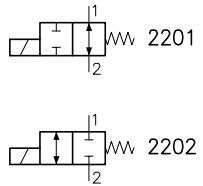
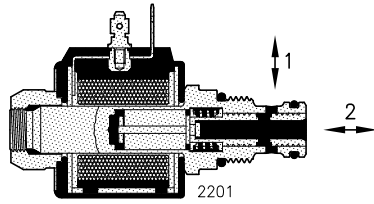
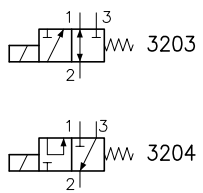
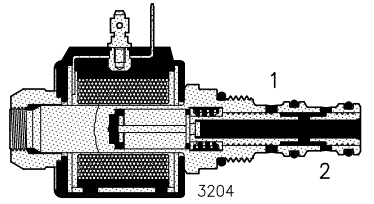
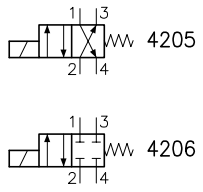
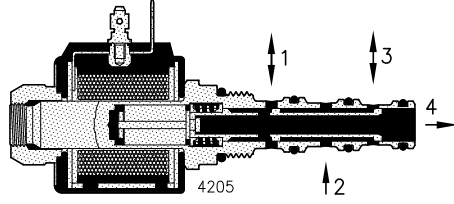
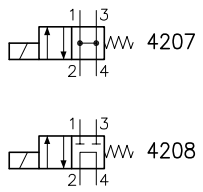
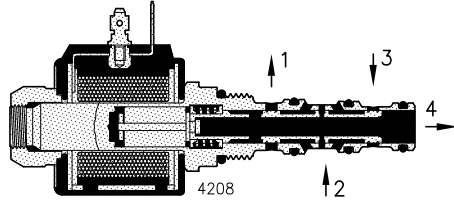


Single solenoid valves.

They are simple solenoid valves with two, three and four way, manufactured in sizes 20, 30 and 50 and in several circuits, are used in compact applications settled in manifolds.

The solenoid ETD series utilize power coils and are suitable for working till 315 bar.

The duty current coils (12-24 Volt) can be directly fed; otherwise for alternate current coils (24-110-220 Volt 50/60 Hz) a connector with rectifier bridge is required, which can be supplied on request.

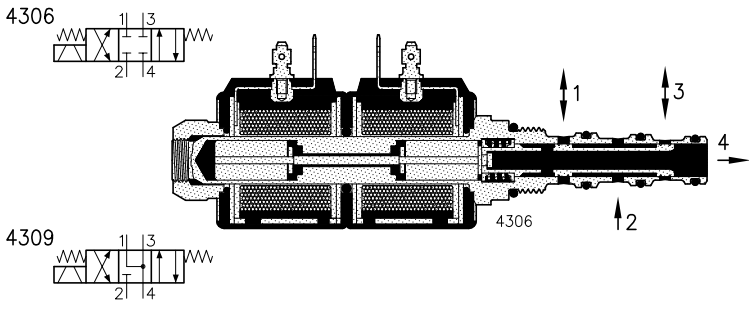
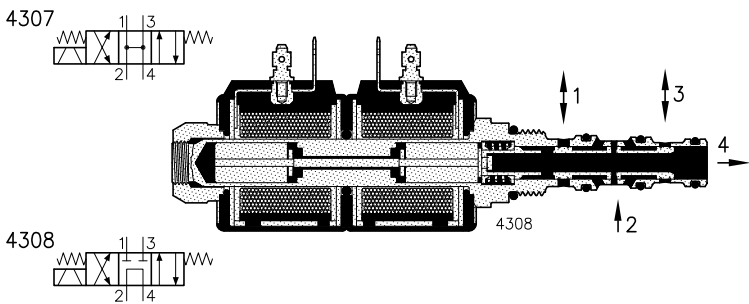
Main features	Type	Q max. (l/min.)	P max. (bar)	Technical schedule
ETD../22.. series – two-ways type. Normally open or closed, have better performances with flow from 1 to 2, in the opposite direction it's necessary to limit flow.  	ETD 20/2201	15	210	09.010
	ETD 30/2201	30	315	09.020
	ETD 50/2201	60	315	09.030
	ETD 20/2202	15	210	09.010
	ETD 30/2202	30	315	09.020
	ETD 50/2202	60	315	09.030
ETD../32.. series – three-way type. Manufactured with two different circuits in order to obtain highest performances. With flow direction opposit to symbols it's necessary to limit flow and max. pressure.  	ETD 20/3203	15	210	09.040
	ETD 30/3203	30	315	09.050
	ETD 50/3203	60	315	09.060
	ETD 20/3204	15	210	09.040
	ETD 30/3204	30	315	09.050
	ETD 50/3204	60	315	09.060
ETD../42.. series – four-way type centre closed.  	ETD 20/4205	15	315	09.070
	ETD 30/4205	30	315	09.080
	ETD 50/4205	60	315	09.090
	ETD 20/4206	15	315	09.070
	ETD 30/4206	30	315	09.080
	ETD 50/4206	60	315	09.090
ETD../42.. series – four-way type centre open.  	ETD 20/4207	12	315	09.100
	ETD 30/4207	25	315	09.110
	ETD 50/4207	45	315	09.120
	ETD 20/4208	12	315	09.100
	ETD 30/4208	25	315	09.110
	ETD 50/4208	45	315	09.120

Duble solenoid valves.

They are duple solenoid valves with four-way and three-positions, manufactured in sizes 20, 30 and 50 and in several circuits; are used in pilot systems and compact applications settled in manifolds.

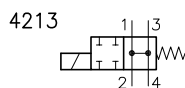
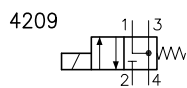
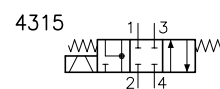
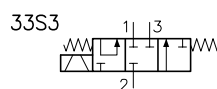
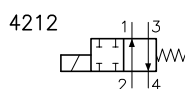
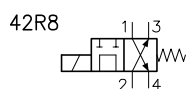
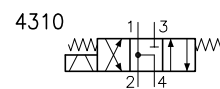
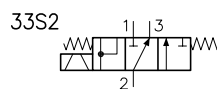
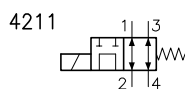
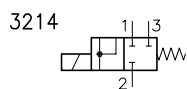
The solenoid ETD series utilize power coils and are suitable for working till 315 bar.

The duty current coils (12-24-27 Volt) can be directly fed; otherwise for alternate current coils (24-110-220 Volt 50/60 Hz) a connector with rectifier bridge is required, which can be supplied on request.

Main features	Type	Q max. (l/min.)	P max. (bar)	Technical schedule
ETD../43.. series – four-way type centre closed. 	ETD 20/4306	15	315	09.130
	ETD 30/4306	30	315	09.140
	ETD 50/4306	60	315	09.150
	ETD 20/4309	15	315	09.130
	ETD 30/4309	30	315	09.140
	ETD 50/4309	60	315	09.150
ETD../43.. series – four-way type centre open. 	ETD 20/4307	12	315	09.160
	ETD 30/4307	25	315	09.170
	ETD 50/4307	45	315	09.180
	ETD 20/4308	12	315	09.160
	ETD 30/4308	25	315	09.170
	ETD 50/4308	45	315	09.180

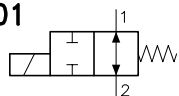
Special circuits supplied on request.

On Customers request and for large quantity, solenoid valves with not standard circuits can be supplied. The circuits under mentioned are models already manufactured.

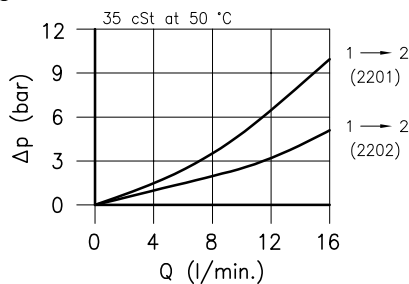
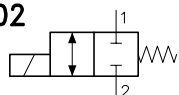


Technical features

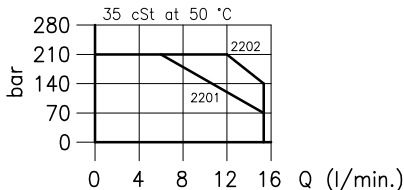
01



02



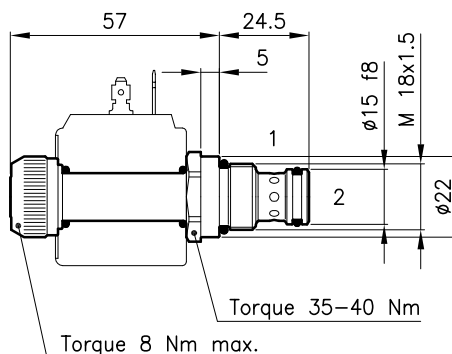
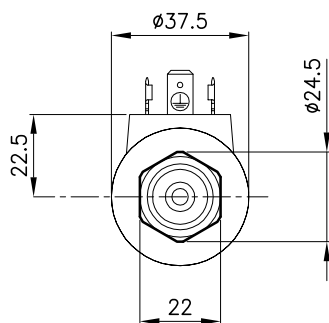
Use limits



With flow from 2 to 1
limit the flow of 30%

Cavity	(For dimensions see catalogue 17.000)	S 20/2
Max. flow	(With flow from 1 to 2) (l/min.)	15
Max. pressure	(bar)	210
Max. leakage	(cm ³ /min.)	20
Response time	(ms)	20 - 40
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.120
Hydraulic flow; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolute)		
Standard seals in Polyurethane and Buna N		

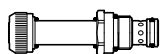
Dimensions



Ordering informations

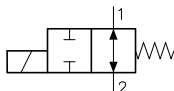
ETD 20/2201

ETD 20/22.. = Valve type

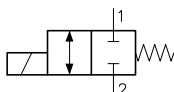


Circuits

2201



2202



Codes:

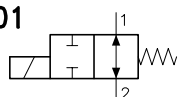
ETD 20/2201	25 011 113
ETD 20/2202	25 011 110
External seals kit	90 620 100

ETD 20/22.. valves can be assembled on standard bodies 20-L0 series; for dimensions see catalogue 16.010

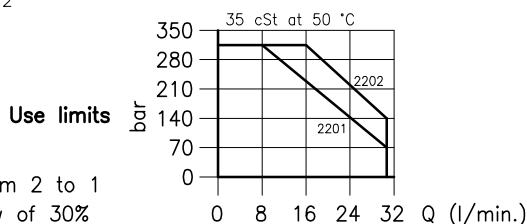
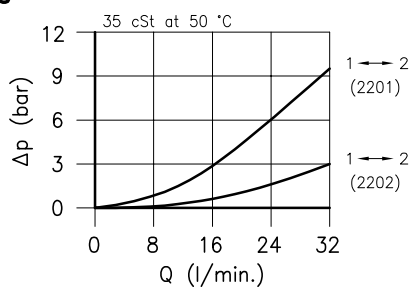
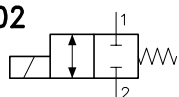
On the ETD 20 valves must be assembled the Coils B20 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features

01



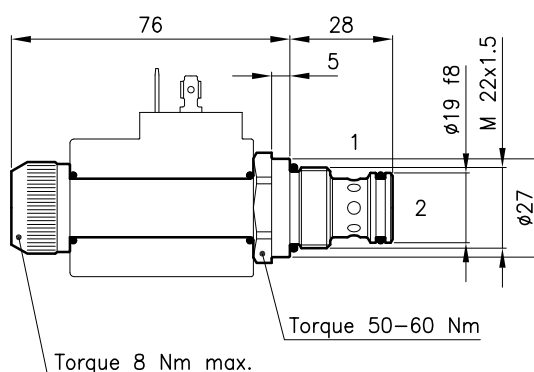
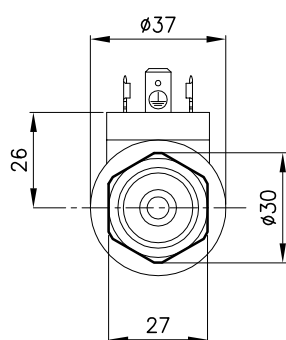
02



With flow from 2 to 1
limit the flow of 30%

Cavity	(For dimensions see catalogue 17.000)	S 30/2
Max. flow	(With flow from 1 to 2) (l/min.)	30
Max. pressure	(bar)	315
Max. leakage	(cm ³ /min.)	25
Response time	(ms)	30 - 60 (Mean value)
It change in function of circuit, pressure, flow and fluid viscosity.		
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.210
Hydraulic fluid; mineral oil HM and HV ISO 6074		
Recommended filtration; 19/15 ISO 4466 (25 μ absolute)		
Standard seals in Polyurethane and Buna N		

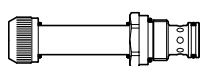
Dimensions



Ordering informations

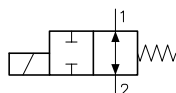
ETD 30/2201

ETD 30/22.. = Valve type

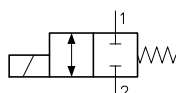


Circuits

2201



2202



Codes:

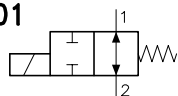
ETD 30/2201	35 011 120
ETD 30/2202	35 011 130
External seals kit	90 620 103

ETD 30/22.. valves can be assembled on standard bodies 30-L0 series; for dimensions see catalogue 16.010

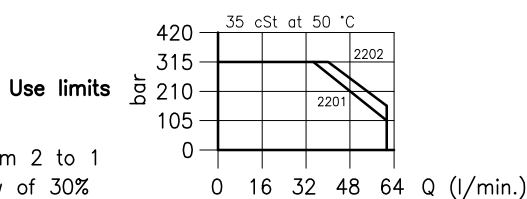
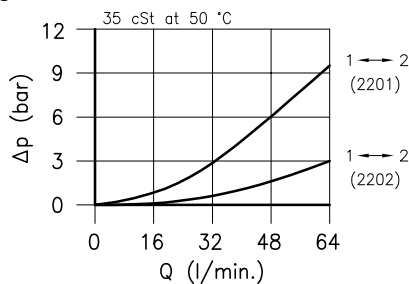
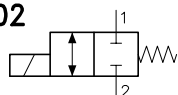
On the ETD 30 valves must be assembled the Coils B30 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features

01



02

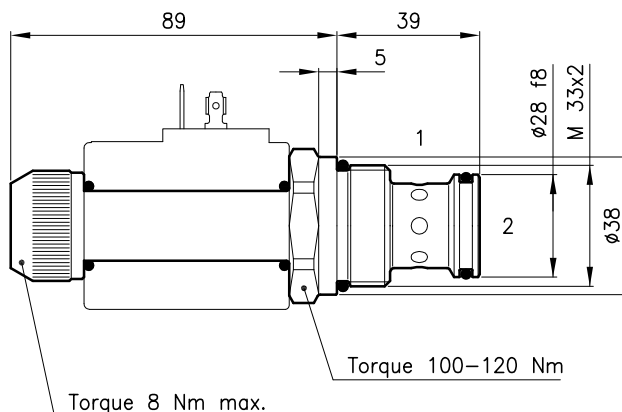
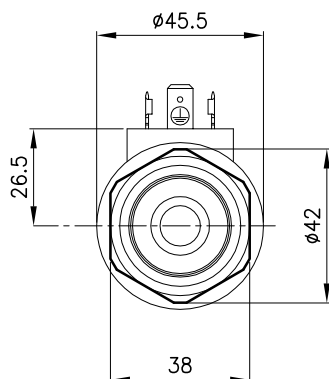


Use limits

With flow from 2 to 1
limit the flow of 30%

Cavity	(For dimensions see catalogue 17.000)	S 50/2
Max. flow	(With flow from 1 to 2) (l/min.)	60
Max. pressure	(bar)	315
Max. leakage	(cm ³ /min.)	40
Response time	(ms)	40 - 80
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.400
Hydraulic fluid; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

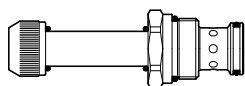
Dimensions



Ordering informations

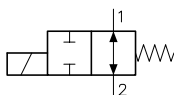
ETD 50/2201

ETD 50/22.. = Valve type

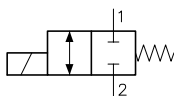


Circuits

2201



2202



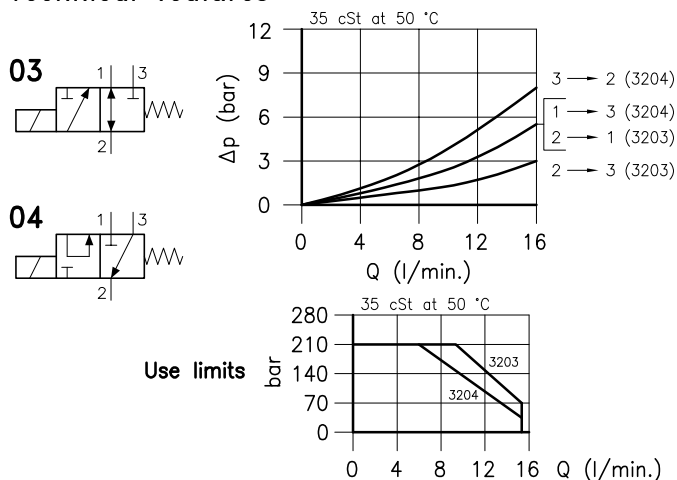
Codes:

ETD 50/2201	55 011 111
ETD 50/2202	55 011 115
External seals kit	90 620 106

ETD 50/22.. valves can be assembled on standard bodies 50-L0 series; for dimensions see catalogue 16.010

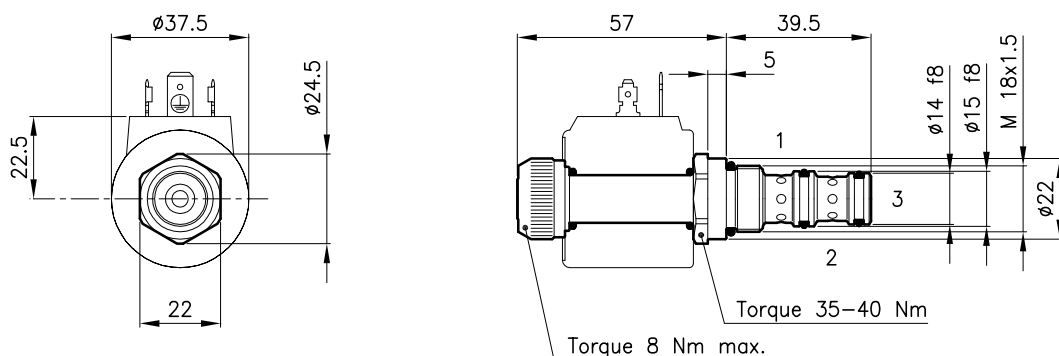
On the ETD 50 valves must be assembled the Coils B50 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity	(For dimensions see catalogue 17.000)	S 20/3
Max. flow	(l/min.)	15
Max. pressure	(bar)	210
Max. leakage	(cm ³ /min.)	20
Response time	(ms)	20 - 40 (Mean value)
It change in function of circuit, pressure, flow and fluid viscosity.		
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.130
Hydraulic fluid; mineral oil HM and HV ISO 6074		
Recommended filtration; 19/15 ISO 4466 (25 μ absolute)		
Standard seals in Polyurethane and Buna N		

Dimensions



Ordering informations

ETD 20/3203

ETD 20/32.. = Valve type



Circuits

3203 =

3204 =

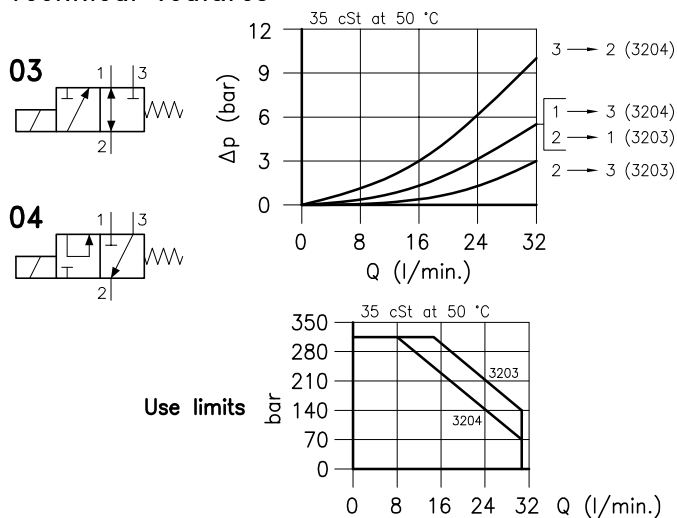
Codes:

ETD 20/3203	25 011 115
ETD 20/3204	25 011 108
External seals kit	90 620 101

ETD 20/32.. valves can be assembled on standard bodies 20-C3 series; for dimensions see catalogue 16.010

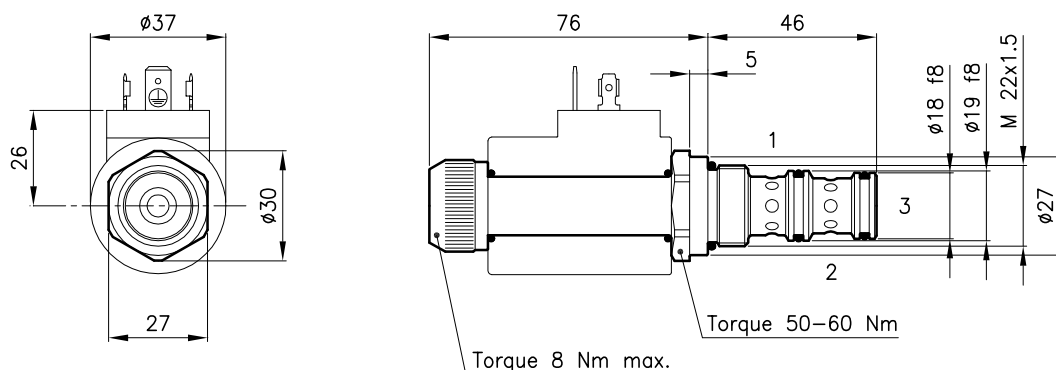
On the ETD 20 valves must be assembled the Coils B20 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity	(For dimensions see catalogue 17.000)	S 30/3
Max. flow	(l/min.)	30
Max. pressure	(bar)	315
Max. leakage	(cm ³ /min.)	25
Response time	(ms)	30 - 60 (Mean value)
It change in function of circuit, pressure, flow and fluid viscosity.		
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.230
Hydraulic fluid; mineral oil HM and HV ISO 6074		
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

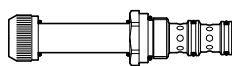
Dimensions



Ordering informations

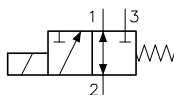
ETD 30/3203

ETD 30/32.. = Valve type

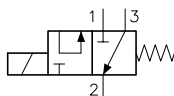


Circuits

3203 =



3204 =



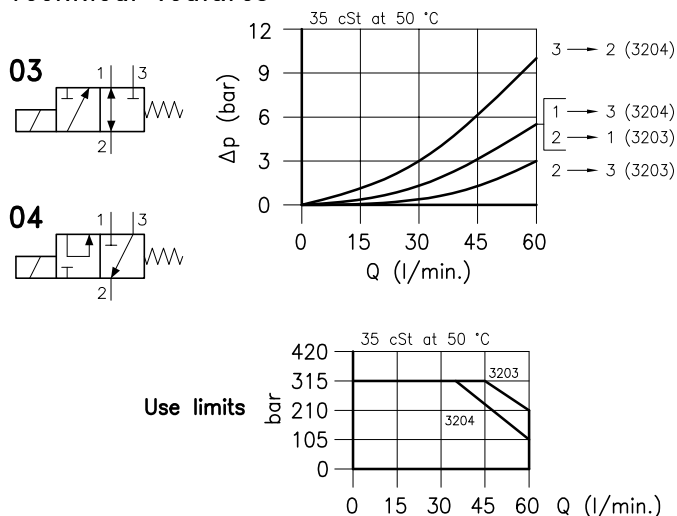
Codes:

ETD 30/3203	35 011 123
ETD 30/3204	35 011 124
External seals kit	90 620 104

ETD 30/32.. valves can be assembled on standard bodies 30-C3 series; for dimensions see catalogue 16.010

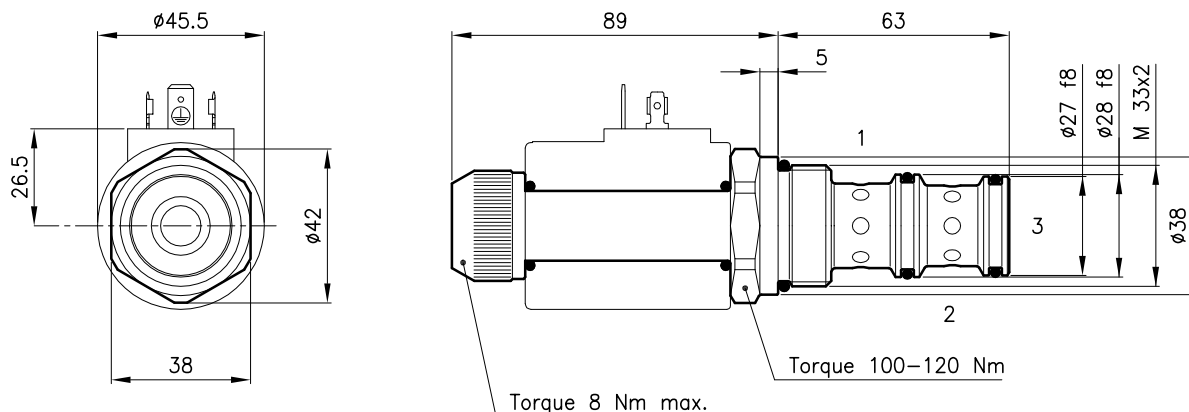
On the ETD 30 valves must be assembled the Coils B30 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity	(For dimensions see catalogue 17.000)	S 50/3
Max. flow	(l/min.)	60
Max. pressure	(bar)	315
Max. leakage	(cm ³ /min.)	40
Response time	(ms)	40 - 80 (Mean value)
It change in function of circuit, pressure, flow and fluid viscosity.		
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.440
Hydraulic fluid; mineral oil HM and HV ISO 6074		
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

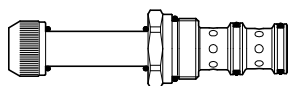
Dimensions



Ordering informations

ETD 50/3203

ETD 50/32.. = Valve type



Circuits

3203 =

3204 =

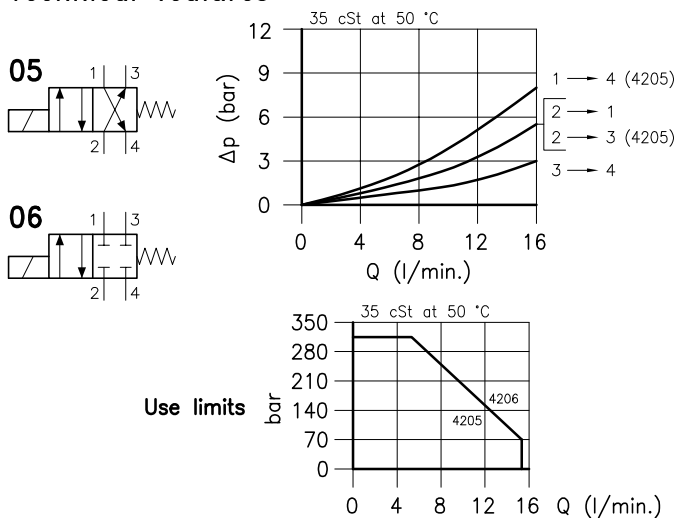
Codes:

ETD 50/3203	55 011 112
ETD 50/3204	55 011 126
External seals kit	90 620 107

ETD 50/32.. valves can be assembled on standard bodies 50-C3 series; for dimensions see catalogue 16.010

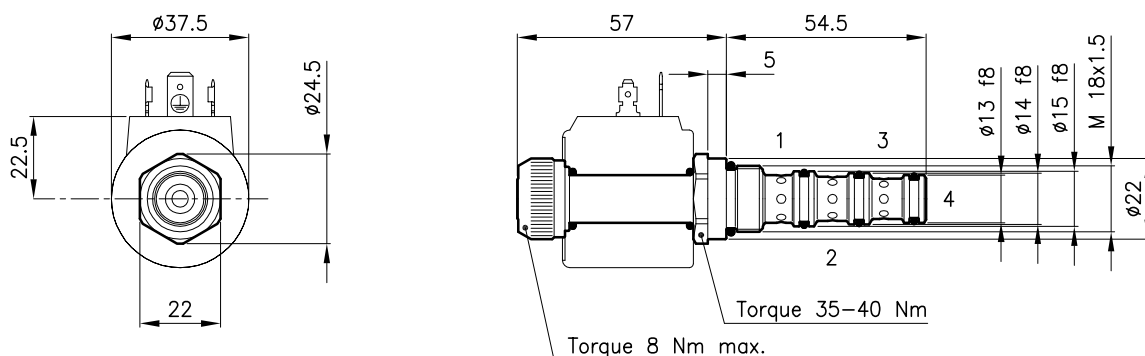
On the ETD 50 valves must be assembled the Coils B50 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity	(For dimensions see catalogue 17.000)	S 20/4
Max. flow	(l/min.)	15
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	210
Max. leakage	(cm ³ /min.)	20
Response time	(ms)	20 - 40 (Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.140
Hydraulic fluid; mineral oil HM and HV ISO 6074		
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

Dimensions



Ordering informations

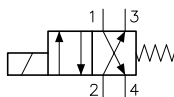
ETD 20/4205

ETD 20/42.. = Valve type
Centre closed

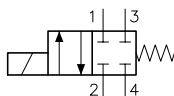


Circuits

4205 =



4206 =



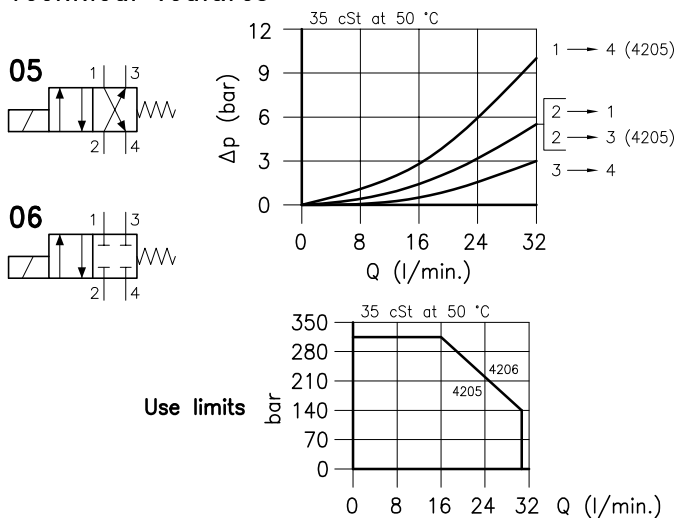
Codes:

ETD 20/4205	25 011 121
ETD 20/4206	25 011 122
External seals kit	90 620 102

ETD 20/42.. valves can be assembled on standard bodies 20-C4 series; for dimensions see catalogue 16.011

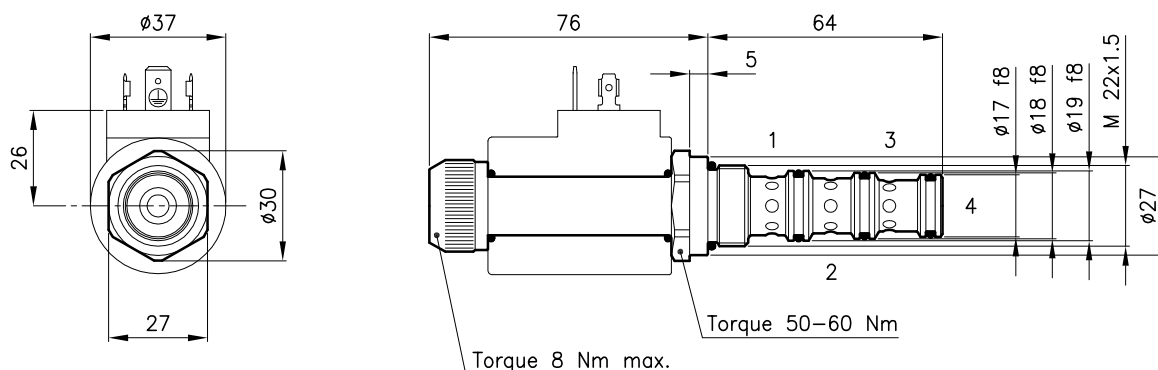
On the ETD 20 valves must be assembled the Coils B20 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity	(For dimensions see catalogue 17.000)	S 30/4
Max. flow	(l/min.)	30
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	210
Max. leakage	(cm ³ /min.)	25
Response time	(ms)	30 - 60
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.250
Hydraulic fluid; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

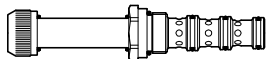
Dimensions



Ordering informations

ETD 30/4205

ETD 30/42.. = Valve type
Centre closed



Circuits

4205 =

4206 =

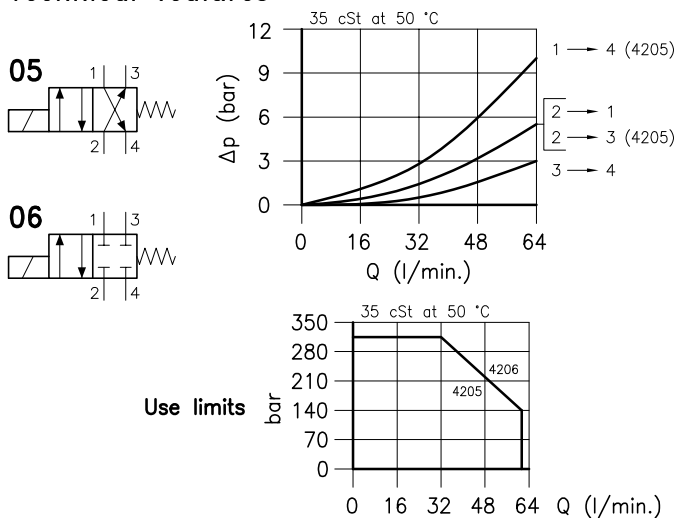
Codes:

ETD 30/4205	35 011 125
ETD 30/4206	35 011 152
External seals kit	90 620 105

ETD 30/42.. valves can be assembled on standard bodies 30-C4 series; for dimensions see catalogue 16.011

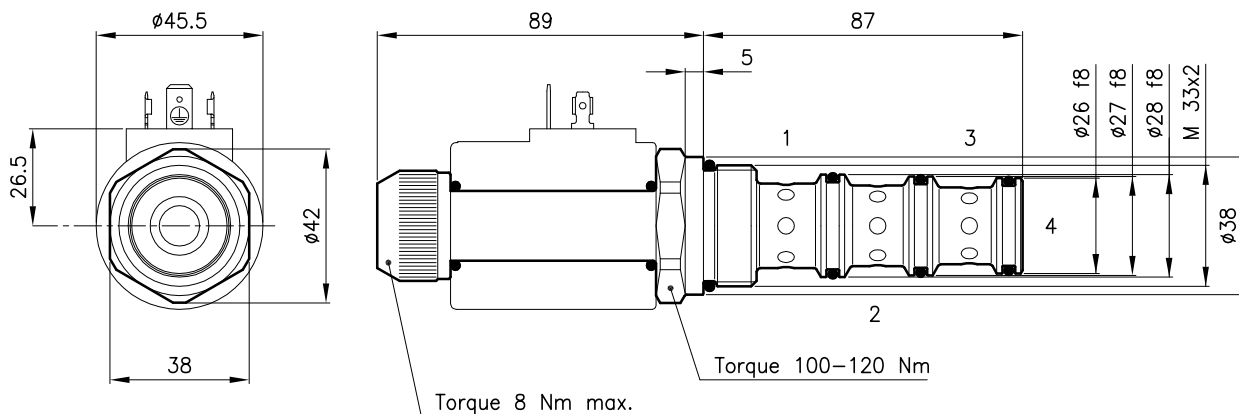
On the ETD 30 valves must be assembled the Coils B30 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity	(For dimensions see catalogue 17.000)	S 50/4
Max. flow	(l/min.)	60
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	210
Max. leakage	(cm ³ /min.)	40
Response time	(ms)	40 - 80
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.480
Hydraulic fluid; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

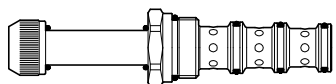
Dimensions



Ordering informations

ETD 50/4205

ETD 50/42.. = Valve type
Centre closed



Circuits

4205 =

4206 =

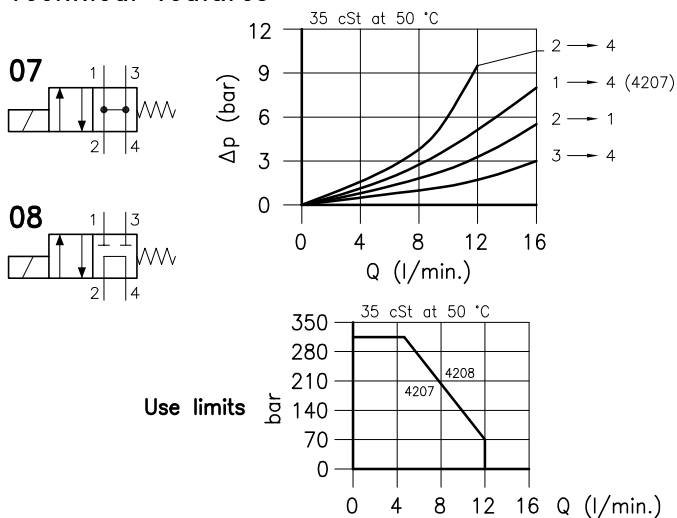
Codes:

ETD 50/4205	55 011 118
ETD 50/4206	55 011 123
External seals kit	90 620 108

ETD 50/42.. valves can be assembled on standard bodies 50-C4 series; for dimensions see catalogue 16.011

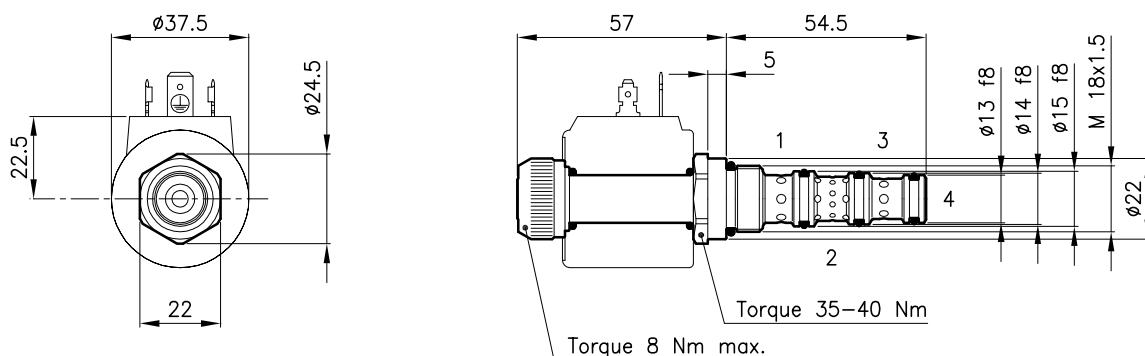
On the ETD 50 valves must be assembled the Coils B50 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity	(For dimensions see catalogue 17.000)	S 20/4
Max. flow	(l/min.)	12
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	210
Max. leakage	(cm ³ /min.)	20
Response time	(ms)	20 - 40
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.140
Hydraulic fluid; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

Dimensions



Ordering informations

ETD 20/4207

ETD 20/42.. = Valve type

Centre open



Circuits

4207 =

4208 =

Codes:

ETD 20/4207 25 011 123

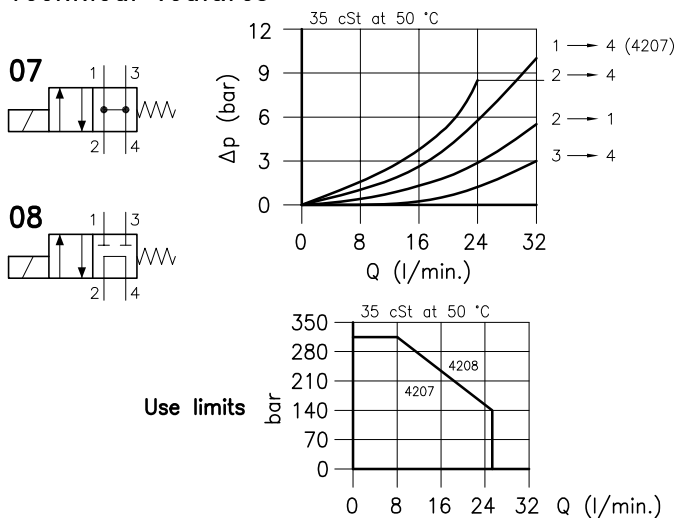
ETD 20/4208 25 011 124

External seals kit 90 620 102

ETD 20/42.. valves can be assembled on standard bodies 20-C4 serie; for dimensions see catalogue 16.011

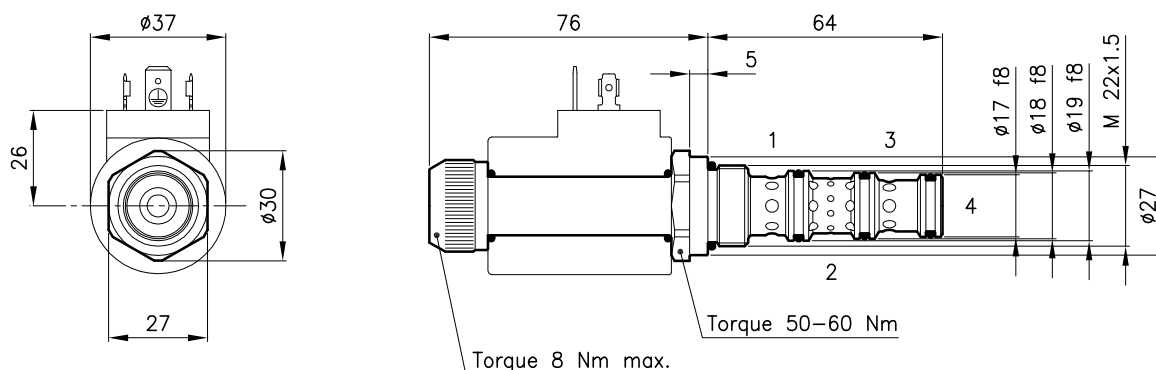
On the ETD 20 valves must be assembled the Coils B20 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity	(For dimensions see catalogue 17.000)	S 30/4
Max. flow	(l/min.)	25
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	210
Max. leakage	(cm ³ /min.)	25
Response time	(ms)	30 - 60
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.250
Hydraulic fluid; mineral oil HM and HV ISO 6074		
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

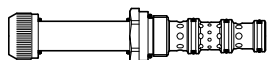
Dimensions



Ordering informations

ETD 30/4207

ETD 30/42.. = Valve type
Centre open



Circuits

4207 =

4208 =

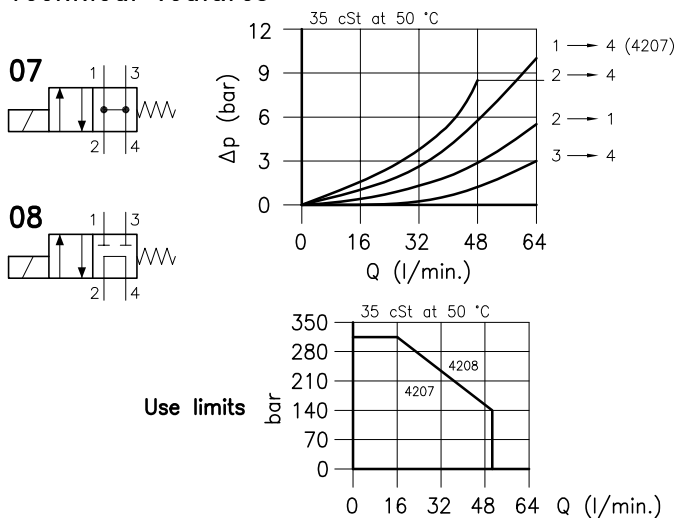
Codes:

ETD 30/4207	35 011 118
ETD 30/4208	35 011 133
External seals kit	90 620 105

ETD 30/42.. valves can be assembled on standard bodies 30-C4 series; for dimensions see catalogue 16.011

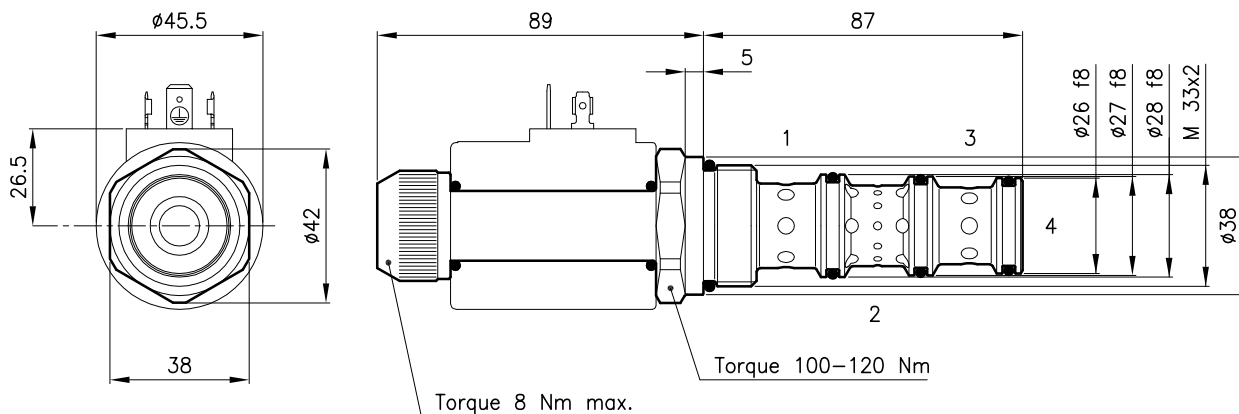
On the ETD 30 valves must be assembled the Coils B30 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity (For dimensions see catalogue 17.000)	S 50/4
Max. flow (l/min.)	45
Max. pressure way 1-2-3 (bar)	315
Max. pressure way 4 (bar)	210
Max. leakage (cm ³ /min.)	40
Response time (ms) It change in function of circuit, pressure, flow and fluid viscosity.	40 - 80 (Mean value)
Fluid viscosity range (cSt)	2.8 - 380
Fluid temperature range (°C)	-20 +80
Mass (kg)	0.480
Hydraulic fluid; mineral oil HM and HV ISO 6074	
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)	
Standard seals in Polyurethane and Buna N	

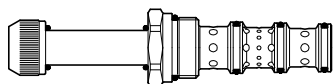
Dimensions



Ordering informations

ETD 50/4207

ETD 50/42.. = Valve type
Centre open



Circuits

4207 =

4208 =

Codes:

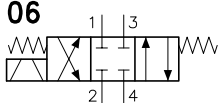
ETD 50/4207	55 011 124
ETD 50/4208	55 011 125
External seals kit	90 620 108

ETD 50/42.. valves can be assembled on standard bodies 50-C4 series; for dimensions see catalogue 16.011

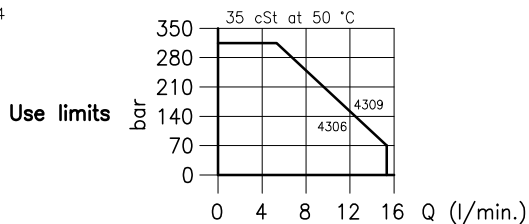
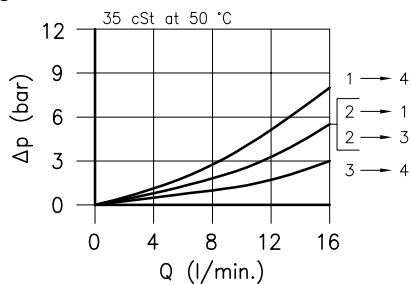
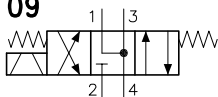
On the ETD 50 valves must be assembled the Coils B50 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features

06

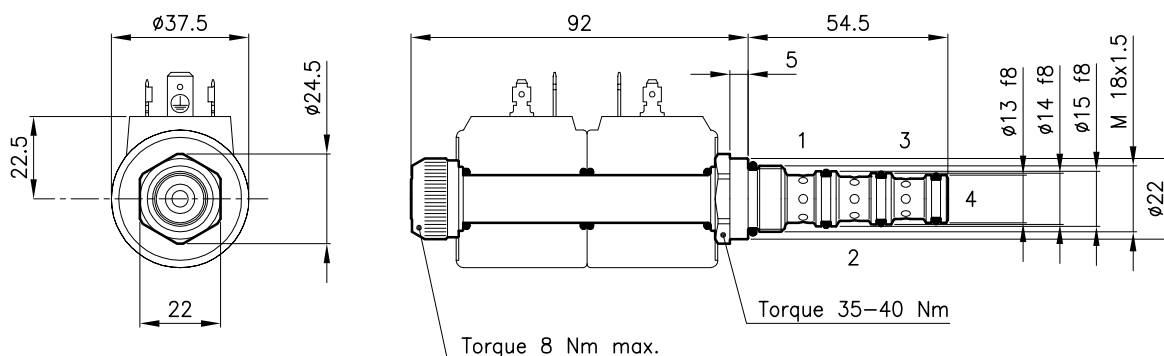


09



Cavity	(For dimensions see catalogue 17.000)	S 20/4
Max. flow	(l/min.)	15
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	50
Max. leakage	(cm ³ /min.)	20
Response time	(ms)	20 - 40
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.170
Hydraulic fluid; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

Dimensions



Ordering informations

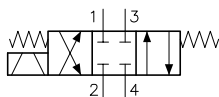
ETD 20/4306

ETD 20/43.. = Valve type
Centre closed

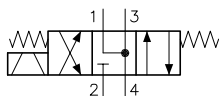


Circuits

4306 =



4309 =



Codes:

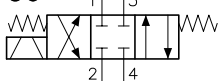
ETD 20/4306	25 011 125
ETD 20/4309	25 011 126
External seals kit	90 620 102

ETD 20/43.. valves can be assembled on standard bodies 20-C4 series; for dimensions see catalogue 16.011

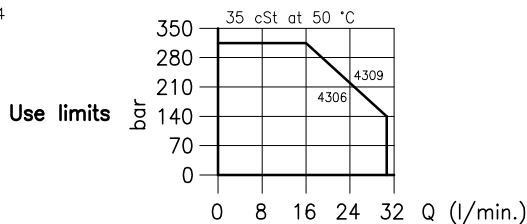
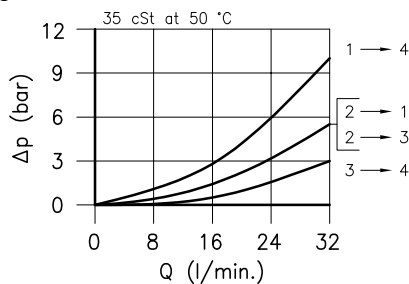
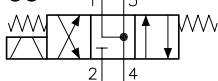
On the ETD 20 valves must be assembled the Coils B20 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features

06

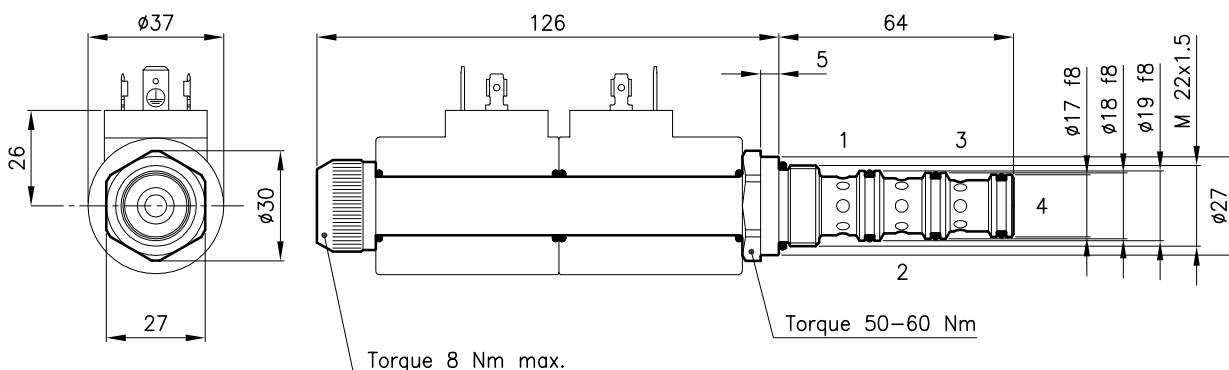


09



Cavity	(For dimensions see catalogue 17.000)	S 30/4
Max. flow	(l/min.)	30
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	210
Max. leakage	(cm ³ /min.)	25
Response time	(ms)	30 - 60
It change in function of circuits, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.310
Hydraulic fluid; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

Dimensions

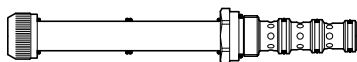


Ordering informations

ETD 30/4306

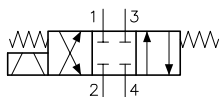
ETD 30/43.. = Valve type

Centre closed

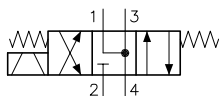


Circuits

4306 =



4309 =



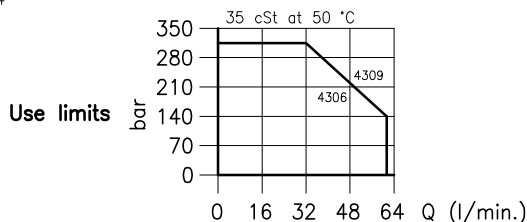
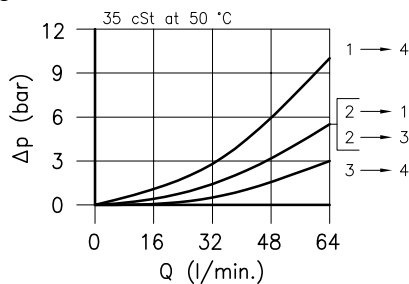
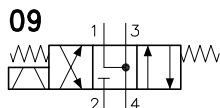
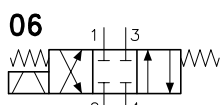
Codes:

ETD 30/4306	35 011 149
ETD 30/4309	35 011 113
External seals kit	90 620 105

ETD 30/43.. valves can be assembled on standard bodies 30-C4 series; for dimensions see catalogue 16.011

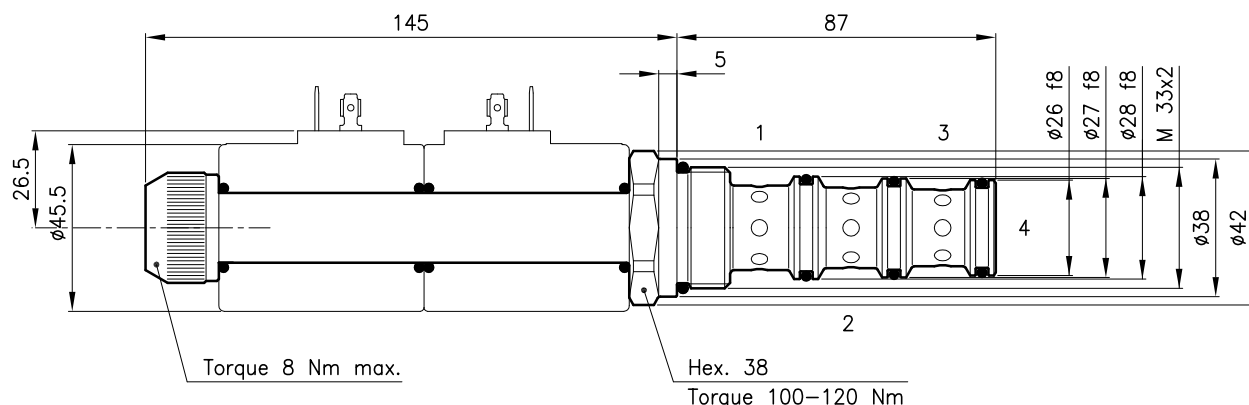
On the ETD 30 valves must be assembled the Coils B30 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity	(For dimensions see catalogue 17.000)	S 50/4
Max. flow	(l/min.)	60
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	210
Max. leakage	(cm ³ /min.)	40
Response time	(ms)	40 - 80
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.580
Hydraulic fluid; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

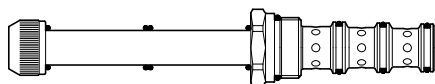
Dimensions



Ordering informations

ETD 50/4306

ETD 50/43.. = Valve type
Centre closed



Circuits

4306 =

4309 =

Codes:

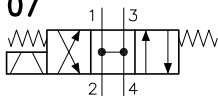
ETD 50/4306	55 011 127
ETD 50/4309	55 011 128
External seals kit	90 620 108

ETD 50/43.. valves can be assembled on standard bodies 50-C4 series; for dimensions see catalogue 16.011

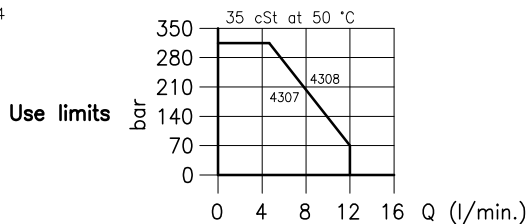
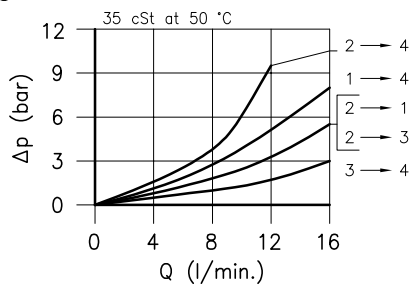
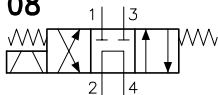
On the ETD 50 valves must be assembled the Coils B50 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features

07

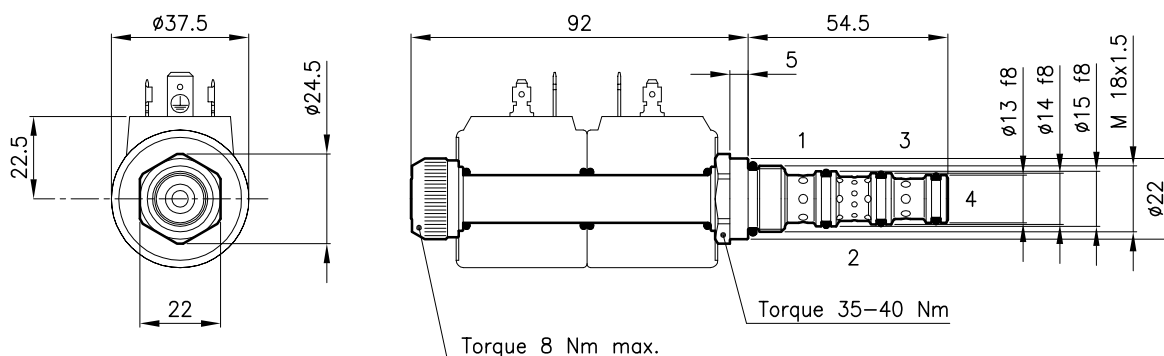


08



Cavity	(For dimensions see catalogue 17.000)	S 20/4
Max. flow	(l/min.)	12
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	50
Max. leakage	(cm ³ /min.)	20
Response time	(ms)	20 - 40
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.170
Hydraulic fluid; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

Dimensions



Ordering informations

ETD 20/4307

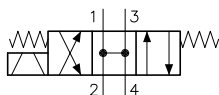
ETD 20/43.. = Valve type

Centre open

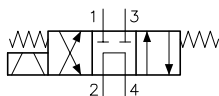


Circuits

4307 =



4308 =



Codes:

ETD 20/4307 25 011 127

ETD 20/4308 25 011 128

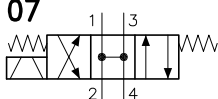
External seals kit 90 620 102

ETD 20/43.. valves can be assembled on standard bodies 20-C4 serie; for dimensions see catalogue 16.011

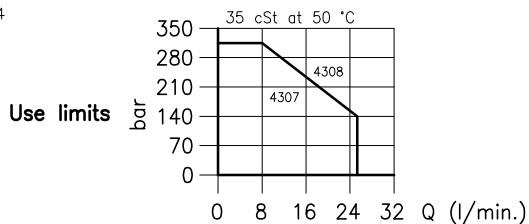
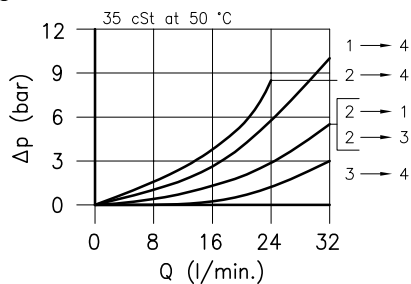
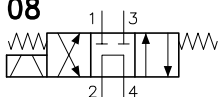
On the ETD 20 valves must be assembled the Coils B20 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features

07



08

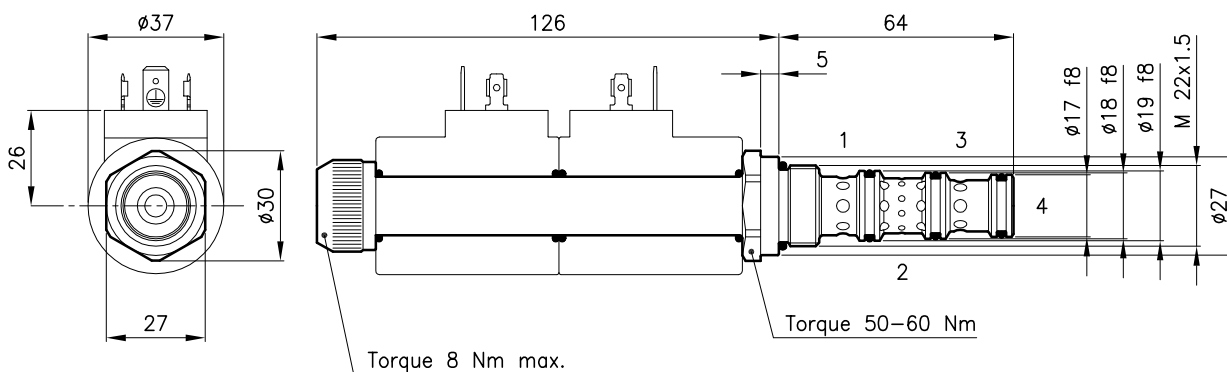


Use limits

bar

Cavity	(For dimensions see catalogue 17.000)	S 30/4
Max. flow	(l/min.)	25
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	210
Max. leakage	(cm ³ /min.)	25
Response time	(ms)	30 - 60
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.310
Hydraulic fluid; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

Dimensions

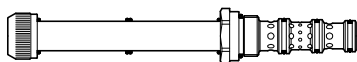


Ordering informations

ETD 30/4307

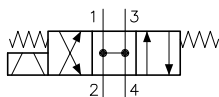
ETD 30/43.. = Valve type

Centre open

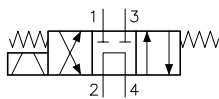


Circuits

4307 =



4308 =



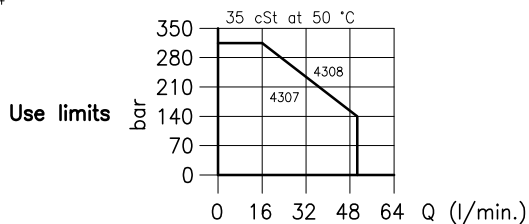
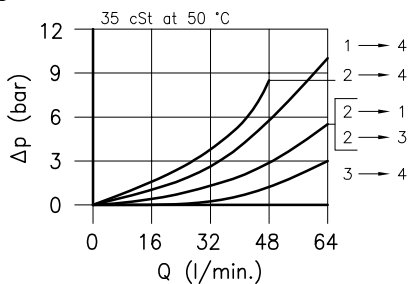
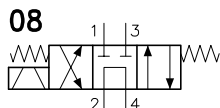
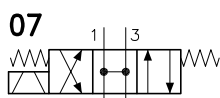
Codes:

ETD 30/4307	35 011 132
ETD 30/4308	35 011 119
External seals kit	90 620 105

ETD 30/43.. valves can be assembled on standard bodies 30-C4 series; for dimensions see catalogue 16.011

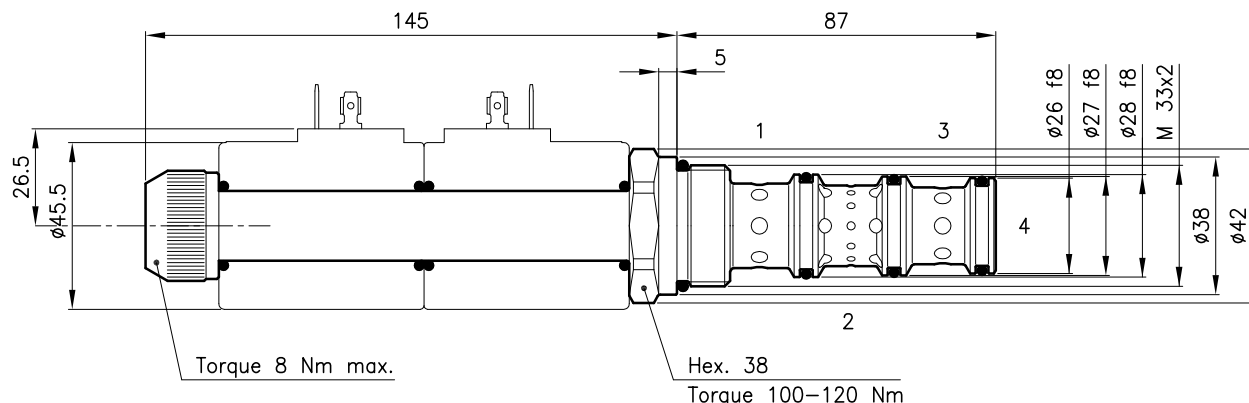
On the ETD 30 valves must be assembled the Coils B30 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

Technical features



Cavity	(For dimensions see catalogue 17.000)	S 50/4
Max. flow	(l/min.)	45
Max. pressure way 1-2-3	(bar)	315
Max. pressure way 4	(bar)	210
Max. leakage	(cm ³ /min.)	40
Response time	(ms)	40 - 80
It change in function of circuit, pressure, flow and fluid viscosity.		(Mean value)
Fluid viscosity range	(cSt)	2.8 - 380
Fluid temperature range	(°C)	-20 +80
Mass	(kg)	0.580
Hydraulic fluid; mineral oil HM and HV		ISO 6074
Recommended filtration; 19/15 ISO 4466 (25 μ absolutes)		
Standard seals in Polyurethane and Buna N		

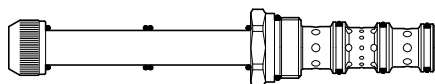
Dimensions



Ordering informations

ETD 50/4307

ETD 50/43.. = Valve type
Centre open



Circuits

4307 =

4308 =

Codes:

ETD 50/4307	55 011 129
ETD 50/4308	55 011 110
External seals kit	90 620 108

ETD 50/43.. valves can be assembled on standard bodies 50-C4 series; for dimensions see catalogue 16.011

On the ETD 50 valves must be assembled the Coils B50 series; for dimensions, features and codes see catalogues 09.900 and 09.901.

This Coils series, with connection DIN 43650, include all standard versions normally available.

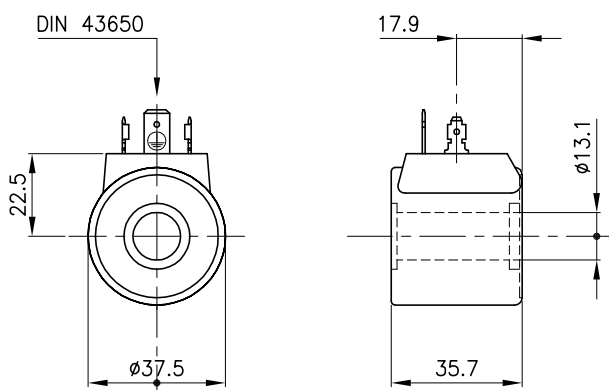
Protection Class (with connector assembled) IP 65 DIN 40050

Encapsulation with nylon 6 and fiberglass

Insulation Coil Class F – VDE 0580

Insulation Copper wire Class H – VDE 0580

Coils **B20** Series (DIN 43650)



Power 18 Watt

Voltage range $\pm 10\%$

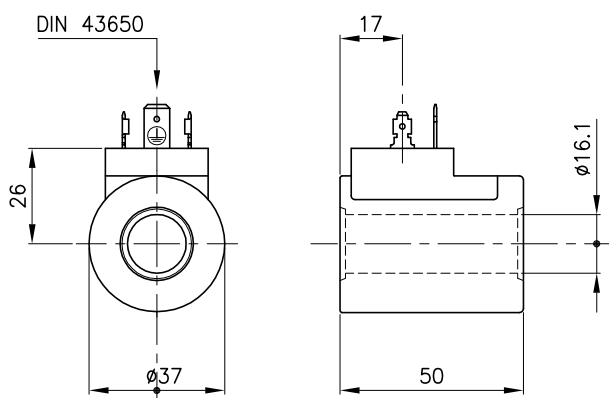
Duty cycle ED 100%

* (1) Nominal current

* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1) Ampere	* (2) Ohm
B20-12C-18H	25 125 101	12	1.50	8
B20-24C-18H	25 125 102	24	0.75	32
B20-27C-18H	25 125 110	27	0.66	40.5
B20-24A-18H	25 125 103	19.4	0.93	20.9
B20-110A-18H	25 125 104	96	0.19	512
B20-220A-18H	25 125 105	194	0.09	2090

Coils **B30** Series (DIN 43650)



Power 28.5 Watt

Voltage range $\pm 10\%$

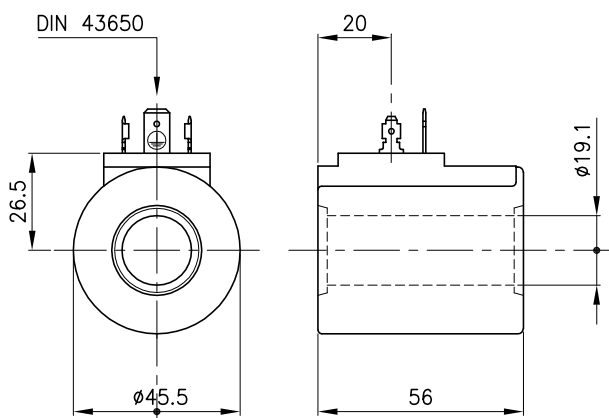
Duty cycle ED 100%

* (1) Nominal current

* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1) Ampere	* (2) Ohm
B30-12C-28H	35 125 101	12	2.37	5.05
B30-24C-28H	35 125 102	24	1.19	20.2
B30-27C-28H	35 125 109	27	1.05	25.6
B30-24A-28H	35 125 103	19.4	1.46	13.2
B30-110A-28H	35 125 104	96	0.30	323
B30-220A-28H	35 125 105	194	0.15	1320

Coils **B50** Series (DIN 43650)



Power 33 Watt

Voltage range $\pm 10\%$

Duty cycle ED 100%

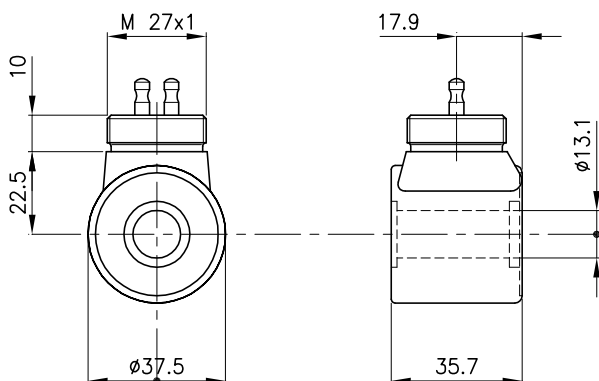
* (1) Nominal current

* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1) Ampere	* (2) Ohm
B50-12C-33H	55 125 101	12	2.75	4.36
B50-24C-33H	55 125 102	24	1.38	17.45
B50-27C-33H	55 125 110	27	1.22	22.13
B50-24A-33H	55 125 103	19.4	1.70	11.40
B50-110A-33H	55 125 104	96	0.34	279.27
B50-220A-33H	55 125 105	194	0.17	1140.5

This Coils series, with connection KOSTAL M 27x1, include all standard version normally available.
Protection Class (with connector assembled) IP 67 DIN 40050 Encapsulation with nylon 6 and fiberglass
Insulation Coil Class F – VDE 0580 Insulation Copper wire Class H – VDE 0580

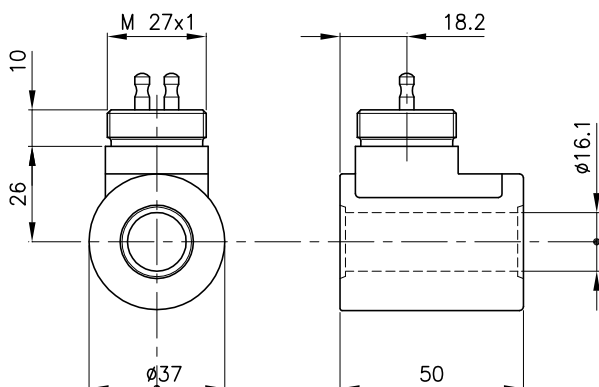
Coils **B20** Series (KOSTAL)



Power 18 Watt
Voltage range $\pm 10\%$
Duty cycle ED 100%
* (1) Nominal current
* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1) * (2)	
			Ampere	Ohm
B20-12C-18K	25 125 106	12	1.50	8
B20-24C-18K	25 125 107	24	0.75	32

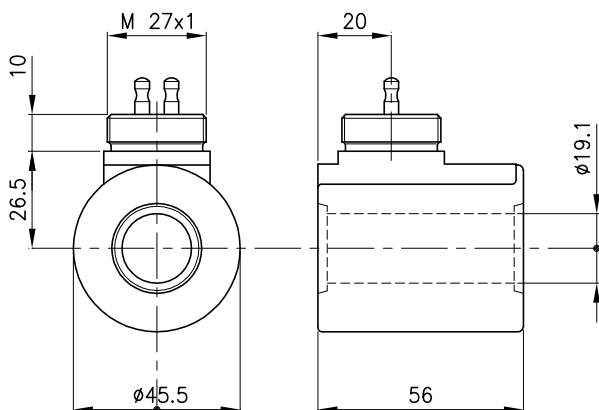
Coils **B30** Series (KOSTAL)



Power 28.5 Watt
Voltage range $\pm 10\%$
Duty cycle ED 100%
* (1) Nominal current
* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1) * (2)	
			Ampere	Ohm
B30-12C-28K	35 125 106	12	2.37	5.05
B30-24C-28K	35 125 107	24	1.19	20.2

Coils **B50** Series (KOSTAL)

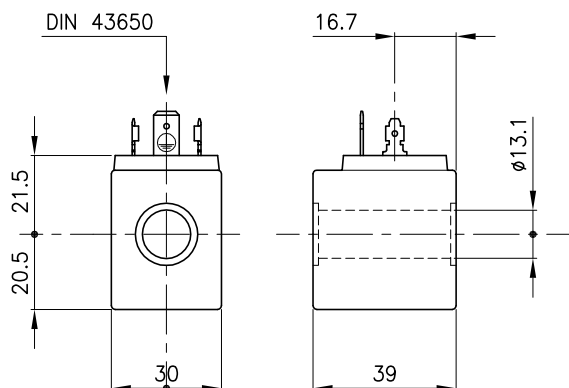


Power 33 Watt
Voltage range $\pm 10\%$
Duty cycle ED 100%
* (1) Nominal current
* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1) * (2)	
			Ampere	Ohm
B50-12C-33K	55 125 106	12	2.75	4.36
B50-24C-33K	55 125 107	24	1.38	17.45

This Coils series include connection DIN 43650 – KOSTAL M 24x4 – AMP JUNIOR
Protection Class (with connector assembled) IP 65 DIN 40050 Encapsulation with nylon 6 and fiberglass
Insulation Coil Class F – VDE 0580 Insulation Copper wire Class H – VDE 0580

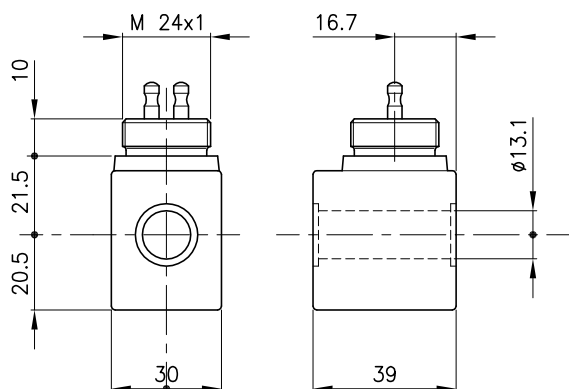
Coils **B28** Series (DIN 43650)



Power 18 Watt
Voltage range $\pm 10\%$
Duty cycle ED 100%
* (1) Nominal current
* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1)	* (2)
			Ampere	Ohm
B28-12C-18H	25 125 112	12	1.50	8
B28-24C-18H	25 125 113	24	0.75	32
B28-24A-18H	25 125 114	19.4	0.93	20.9
B28-110A-18H	25 125 115	96	0.19	512
B28-220A-18H	25 125 116	194	0.09	2090

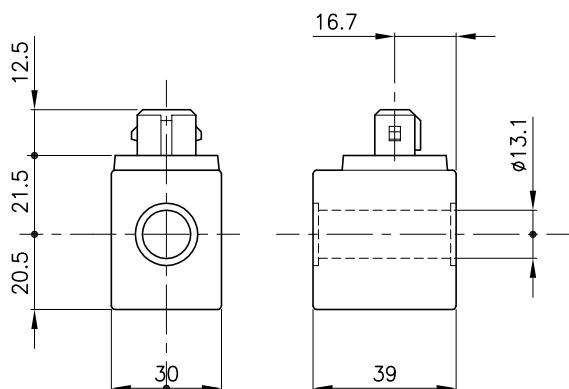
Coils **B28** Series (KOSTAL)



Power 18 Watt
Voltage range $\pm 10\%$
Duty cycle ED 100%
* (1) Nominal current
* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1)	* (2)
			Ampere	Ohm
B28-12C-18K	25 125 118	12	1.50	8
B28-24C-18K	25 125 119	24	0.75	32

Coils **B28** Series (AMP JUNIOR)



Power 18 Watt
Voltage range $\pm 10\%$
Duty cycle ED 100%
* (1) Nominal current
* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1)	* (2)
			Ampere	Ohm
B28-12C-18J	25 125 124	12	1.50	8
B28-24C-18J	25 125 125	24	0.75	32

Coils series with connection AMP JUNIOR

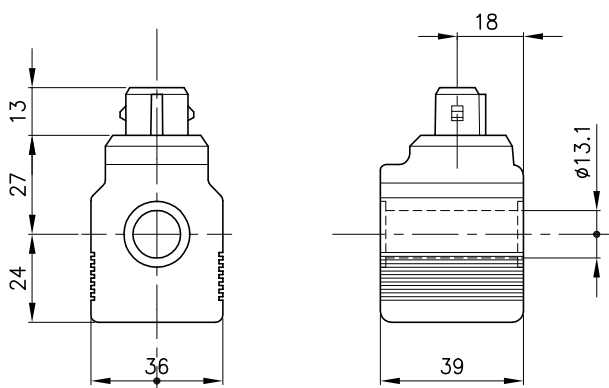
Protection Class (with connector assembled) IP 65 DIN 40050

Encapsulation with nylon 6 and fiberglass

Insulation Coil Class F – VDE 0580

Insulation Copper wire Class H – VDE 0580

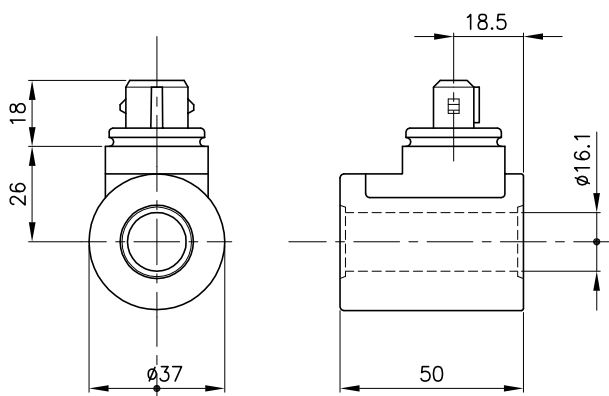
Coils **B20** Series (AMP JUNIOR)



Power 22 Watt
Voltage range $\pm 10\%$
Duty cycle ED 100%
* (1) Nominal current
* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1) * (2)	
			Ampere	Ohm
B20-12C-22J	25 125 127	12	1.83	6.5
B20-24C-22J	25 125 128	24	0.92	26.1

Coils **B30** Series (AMP JUNIOR)



Power 28.5 Watt
Voltage range $\pm 10\%$
Duty cycle ED 100%
* (1) Nominal current
* (2) Resistance 20°C $\pm 5\%$

Type	Code	Volt	* (1) * (2)	
			Ampere	Ohm
B30-12C-28J	35 125 118	12	2.37	5.05
B30-24C-28J	35 125 119	24	1.19	20.2
B30-27C-28J	35 125 120	27	1.05	25.6

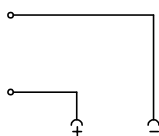
Technical features

Standard connectors HA type are used for connection off all DC coils.

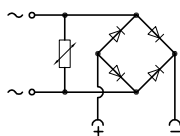
The HR version must be used when coils work in AC at 50 or 60 Hz, this version include a bridge rectifier composed of four diodes and one protection varistor.

The outlet rectified voltage are reduced by 10%; this connector type must be combined with coils A type predisposed for this voltage drop.

HA Type



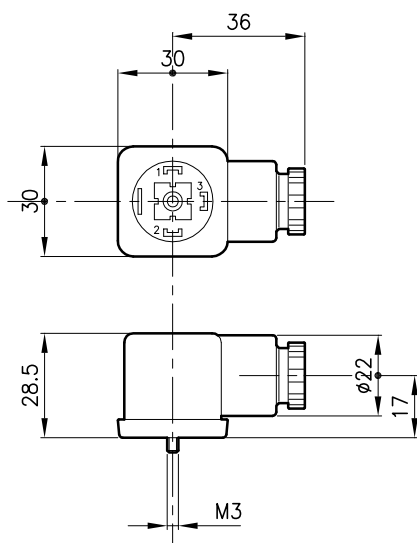
HR Type



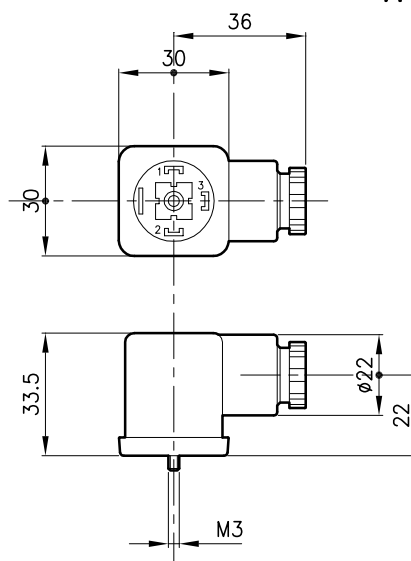
Nominal voltage	Volt	250
Poles number		2 + $\perp$
Protection		Nylon glass
Contacts seat		Nylon glass
Contacts nominal current	Ampere	10
Contacts max. current	Ampere	16
Contacts resistance	mOhm	4
Cables max. section	mm ²	1.5
Terminal cable		PG9
Cable diameter	mm	6 – 8
Protection class DIN 40050		IP 65
Insulation class VDE 0110		C group
Profiled seal in nitrile		

Dimensions

HA Type



HR Type



Ordering informations

Type

HA = Standard

HR = With rectifier

Color

A = Grey

B = Black

HA-B

Codes:

HA-A 90 538 100

HA-B 90 538 102

HR-A 90 538 101

HR-B 90 538 103

NOTE: Black connectors are preferable.

The emergency override system specifications are conceived to be used by way of exceptions and momentary; a continuous and lasting working is not allowed.

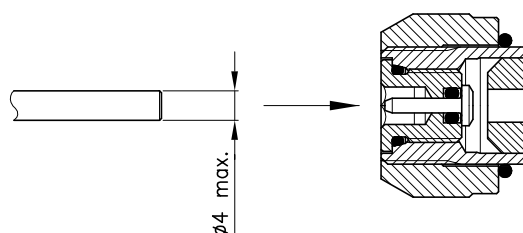
The emergency MO type, PS type and MS type can be foreseen for all ECD 20-30-50 solenoid valves circuits and for circuits 22B1 and 22C1 type (normally open) of solenoid valves EPP 30-50-70 type.

The emergency override PS type and MS type can be assembled also in a second time on solenoid valves which are already prepared in advance with override MO type.

EMERGENCY OVERRIDE MO TYPE

(20-MO 25 011 145)

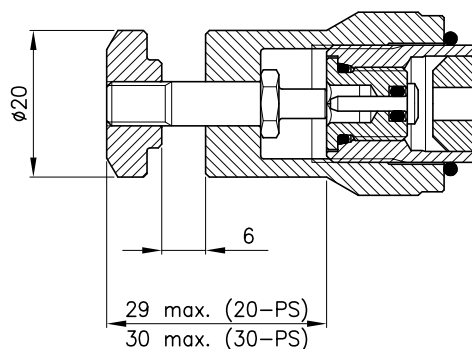
(30-MO 35 011 144)



EMERGENCY OVERRIDE PS TYPE

(20-PS 25 011 174)

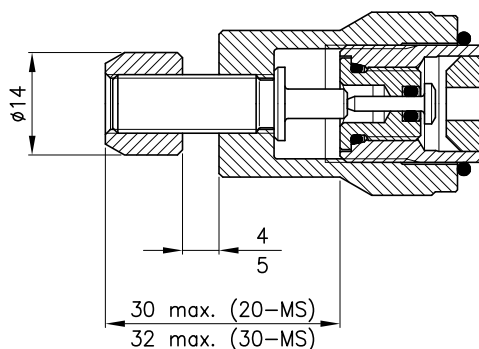
(30-PS 35 011 161)



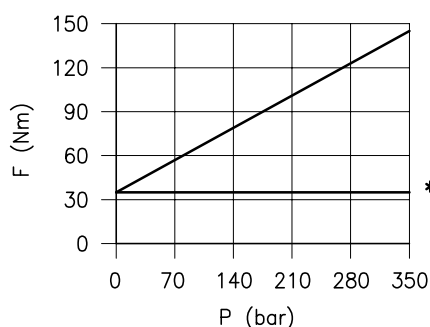
EMERGENCY OVERRIDE MS TYPE

(20-MS 25 011 167)

(30-MS 35 011 195)



WORKING SPECIFICATIONS



* In ECD solenoid valves, pressure in chamber 1 is uninfluent and the necessary force to make the override working is 35 Nm.