEMENT CONTROL: High precision in flow regulation, ideal for applications requiring accurate movement control.
- LOAD INDEPENDENCE: Performance is not affected by load changes, ensuring consistent operation under varying conditions.
- COMPACT AND LIGHTWEIGHT: Space-efficient and easy to integrate into machinery due to its compact size and lightweight nature.

SUMMARY

The OLEOWEB DSC030P valve is a versatile and efficient solution for hydraulic systems in lifting machines and other applications that demand precise and stable movement control. Its combination of a compact design, pressure compensation, and electro-proportional actuation makes it a reliable component for achieving consistent performance regardless of load variations.

TECHNICAL DATA

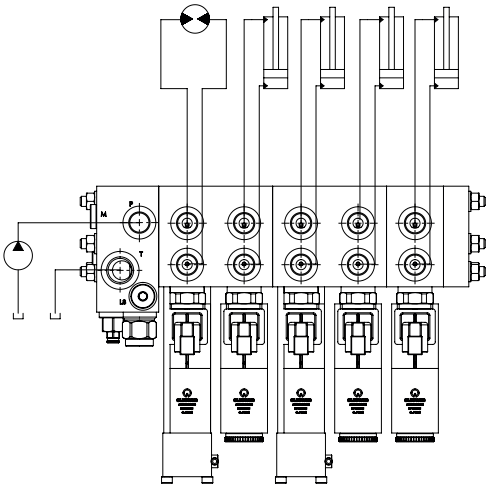
Work sections	up to 7 (FOR SPECIAL CONFIGURATION, CONTACT OUR CUSTOMER CARE)
Body material	Aluminum
Gaskets	NBR (standard) -30 ÷ 130 °C
	VITON -20 ÷ 205 °C
	PTFE -30 ÷ 260 °C
Ambient Temperature	-30 ÷ 50 °C

HYDRAULIC DATA

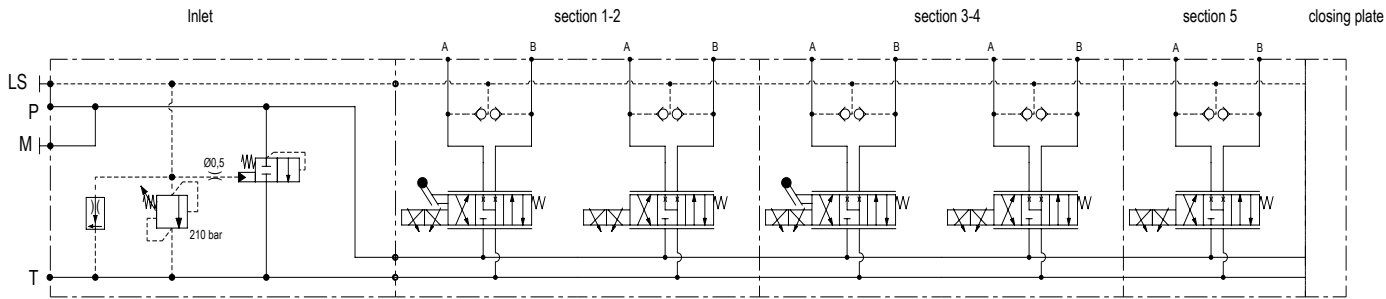
Maximum inlet flow	50 L/min (with standard inlet section)
Maximum regulated flow on ports A-B	30 L/min
Maximum working pressure	250 bar
Maximum back pressure on T	10 bar
Hydraulic fluid	Mineral oil (data referred to ISO-VG46 oil @ 40°C)
Viscosity range	15 ÷ 400 cSt
Oil temperature	-20 ÷ 100 °C
Max contamination index	ISO4406:1999 Class 18/16/13

ELECTRICAL DATA

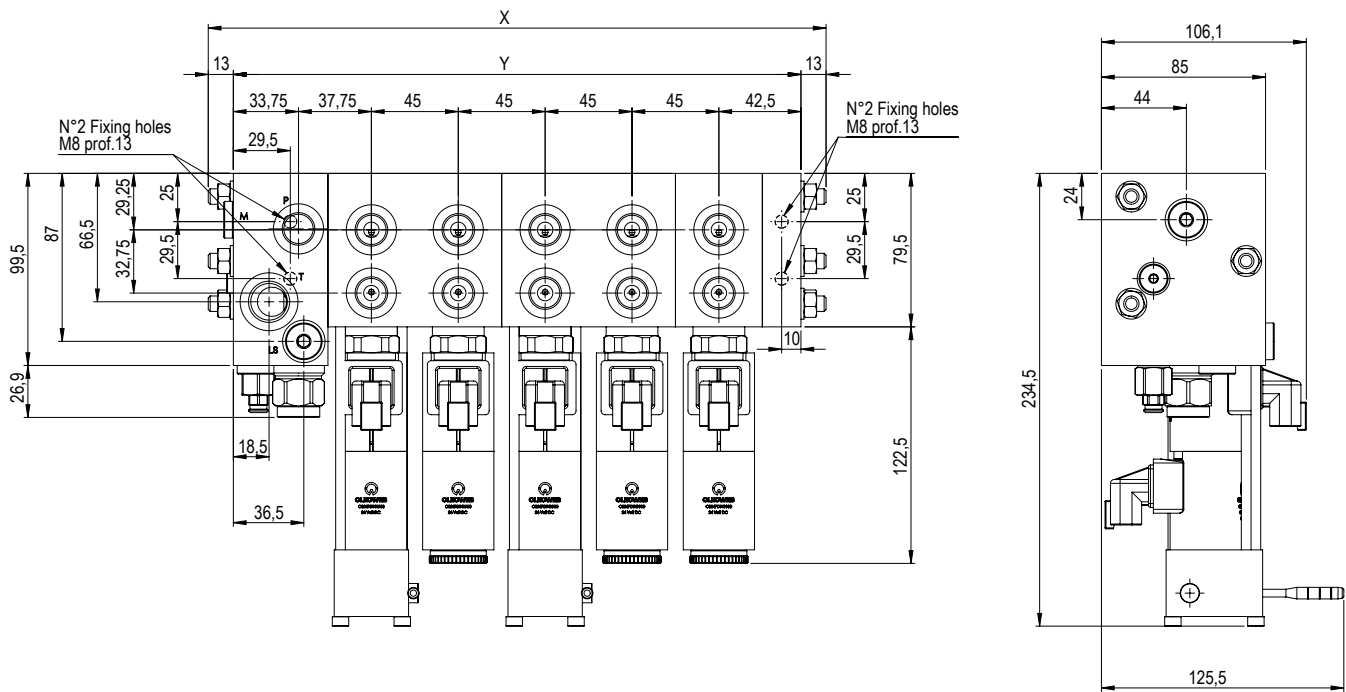
Nominal Voltage	12VDC or 24VDC
Nominal Power	24W (On-Off type)
	36W or 39W (Proportional type)
Connection type	DIN 46350
	DEUTSCH DT4
Protection class	IP 65 - IP 69K with appropriate connector
Thermal insulation	Class H
Wire insulation	Class H ⁺
Relative intermittance	ED 100%



HYDRAULIC CIRCUIT



OVERALL DIMENSIONS



SECTION WEIGHTS

Inlet Section	1,2 kg
Single Working Section Style	1,5 kg
Double Working Section Style	2,9 kg
Closing Plate	0,5 kg

PORTS SIZE

Port M	BSPP 1/4" (Plugged)
Port LS	BSPP 1/4" (Plugged)
Inlet Port P	
User Port A	BSPP 3/8"
User Port B	
Outlet Port T	BSPP 1/2"

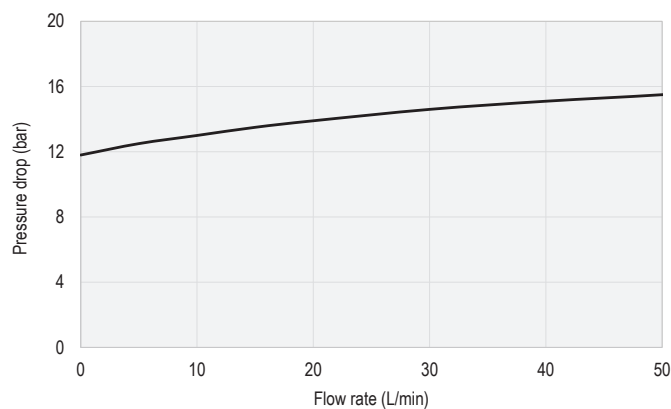
TOTAL WEIGHTS AND DIMENSIONS

DSC030/2	DSC030/3	DSC030/4	DSC030/5	DSC030/6	DSC030/7
4,7 kg	6,1 kg	7,6 kg	9 kg	11,9 kg	13,4 kg
Y= 159 mm	Y= 204 mm	Y= 249 mm	Y= 294 mm	Y= 339 mm	Y= 384 mm
X= 185 mm	X= 230 mm	X= 275 mm	X= 320 mm	X= 365 mm	X= 410 mm

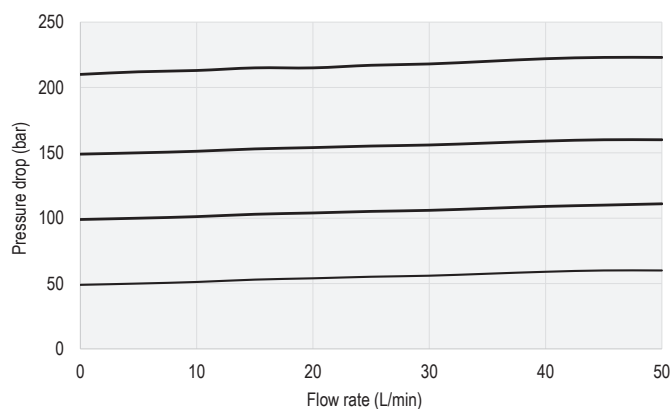
For Sections farther the nr.7 contact our customer care*

PERFORMANCE CHARACTERISTICS

STAND-BY PRESSURE CHARACTERISTIC



PRESSURE RELIEF CHARACTERISTICS



NOTE:

The main relief function is provided by the pressure compensator. The load sensing signal is limited by the setting pressure of the relief valve.

FLOW REGULATION CHARACTERISTICS

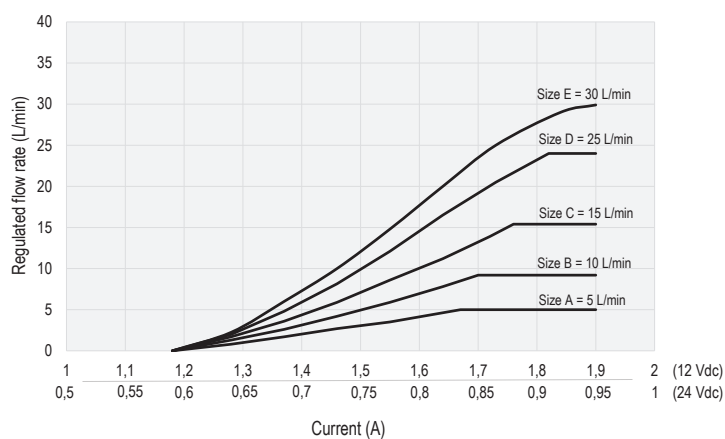
Electro-proportional signal characteristics

Maximum current regulation (only for proportional coils, see page 9):

- 0,9 Ampere (with nominal voltage supply 24 Vdc)
- 1,8 Ampere (with nominal voltage supply 12 Vdc)

Recommended PWM frequency 120 Hz

Flow regulation maximum hysteresis 5% with recommended PWM



NOTE:

Flow regulation characteristics reported in the graph are referred to users A and B both, with 4 way operation and symmetrical flow (i.e. motor).

For valve applications where the asymmetrical flow is present, the performance may vary. For example, the performance may increase for valve applications where flow is present with 2 way operation (i.e. P to user A or P to user B operations, without return flow).

For more information, contact OLEOWEB customer care.

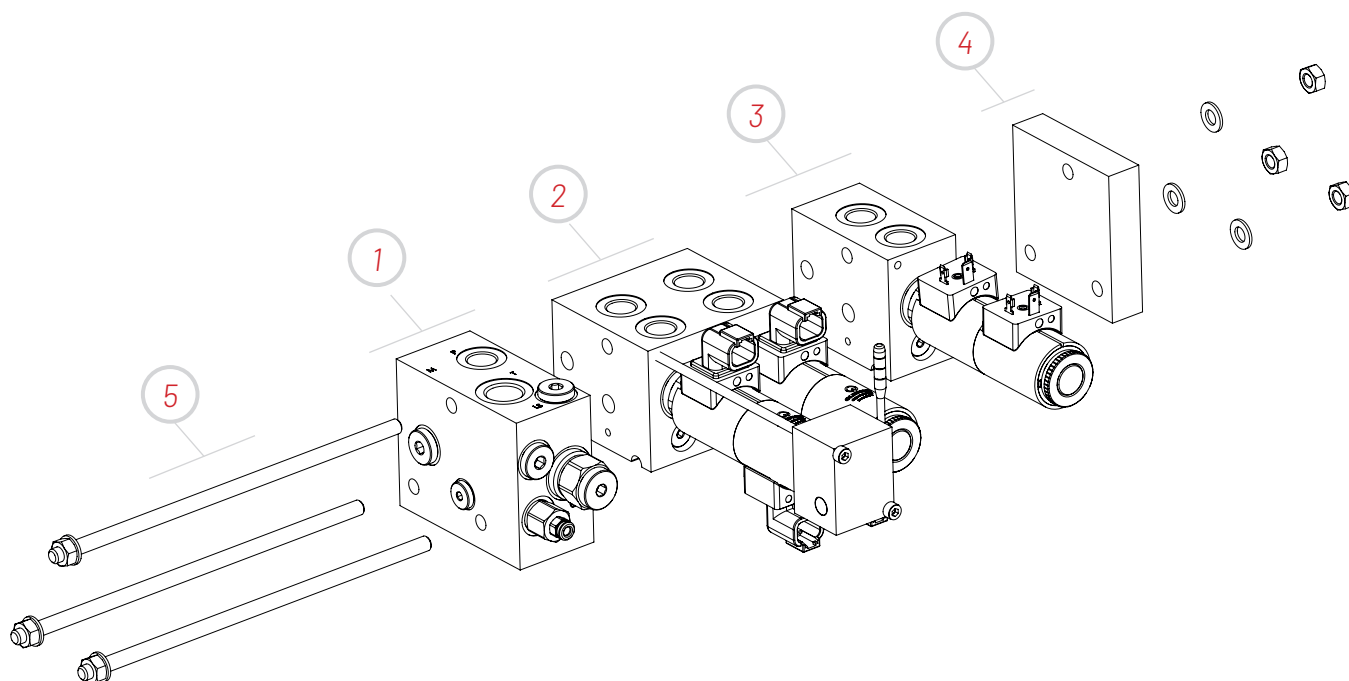
ORDERING CODE EXAMPLE

DSC030P/03

PRODUCT TYPE

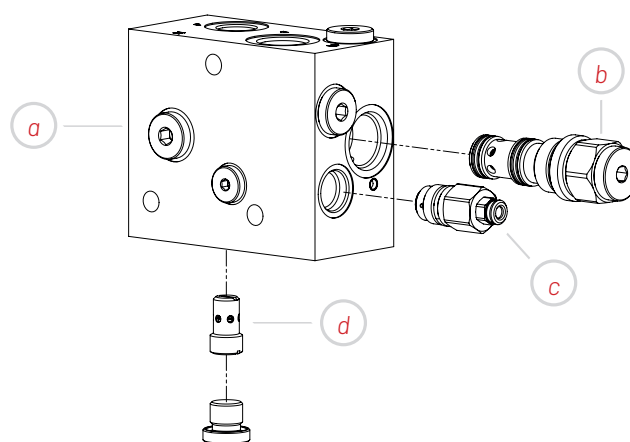
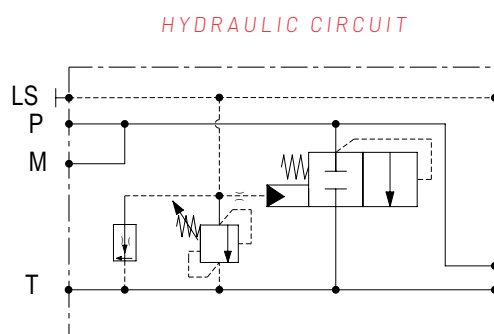
WORKING SECTION NUMBER

- 1 **ISP0-C12-RV(210)-BF03** — **INLET SECTION** PAGE 6
- 2 **DWP0/1PCL-24PDT4/1PCN-24PDT4** — **DOUBLE WORKING SECTION STYLE** PAGE 7 - 8 - 9
- 3 **SWP0/1PDN-24NDIN** — **SINGLE WORKING SECTION STYLE** PAGE 7 - 8 - 9
- 4 **CP** — **CLOSING PLATE** PAGE 10
- 5 **TIE ROD SPARE PART KITS** PAGE 10



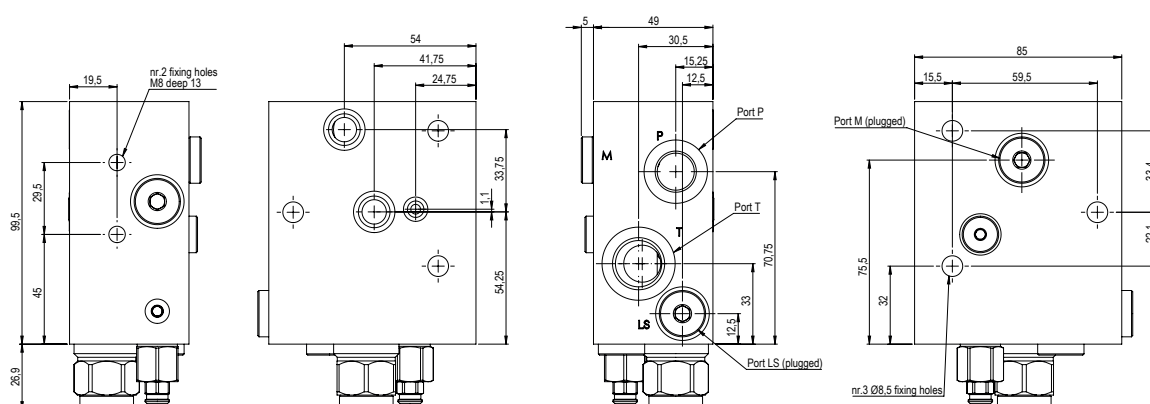
1 INLET SECTION

ISP0-C12-RV(210)-BF03

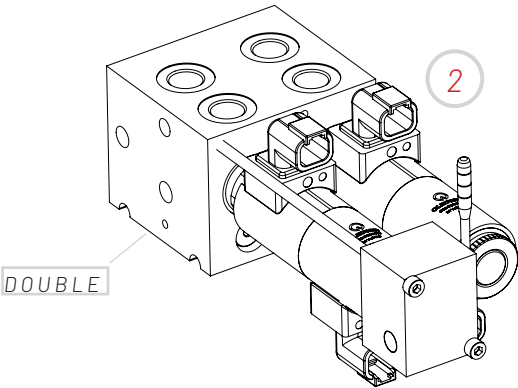


	OPTIONS	DESCRIPTION	SPARE PARTS CODE
a	INLET SECTION ¹⁾	ISPO	Inlet Section Proportional style 9C0EDSC030AA03 ¹⁾
b	COMPENSATOR	C12	Pressure Compensator cracking pressure 12 bar LE103A-BPN
c	RELIEF VALVE	RV(...)	Relief valve (setting pressure 100÷250 bar) If setting pressure not indicated, Standard setting 210 bar 2VDM17M16250
d	BLEEDING FLOW REGULATOR	BF03	Bleeding flow regulator insert type BSPP 1/4" - 0,3 L/min VCC140CV3

¹⁾ The Spare Part code **9COEDSC030AA03** includes plugs, O-rings and the bleeding flow regulator BF03. Pressure compensator and relief valve aren't included.

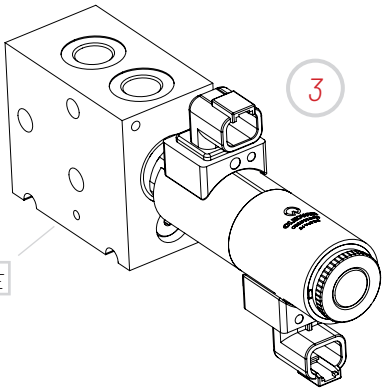


WORKING SECTIONS



DWP0/1PCL-24PDT4/1PCN-24PDT4

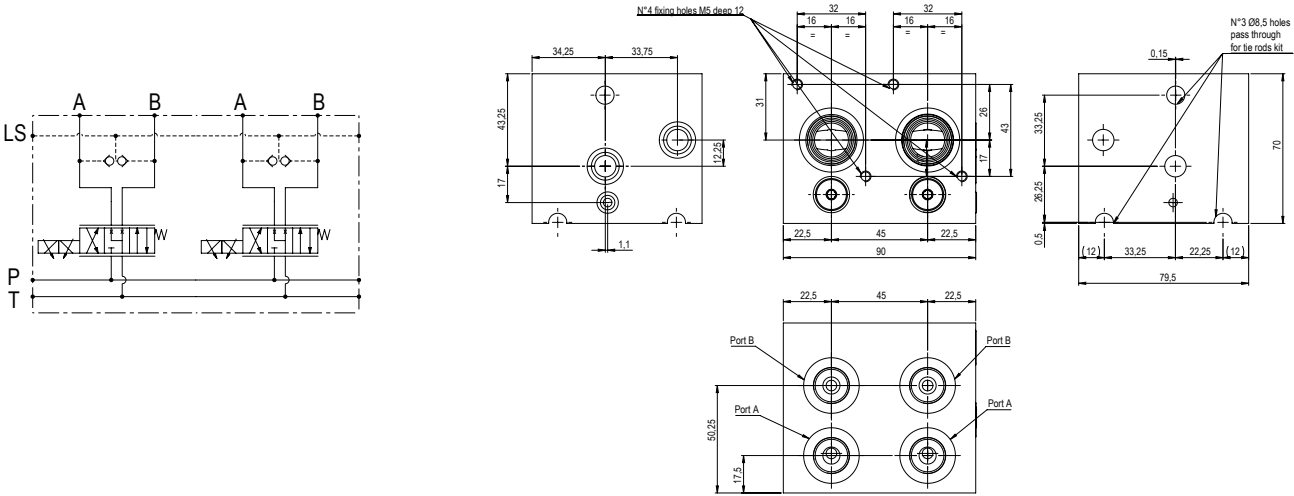
DOUBLE



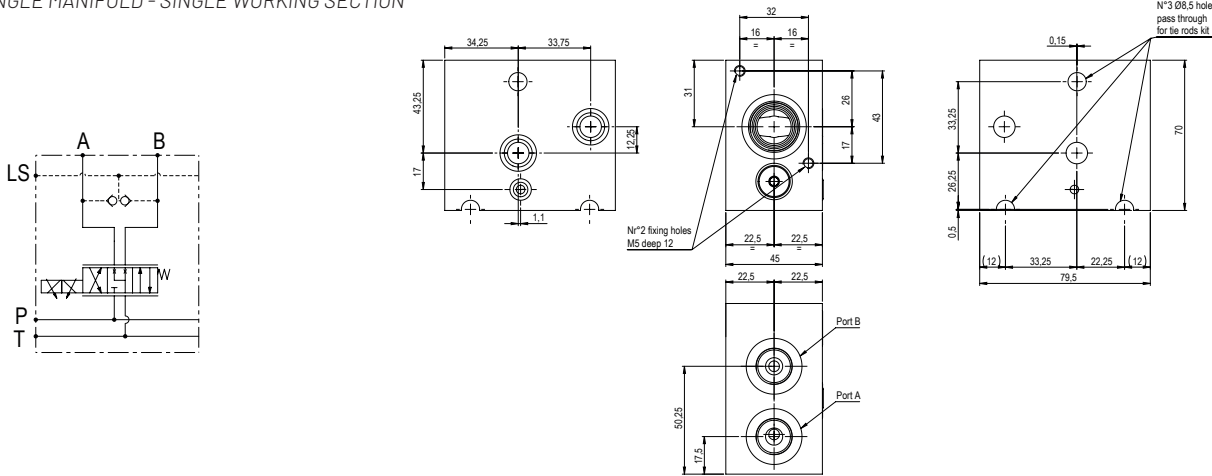
SWP0/1PDN-24PDIN

SINGLE

OPTION DWP0 :SINGLE MANIFOLD - DOUBLE WORKING SECTION



OPTION SWP0 :SINGLE MANIFOLD - SINGLE WORKING SECTION



OPTIONS

DESCRIPTION

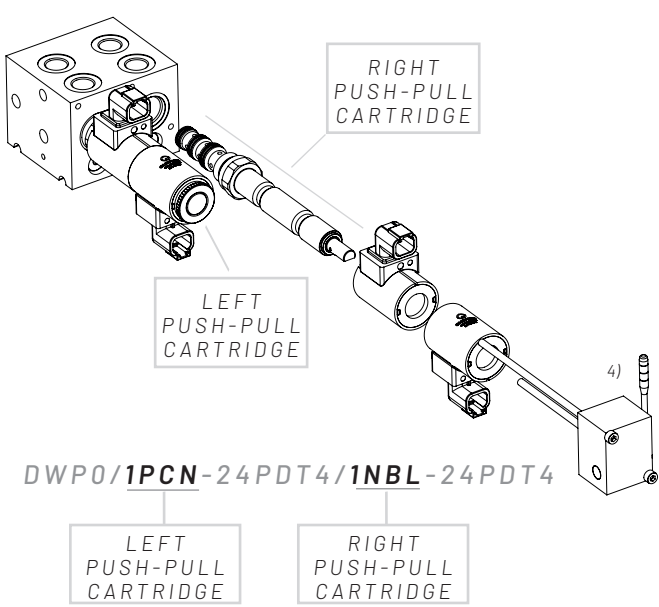
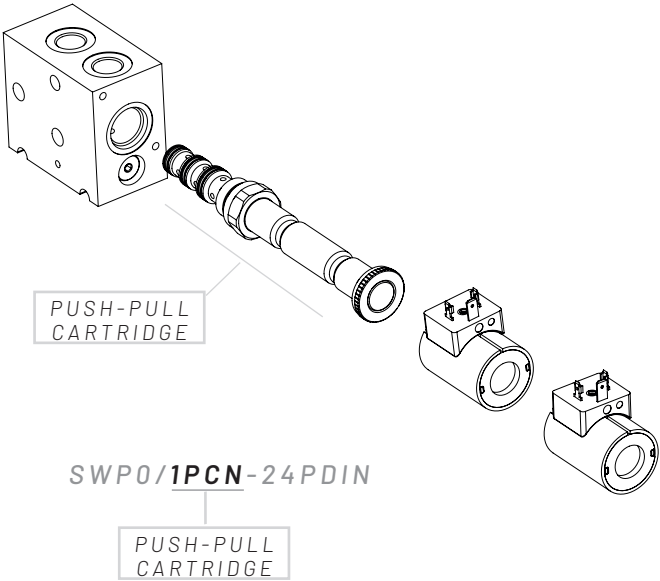
SPARE PARTS CODE

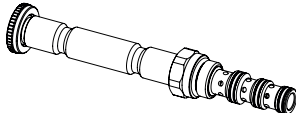
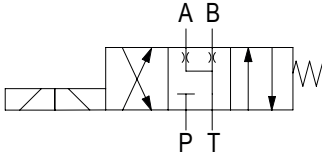
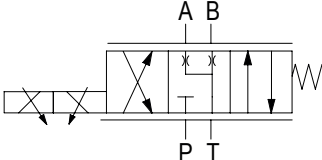
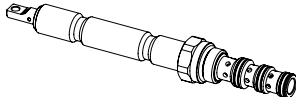
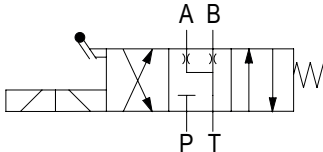
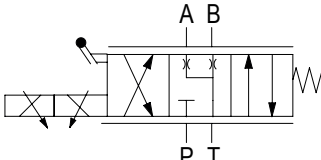
WORKING SECTION	OPTION	DESCRIPTION	SPARE PARTS CODE
	DWP0	Double Working Section Proportional style	9SEZDSC030B38000 ²⁾
	SWP0	Single Working Section Proportional style	9SEZDSC030A38000 ²⁾

NOTES:

²⁾ The Spare Part codes 9SEZDSC030B38000 and 9SEZDSC030A38000 includes only O-rings and the select valve (with plug).
Electric directional control valve and coils aren't included in these spare part codes.

PUSH-PULL ELECTRIC CARTRIDGE



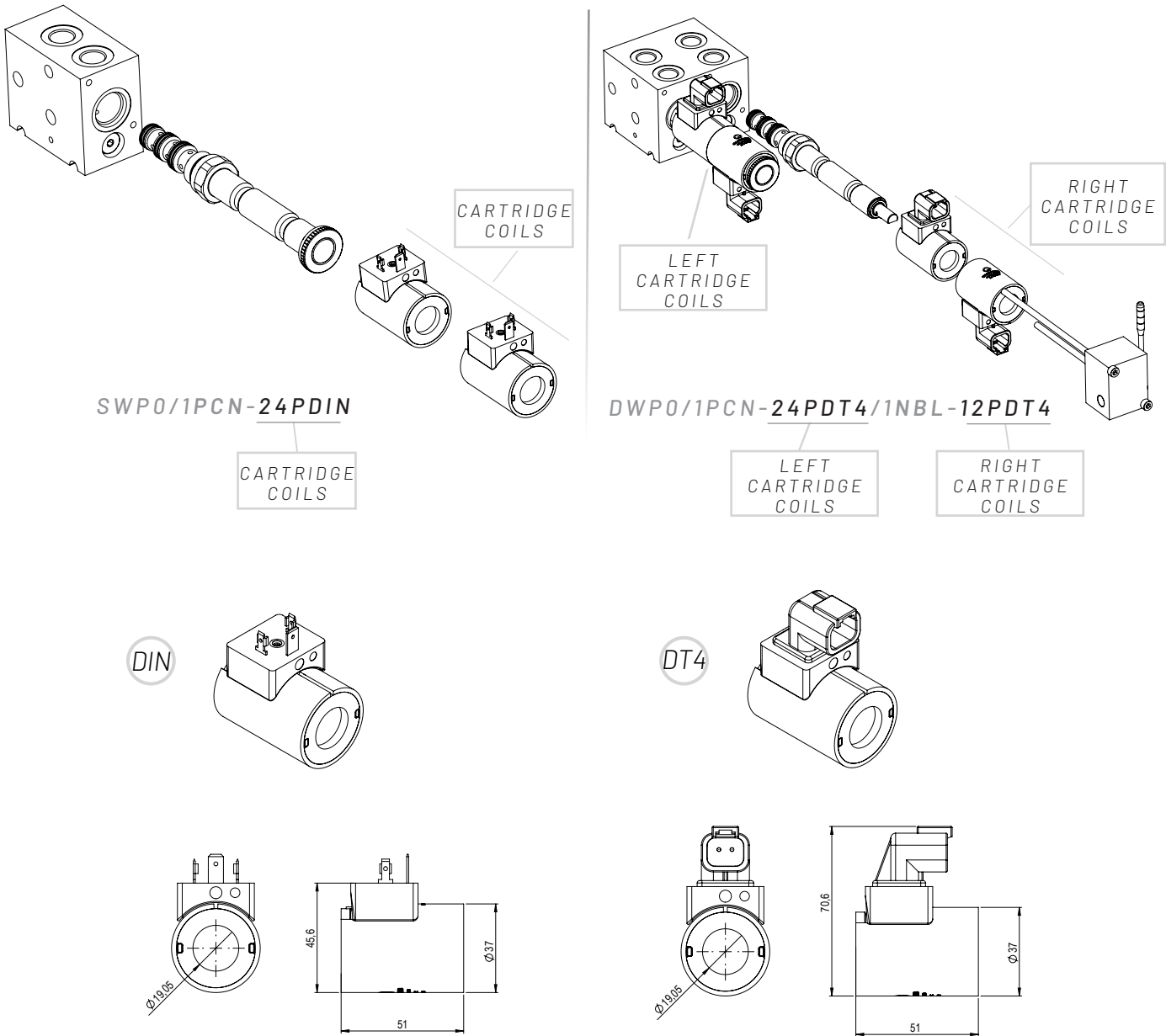
TYPE OF EMERGENCY	SCHEME (TYPE 1)	SIZE	OPTION	SPARE PART CODE
 NO EMERGENCY	 ON-OFF TYPE A-B to T in neutral position ³⁾	5 L/min	1NAN	ES104F-1AN
	 PROPORTIONAL TYPE A-B to T in neutral position ³⁾	10 L/min	1NBN	ES104F-1BN
		15 L/min	1NCN	ES104F-1CN
		25 L/min	1NDN	ES104F-1DN
		30 L/min	1NEN	ES104F-1EN
 MANUAL LEVER PREDISPOSITION	 ON-OFF TYPE A-B to T in neutral position ³⁾	5 L/min	1NAL	ES104F-1AL ⁴⁾
		10 L/min	1NBL	ES104F-1BL ⁴⁾
		15 L/min	1NCL	ES104F-1CL ⁴⁾
		25 L/min	1NDL	ES104F-1DL ⁴⁾
		30 L/min	1NEL	ES104F-1EL ⁴⁾
	 PROPORTIONAL TYPE A-B to T in neutral position ³⁾	5 L/min	1PAL	ES104P-1AL ⁴⁾
		10 L/min	1PBL	ES104P-1BL ⁴⁾
		15 L/min	1PCL	ES104P-1CL ⁴⁾
		25 L/min	1PDL	ES104P-1DL ⁴⁾
		30 L/min	1PEL	ES104P-1EL ⁴⁾

NOTES:

³⁾ A and B closed in neutral position (scheme type 2) available under request. Contact customer service for more information

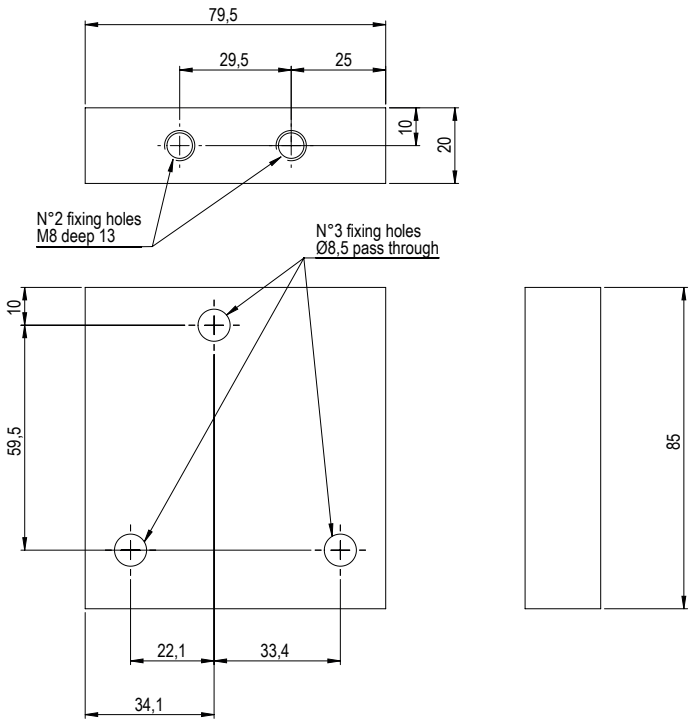
⁴⁾ For Spare Parts Cartridges, lever kit must be order separately for each one - LEVER KIT CODE : 9COR18000200

PUSH-PULL CARTRIDGE COILS



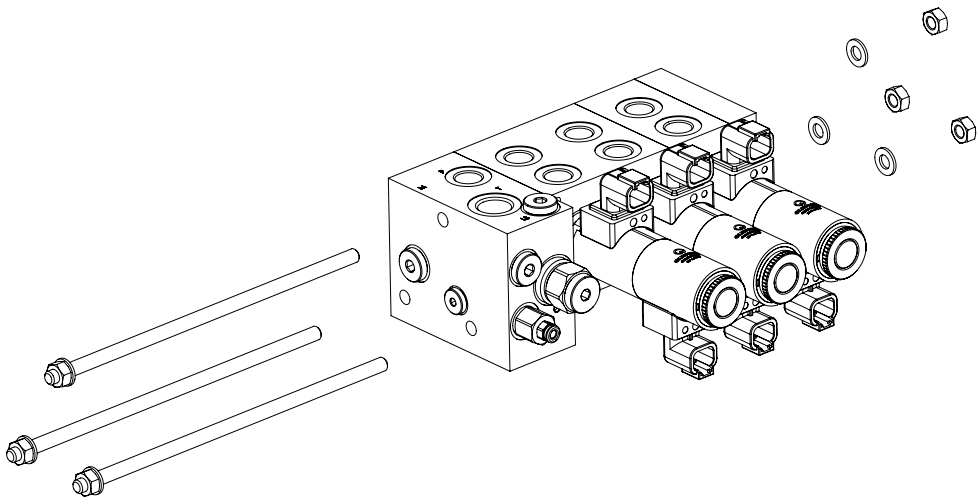
COIL TYPE	DESCRIPTION	OPTIONS	SPARE PART CODE (SINGLE PIECE)
PROPORTIONAL	12V - 36 W - 4 Ω - DIN 46350	12PDIN	C012PDIN1900 (2 pcs x section)
	24V - 39,7 W - 14,5 Ω - DIN46350	24PDIN	C024PDIN1900 (2 pcs x section)
	12V - 36 W - 4 Ω - DEUTSCH DT4	12PDT4	C012PDT41900 (2 pcs x section)
	24V - 39,7 W - 14,5 Ω - DEUTSCH DT4	24PDT4	C024PDT41900 (2 pcs x section)
ON-OFF	12V - 23,6 W - 6,1 Ω - DIN 46350	12NDIN	C012NDIN1900 (2 pcs x section)
	24V - 24 W - 24 Ω - DIN 46350	24NDIN	C024NDIN1900 (2 pcs x section)
	12V - 23,6 W - 6,1 Ω - DEUTSCH DT4	12NDT4	C012NDT41900 (2 pcs x section)
	24V - 24 W - 24 Ω - DEUTSCH DT4	24NDT4	C024NDT41900 (2 pcs x section)

4 CLOSING PLATE (CP OPTION)



DESCRIPTION	SPARE PART CODE
Closing Plate	9C0CDSC025B0P

5 TIE ROD SPARE PART KITS

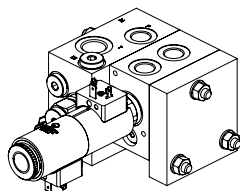


DESCRIPTION	SECTIONS NUMBER	TOTAL LENGTH[mm]	SPARE PART CODE
Tie rods kit*	1	140	9TIR3M081400
	2	185	9TIR3M081850
	3	230	9TIR3M082300
	4	275	9TIR3M082750
	5	320	9TIR3M083200
	6	365	9TIR3M083650
	7	410	9TIR3M084100

NOTES:
*For sections farther the nr.7 contact our customer care
For gaskets kits contact our customer care

ORDERING CODE EXAMPLES

ONE WORKING SECTION

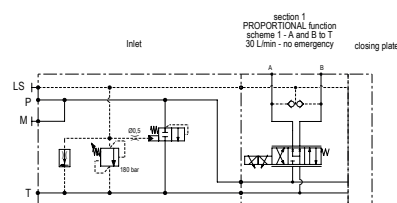


DSC030P/01

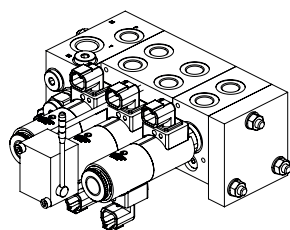
ISP0-C12-RV(180)-BF03

SWP0/IPEN-12PDIN

CP



THREE WORKING SECTIONS



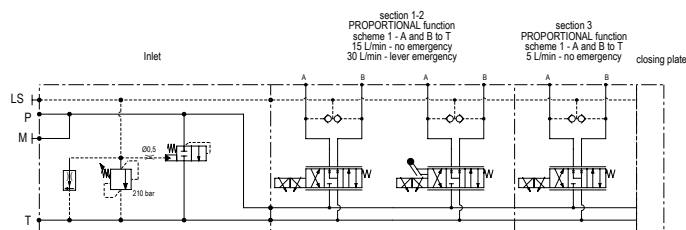
DSC030P/03

ISP0-C12-RV(210)-BF03

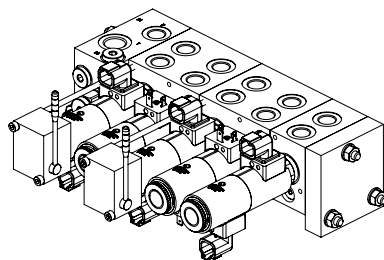
DWP0/IPCN-24PDT4/ 1PEL-24PDT4

SWP0/IPAN-12PDT4

CP



FIVE WORKING SECTIONS



DSC030P/05

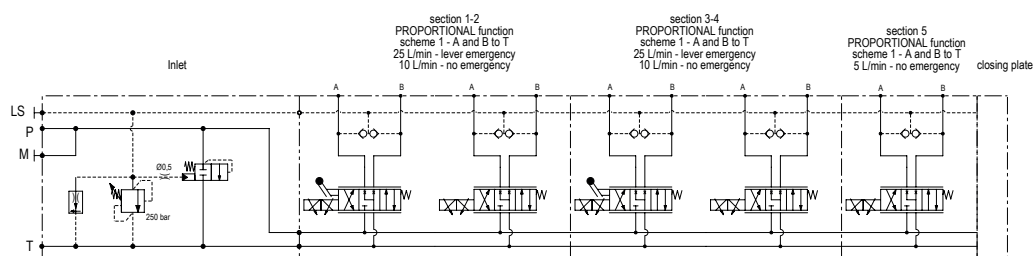
ISP0-C12-RV(250)-BF03

DWP0/IPDL-24PDT4/IPBN-24PDIN

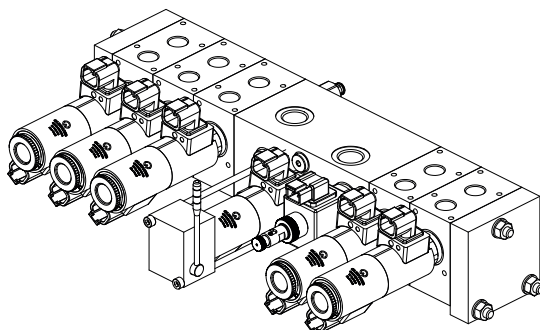
DWP0/IPDL-24PDT4/ 1PBN-24PDIN

SWP0/IPAN-12PDT4

CP



SPECIAL DSC030A CONFIGURATIONS



Customized DSC030P versions may be developed under request

Contact our customer care for more details



Oleoweb S.r.l. Via L. Ariosto, 1 - 42023 Cadelbosco di Sopra (RE) Italy - Tel. +39 0522 917679
www.oleoweb.com - sales@oleoweb.com - VAT: IT02062320359 - REA: RE-248187

ORGANIZATION WITH A
ISO 9001-2015
MANAGEMENT SYSTEM



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