



**ATLANTIC**  
Fluid Tech

## **SECTION 16**

Proportional  
Cartridges

# PROPORTIONAL CARTRIDGES



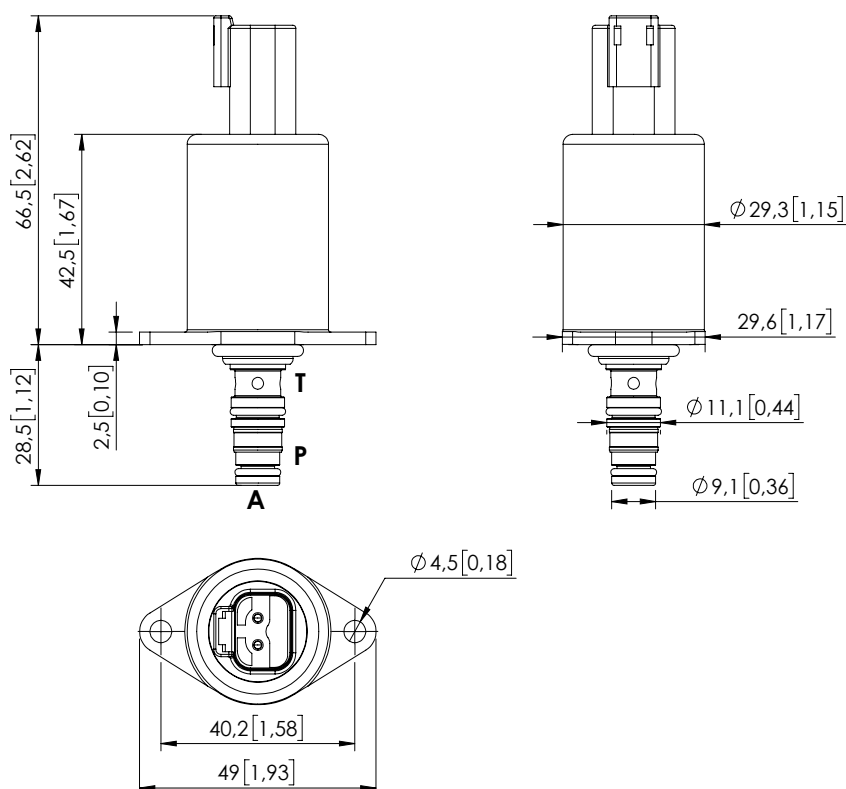
Hydraulic scheme	Valve description	Valve type	Rated flow l/min (gpm)	Max. pressure bar (psi)	Installation	Main port size or cavity type	Page
	<a href="#">CECS-005-PRPN</a>	Proportional, direct operated, pressure reducing	5 (1,3)	50 (700)	DT04-2P	VP000371	16.010
	<a href="#">CECT-080-PRPS</a>	Proportional, pilot operated, reducing and relieving	80 (21)	250 (3600)	Cartridge	SAE-10-3N	16.020
	<a href="#">CEBD-005-PLPS</a>	Proportional, poppet type relief	5 (1,3)	350 (5000)	Cartridge	SAE-08-2N	16.030
	<a href="#">CEBD-001-PMPS</a>	Proportional, poppet type relief, for inverse controlled	0,6 (0,1)	350 (5000)	Cartridge	SAE-08-2N	16.040
	<a href="#">CEBT-120-PMPS</a>	Proportional, pilot operated, relieving, for fan drive	120 (32)	350 (5000)	Cartridge	SAE-10-2N	16.050
	<a href="#">CEBT-120-PLPS</a>	Proportional, pilot operated, relieving	120 (32)	350 (5000)	Cartridge	SAE-10-2N	16.060
	<a href="#">CEBT-300-PLPS</a>	Proportional, pilot operated, relieving	300 (79)	350 (5000)	Cartridge	SAE-16-2N	16.070
	<a href="#">CEBT-500-PLPS</a>	Proportional, pilot operated, relieving	500 (132)	350 (5000)	Cartridge	SAE-20-2N	16.080
	<a href="#">CECS-020-FSPS</a>	Proportional, non compensated, flow regulator	20 (5)	210 (3000)	Cartridge	SAE-10-3N	16.090
	<a href="#">CECS-030-FSPS</a>	Proportional, non compensated, flow regulator	30 (8)	210 (3000)	Cartridge	SAE-10-3N	16.090
	<a href="#">CECS-040-FSPS</a>	Proportional, non compensated, flow regulator	40 (11)	210 (3000)	Cartridge	SAE-10-3N	16.090
	<a href="#">CECS-050-FRPM</a>	Proportional, direct operated, flow regulator	50 (13)	320 (4600)	Cartridge	SAE-10-3N	16.100
	<a href="#">CECS-140-FRPM</a>	Proportional, direct operated, flow regulator	140 (37)	320 (4600)	Cartridge	SAE-16-3N	16.110
	<a href="#">CEBD-020-PEPS</a>	Proportional, normally closed	20 (5)	210 (3000)	Cartridge	SAE-08-2N	16.120
	<a href="#">CEBD-020-PEPS</a>	Proportional, normally closed	20 (5)	210 (3000)	Cartridge	VP000064	16.130
	<a href="#">CEES-010-SEPN</a>	Proportional, direct operated	10 (3)	350 (5000)	Cartridge	SAE-08-4N	16.140
	<a href="#">CEES-030-SEFN</a>	Proportional, direct operated	30 (8)	350 (5000)	Cartridge	SAE-10-4N	16.190
	<a href="#">CEES-010-SEPN</a>	Proportional, direct operated	10 (3)	350 (5000)	Cartridge	SAE-08-4N	16.150
	<a href="#">CEES-030-SEPN</a>	Proportional, direct operated	30 (8)	350 (5000)	Cartridge	SAE-10-4N	16.200
	<a href="#">CEFS-010-SEPN</a>	Proportional, direct operated	10 (3)	350 (5000)	Cartridge	SAE-08-5N	16.160
	<a href="#">CEFS-030-SEFN</a>	Proportional, direct operated	30 (8)	350 (5000)	Cartridge	SAE-10-5N	16.210
	<a href="#">CEFS-010-SEPN</a>	Proportional, direct operated	10 (3)	350 (5000)	Cartridge	SAE-08-5N	16.170
	<a href="#">CEFS-030-SEPN</a>	Proportional, direct operated	30 (8)	350 (5000)	Cartridge	SAE-10-5N	16.220
	<a href="#">CEFS-010-SEPN</a>	Proportional, direct operated	10 (3)	350 (5000)	Cartridge	SAE-08-5N	16.180
	<a href="#">CEFS-030-SEFN</a>	Proportional, direct operated	30 (8)	350 (5000)	Cartridge	SAE-10-5N	16.230
	<a href="#">ELPC-030-SCCB</a>	Proportional electronic controller	-	-	DIN 43650	-	16.240

PROPORTIONAL  
CONTROLLER

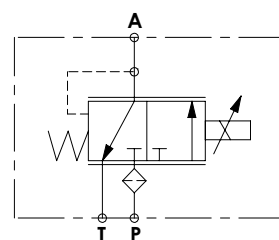
## SOLENOID OPERATED CARTRIDGE

## CECS-005-PRPN

PROPORTIONAL VALVES  
DIRECT OPERATED  
PRESSURE REDUCING



Dimensions: mm [inches]



## SPECIFICATIONS

Max. P pressure:	50 bar (700 psi)
Max. T pressure:	30 bar (400 psi)
Rated flow:	5 l/min (1.3 gpm)
Cavity:	VP000371
Weight:	0,2 kg (0,44 lbs)
Connector type:	Deutsch DT04-2P
Internal leakage:	15 cc/min @ 25 bar, 46 cSt (0,9 in <sup>3</sup> /min @ 363 psi, 46 cSt)
Protection class:	Up to IP6K6 / IPX9K
PWM range recommended:	100 Hz
Seal kit:	RC100371
Mounting screw torque:	3,5 Nm (2,5 ft-lb)
MTTFd:	150 - 1200 years: See technical spec.
Filter on P port:	125 µm

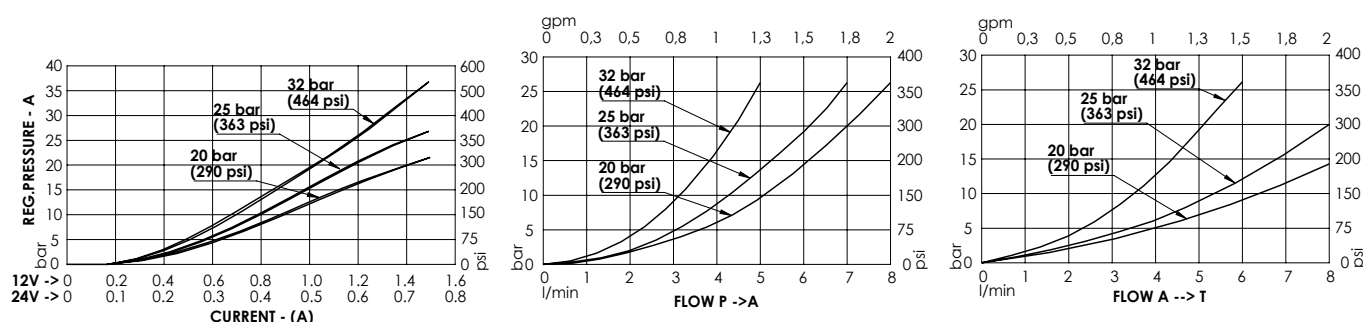
## NOTES

Mounting screw not included

Mounting screw: 2 x M4x10 [M4x0,39] class 8.8

For other configurations/quick codes not available in this catalogue page please consult factory

## CURVES



## ORDERING CODES

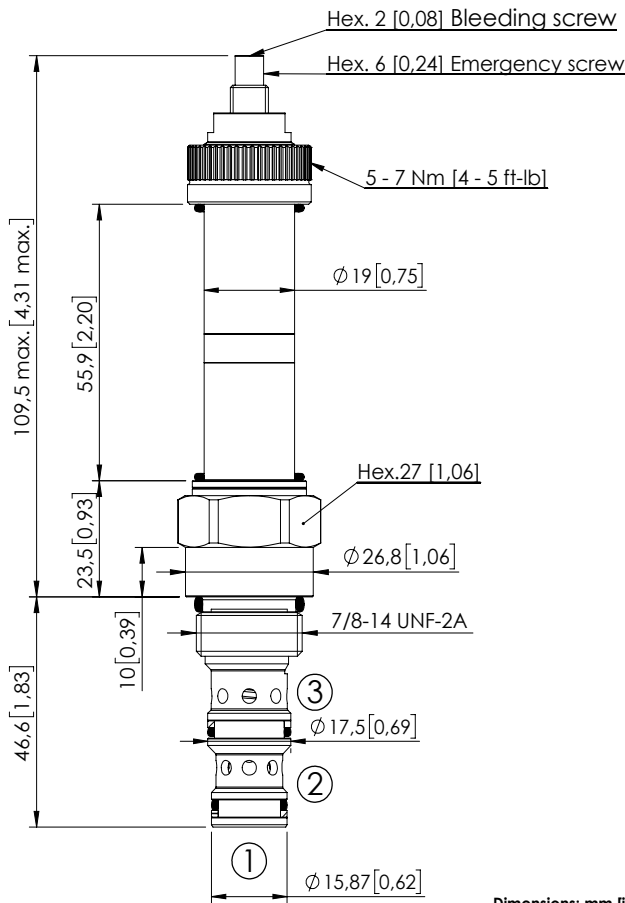
Quick code	Description	Regulated pressure range	Voltage (V)	Current (mA)	Resistance (Ω) ± 5%	Hysteresis pA
CE000850	CECS-005-PRPN-95-371-N020-12DT	0-20 bar (0-290 psi)	12	1500	4.72	< 0.4 bar (< 5,8 psi)
CE000851	CECS-005-PRPN-95-371-N020-24DT	0-20 bar (0-290 psi)	24	750	20.8	< 0.4 bar (< 5,8 psi)
CE000852	CECS-005-PRPN-95-371-N025-12DT	0-25 bar (0-363 psi)	12	1500	4.72	< 0.5 bar (< 7,3 psi)
CE000853	CECS-005-PRPN-95-371-N025-24DT	0-25 bar (0-363 psi)	24	750	20.8	< 0.5 bar (< 7,3 psi)
CE000893	CECS-005-PRPN-95-371-N032-12DT	0-32 bar (0-464 psi)	12	1500	4.72	< 0.7 bar (< 10,2 psi)
CE000862	CECS-005-PRPN-95-371-N032-24DT	0-32 bar (0-464 psi)	24	750	20.8	< 0.7 bar (< 10,2 psi)

Revision A1

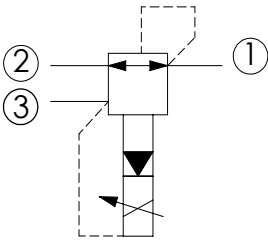
SOLENOID OPERATED CARTRIDGE

CECT-080-PRPS

PROPORTIONAL VALVES  
PILOTED OPERATED PRESSURE  
REDUCING AND RELIEVING



Dimensions: mm [inches]



SPECIFICATIONS

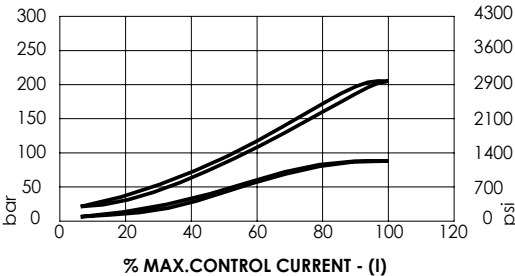
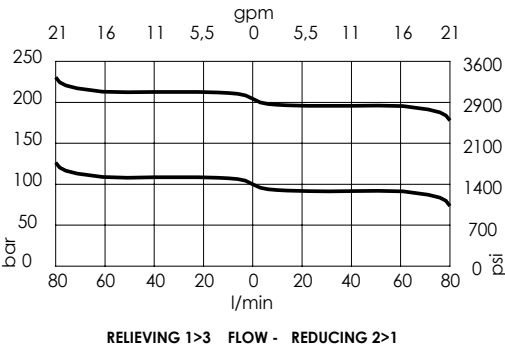
Max. operating pressure:	250 bar (3600 psi)
Rated flow:	80 l/min (32 gpm)
Cavity:	SAE-10-3N
Weight:	0,33 kg (0,46 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M15 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	120-150 Hz
Installation torque:	55 - 62 Nm (41 - 46 ft-lb)
Seal kit:	RA100092
MTTFd:	150 - 1200 years: See technical spec.

NOTES

Bleed air before use

For other configurations/quick codes not available in this catalogue page please consult factory

CURVES

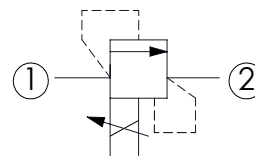
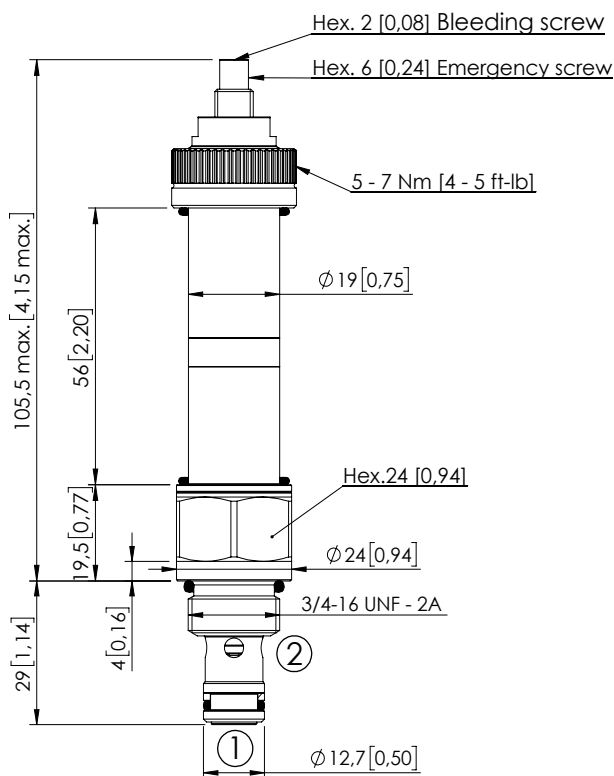


ORDERING CODES

Quick code	Description	Regulated pressure range	Threshold current (with 12VDC coil)	Max control current (with 12V DC coil)	Override
CE000122	CECT-080-PRPS-96-S10-V210	20-220 bar (300-3100 psi)	200 mA (+/-7%)	1700 mA (+/-7%)	Screw style
CE000915	CECT-080-PRPS-96-S10-V080	4-80 bar (60-1200 psi)	200 mA (+/-7%)	1800 mA (+/-7%)	Screw style

## SOLENOID OPERATED CARTRIDGE

## CEBD-005-PLPS

PROPORTIONAL VALVES  
POPPET TYPE RELIEF

## SPECIFICATIONS

Max. operating pressure:	350 bar (5000 psi)
Rated flow:	5 l/min (1,3 gpm)
Cavity:	SAE-08-2N
Weight:	0,27 kg (0,35 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M15 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	150-180 Hz
Installation torque:	45 - 50 Nm (33 - 37 ft-lb)
Seal kit:	RA100081
MTF <sub>d</sub> :	150 - 1200 years: See technical spec.

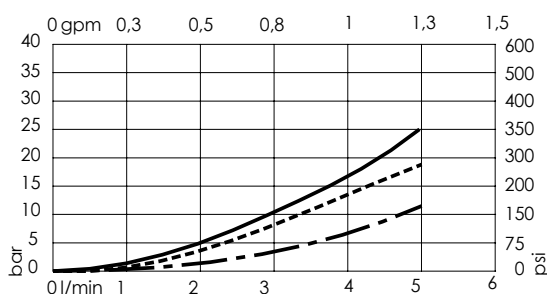
Dimensions: mm [inches]

## NOTES

Bleed air before use

For other configurations/quick codes not available in this catalogue page please consult factory

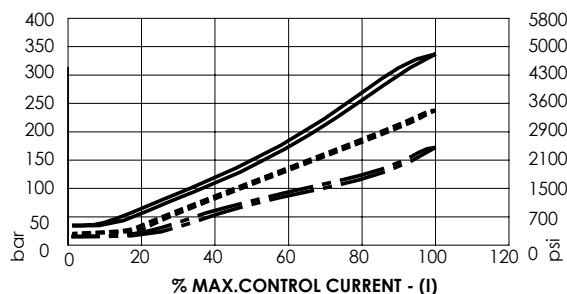
## CURVES



CE000910 —————

CE000911 - - - - -

CE000912 — · — · —



## ORDERING CODES

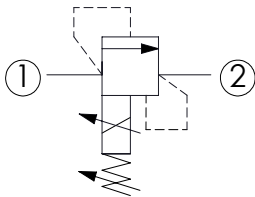
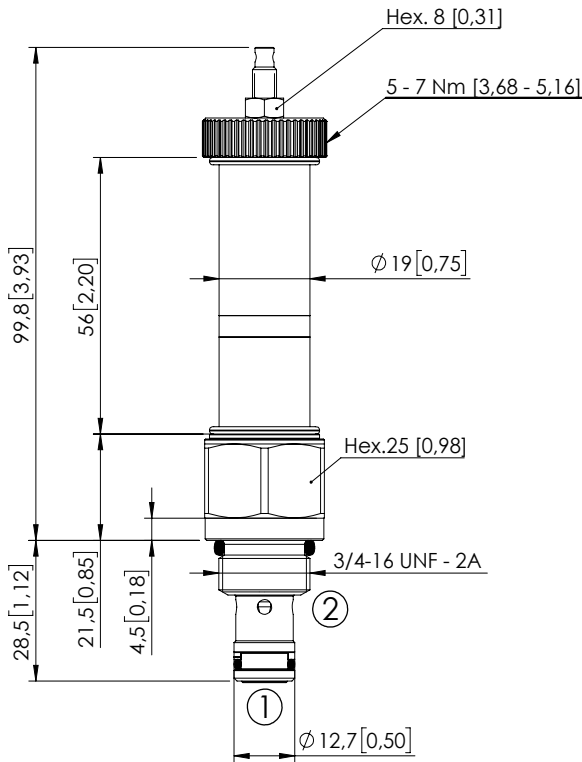
Quick code	Description	Setting range	Threshold current (with 12VDC coil)	Max control current (with 12V DC coil)	Override	
CE000910	CEBD-005-PLPS-92-S08-V350	25-340 bar (350-4500 psi)	250 mA (+/-7%)	1800 mA (+/-7%)	Screw style	
CE000911	CEBD-005-PLPS-92-S08-V200	17-250 bar (250-3600 psi)	200 mA (+/-7%)	1800 mA (+/-7%)	Screw style	
CE000912	CEBD-005-PLPS-92-S08-V100	9-160 bar (130-2300 psi)	200 mA (+/-7%)	1800 mA (+/-7%)	Screw style	

Revision B3

SOLENOID OPERATED CARTRIDGE

CEBD-001-PMPS

PROPORTIONAL VALVES  
POPPET TYPE RELIEF  
SPOOL TYPE  
FOR INVERSE CONTROLLED



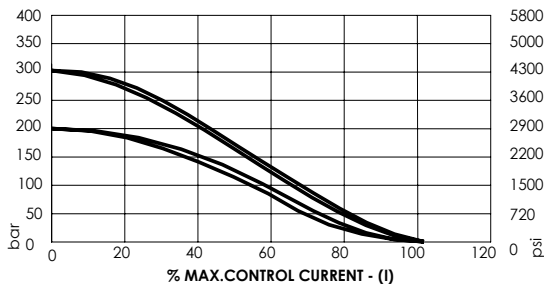
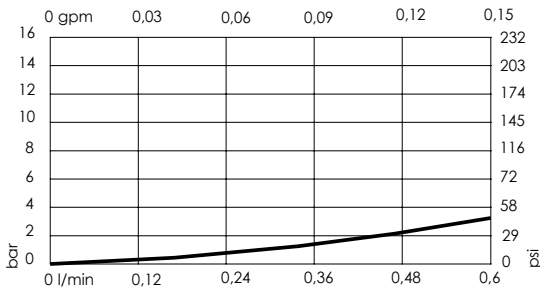
SPECIFICATIONS

Max. operating pressure:	320 bar (4600 psi)
Rated flow:	0,6 l/min (0,15 gpm)
Cavity:	SAE-08-2N
Weight:	0,12 kg (0,44 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M15 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	150-180 Hz
Installation torque:	45 - 50 Nm (33,2 - 36,9 ft-lb)
Seal kit:	RA100081
MTFa:	150 - 1200 years: See technical spec.

NOTES

Pressure decreasing with current increasing.  
Maximum pressure value can be adjusted manually within a range.  
For other configurations/quick codes not available in this catalogue page please consult factory

CURVES



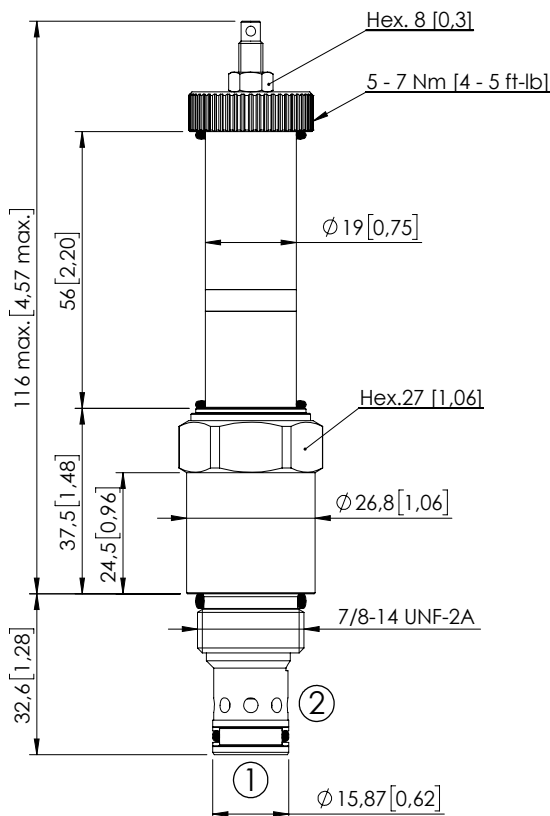
ORDERING CODES

Quick code	Description	Max. pressure setting range	Standard setting	Threshold current (with 12VDC coil)	Max control current (with 12V DC coil)	Override
CE001120	CEBD-001-PMPS-92-S08-V320	200-320 bar (2900-4600 psi)	210 bar (3000 psi)	200 mA (+/-7%)	1600 mA (+/-7%)	Screw style

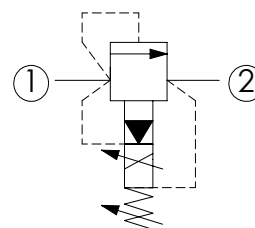
## SOLENOID OPERATED CARTRIDGE

## CEBT-120-PMPS

PROPORTIONAL VALVES  
POPPET TYPE RELIEF  
SPOOL TYPE  
FOR INVERSE CONTROLLED



Dimensions: mm [inches]



## SPECIFICATIONS

Max. operating pressure (port 1): 320 bar (4600 psi)

Max. operating pressure (port 2): 250 bar (3600 psi)

Rated flow: 120 l/min (32 gpm)

Pilot oil: &lt; 0,8 l/min (&lt;0,2 gpm)

Type hydraulic fluid: See Technical specif.

Hydraulic fluid temp. range: -30/+100 °C (-22/+212 °F)

Viscosity range: 10 to 380 mm²/s

Contamination class to ISO 4406: See technical spec.

Max. int. leakage: 200 cm³/min (@46 cSt, Δp=250 bar)  
0,05 in³/min (@46 cSt, Δp=3600 psi)

Step response: 80 ms (Depending on the system)

Cavity: SAE-10-2N

Weight: 0,21 kg (0,46 lbs)

Coil type: M15 type

Ambient temperature: -20/+50 °C (-4/+122 °F)

Hysteresis: &lt; 4% of the max. set pressure

PWM range recommended: 150-180 Hz

Installation torque: 55 - 62 Nm (41 - 46 ft-lb)

Seal kit: RB100082

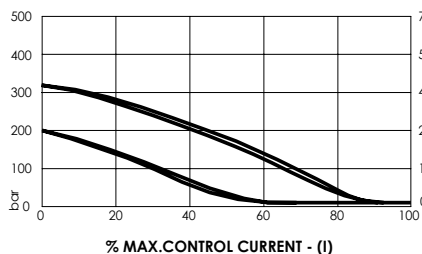
MTTF<sub>d</sub>: 150 - 1200 years: See technical spec.

## NOTES

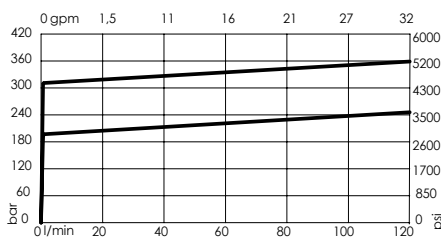
Pressure decreasing with current increasing.  
Maximum pressure value can be adjusted manually within a range.  
For other configurations/quick codes not available in this catalogue page please consult factory

## CURVES

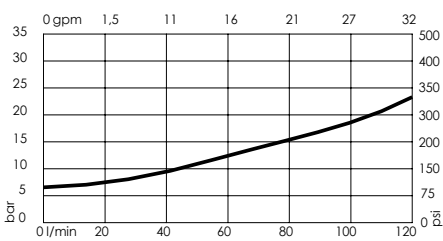
PRESSURE IN PORT 1 vs CONTROL CURRENT



PRESSURE IN PORT 1 vs FLOW



MINIMUM SET PRESSURE vs FLOW



## ORDERING CODES

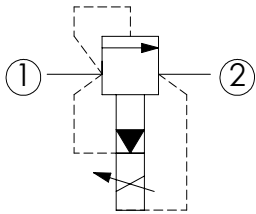
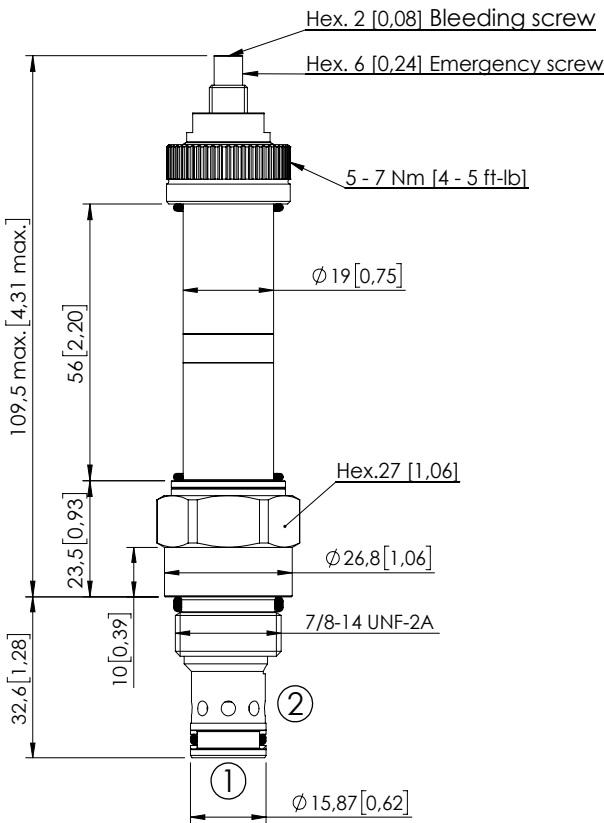
Quick code	Description	Minimum pressure	Max. pressure setting range	Standard setting	Threshold current (with 12VDC coil)	Max control current (with 12V DC coil)
CE000890	CEBT-120-PMPS-91-S10-V320	7 bar (100 psi)	200-320 bar (2900-4600 psi)	210 bar (3000 psi)	200 mA (+/-7%)	1600 mA (+/-7%)

Revision B3

SOLENOID OPERATED CARTRIDGE

CEBT-120-PLPS

PROPORTIONAL VALVES  
PILOTED RELIEF  
SPOOL TYPE



SPECIFICATIONS

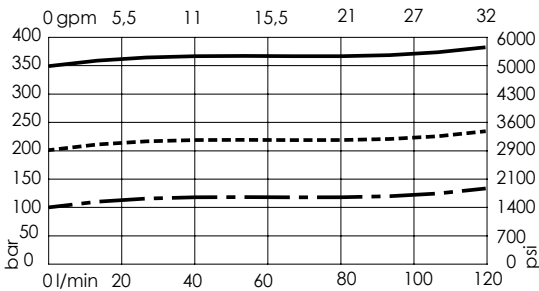
Max. operating pressure:	350 bar (5000 psi)
Rated flow:	120 l/min (32 gpm)
Cavity:	SAE-10-2N
Weight:	0,31 kg (0,44 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M15 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	150-180 Hz
Installation torque:	55 - 62 Nm (41 - 46 ft-lb)
Max. int. leakage:	200 cm <sup>3</sup> /min (@46 cSt) 12 in <sup>3</sup> /min (@46 cSt)
Seal kit:	RB100082
MTTFd:	150 - 1200 years: See technical spec.

Dimensions: mm [inches]

NOTES

Bleed air before use  
For other configurations/quick codes not available in this catalogue page please consult factory

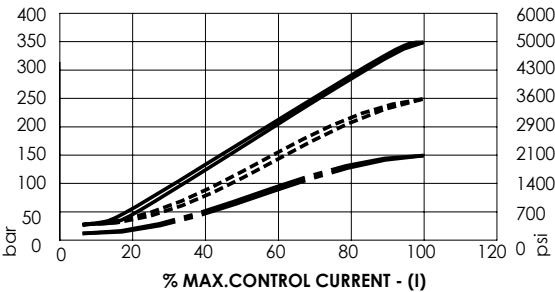
CURVES



CE000119 1>2

CE000120 1>2

CE000121 1>2



ORDERING CODES

Quick code	Description	Setting range	Threshold current (with 12VDC coil)	Max control current (with 12V DC coil)	Override
CE000119	CEBT-120-PLPS-91-S10-V350	30-350 bar (450-5000 psi)	200 mA (+/-7%)	1600 mA (+/-7%)	Screw style
CE000120	CEBT-120-PLPS-91-S10-V200	20-220 bar (300-3100 psi)	200 mA (+/-7%)	1700 mA (+/-7%)	Screw style
CE000121	CEBT-120-PLPS-91-S10-V100	15-90 bar (200-1300 psi)	200 mA (+/-7%)	1700 mA (+/-7%)	Screw style

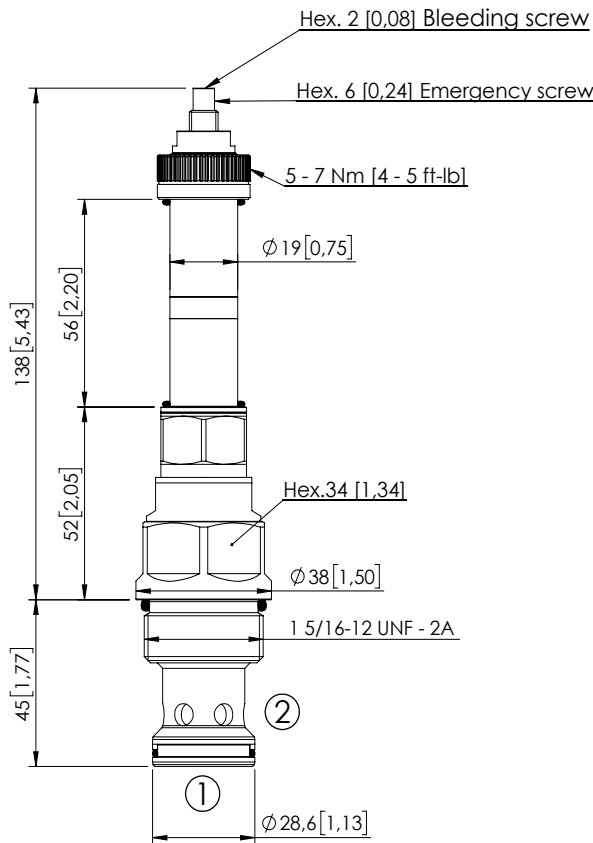
Revision B3



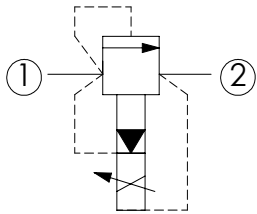
SOLENOID OPERATED CARTRIDGE

CEBT-300-PLPS

PROPORTIONAL VALVES  
PILOTED RELIEF  
SPOOL TYPE



Dimensions: mm [inches]



SPECIFICATIONS

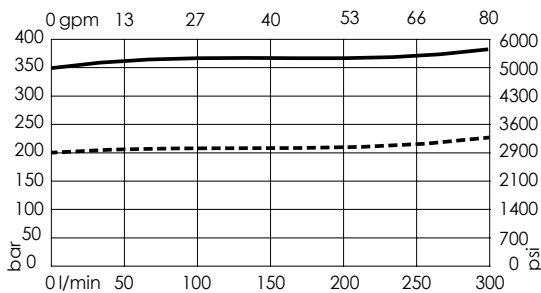
Max. operating pressure:	350 bar (5000 psi)
Rated flow:	300 l/min (80 gpm)
Cavity:	SAE-16-2N
Weight:	0,6 kg (1,10 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M15 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	150-180 Hz
Installation torque:	118 - 132 Nm (87 - 97 ft-lb)
Max. int. leakage:	200 cm <sup>3</sup> /min (@46 cSt) 12 in <sup>3</sup> /min (@46 cSt)
Seal kit:	RA100084
MTF <sub>d</sub> :	150 - 1200 years: See technical spec.

NOTES

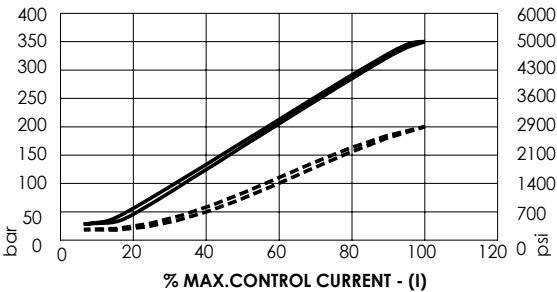
Bleed air before use

For other configurations/quick codes not available in this catalogue page please consult factory

CURVES



CE000880 1>2————



CE000895 1>2-----

ORDERING CODES

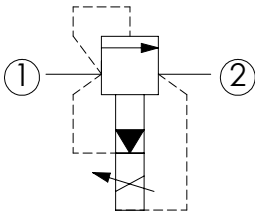
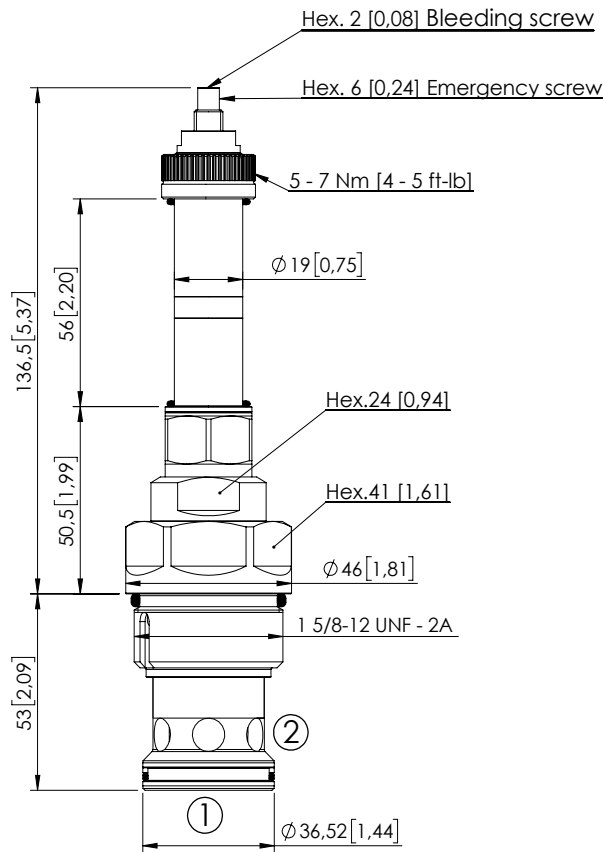
Quick code	Description	Proportional setting range	Threshold current (with 12VDC coil)	Max control current (with 12V DC coil)	Override	
CE000880	CEBT-300-PLPS-91-S16-V350	30-350 bar (450-5000 psi)	200 mA (+/-7%)	1600 mA (+/-7%)	Screw style	
CE000895	CEBT-300-PLPS-91-S16-V200	20-200 bar (300-2900 psi)	200 mA (+/-7%)	1700 mA (+/-7%)	Screw style	

Revision B3

SOLENOID OPERATED CARTRIDGE

CEBT-500-PLPS

PROPORTIONAL VALVES  
PILOTED RELIEF  
SPOOL TYPE



SPECIFICATIONS

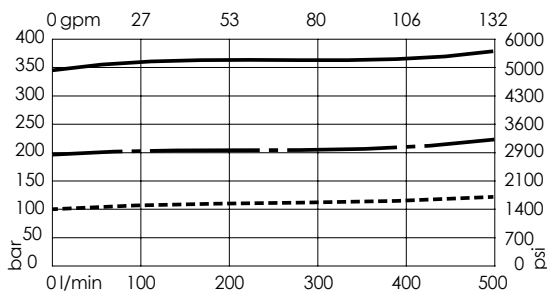
Max. operating pressure:	350 bar (5000 psi)
Rated flow:	500 l/min (132 gpm)
Cavity:	SAE-20-2N
Weight:	0,8 kg (1,76 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M15 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	150-180 Hz
Installation torque:	230 - 250 Nm (170 - 184 ft-lb)
Max. int. leakage:	200 cm <sup>3</sup> /min (@46 cSt) 12 in <sup>3</sup> /min (@46 cSt)
Seal kit:	RA100085
MTTFa:	150 - 1200 years: See technical spec.

NOTES

Bleed air before use

For other configurations/quick codes not available in this catalogue page please consult factory

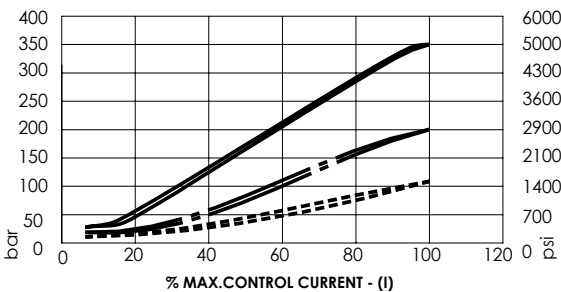
CURVES



CE000770 1>2————

CE000771 1>2-----

CE000772 1>2-----



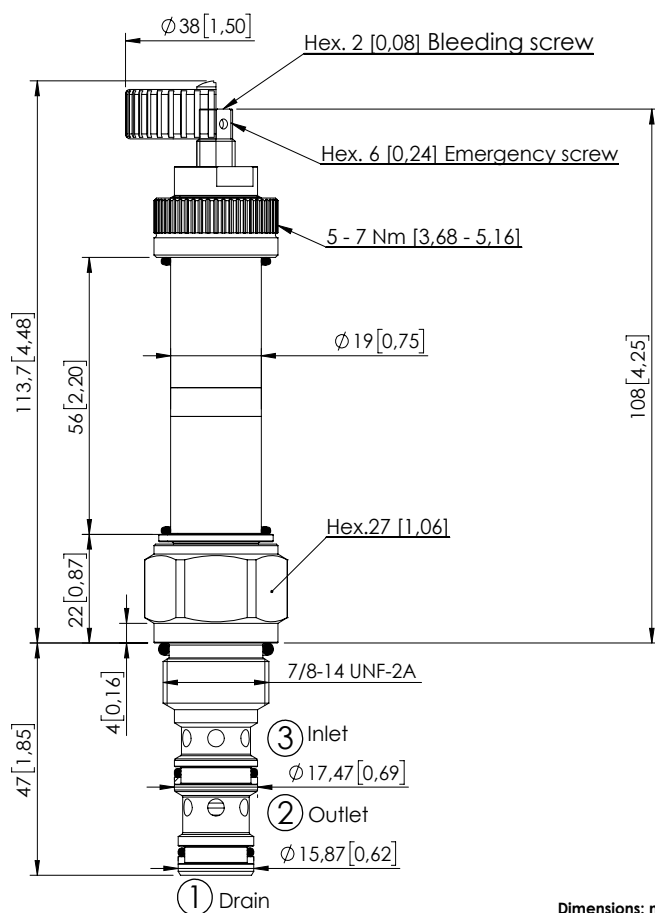
ORDERING CODES

Quick code	Description	Proportional setting range	Threshold current (with 12VDC coil)	Max control current (with 12V DC coil)	Override
CE000770	CEBT-500-PLPS-91-S20-V350	30-350 bar (450-5000 psi)	200 mA (+/-7%)	1600 mA (+/-7%)	Screw style
CE000771	CEBT-500-PLPS-91-S20-V200	20-220 bar (300-3100 psi)	200 mA (+/-7%)	1700 mA (+/-7%)	Screw style
CE000772	CEBT-500-PLPS-91-S20-V100	15-90 bar (200-1300 psi)	200 mA (+/-7%)	1700 mA (+/-7%)	Screw style

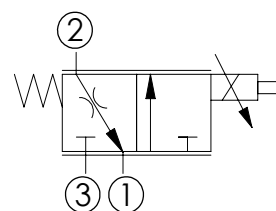
## SOLENOID OPERATED CARTRIDGE

## CECS-040-FSPS

PROPORTIONAL VALVES  
NON COMPENSATED  
FLOW REGULATOR



Dimensions: mm [inches]



## SPECIFICATIONS

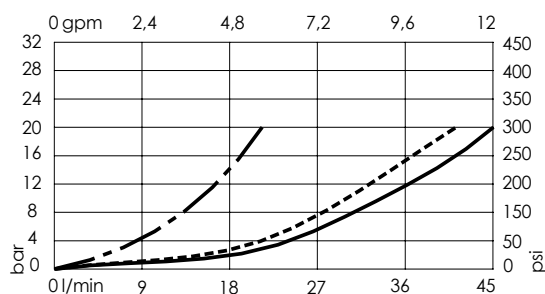
Max. operating pressure:	210 bar (3000 psi)
Rated flow:	40 l/min (11 gpm)
Cavity:	SAE-10-3N
Weight:	0,22 kg (0,49 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M15 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	150-180 Hz
Installation torque:	55 - 62 Nm (41 - 46 ft-lb)
Max. int. leakage:	150 cm <sup>3</sup> /min (@46 cSt) 9 in <sup>3</sup> /min (@46 cSt)
Seal kit:	RA100092
MTTFd:	150 - 1200 years: See technical spec.

## NOTES

Bleed air before use

For other configurations/quick codes not available in this catalogue page please consult factory

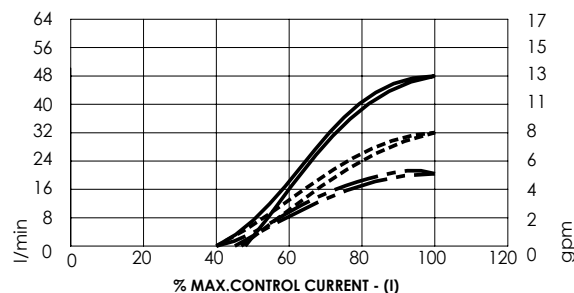
## CURVES



CE000111 3&gt;2 —————

CE000112 3&gt;2 - - - - -

CE000113 3&gt;2 — — — — —



## ORDERING CODES

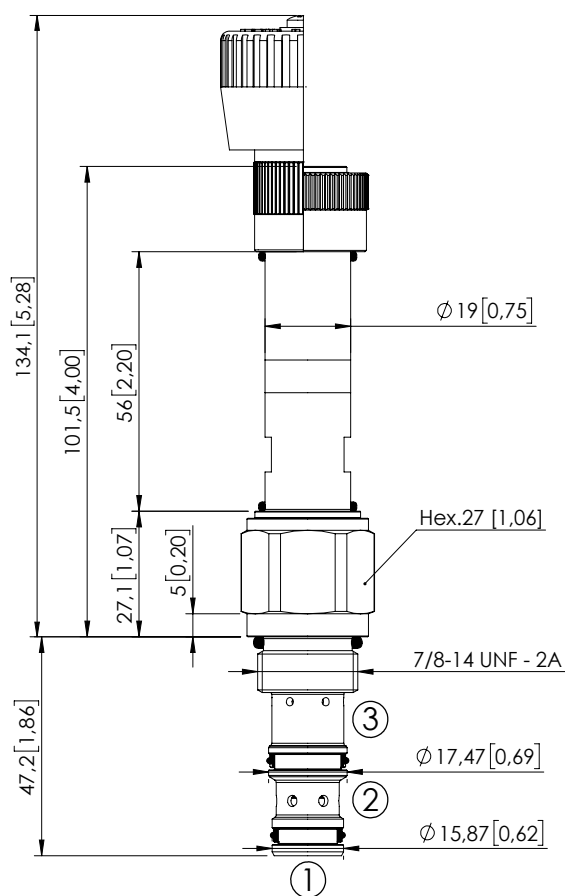
Quick code	Description	Rated flow	Threshold current (with 12VDC coil)	Max control current (with 12V DC coil)	Override	
CE000111	CECS-040-FSPS-85-S10-V210	40 l/min (11 gpm)	800 mA (+/-7%)	1600 mA (+/-7%)	Screw style	
CE000112	CECS-030-FSPS-85-S10-V210	30 l/min (8 gpm)	700 mA (+/-7%)	1500 mA (+/-7%)	Screw style	
CE000113	CECS-020-FSPS-85-S10-V210	20 l/min (6 gpm)	700 mA (+/-7%)	1400 mA (+/-7%)	Screw style	
CE000960	CECS-040-FSPV-85-S10-V210	40 l/min (11 gpm)	800 mA (+/-7%)	1600 mA (+/-7%)	Handknob style	
CE000906	CECS-030-FSPV-85-S10-V210	30 l/min (8 gpm)	700 mA (+/-7%)	1500 mA (+/-7%)	Handknob style	
CE000489	CECS-020-FSPV-85-S10-V210	20 l/min (6 gpm)	700 mA (+/-7%)	1400 mA (+/-7%)	Handknob style	

Revision B3

## SOLENOID OPERATED CARTRIDGE

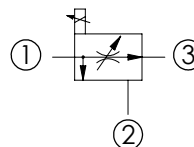
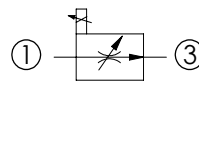
## CECS-050-FRPN

PROPORTIONAL VALVES  
FLOW REGULATOR  
3 WAYS COMBINATION



Dimensions: mm [inches]

3 way application

2 way application,  
port 2 not connected

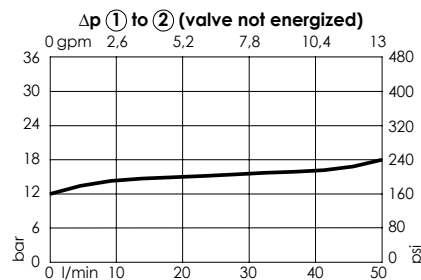
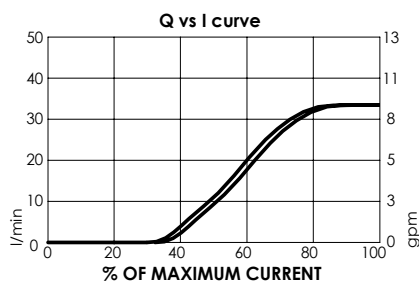
## SPECIFICATIONS

Max. operating pressure:	320 bar (4600 psi)
Max. flow (in inlet port ①):	50 l/min (13 gpm)
Max. flow ① to ③:	35 l/min REGULATED (9 gpm)
Cavity:	SAE-10-3N
Weight:	0.250 kg (0.55 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M15 type
Voltage:	12- 24 V dc
Ambient temperature:	-20/+50 °C (-4/+122 °F)
Pressure differential (① to ③):	7-11 bar (101 - 159 psi)
Hysteresis (ramp up and down):	5 %
Max current (12 V dc):	1800 mA
Max current (24 V dc):	1200 mA
Coil resistance (12 V dc):	3.3-5.8 Ω
Coil resistance (24 V dc):	7.2-13 Ω
Surface protection proportional solenoid:	Coating DIN 50962 Fe8/ Zi-Ni with passivation
Installation torque:	55 - 62 Nm (41 - 46 ft-lb)
Seal kit:	RB100092
MTF <sub>d</sub> :	150 - 1200 years: See technical spec.

## NOTES

For other configurations/quick codes not available in this catalogue page please consult factory

## CURVES



## ORDERING CODES

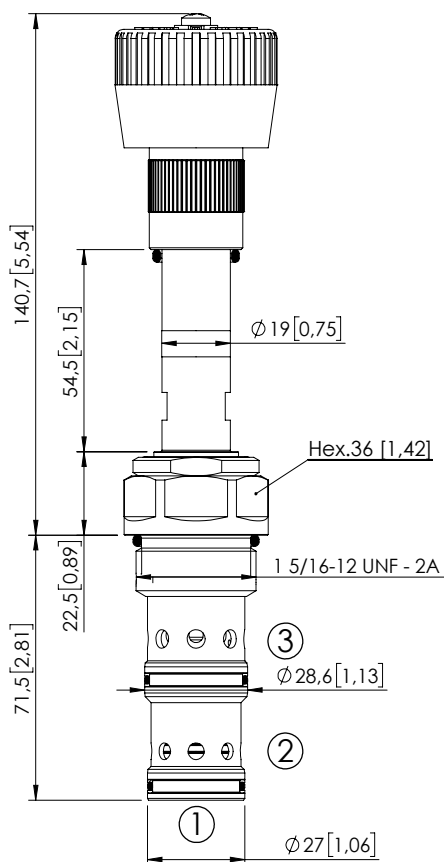
Quick code	Description	Regulated flow range	Adjustment type	
CE001144	CECS-050-FRPN-35-S10-V320	0-35 l/min (0-9 gpm)	Standard	
CE001882	CECS-050-FRPM-35-S10-V320	0-35 l/min (0-9 gpm)	Handknob	

Revision B

## SOLENOID OPERATED CARTRIDGE

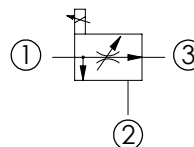
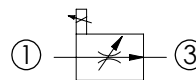
## CECS-140-FRPM

PROPORTIONAL VALVES  
FLOW REGULATOR  
PRIORITY TYPE



Dimensions: mm [inches]

3 way application

2 way application,  
port 2 not connected

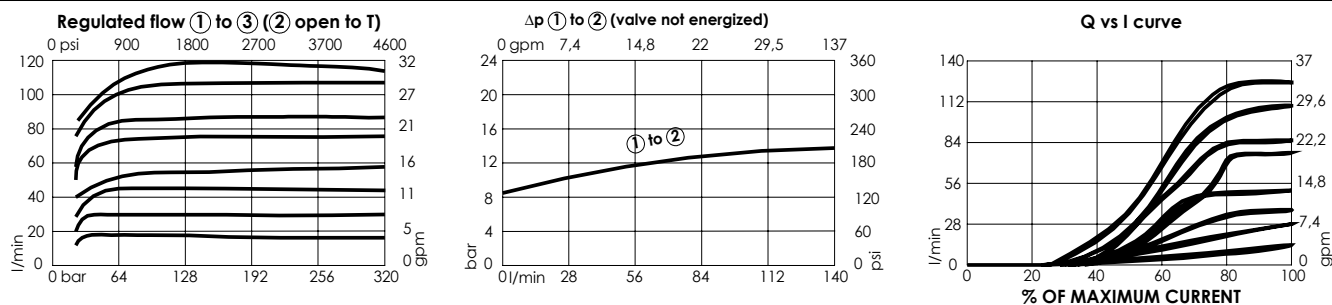
## SPECIFICATIONS

Max. operating pressure:	320 bar (4600 psi)
Max. flow (in inlet port ①):	140 l/min (37 gpm)
Max. flow ① to ③:	120 l/min REGULATED (32 gpm)
Cavity:	SAE-16-3N
Weight:	0,6 kg (1.32 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M15 type
Voltage:	12- 24 V dc
Ambient temperature:	-20/+50 °C (-4/+122 °F)
Pressure differential (① to ③):	7- 11 bar (101 - 159 psi)
Hysteresis (ramp up and down):	1,5 - 3 %
Max current (12 V dc):	1800 mA
Max current (24 V dc):	1200 mA
Coil resistance (12 V dc):	3,3-5,8 Ω
Coil resistance (24 V dc):	7,2-13 Ω
Surface protection proportional solenoid:	Coating DIN 50962 Fe8/ Zi-Ni with passivation
Installation torque:	118 - 132 Nm (160 - 179 ft-lb)
Seal kit:	RB100094
MTF <sub>d</sub> :	150 - 1200 years: See technical spec.

## NOTES

If port 2 is blocked the valve operates as a two way flow regulator.  
Port 2 can be pressurized.  
For other configurations/quick codes not available in this catalogue page please  
consult factory

## CURVES



## ORDERING CODES

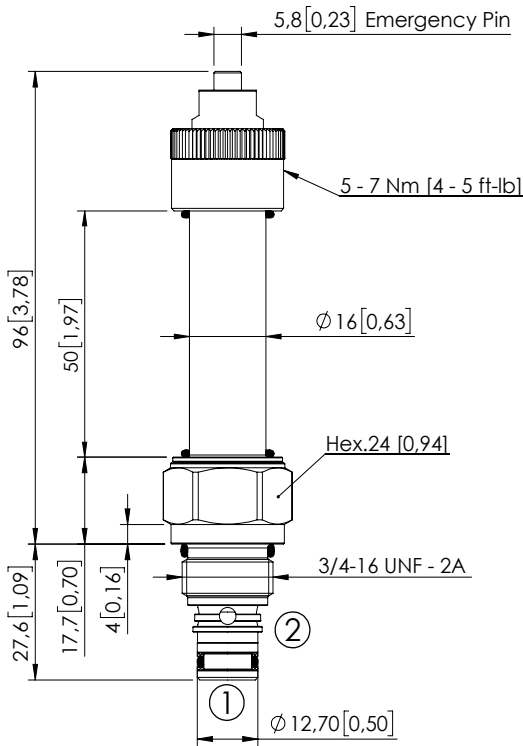
Quick code	Description	Regulated flow range	Adjustment type
CE000831	CECS-140-FRPM-15-S16-V320	0-15 l/min (0-4 gpm)	Handknob
CE000832	CECS-140-FRPM-25-S16-V320	0-25 l/min (0-7 gpm)	Handknob
CE000833	CECS-140-FRPM-40-S16-V320	0-40 l/min (0-11 gpm)	Handknob
CE000834	CECS-140-FRPM-50-S16-V320	0-50 l/min (0-13 gpm)	Handknob
CE000835	CECS-140-FRPM-65-S16-V320	0-65 l/min (0-17 gpm)	Handknob
CE000836	CECS-140-FRPM-80-S16-V320	0-80 l/min (0-21 gpm)	Handknob
CE001034	CECS-140-FRPM-100-S16-V320	0-100 l/min (0-27 gpm)	Handknob
CE001184	CECS-140-FRPM-120-S16-V320	0-120 l/min (0-32 gpm)	Handknob

Revision F

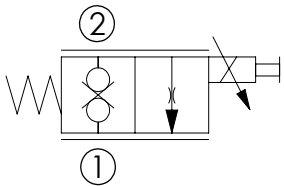
SOLENOID OPERATED CARTRIDGE

CEBD-020-PEPS

PROPORTIONAL VALVE  
NORMALLY CLOSED



Dimensions: mm [inches]



SPECIFICATIONS

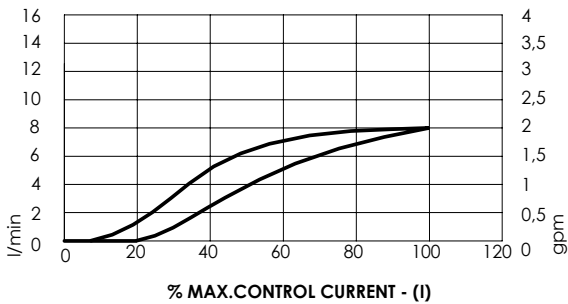
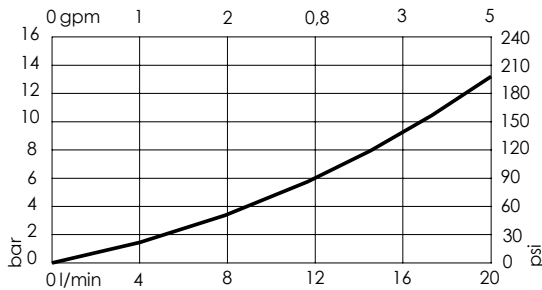
Max. operating pressure:	210 bar (3000 psi)
Rated flow:	20 l/min (5 gpm)
Cavity:	SAE 08-2N
Weight:	0,21 kg (0,33 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M16 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	120-150 Hz
Installation torque:	45 - 50 Nm (33 - 37 ft-lb)
Seal kit:	RA100081
MTTFd:	150 - 1200 years: See technical spec.

NOTES

Bleed air before use

For other configurations/quick codes not available in this catalogue page please consult factory

CURVES



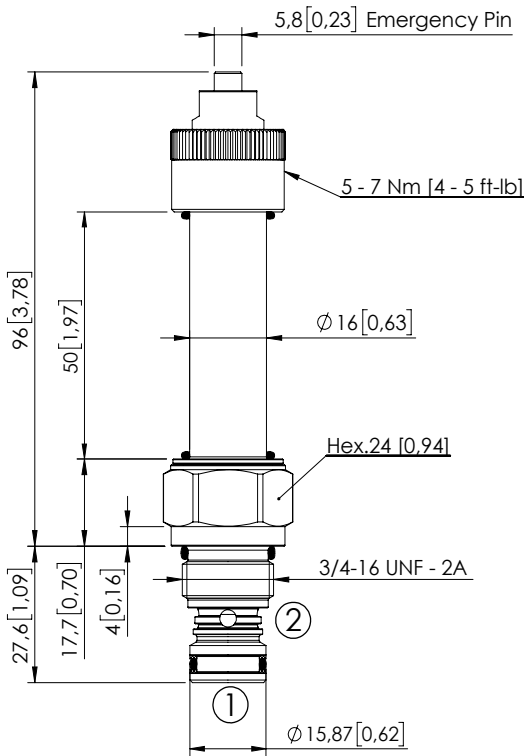
ORDERING CODES

Quick code	Description	Rated flow	Threshold current (with 12VDC coil)	Max control current (with 12V DC coil)	Override	
CE001190	CEBD-020-PEPS-103-S08-V210	20 l/min (5 gpm)	1000 mA (+/-7%)	2000 mA (+/-7%)	Push style	

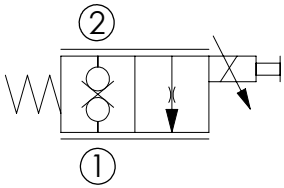
SOLENOID OPERATED CARTRIDGE

CEBD-020-PEPS

PROPORTIONAL VALVE  
NORMALLY CLOSED



Dimensions: mm [inches]



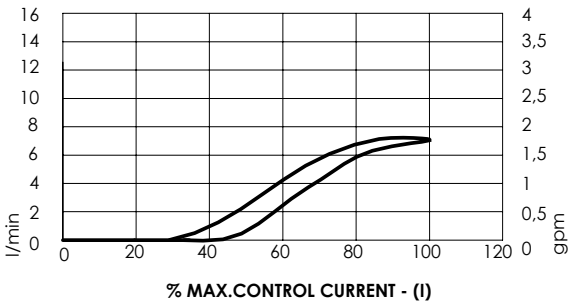
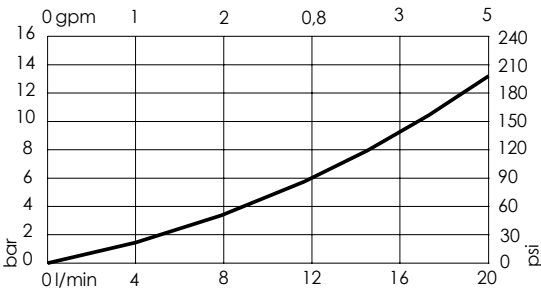
SPECIFICATIONS

Max. operating pressure:	210 bar (3000 psi)
Rated flow:	20 l/min (5 gpm)
Cavity:	VP000064
Weight:	0,21 kg (0,33 lbs)
Type hydraulic fluid:	See Technical specif.
Hydraulic fluid temp. range:	-30/+100 °C (-22/+212 °F)
Contamination class to ISO 4406:	See technical spec.
Coil type:	M16 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	150-180 Hz
Installation torque:	45 - 50 Nm (33 - 37 ft-lb)
Seal kit:	RA100081
MTFa:	150 - 1200 years: See technical spec.

NOTES

Bleed air before use  
For other configurations/quick codes not available in this catalogue page please consult factory

CURVES



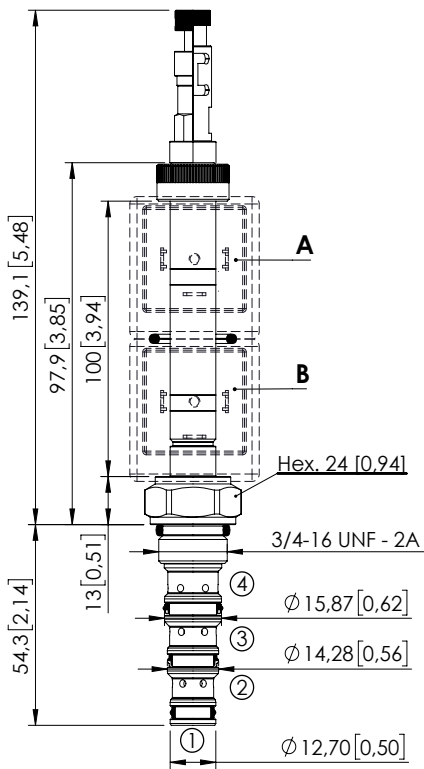
ORDERING CODES

Quick code	Description	Rated flow	Threshold current (with 12VDC coil)	Max control current (with 12V DC coil)	Override	
CE001116	CEBD-020-PEPS-103-064-V210	20 l/min (5 gpm)	1000 mA (+/-7%)	2000 mA (+/-7%)	Push style	

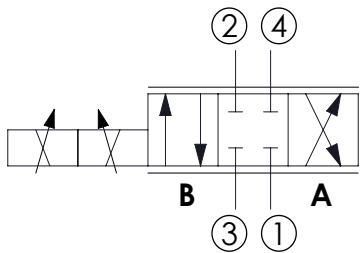
SOLENOID OPERATED CARTRIDGE

CEES-010-SEPN-51

DIRECT OPERATED  
SPOOL TYPE



Dimensions: mm [inches]



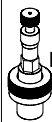
SPECIFICATIONS

Max. operating pressure:	350 bar (5000 psi)
Max. operating pressure on port 1:	210 bar (3000 psi)
Rated flow:	10 l/min (3 gpm)
Cavity:	SAE-08-4N
Weight:	0.13 kg (0,68 lbs)
Min. voltage required:	90% of nominal
Coil type:	M7 or M3 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	100 Hz
Contamination class to ISO 4406:	See technical spec.
Seal kit:	RB600101
Installation torque:	45 - 50 Nm (41 - 46 ft-lb)
MTTFd:	150 - 1200 years: See technical spec.
Leakage:	120 cm <sup>3</sup> /min (@46 cSt) 7,3 in <sup>3</sup> /min (@46 cSt)

OPTIONS



Standard



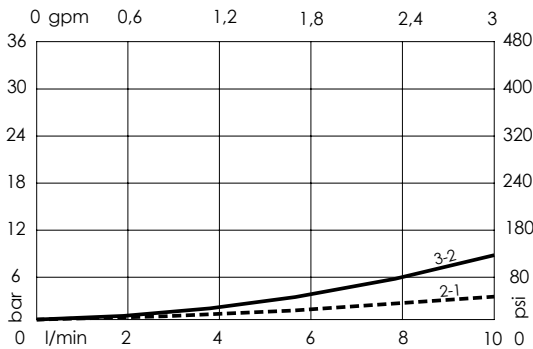
Push and  
pull manual  
override



Push pull and  
twist manual  
override

NOTES

For other configurations/quick codes not available in this catalogue page please consult factory



ORDERING CODES

Quick code	Description	Options	
CE001832	CEES-010-SEPN-51-S08-N350	Standard	
CE001833	CEES-010-SEPL-51-S08-N350	Push and pull manual override	
CE001834	CEES-010-SEPG-51-S08-N350	Push pull and twist manual override	

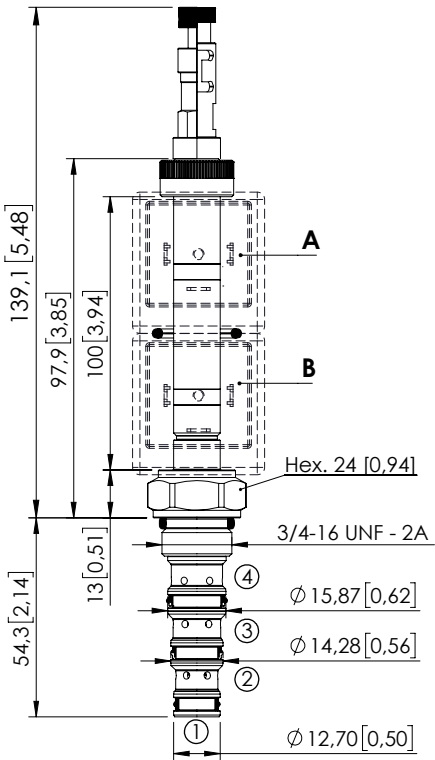
Revision C



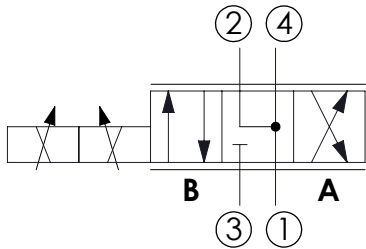
SOLENOID OPERATED CARTRIDGE

CEES-010-SEPN-52

DIRECT OPERATED  
SPOOL TYPE



Dimensions: mm [inches]



SPECIFICATIONS

Max. operating pressure:	350 bar (5000 psi)
Max. operating pressure on port 1:	210 bar (3000 psi)
Rated flow:	10 l/min (3 gpm)
Cavity:	SAE-08-4N
Weight:	0.13 kg (0,68 lbs)
Min. voltage required:	90% of nominal
Coil type:	M7 or M3 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	100 Hz
Contamination class to ISO 4406:	See technical spec.
Seal kit:	RB600101
Installation torque:	45 - 50 Nm (41 - 46 ft-lb)

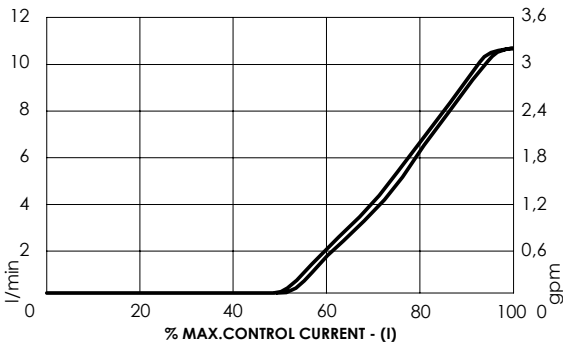
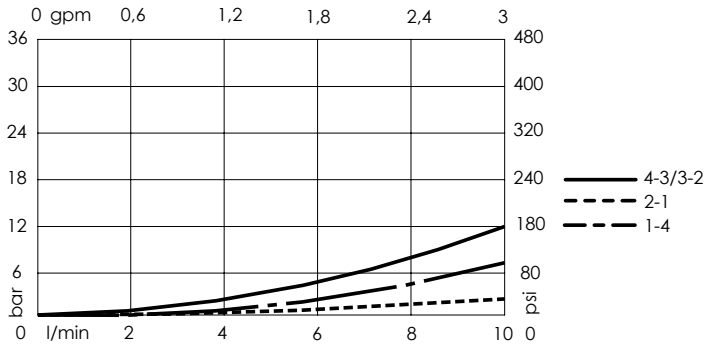
NOTES

For other configurations/quick codes not available in this catalogue page please consult factory

MTTF <sub>d</sub> :	150 - 1200 years: See technical spec.
Leakage:	120 cm <sup>3</sup> /min (@46 cSt) 7,3 in <sup>3</sup> /min (@46 cSt)

OPTIONS

 Standard	 Push and pull manual override	 Push pull and twist manual override
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ORDERING CODES

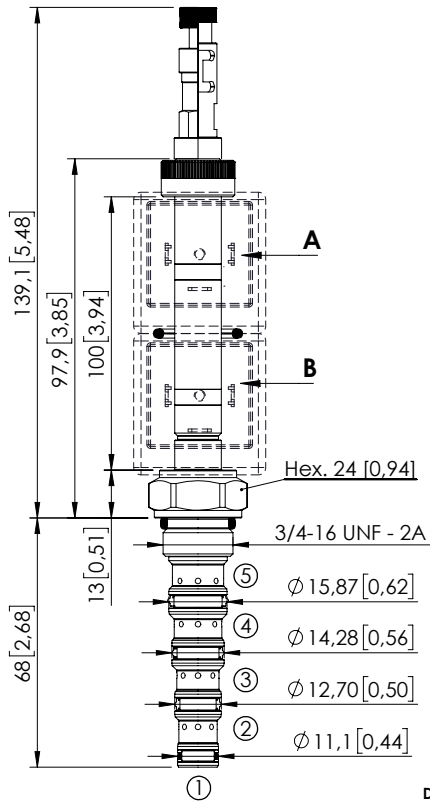
Quick code	Description	Options
CE001835	CEES-010-SEPN-52-S08-N350	Standard
CE001836	CEES-010-SEPL-52-S08-N350	Push and pull manual override
CE001837	CEES-010-SEPG-52-S08-N350	Push pull and twist manual override

Revision C

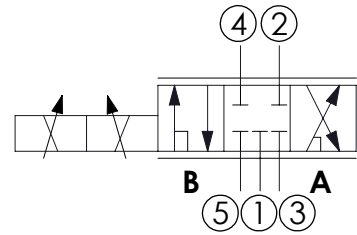
SOLENOID OPERATED CARTRIDGE

**CEFS-010-SEPN-106**

DIRECT OPERATED  
SPOOL TYPE



Dimensions: mm [inches]



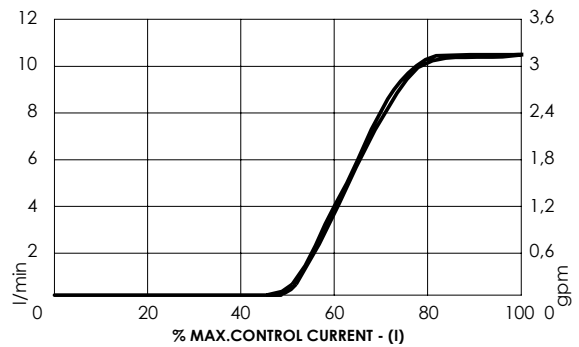
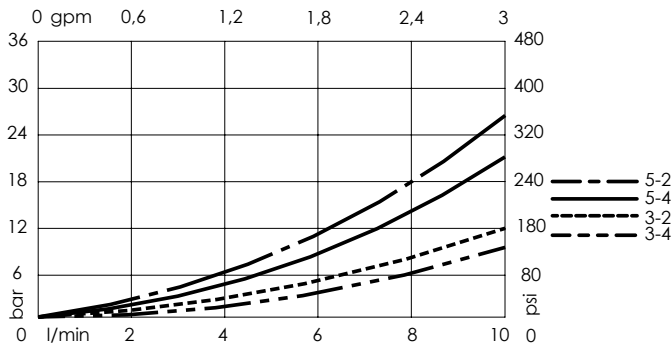
**SPECIFICATIONS**

Max. operating pressure:	250 bar (3600 psi)
Max. operating pressure on port 1:	210 bar (3000 psi)
Rated flow:	10 l/min (3 gpm)
Cavity:	SAE-08-5N
Weight:	0.25 kg (0,68 lbs)
Min. voltage required:	90% of nominal
Coil type:	M7 or M3 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	100 Hz
Contamination class to ISO 4406:	See technical spec.
Seal kit:	RB900106
Installation torque:	45 - 50 Nm (41 - 46 ft-lb)
MTTFd:	150 - 1200 years: See technical spec.
Leakage:	120 cm <sup>3</sup> /min (@46 cSt) 7,3 in <sup>3</sup> /min (@46 cSt)

**NOTES**

For other configurations/quick codes not available in this catalogue page please consult factory

**OPTIONS**



**ORDERING CODES**

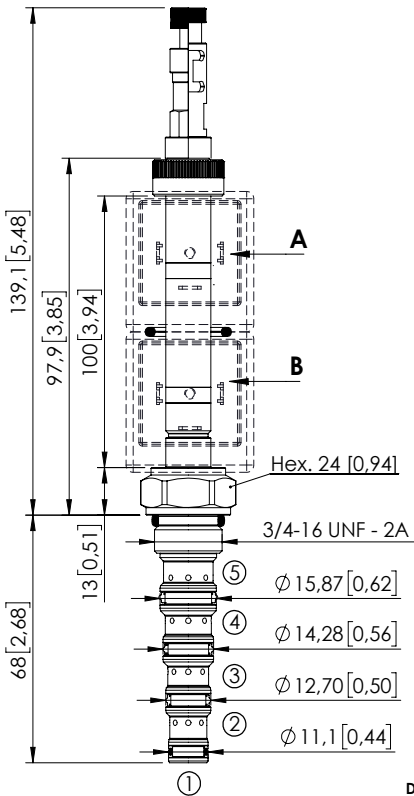
Quick code	Description	Options
CE001841	CEFS-010-SEPN-106-S08-N250	Standard
CE001842	CEFS-010-SEPL-106-S08-N250	Push and pull manual override
CE001843	CEFS-010-SEPG-106-S08-N250	Push pull and twist manual override

Revision B

SOLENOID OPERATED CARTRIDGE

CEFS-010-SEPN-107

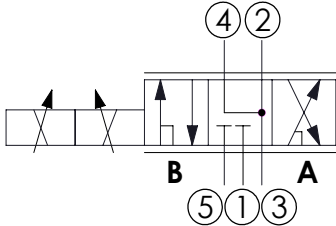
DIRECT OPERATED  
SPOOL TYPE



Dimensions: mm [inches]

NOTES

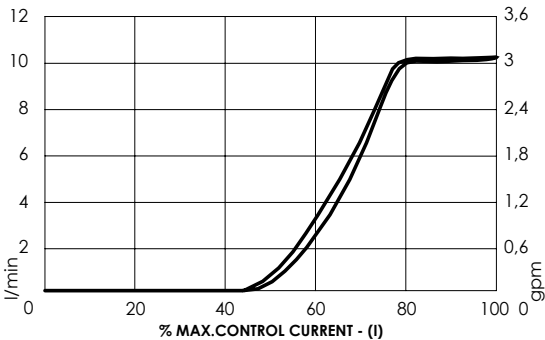
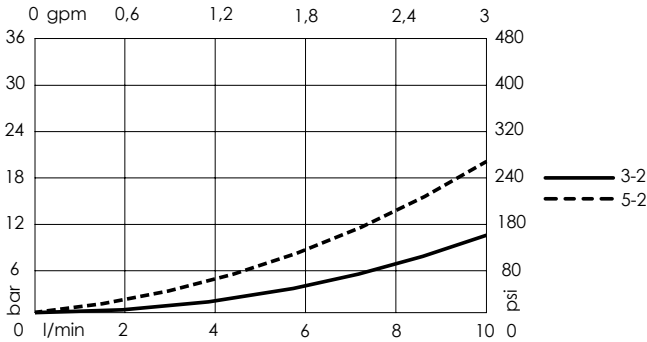
For other configurations/quick codes not available in this catalogue page please consult factory



SPECIFICATIONS

Max. operating pressure:	250 bar (3600 psi)
Max. operating pressure on port 1:	210 bar (3000 psi)
Rated flow:	10 l/min (3 gpm)
Cavity:	SAE-08-5N
Weight:	0.25 kg (0,68 lbs)
Min. voltage required:	90% of nominal
Coil type:	M7 or M3 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	100 Hz
Contamination class to ISO 4406:	See technical spec.
Seal kit:	RB900106
Installation torque:	45 - 50 Nm (41 - 46 ft-lb)
MTFa:	150 - 1200 years: See technical spec.
Leakage:	120 cm <sup>3</sup> /min (@46 cSt) 7,3 in <sup>3</sup> /min (@46 cSt)

OPTIONS



ORDERING CODES

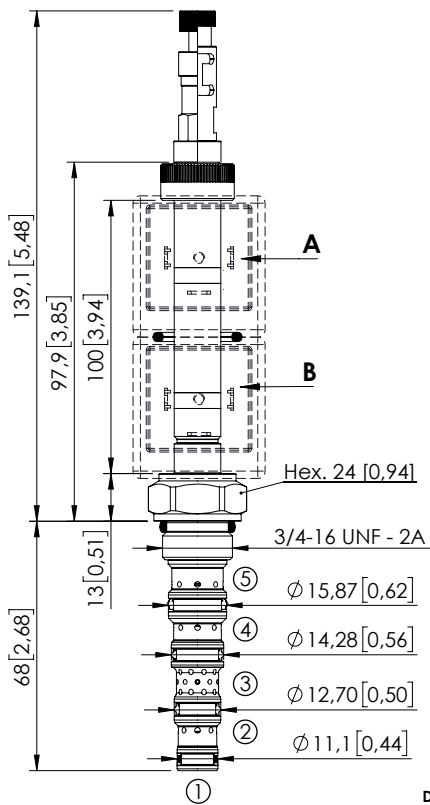
Quick code	Description	Options
CE001844	CEFS-010-SEPN-107-S08-N250	Standard
CE001845	CEFS-010-SEPL-107-S08-N250	Push and pull manual override
CE001846	CEFS-010-SEPG-107-S08-N250	Push pull and twist manual override

Revision B

SOLENOID OPERATED CARTRIDGE

CEFS-010-SEPN-115

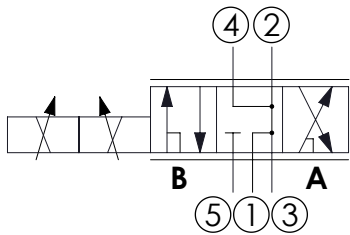
DIRECT OPERATED  
SPOOL TYPE



Dimensions: mm [inches]

NOTES

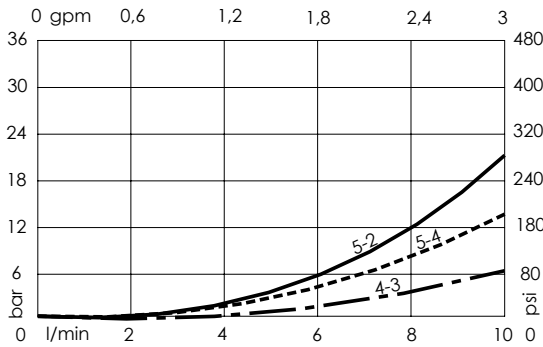
For other configurations/quick codes not available in this catalogue page please consult factory



SPECIFICATIONS

Max. operating pressure:	350 bar (5000 psi)
Max. operating pressure on port 1:	210 bar (3000 psi)
Rated flow:	10 l/min (3 gpm)
Cavity:	SAE-08-5N
Weight:	0,25 kg (0,68 lbs)
Min. voltage required:	90% of nominal
Coil type:	M7 or M3 type
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	100 Hz
Contamination class to ISO 4406:	See technical spec.
Seal kit:	RB900106
Installation torque:	45 - 50 Nm (41 - 46 ft-lb)
MTF <sub>d</sub> :	150 - 1200 years: See technical spec.
Leakage:	120 cm <sup>3</sup> /min (@46 cSt) 7,3 in <sup>3</sup> /min (@46 cSt)

OPTIONS



ORDERING CODES

Quick code	Description	Options
CE001850	CEFS-010-SEPN-115-S08-N350	Standard
CE001851	CEFS-010-SEPL-115-S08-N350	Push and pull manual override
CE001852	CEFS-010-SEPG-115-S08-N350	Push pull and twist manual override

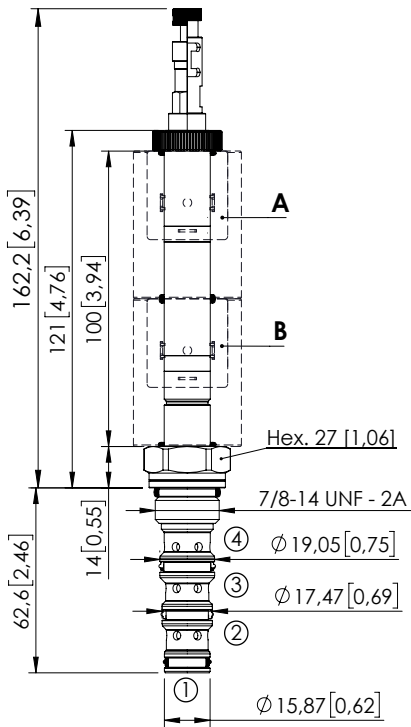
Revision A



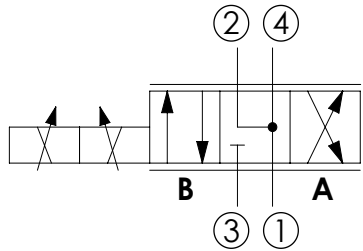
SOLENOID OPERATED CARTRIDGE

CEES-030-SEPN-52

DIRECT OPERATED  
SPOOL TYPE



Dimensions: mm [inches]



SPECIFICATIONS

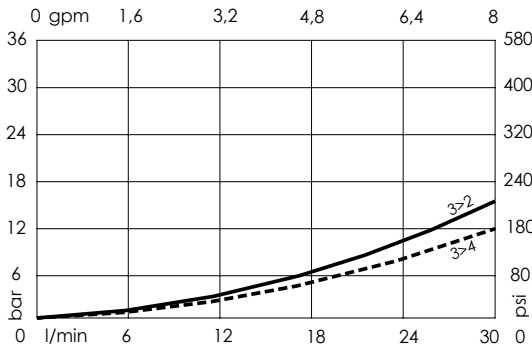
Max. operating pressure:	350 bar (5000 psi)
Max. operating pressure on port 1:	210 bar (3000 psi)
Rated flow:	30 l/min (8 gpm)
Cavity:	SAE-10-4N
Weight:	0.20 kg (0.68 lbs)
Min. voltage required:	90% of nominal
Coil type:	M16
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	100 Hz
Contamination class to ISO 4406:	See technical spec.
Seal kit:	RB600102
Installation torque:	55 - 62 Nm (41 - 46 ft-lb)
MTTF <sub>d</sub> :	150 - 1200 years: See technical spec.
Leakage:	120 cm <sup>3</sup> /min (@46 cSt) 7.3 in <sup>3</sup> /min (@46 cSt)

OPTIONS



NOTES

For other configurations/quick codes not available in this catalogue page please consult factory



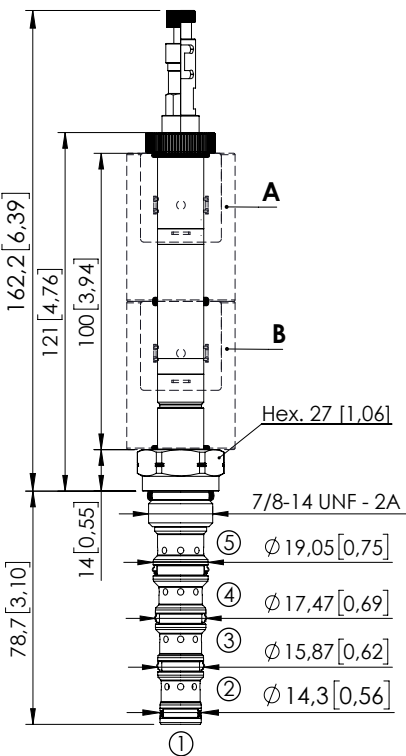
ORDERING CODES

Quick code	Description	Options	
CE001856	CEES-030-SEPN-52-S10-N350	Standard	
CE001857	CEES-030-SEPL-52-S10-N350	Push and pull manual override	
CE001858	CEES-030-SEPG-52-S10-N350	Push pull and twist manual override	

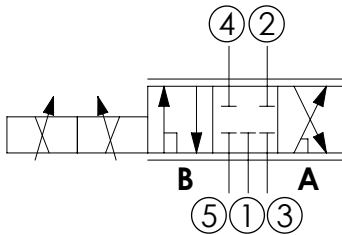
SOLENOID OPERATED CARTRIDGE

CEFS-030-SEPN-106

DIRECT OPERATED  
SPOOL TYPE



Dimensions: mm [inches]



SPECIFICATIONS

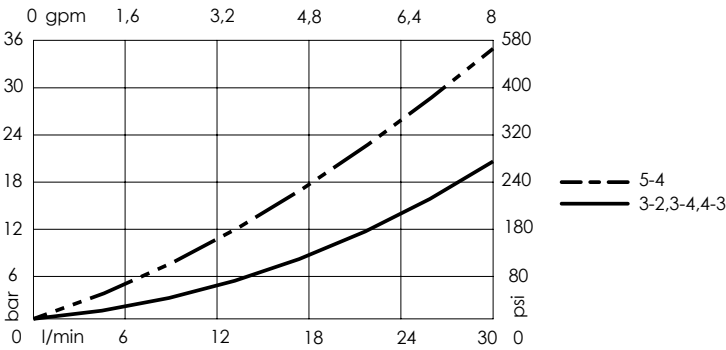
Max. operating pressure:	350 bar (5000 psi)
Max. operating pressure on port 1:	210 bar (3000 psi)
Rated flow:	30 l/min (8 gpm)
Cavity:	SAE 10 5N
Weight:	0.22 kg (0,68 lbs)
Min. voltage required:	90% of nominal
Coil type:	M16
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	100 Hz
Contamination class to ISO 4406:	See technical spec.
Seal kit:	RB900107
Installation torque:	55 - 62 Nm (41 - 46 ft-lb)
MTF <sub>a</sub> :	150 - 1200 years: See technical spec.
Leakage:	120 cm <sup>3</sup> /min (@46 cSt) 7,3 in <sup>3</sup> /min (@46 cSt)

OPTIONS



NOTES

For other configurations/quick codes not available in this catalogue page please consult factory



ORDERING CODES

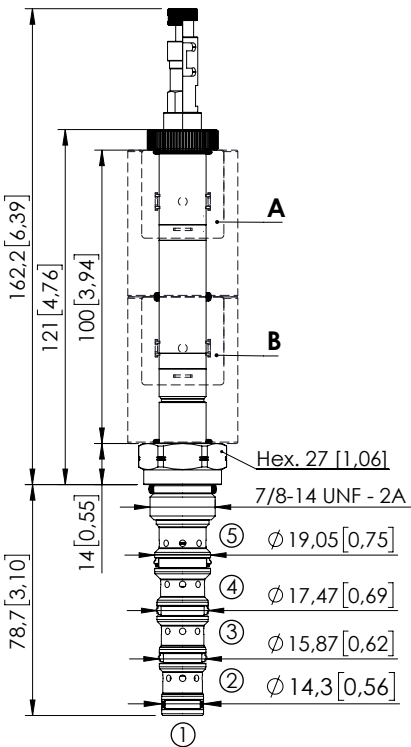
Quick code	Description	Options	
CE001862	CEFS-030-SEPN-106-S10-N350	Standard	
CE001863	CEFS-030-SEPL-106-S10-N350	Push and pull manual override	
CE001864	CEFS-030-SEPG-106-S10-N350	Push pull and twist manual override	

Revision C

SOLENOID OPERATED CARTRIDGE

CEFS-030-SEPN-107

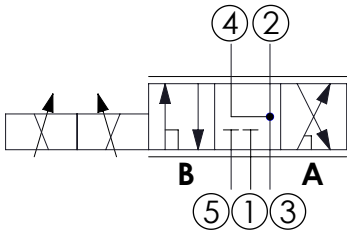
DIRECT OPERATED  
SPOOL TYPE



Dimensions: mm [inches]

NOTES

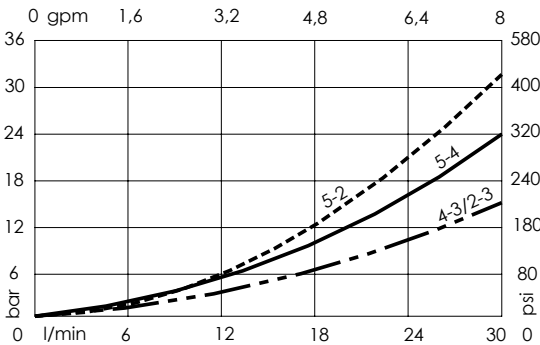
For other configurations/quick codes not available in this catalogue page please consult factory



SPECIFICATIONS

Max. operating pressure:	350 bar (5000 psi)
Max. operating pressure on port 1:	210 bar (3000 psi)
Rated flow:	30 l/min (8 gpm)
Cavity:	SAE 10 5N
Weight:	0.22 kg (0.68 lbs)
Min. voltage required:	90% of nominal
Coil type:	M16
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	100 Hz
Contamination class to ISO 4406:	See technical spec.
Seal kit:	RB900107
Installation torque:	55 - 62 Nm (41 - 46 ft-lb)
MTTF:	150 - 1200 years: See technical spec.
Leakage:	120 cm <sup>3</sup> /min (@46 cSt) 7.3 in <sup>3</sup> /min (@46 cSt)

OPTIONS



ORDERING CODES

Quick code	Description	Options
CE001865	CEFS-030-SEPN-107-S10-N350	Standard
CE001866	CEFS-030-SEPL-107-S10-N350	Push and pull manual override
CE001867	CEFS-030-SEPG-107-S10-N350	Push pull and twist manual override

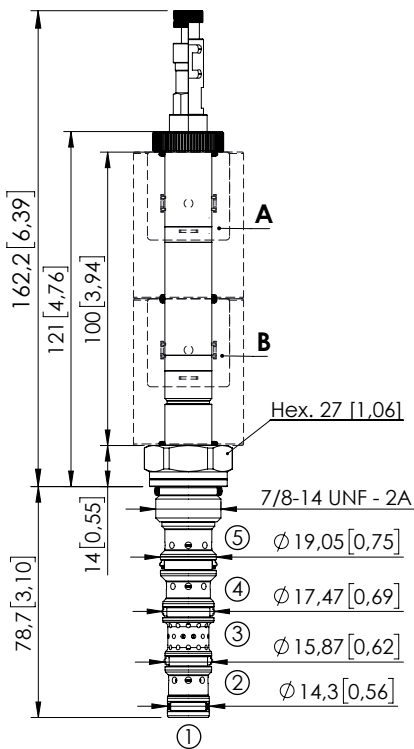
Revision C



SOLENOID OPERATED CARTRIDGE

CEFS-030-SEPN-108

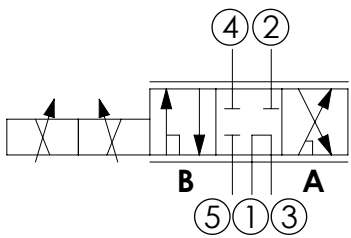
DIRECT OPERATED  
SPOOL TYPE



Dimensions: mm [inches]

NOTES

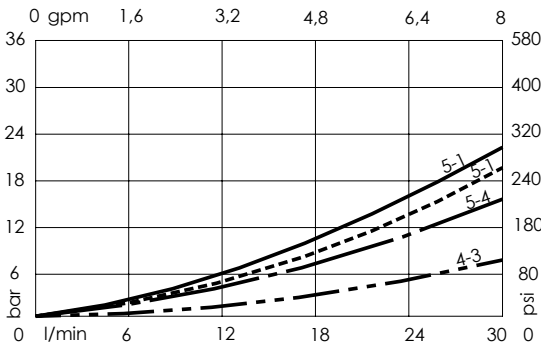
For other configurations/quick codes not available in this catalogue page please consult factory



SPECIFICATIONS

Max. operating pressure:	350 bar (5000 psi)
Max. operating pressure on port 1:	210 bar (3000 psi)
Rated flow:	30 l/min (8 gpm)
Cavity:	SAE 10 5N
Weight:	0,22 kg (0,68 lbs)
Min. voltage required:	90% of nominal
Coil type:	M16
Ambient temperature:	-20/+50 °C (-4/+122 °F)
PWM range recommended:	100 Hz
Contamination class to ISO 4406:	See technical spec.
Seal kit:	RB900107
Installation torque:	55 - 62 Nm (41 - 46 ft-lb)
MTF <sub>d</sub> :	150 - 1200 years: See technical spec.
Leakage:	120 cm <sup>3</sup> /min (@46 cSt) 7,3 in <sup>3</sup> /min (@46 cSt)

OPTIONS



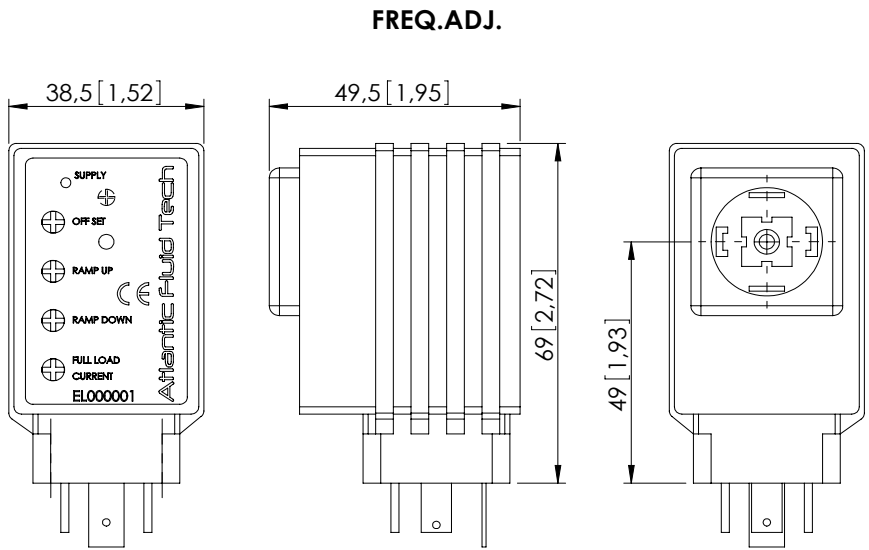
ORDERING CODES

Quick code	Description	Options
CE001868	CEFS-030-SEPN-108-S10-N350	Standard
CE001869	CEFS-030-SEPL-108-S10-N350	Push and pull manual override
CE001870	CEFS-030-SEPG-108-S10-N350	Push pull and twist manual override

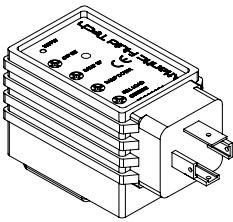
Revision A

PROPORTIONAL VALVE CONTROLLER

ELPC-030-SCCB



Max torque 0,5 Nm [0,37 ft-lb]



SPECIFICATIONS

Supply voltage: 12 - 30 VDC  
Coil rating must be matched with supply voltage:  
 $R_{coil} < (V_{supply} - 1,5V) / I_{max}$

Control input signal options:  
5K $\Omega$  external potentiometer  
(accepts 2K $\Omega$  to 10K $\Omega$ ), or 0-10 VDC signal  
(see connection diagram)

Output current: up to 2A

Minimum current: 0 - 0,6 A

Max current deviation in  
temperature range: 3%

Ramp up / ramp down: 0,1 to 10 sec  
Ramp setting independent from current range

PWM frequency: 100 - 500 Hz

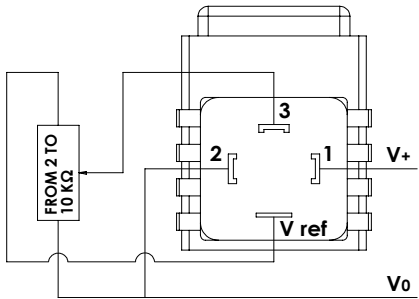
Operating conditions: -20 TO +70°C  
0 to 85% relative humidity

Environmental protection: IP65  
with cover and seals installed

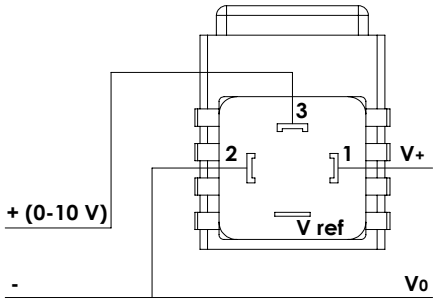
Connector type: DIN 43650 - ISO 4400

**IMPORTANT**  
DO NOT REMOVE controller from  
solenoid when energized to avoid  
the risk of damaging it

CONNECTION EXAMPLE WITH  
JOYSTICK OR POTENTIOMETER



CONNECTION EXAMPLE WITH  
ANALOGIC SIGNAL



SETTING INSTRUCTIONS

- SUPPLY:** led is on when current is supplied
- OFFSET:** to be used to set minimum current value (l/min-gpm), turn clockwise to increase setting
- RAMP UP:** to be used to set the ramp time from minimum (l/min-gpm) to maximum current value (l max-g max)
- RAMP DOWN:** to be used to set the ramp time from maximum (l max-g max) to minimum current value (l/min-gpm)
- FULL LOAD CURRENT:** to be used to set maximum current value (l max-g max), turn clockwise to increase setting
- FREQ. ADJ.:** this trimmer is inside the controller and is preset by factory, to be used to modify the PWM frequency

ORDERING CODES

Quick code	Description	
EL000001	Proportional controller ELPC-030-SCCB	

For other configurations/quick codes not available in this catalogue page please consult factory