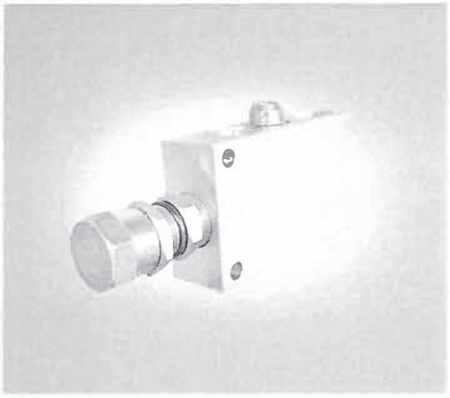
Heizmann

MANUAL

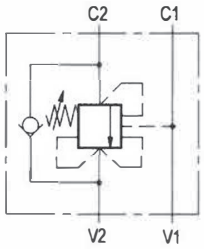
Senkbrems-Ventil Lasthalteventil (230384)
Soupapes d'équilibrage

RE 18307-51/04.10
Replaces: RE 00171/02.07

Single counterbalance, relief compensated



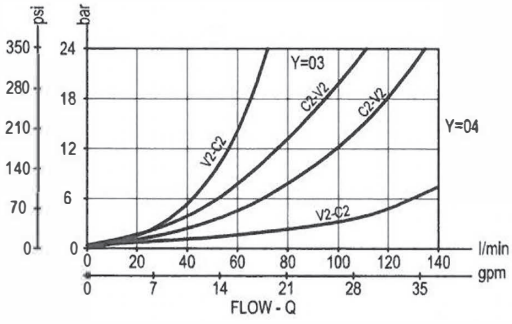
VBSO-SE-CC **05.41.06 - X - Y - Z**



Description

When pressure at V2 rises above the spring bias pressure, the check valve poppet is pushed away from the piston and flow is allowed from V2 to C2. When load pressure at C2 rises above the pressure setting, the relief function is activated and flow is relieved from C2 to V2. With pilot pressure at V1–C1, the pressure setting is reduced in proportion to the pilot ratio, until opening and allowing flow from C2 to V2. The spring chamber is drained to V2. The valve applies a balanced piston allowing relief operation at the valve setting independent of back-pressure at V2. However, the piloted opening of the valve remains subject to additive pressure at port V2.

Performance



Technical data

Hydraulic

Operating pressure	bar (psi)	up to 210 (3000)
Max. flow: see performance graph		
Relief setting: at least 1.3 times the highest expected load.		

General

Manifold material		Aluminium
Note: aluminium bodies are often strong enough for operating pressures exceeding 210 bar (3000 psi), depending from the fatigue life expected in the specific application. If in doubt, consult our Service Network.		
Weight		see "Dimensions"
Fluid temperature range	°C (°F)	between -30 (-22) and +100 (212)
Other technical data		see data sheet RE 18350-50

Note: for applications outside these parameters, please consult us.

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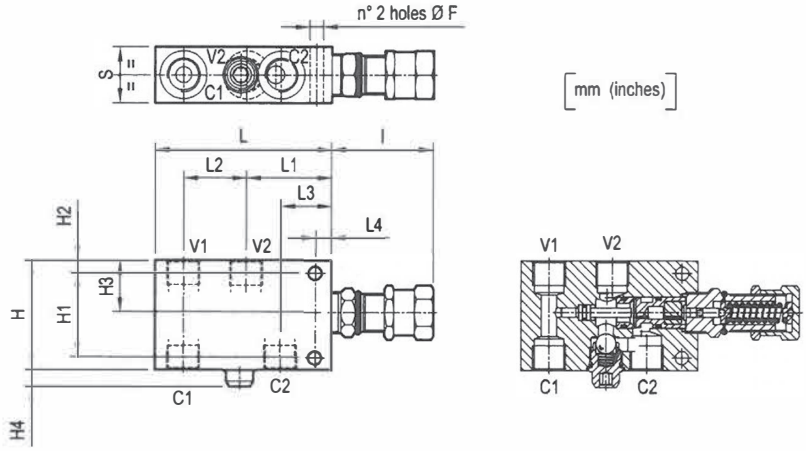
MANUAL

Senkbrems-Ventil Lasthalteventil (230384)
Soupapes d'équilibrage

Dimensions



40 (1.58)	10 (0.39)	34 (1.34)	54.5 (2.15)	62.5 (2.46)	135 (5.32)	65 (2.56)	11 (0.43)	38 (1.5)	9.5 (0.37)	70 (2.76)	89 (3.5)		10.5 (0.41)		G 3/4	1.42 (3.13)
35 (1.38)	10 (0.39)	32.5 (1.28)	40.5 (1.6)	54.5 (2.15)	113 (4.55)	65 (2.56)	11 (0.43)	33.5 (1.32)	7.5 (0.3)	54 (2.13)	70 (2.76)		8.5 (0.34)		G 1/2	0.9 (1.98)
S	L4	L3	L2	L1	L	l	H4	H3	H2	H1	H		F		Y	Weight kg (lbs)

Ordering code

05.41.06	X	Y	Z

Single counterbalance, relief compensated

Pilot ratio

= 02	8.2:1
= 10	3.2:1

Port sizes	V1-V2	C1-C2	
= 03	G 1/2	G 1/2	
= 04	G 3/4	G 3/4	

	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min.) bar (psi)
= 20	60-210 (870-3000)	54 (783)	200 (2900)
= 35	100-350 (1450-5000)	95 (1378)	350 (5000)

Type	Material number
054106020320000	R930001670
05410602033500A	R930001671
054106020420000	R930001674
05410602043500A	R930001675
054106100320000	R930001678
05410610033500A	R930001680
054106100420000	R930001941
054106100435000	R930001687

Type	Material number

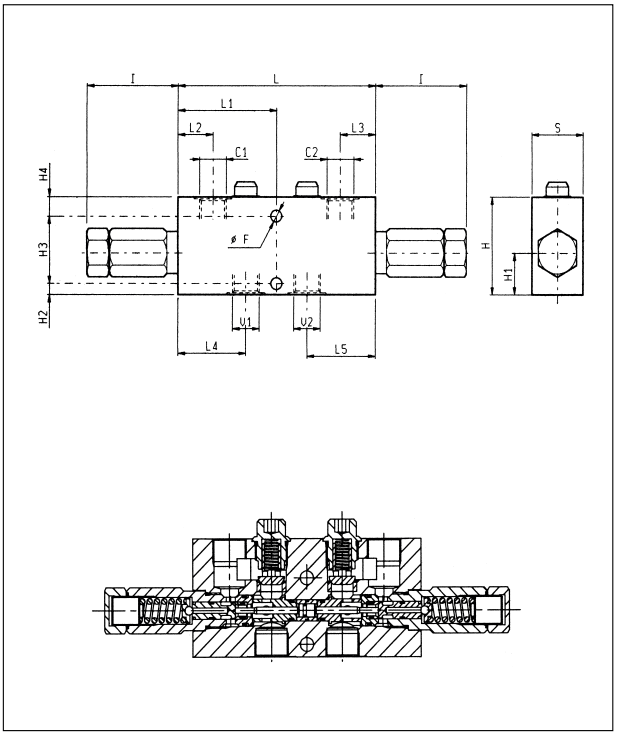
Heizmann

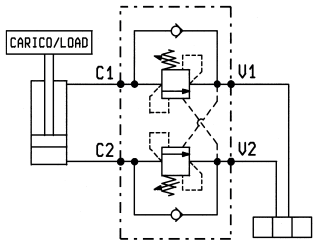
MANUAL

Senkbrems-Ventil Lasthalteventil (230386)
Soupapes d'équilibrage

BILANCIAMENTO, DOPPIO EFFETTO, SERIE "NA"
DUAL PILOT ASSISTED, SERIES "NA" OVERCENTRE

VBSO-DE-NA **05.42.25 - X - Y - Z**

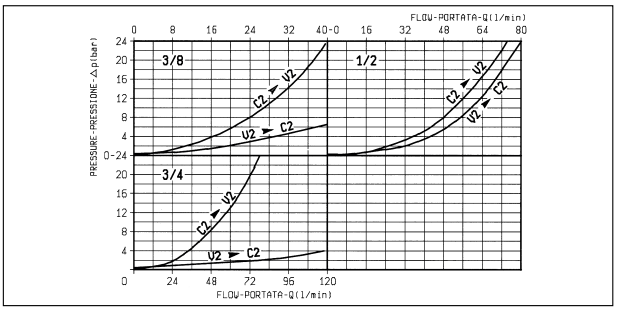




S	L5	L4	L3	L2	L1	L	I	H4	H3	H2	H1	H	F				Y	Peso kg Weight kg
40	62	62	29	29	90	180	69	30	50	10	35	90	10.5				3/4	2.60
40	53.5	53.5	27.5	27.5	77.5	155	71.5	14	48	8	30	70	8.5				1/2	2.10
35	48.5	48.5	25.5	25.5	77.5	145	61.5	17	40	8	26.5	65	8.5				3/8	1.45

DATI TECNICI / TECHNICAL DATA

Pressione max. Max. pressure	350 bar
Portata max. vedi diagramma Flow see performance graph	
Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico Pressure setting: at least 1.3 times the load induced pressure	
Cappellotto per piombatura Sealing Cap	Codice/Ordering code 03.05.01.001



X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	1/2 - 7.6 : 1 3/4 - 7.6 : 1
10	3/8 - 3.6 : 1 1/2 - 3 : 1 3/4 - 3 : 1

Z		MOLLE / SPRINGS Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q = 5 l/min) Std. setting bar (made at = 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
3/8	20	60-210	60	200	03.51.01.075	verde green
	35	100-350	100	350	03.51.01.059	giallo yellow
1/2	20	60-210	68	200	03.51.01.152	verde green
3/4	35	100-350	105	350	03.51.01.142	giallo yellow

Y	ATTACCHI / PORT SIZE V1-V2-C1-C2
02	G 3/8
03	G 1/2
04	G 3/4

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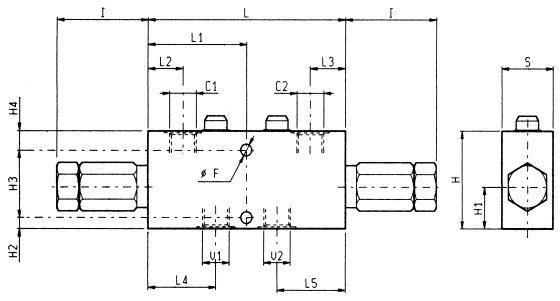
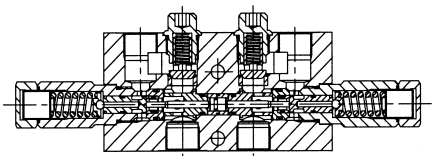
MANUAL

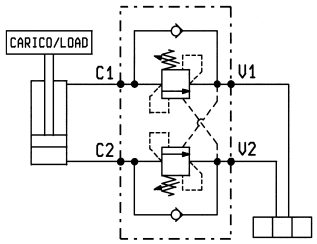
Senkbrems-Ventil Lasthalteventil (230387)
Soupapes d'équilibrage

BILANCIAMENTO, DOPPIO EFFETTO, SERIE "NA"
DUAL PILOT ASSISTED, SERIES "NA" OVERCENTRE

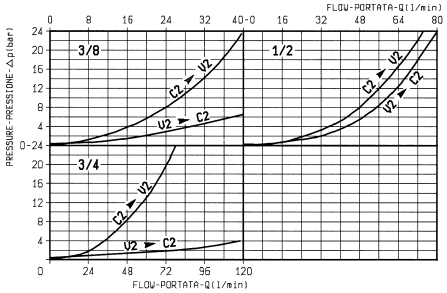
VBSO-DE-NA **05.42.25 - X - Y - Z**







S	L5	L4	L3	L2	L1	L	I	H4	H3	H2	H1	H	F				Y	Peso kg Weight kg
40	62	62	29	29	90	180	69	30	50	10	35	90	10.5				3/4	2.60
40	53.5	53.5	27.5	27.5	77.5	155	71.5	14	48	8	30	70	8.5				1/2	2.10
35	48.5	48.5	25.5	25.5	77.5	145	61.5	17	40	8	26.5	65	8.5				3/8	1.45



DATI TECNICI / TECHNICAL DATA

Pressione max. Max. pressure	350 bar
Portata max. vedi diagramma Flow see performance graph	
Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico Pressure setting: at least 1.3 times the load induced pressure	
Cappellotto per piombatura Sealing Cap	Codice/Ordering code 03.05.01.001

X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	1/2 - 7.6 : 1 3/4 - 7.6 : 1
10	3/8 - 3.6 : 1 1/2 - 3 : 1 3/4 - 3 : 1

Z		MOLLE / SPRINGS Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q = 5 l/min) Std. setting bar (made at = 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
3/8	20	60-210	60	200	03.51.01.075	verde green
	35	100-350	100	350	03.51.01.059	giallo yellow
1/2	20	60-210	68	200	03.51.01.152	verde green
3/4	35	100-350	105	350	03.51.01.142	giallo yellow

Y	ATTACCHI / PORT SIZE V1-V2-C1-C2
02	G 3/8
03	G 1/2
04	G 3/4

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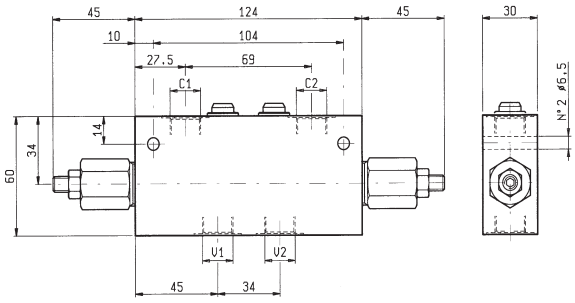
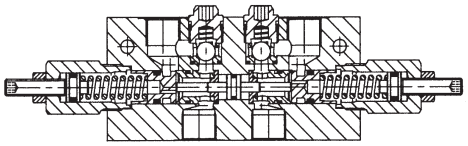
MANUAL

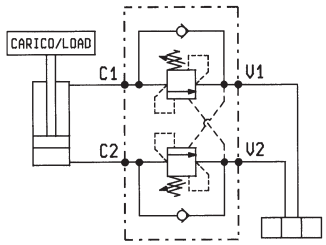
Senkbrems-Ventil Lasthalteventil (230388)
Soupapes d'équilibrage

BILANCIAMENTO, DOPPIO EFFETTO, SERIE "NN"
DUAL PILOT ASSISTED, SERIES "NN" OVERCENTRE

VBSO-DE-NN **05.42.47 - X - Y - Z**

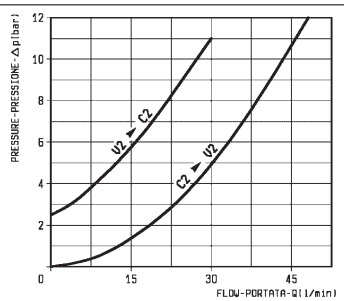






DATI TECNICI / TECHNICAL DATA

Pressione max. Max. pressure	350 bar
Portata max. Flow max.	40 l/min
Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico Pressure setting: at least 1.3 times the load induced pressure	
Peso Weight	0.80 kg



X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	6.6 : 1
10	2.9 : 1

Z	MOLLE / SPRINGS				
	Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q = 5 l/min) Std. setting bar (made at = 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
20	60-210	54	200	03.51.01.102	verde green
35	120-350	118	350	03.51.01.116	giallo yellow

Y	ATTACCHI / PORT SIZE
	V1-V2-C1-C2
02	G 3/8

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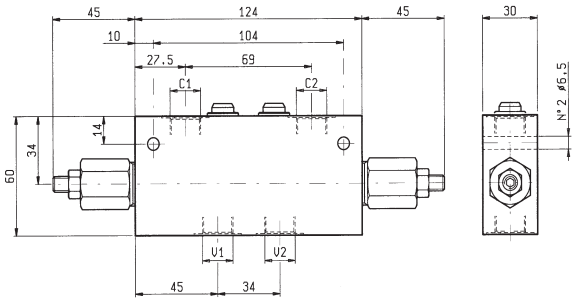
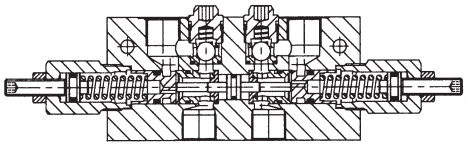
MANUAL

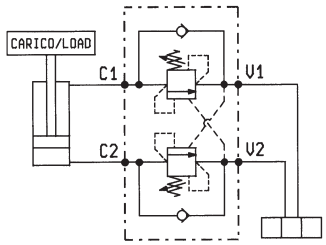
Senkbrems-Ventil Lasthalteventil (230389)
Soupapes d'équilibrage

BILANCIAMENTO, DOPPIO EFFETTO, SERIE "NN"
DUAL PILOT ASSISTED, SERIES "NN" OVERCENTRE

VBSO-DE-NN **05.42.47 - X - Y - Z**

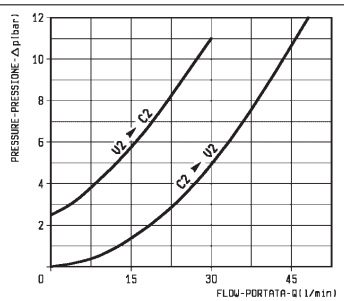






DATI TECNICI / TECHNICAL DATA

Pressione max. Max. pressure	350 bar
Portata max. Flow max.	40 l/min
Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico Pressure setting: at least 1.3 times the load induced pressure	
Peso Weight	0.80 kg



X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	6.6 : 1
10	2.9 : 1

Z	MOLLE / SPRINGS				
	Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q = 5 l/min) Std. setting bar (made at = 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
20	60-210	54	200	03.51.01.102	verde green
35	120-350	118	350	03.51.01.116	giallo yellow

Y	ATTACCHI / PORT SIZE
	V1-V2-C1-C2
02	G 3/8

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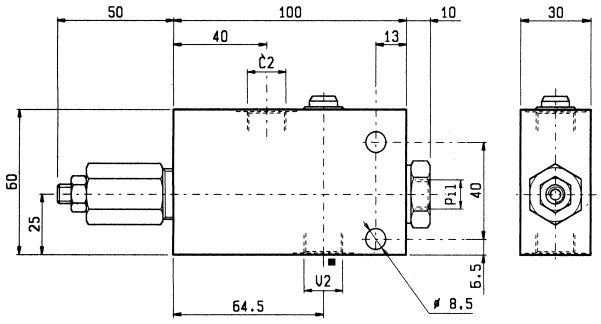
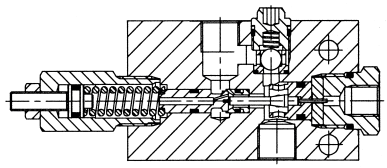
MANUAL

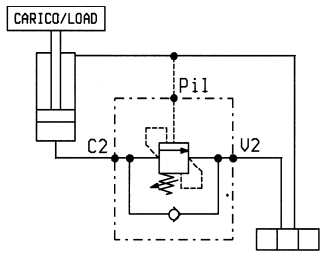
Senkbrems-Ventil Lasthalteventil (230390)
Soupapes d'équilibrage

BILANCIAMENTO, SEMPLICE EFFETTO, SERIE "NBA"
PILOT ASSISTED, SERIES "NBA" OVERCENTRE

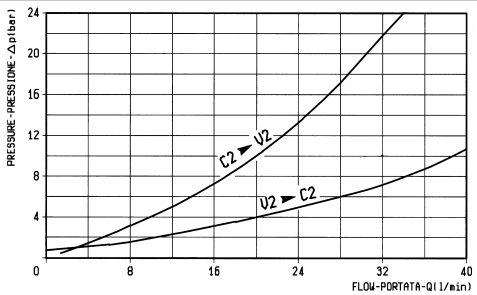
VBSO-SE-NBA **05.43.01 - X - Y - Z**







DATI TECNICI / TECHNICAL DATA	
Pressione max. Max. pressure	350 bar
Portata max. Flow max.	40 l/min
Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico Pressure setting: at least 1.3 times the load induced pressure	
Cappellotto per piombatura Sealing Cap	Codice/Ordering code 03.05.01.002
Peso Weight	0.67 kg



X	RAPPORTO DI PILOTAGGIO PILOT RATIO
37	9.1 : 1
10	3.6 : 1
39	2 : 1

Z	MOLLE / SPRINGS				
	Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q = 5 l/min) Std. setting bar (made at 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
20	60-210	50	200	03.51.01.075	verde green
35	100-350	88	350	03.51.01.059	giallo yellow

Y	ATTACCHI / PORT SIZE	
	V2-C2	PIL
02	G 3/8	G 1/4

Heizmann

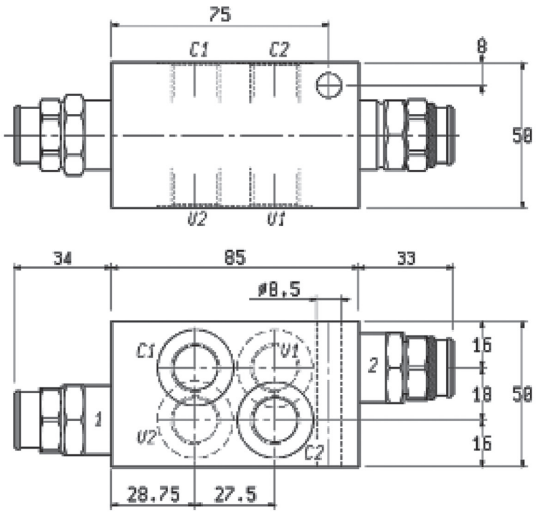
MANUAL

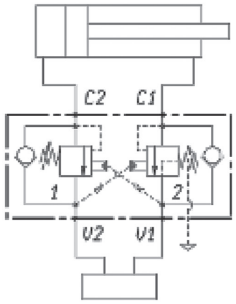
Senkbrems-Ventil Lasthalteventil (230393)
Soupapes d'équilibrage

VALVOLA DI BILANCIAMENTO A
DOPPIO EFFETTO SERIE "78"
CON UNA SEZIONE "CCAP"

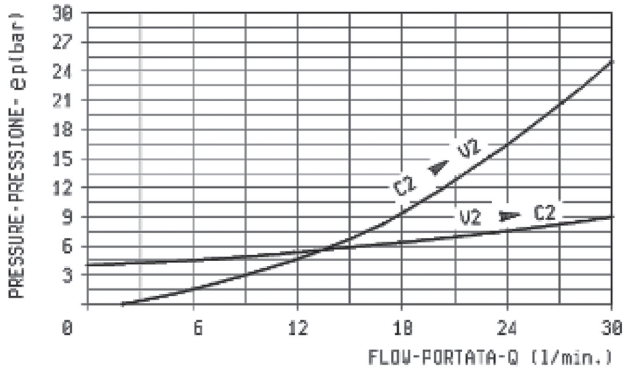
VBSO-DE-1CCAP78

05.44.46 - X - Y - Z





Pressione di lavoro max $\frac{350 \text{ bar}}{1,3}$ = 270 bar	Portata max 30 l/min.	Peso Kg 0,75
Max working pressure $\frac{350 \text{ bar}}{1,3}$ = 270 bar	Flow max 30 l/min.	Weight Kg 0,75



X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	4 : 1

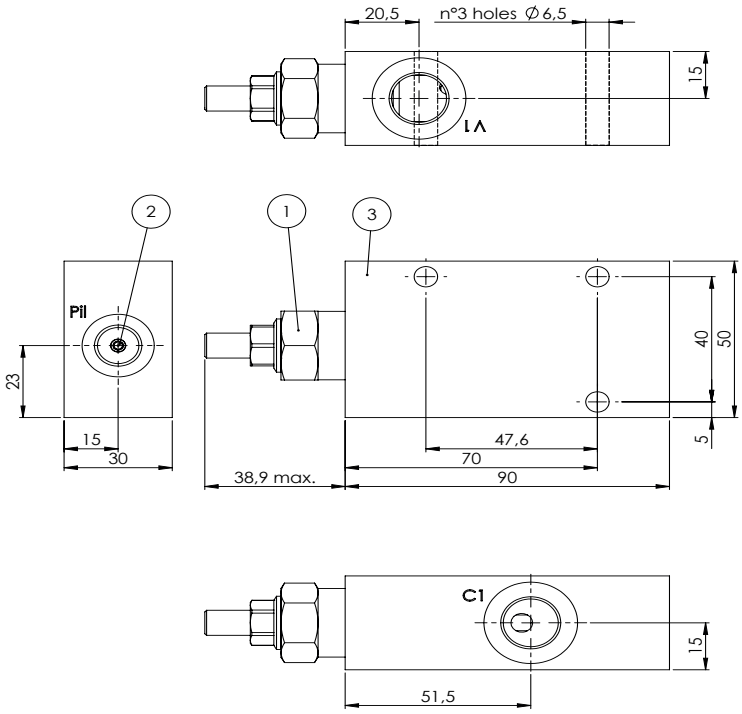
N	MOLLE - SPRINGS				
	Campo tarature min-max bar Adj.press. range bar	Incremento pressione bar/giro vite Pressure increase bar/turn	Taratura standard bar(Q=5 l/1') Std.setting bar (made at 5 l/1')	Codice ordinazione Ordering code	Colore Colour
35	100-350	140	350	03.51.01.198	gialla yellow

Y	ATTACCHI / PORT SIZE V1 - V2 - C1 - C2
02	G 3/8

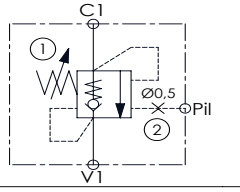
Heizmann

MANUAL

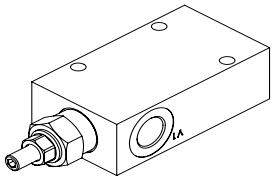
Senkbrems-Ventil Lasthalteventil (231117)
Soupapes d'équilibrage



HYDRAULIC SCHEME



ISOMETRIC VIEW



SPECIFICATIONS

Rated flow:	40 l/min
Maximum pressure:	350 bar
Setting Valve n°2:	350 bar @ 5 l/min
Range setting	100 - 350 bar
Pressure increase	181 bar/turn
Pilot Ratio	4:1
Ports:	
V1, C1	G 3/8" BSPP
Pil	G 1/4" BSPP
Body material:	Aluminium
Surface treatment:	Orange anodized
Seals:	70 Shore NBR
General Tolerance:	± 0,5 mm
Oil Temp. range:	-30/+100 °C

COMPONENTS

N.	QUICK CODE	DESCRIPTION	Q.TY	TORQUE ±7% (Nm)	SPARE AVAIL.
1	SB0000028	SBSN-040 4:1 350 bar	1	55	N
2	PE000060	Restrictor M5x5 with Ø0,5 hole	1	-	N
3	LB001310	Manifold	1	-	N

* The cartridges, purchased as spare parts, will be sold with standard setting and not with the setting indicated in the valve.

TITLE

MBSN-040-ZLNR-04-G38-N350

Heizmann

MANUAL

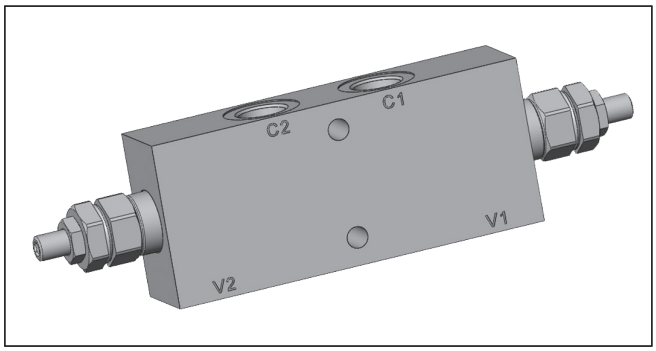
Senkbrems-Ventil Lasthalteventil (230412)
Soupapes d'équilibrage

Dual counterbalance, relief compensated

A-VBSO-DE-CC-30

08.44.04 - X - Y - Z

RE 18307-67
Edition: 03.2016
Replaces: 04.2010



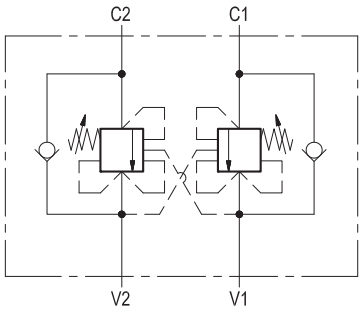
Technical data

Max. operating pressure	410 bar (5945 psi)
Max. flow	60 l/min. (16 gpm)
Weight	see “Dimensions”
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	5 to 800 mm²/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
MTTFd	150 years see data sheet 18350-51
Other technical data	see data sheet 18350-50
Relief setting: at least 1.3 times the highest expected load.	

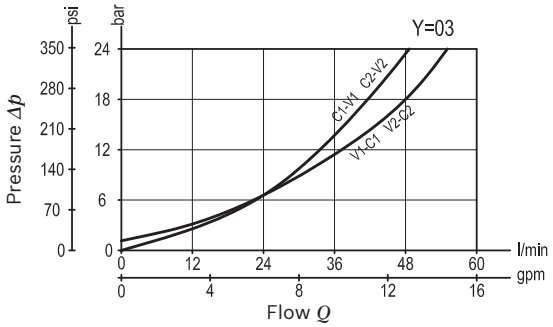
Note: for applications outside these parameters, please consult us.

Description

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports C1 and C2. This valve module includes 2 sections, each one composed by a check and a relief valve with balanced piston, pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Relief operates at the valve setting independent of back-pressure, but the piloted opening remains subject to additive pressure at V1 or V2.



Characteristic curve



Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230412)
Soupapes d'équilibrage

Ordering code

08.44.04	X	Y	Z

Dual counterbalance

Pilot ratio

03 4.2 : 1

Port sizes	V1 - V2	C1 - C2	
02	G 3/8	G 3/8	
03	G 1/2	G 1/2	

	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min) bar (psi)
20	60-210 (870-3000)	75 (1088)	200 (2900)
35	100-350 (1450-5000)	165 (2393)	350 (5000)

Pressure setting up to 410 bar: code on request.

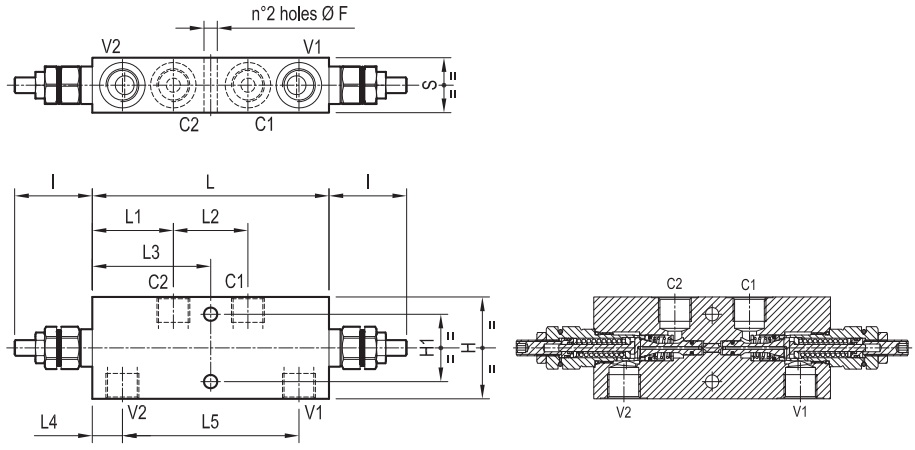
Tamper resistant cap code
ordering code 11.04.23.003
Mat. no. R930000754

Preferred types

Type	Material number
084404030220000	R930003349
084404030235000	R930003352

Type	Material number
084404030320000	R930003355
08440403033500A	R930006979

Dimensions



35 (1.38)	112.6 (4.43)	19.2 (0.76)	75.5 (2.97)	47.6 (1.87)	51.7 (2.04)	151 (5.95)	49.5 (1.95)	43 (1.69)	65 (2.56)		8.5 (0.34)				G 1/2	2.6 (5.7)
30 (1.18)	109.6 (4.32)	20.7 (0.82)	75.5 (2.97)	47.6 (1.87)	51.7 (2.04)	151 (5.95)	49.5 (1.95)	38 (1.5)	55 (2.17)		8.5 (0.34)				G 3/8	2.0 (4.4)
S	L5	L4	L3	L2	L1	L	I	H1	H		F				Y	Weight kg (lbs)

Heizmann

MANUAL

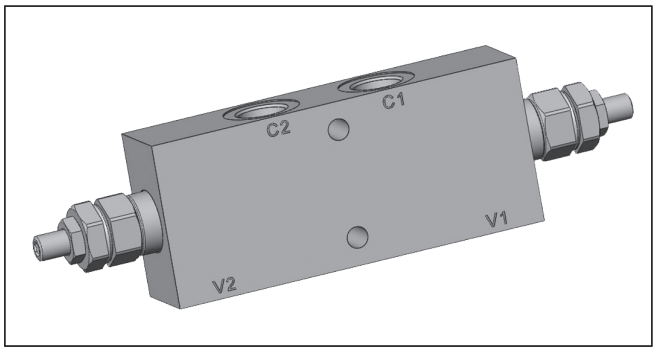
Senkbrems-Ventil Lasthalteventil (230313)
Soupapes d'équilibrage

Dual counterbalance, relief compensated

A-VBSO-DE-CC-30

08.44.04 - X - Y - Z

RE 18307-67
Edition: 03.2016
Replaces: 04.2010



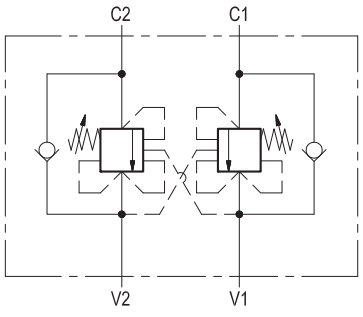
Technical data

Max. operating pressure	410 bar (5945 psi)
Max. flow	60 l/min. (16 gpm)
Weight	see “Dimensions”
Manifold material	Zinc plated steel
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	5 to 800 mm²/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
MTTFd	150 years see data sheet 18350-51
Other technical data	see data sheet 18350-50
Relief setting: at least 1.3 times the highest expected load.	

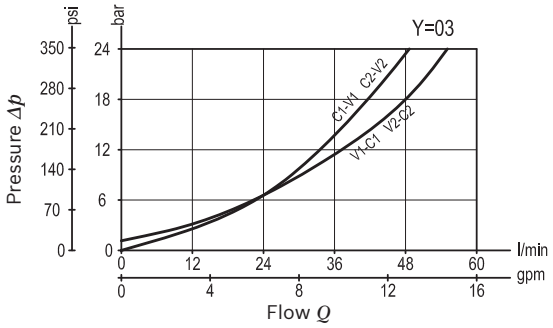
Note: for applications outside these parameters, please consult us.

Description

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports C1 and C2. This valve module includes 2 sections, each one composed by a check and a relief valve with balanced piston, pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Relief operates at the valve setting independent of back-pressure, but the piloted opening remains subject to additive pressure at V1 or V2.



Characteristic curve



Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230413)
Soupapes d'équilibrage

Ordering code

08.44.04	X	Y	Z

Dual counterbalance

Pilot ratio

03 4.2 : 1

Port sizes	V1 - V2	C1 - C2	
02	G 3/8	G 3/8	
03	G 1/2	G 1/2	

	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min) bar (psi)
20	60-210 (870-3000)	75 (1088)	200 (2900)
35	100-350 (1450-5000)	165 (2393)	350 (5000)

Pressure setting up to 410 bar: code on request.

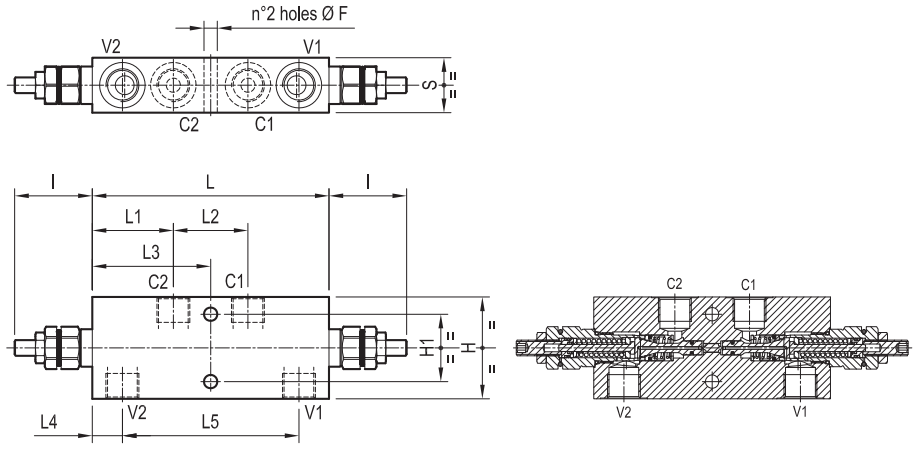
Tamper resistant cap code
ordering code 11.04.23.003
Mat. no. R930000754

Preferred types

Type	Material number
084404030220000	R930003349
084404030235000	R930003352

Type	Material number
084404030320000	R930003355
08440403033500A	R930006979

Dimensions



35 (1.38)	112.6 (4.43)	19.2 (0.76)	75.5 (2.97)	47.6 (1.87)	51.7 (2.04)	151 (5.95)	49.5 (1.95)	43 (1.69)	65 (2.56)		8.5 (0.34)				G 1/2	2.6 (5.7)
30 (1.18)	109.6 (4.32)	20.7 (0.82)	75.5 (2.97)	47.6 (1.87)	51.7 (2.04)	151 (5.95)	49.5 (1.95)	38 (1.5)	55 (2.17)		8.5 (0.34)				G 3/8	2.0 (4.4)
S	L5	L4	L3	L2	L1	L	I	H1	H		F				Y	Weight kg (lbs)

Heizmann

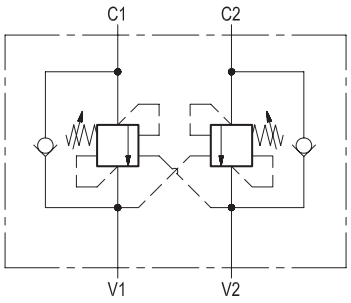
MANUAL

Senkbrems-Ventil Lasthalteventil (230415)
Soupapes d'équilibrage

RE 18307-59/07.10
Replaces: RE 00171/02.07

Dual counterbalance

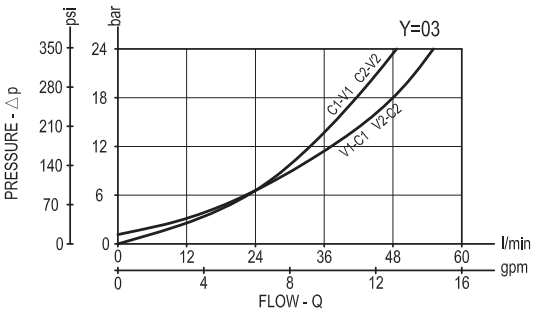
A-VBSO-DE-30 **08.44.07 - X - Y - Z**



Description

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports C1 and C2. This valve module includes 2 sections, each one composed by a check and a relief valve pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Back-pressure at V1 or V2 is additive to the pressure setting in all functions.

Performance



Technical data

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. flow	l/min (gpm)	60 (16)

Relief setting: at least 1.3 times the highest expected load.

General

Manifold material		Steel
Weight		see “Dimensions”
Fluid temperature range	°C (°F)	between -30 (-22) and +100 (212)
Other technical data		see data sheet RE 18350-50

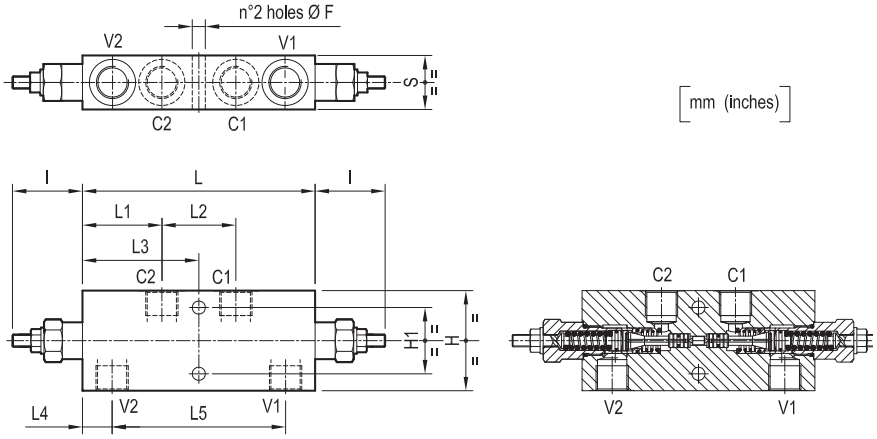
Note: for applications outside these parameters, please consult us.

Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230415)
Soupapes d'équilibrage

Dimensions



35 (1.38)	112.6 (4.43)	19.2 (0.76)	75.5 (2.97)	47.6 (1.87)	51.7 (2.04)	151 (5.95)	45.5 (1.79)	43 (1.69)	65 (2.56)		8.5 (0.34)				G 1/2	2.9 (6.4)
30 (1.18)	109.6 (4.32)	20.7 (0.82)	75.5 (2.97)	47.6 (1.87)	51.7 (2.04)	151 (5.95)	45.5 (1.79)	38 (1.5)	55 (2.17)		8.5 (0.34)				G 3/8	2.5 (5.5)
S	L5	L4	L3	L2	L1	L	I	H1	H		F				Y	Weight kg (lbs)

Ordering code

08.44.07	X	Y	Z

Dual counterbalance

Pilot ratio

= 03 4.2:1

Port sizes	V1-V2	C1-C2	
= 02	G 3/8	G 3/8	
= 03	G 1/2	G 1/2	

	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min.) bar (psi)
= 20	60-210 (870-3000)	63 (914)	200 (2900)
= 35	100-350 (1450-5000)	138 (2001)	350 (5000)

Tamper resistant cap
code 11.04.23.002
R930000752

Type	Material number
08440703022000A	R930003364
08440703023500A	R930003366
08440703032000A	R930003373
08440703033500A	R900338285

Type	Material number

Heizmann

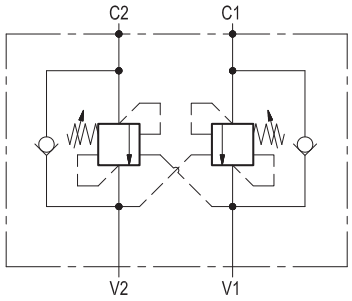
MANUAL

Senkbrems-Ventil Lasthalteventil (230416)
Soupapes d'équilibrage

RD 18307-73/07.12

Senkbremsventil, doppeltwirkend

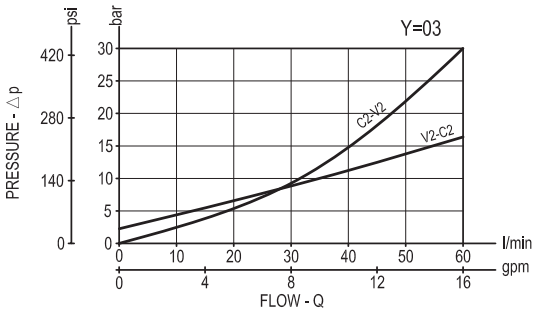
A-VBSO-DE-30-FCB-PI 08.48.12 - X - Y - Z



Bezeichnung

Das Ventil ermöglicht die statische und dynamische Kontrolle der Last, indem es den Volumenstrom ZUM und VOM Aktuator durch die Anschlüsse C1 und C2 reguliert. Dieses Ventilmodul beinhaltet zwei Sektionen, jeweils bestehend aus einem Rückschlagventil und einem Druckbegrenzungsventil, vorgesteuert vom Druck in der gegenüberliegenden Leitung. Die Rückschlagventilsektion erlaubt freien Durchfluss in den Aktor und sperrt dann die Last gegen Rückwärtsbewegung. Bei anliegendem Vorsteuerdruck in der Leitung gegenüber reduziert sich der Öffnungsdruck des Druckbegrenzungsventils proportional zum angegebenen Verhältnis, bis das Ventil öffnet und kontrollierten Rückstrom erlaubt. Gegendruck bei V1 oder V2 addiert sich in allen Funktionen zur Druckeinstellung. Für höhere Sicherheit und kompakteren Aufbau sind die Anschlüsse C1 und C2 direkt (mit Flachdichtung) am Aktuator montiert.

Kennlinien



Technische Daten

Hydraulisch

Max. Betriebsdruck	bar (psi)	350 (5000)
Max. Volumenstrom	l/min (gpm)	60 (16)

Druckbegrenzungseinstellung: mindestens das 1,3-fache der höchsten erwarteten Last.

Allgemeines

Gehäusewerkstoff	Stahl
Masse	siehe „Abmessungen“
Flüssigkeitstemperaturbereich °C (°F)	-30 (-22) bis +100 (212)
Sonstige technische Daten	siehe Datenblatt RD 18350-50

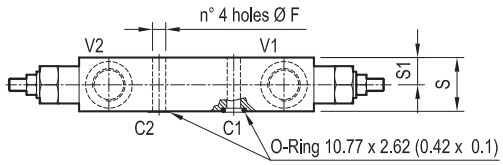
Anmerkung: Bei Anwendungen außerhalb dieser Parameter wenden Sie sich bitte an uns.

Heizmann

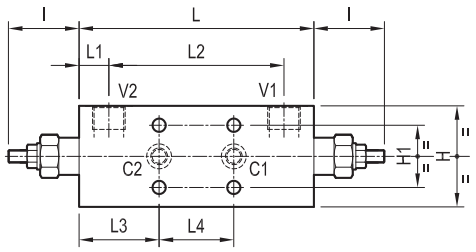
MANUAL

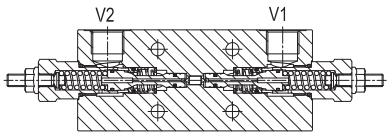
Senkbrems-Ventil Lasthalteventil (230416)
Soupapes d'équilibrage

Abmessungen



[mm (inches)]





17.5 (0.69)	34.5 (1.36)	48 (1.89)	51.5 (2.03)	112.6 (4.43)	19.2 (0.76)	151 (5.95)	45.5 (1.79)	40 (1.58)	65 (2.56)		8.5 (0.34)				G 1/2	2.3 (5.1)
15 (0.59)	29.5 (1.16)	48 (1.89)	51.5 (2.03)	109.6 (4.32)	20.7 (0.82)	151 (5.95)	45.5 (1.79)	40 (1.58)	55 (2.17)		8.5 (0.34)				G 3/8	1.76 (3.88)
S1	S	L4	L3	L2	L1	L	I	H1	H		F				Y	Weight kg (lbs)

Bestellangaben

08.48.12	X	Y	Z

Senkbremsventil, doppeltwirkend

Vorsteuerverhältnis

- = 03 4.2:1
- = 85 11:1

Anschluss-größen	V1-V2	C1-C2	
= 02	G 3/8	Ø 9 (0,35)	
= 03	G 1/2	Ø 9 (0,35)	

		Druckstufen		
		Einstelldruck-bereich bar (psi)	Druckänderung bar/Umdrehung (psi/Umdrehung)	Standard-einstellung Q=5 (l/min.) bar (psi)
= 20	für X=03	60-210 (870-3000)	63 (914)	200 (2900)
	für X=85	60-250 (900-3600)	70 (1015)	200 (2900)
= 35	für X=03	100-350 (1450-5000)	138 (2001)	350 (5000)

Schutzkappe zur Plombierung Bestellnummer 11.04.23.002 R930000752

Typ	Materialnummer
084812030220000	R930006792
084812030235000	R930006446
084812030320000	R930006793
084812030335000	R930006447
084812850220000	R930006794
084812850320000	R930006795

Typ	Materialnummer

Heizmann

MANUAL

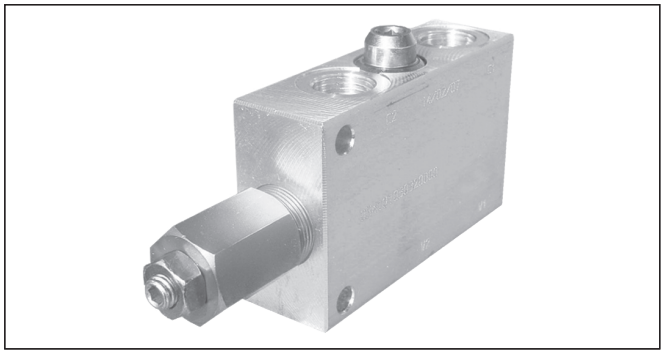
Senkbrems-Ventil Lasthalteventil (230422)
Soupapes d'équilibrage

Single counterbalance

VBSO-SE

05.41.01 - X - Y - Z

RE 18307-43
Edition: 03.2016
Replaces: 04.2010



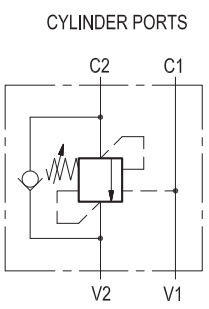
Description

When pressure at V2 rises above the spring bias pressure, the check valve poppet is pushed away from the seat and flow is allowed from V2 to C2. When load pressure at C2 rises above the pressure setting, the direct operated, differential area, relief function is activated and flow is relieved from C2 to V2. With pilot pressure at V1-C1, the pressure setting is reduced in proportion to the stated ratio of the valve, until opening and allowing flow from C2 to V2. The spring chamber is drained to V2, and any back-pressure at V2 is additive to the pressure setting in all functions.

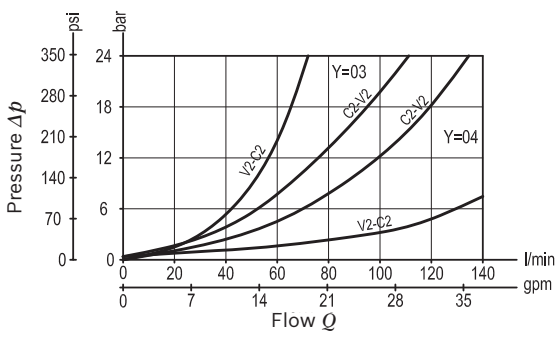
Technical data

Operating pressure	up to 210 bar (3000 psi)
Max. flow	see performance graph
Weight	see “Dimensions”
Manifold material	Aluminium
Note: aluminium bodies are often strong enough for operating pressures exceeding 210 bar (3000 psi), depending from the fatigue life expected in the specific application. If in doubt, consult our Service Network.	
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	5 to 800 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
Other technical data	see data sheet 18350-50
Relief setting: at least 1.3 times the highest expected load.	

Note: for applications outside these parameters, please consult us.



Characteristic curve



Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230422)
Soupapes d'équilibrage

VBSO-SE | Single counterbalance

Ordering code

05.41.01	X	Y	Z

Single counterbalance

Pilot ratio

03	8.2 : 1
10	3.2 : 1

Port sizes	V1-V2	C1-C2
03	G 1/2	G 1/2
04	G 3/4	G 3/4

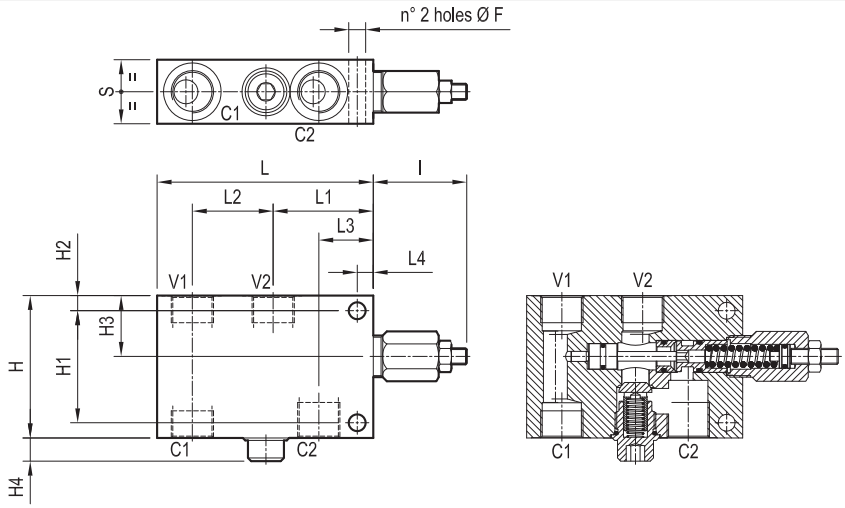
	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min) bar (psi)
20	60-210 (870-3000)	64 (928)	200 (2900)
35	100-350 (1450-5000)	106 (1537)	350 (5000)

Preferred types

Type	Material number
054101030320000	R930001654
05410103033500A	R930001655
054101100320000	R930000088
05410110033500A	R930001662
054101030420000	R930001658

Type	Material number
05410103043500A	R930001659
054101100420000	R930001663
05410110043500A	R930001664

Dimensions



S	L4	L3	L2	L1	L	I	H4	H3	H2	H1	H		F		Y	Weight kg (lbs)
40 (1.58)	10 (0.39)	34 (1.34)	54.5 (2.15)	62.5 (2.46)	135 (5.32)	58.5 (2.3)	14.5 (0.57)	38 (1.5)	9.5 (0.37)	70 (2.76)	89 (3.5)		10.5 (0.41)		G 3/4	1.42 (3.13)
35 (1.38)	10 (0.39)	32.5 (1.28)	40.5 (1.6)	54.5 (2.15)	113 (4.55)	58.5 (2.3)	14.5 (0.57)	33.5 (1.32)	7.5 (0.3)	54 (2.13)	70 (2.76)		8.5 (0.34)		G 1/2	0.9 (1.98)

Dimensions [mm (inches)]

Heizmann

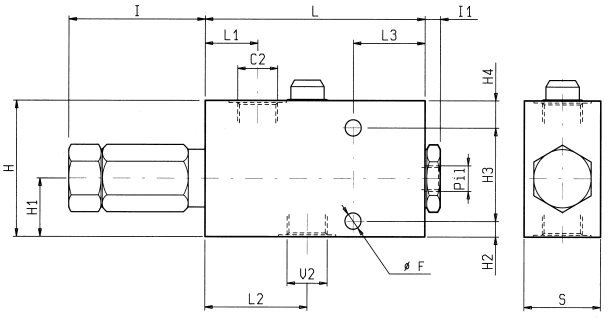
MANUAL

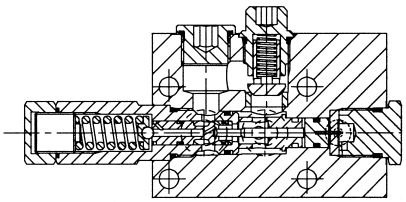
Senkbrems-Ventil Lasthalteventil (230423)
Soupapes d'équilibrage

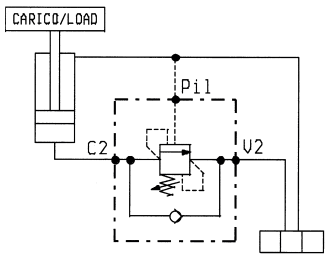
BILANCIAMENTO, SEMPLICE EFFETTO, SERIE "NA"
PILOT ASSISTED, SERIES "NA" OVERCENTRE

VBSO-SE-NA

05.41.62 - X - Y - Z



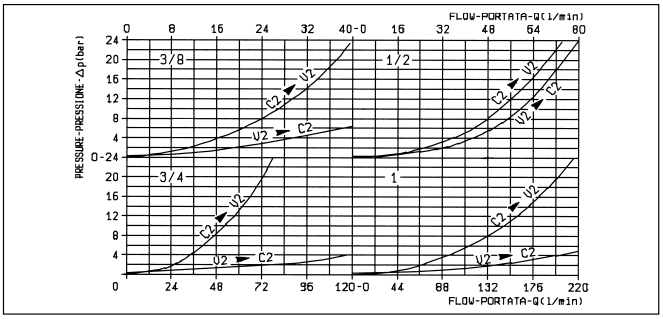




DATI TECNICI / TECHNICAL DATA

Pressione max. Max. pressure	350 bar
Portata max. vedi diagramma Flow see performance graph	
Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico Pressure setting: at least 1.3 times the load induced pressure	

S	L3	L2	L1	L	I	H4	H3	H2	H1	H	F					Y	Peso kg Weight kg
50	40.5	77	35	160	92.5	35	55	10	35	100	10.5					1	3.25
40	42.5	62	29	127.5	71.5	30	50	10	35	90	10.5					3/4	1.755
40	37.5	53.5	27.5	115	71.5	14	48	8	30	70	8.5					1/2	1.39
35	27.5	48.5	27.5	100	61	17	40	8	26.5	65	8.5					3/8	0.98



X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	1/2 - 7.6 : 1 3/4 - 7.6 : 1 1 - 8 : 1
10	3/8 - 3.6 : 1 1/2 - 3 : 1 3/4 - 3 : 1 1 - 2.8 : 1

Z		MOLLE / SPRINGS Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q = 5 l/min) Std. setting bar (Q = 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
3/8	20	60-210	60	200	03.51.01.075	verde green
	35	100-350	100	350	03.51.01.059	giallo yellow
1/2	20	60-210	68	200	03.51.01.152	verde green
3/4	35	100-350	105	350	03.51.01.142	giallo yellow
1	20	60-210	36	200	03.51.01.067	verde green
	35	100-350	62	350	03.51.01.057	giallo yellow

Y	ATTACCHI / PORT SIZE	
	V2-C2	PIL
02	G 3/8	G 1/4
03	G 1/2	G 1/4
04	G 3/4	G 1/4
05	G 1	G 1/4

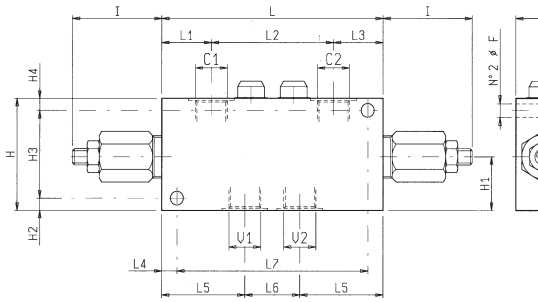
Heizmann

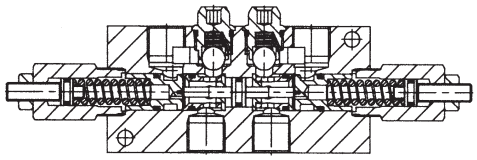
MANUAL

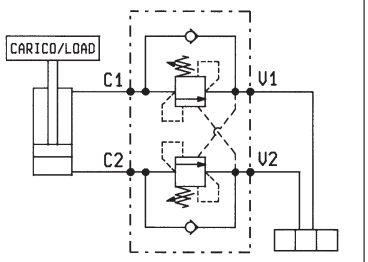
Senkbrems-Ventil Lasthalteventil (230424)
Soupapes d'équilibrage

BILANCIAMENTO, DOPPIO EFFETTO
DUAL PILOT ASSISTED OVERCENTRE

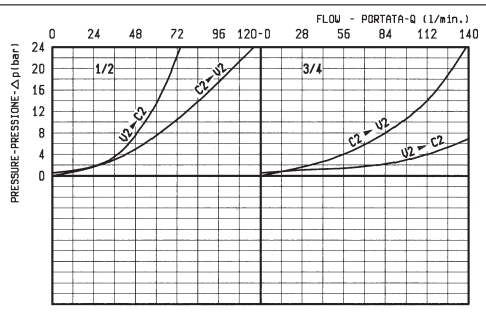
VBSO-DE **05.42.01 - X - Y - Z**







S	L7	L6	L5	L4	L3	L2	L1	L	I	H4	H3	H2	H1	H	F	Y	Peso kg Weight kg
40	155	50	62.5	10	34	107	34	175	60	10	70	10	38	90	10.5	3/4	2.10
35	125	36	54.5	10	32.5	80	32.5	145	60	8	54	8	32	70	8.5	1/2	1.37



DATI TECNICI / TECHNICAL DATA

Pressione max. Max. pressure	350 bar
Portata max. vedi diagramma Flow see performance graph	
Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico Pressure setting: at least 1.3 times the load induced pressure	
Cappellotto per piombatura Sealing Cap	Codice/Ordering code 03.05.01.001

X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	8.15 : 1
10	3 : 1

Z	MOLLE / SPRINGS				
	Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q = 5 l/min) Std. setting bar (made at = 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
20	60-210	64	200	03.51.01.021	verde green
35	120-350	106	350	03.51.01.014	giallo yellow

Y	ATTACCHI / PORT SIZE
	V1-V2-C1-C2
03	G 1/2
04	G 3/4

Heizmann

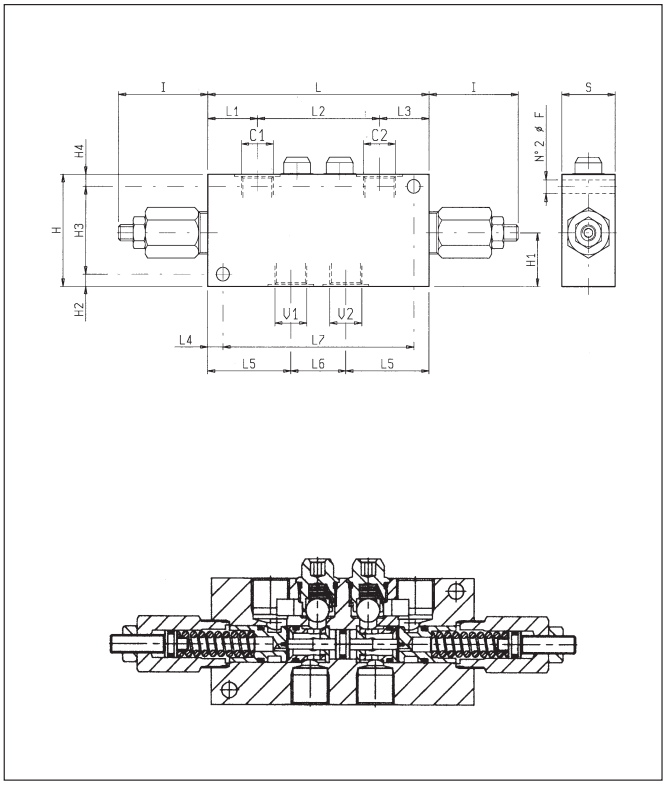
MANUAL

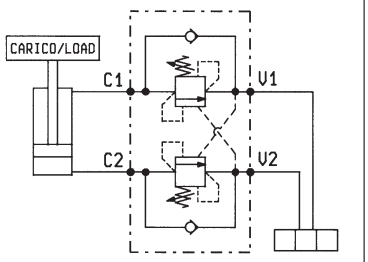
Senkbrems-Ventil Lasthalteventil (230425)
Soupapes d'équilibrage

BILANCIAMENTO, DOPPIO EFFETTO
DUAL PILOT ASSISTED OVERCENTRE

VBSO-DE

05.42.01 - X - Y - Z

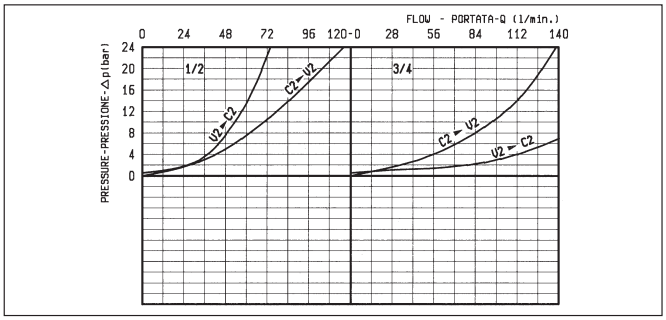




40	155	50	62.5	10	34	107	34	175	60	10	70	10	38	90	10.5	3/4	2.10
35	125	36	54.5	10	32.5	80	32.5	145	60	8	54	8	32	70	8.5	1/2	1.37
S	L7	L6	L5	L4	L3	L2	L1	L	I	H4	H3	H2	H1	H	F	Y	Peso kg Weight kg

DATI TECNICI / TECHNICAL DATA

Pressione max. Max. pressure	350 bar
Portata max. vedi diagramma Flow see performance graph	
Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico Pressure setting: at least 1.3 times the load induced pressure	
Cappellotto per piombatura Sealing Cap	Codice/Ordering code 03.05.01.001



X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	8.15 : 1
10	3 : 1

Z	MOLLE / SPRINGS				
	Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q = 5 l/min) Std. setting bar (made at = 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
20	60-210	64	200	03.51.01.021	verde green
35	120-350	106	350	03.51.01.014	giallo yellow

Y	ATTACCHI / PORT SIZE V1-V2-C1-C2
03	G 1/2
04	G 3/4

Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230427)
Soupapes d'équilibrage

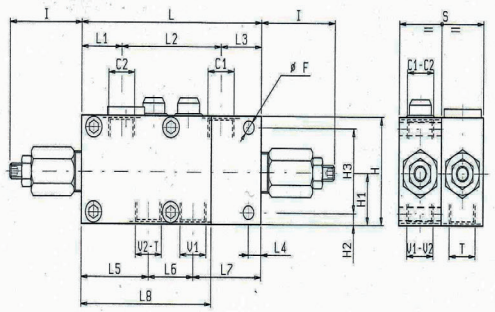
VALVOLE DI BILANCIAMENTO
A DOPPIO EFFETTO
CON SCARICO SUPPLEMENTARE

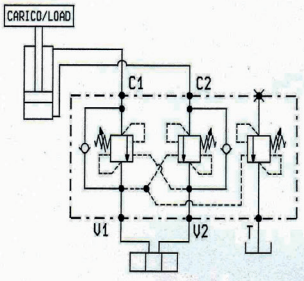
VBSO-DE-SE-S

05.42.04 - X - Y - Z

CODICE D' ORDINAZIONE
ORDERING CODE

Consentono di realizzare elevate velocità di rientro grazie alla "terza" sezione che manda direttamente allo scarico una parte della portata d'olio, limitando così la portata che attraversa il distributore. La "terza" sezione svolge un'ottima funzione anti-shock scaricando direttamente al serbatoio. -Con perdita trascurabile.



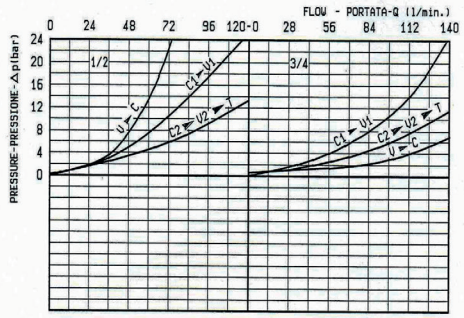


Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico
Pressure setting: at least 1.3 times the load induced pressure

Pressione max 350 bar / Portata max vedi diagramma
Max pressure 350 bar / Flow see performance graph

78	125	62.5	50	62.5	10	34	107	34	175	60	70	10	38	90	10.5	3/4"	3.70
68	105	54.5	36	54.5	10	32.5	80	32.5	145	60	54	8	32	70	8.5	1/2"	2.40
S	**L8**	**L7**	**L6**	**L5**	**L4**	**L3**	**L2**	**L1**	**L**	**I**	**H3**	**H2**	**H1**	**H**	**F**	**Y**	peso Kg weight Kg

Cappellotto per piombatura / Sealing cap (cod. 030501001)



X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	8.15 : 1

Z	MOLLE - SPRINGS				
	Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q=5 l/min) Std. setting bar (made at 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
20	60-210	64	200	03.51.01.021	verde green
35	100-350	106	350	03.51.01.014	giallo yellow

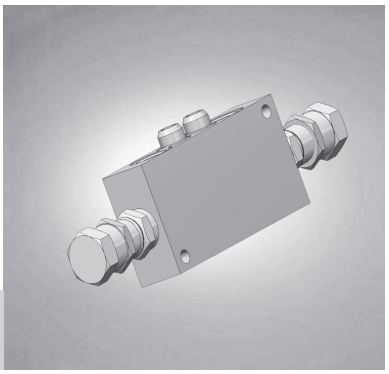
Y	ATTACCHI / PORT SIZE
	V1-V2-C1-C2-T
03	1/2" BSPP
04	3/4" BSPP

Heizmann

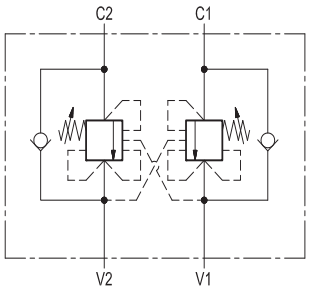
MANUAL

Senkbrems-Ventil Lasthalteventil (230428)
Soupapes d'équilibrage

RE 18307-68/04.10
Replaces: RE 00171/02.07



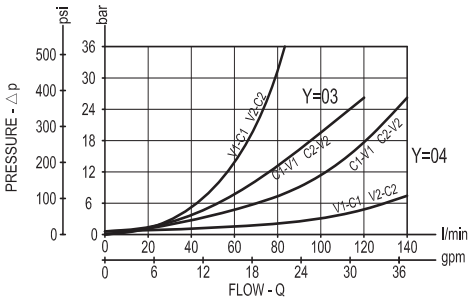
VBSO-DE-CC **05.42.05 - X - Y - Z**



Description

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports C1 and C2. This valve module includes 2 sections, each one composed by a check and a relief valve with balanced piston, pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Relief operates at the valve setting independent of back-pressure, but the piloted opening remains subject to additive pressure at V1 or V2.

Performance



Technical data

Hydraulic

Operating pressure	bar (psi)	up to 210 (3000)
Max. flow: see performance graph		

General

Manifold material		Aluminium
Note: aluminium bodies are often strong enough for operating pressures exceeding 210 bar (3000 psi), depending from the fatigue life expected in the specific application. If in doubt, consult our Service Network.		
Weight		see “Dimensions”
Fluid temperature range	°C (°F)	between -30 (-22) and +100 (212)
Other technical data		see data sheet RE 18350-50

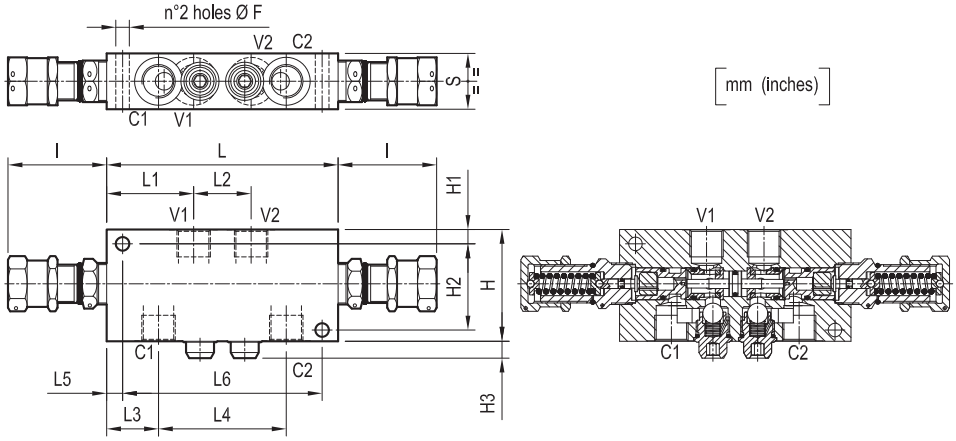
Note: for applications outside these parameters, please consult us.

Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230428)
Soupapes d'équilibrage

Dimensions



40 (1.58)	155 (6.1)	10 (0.39)	107 (4.21)	34 (1.34)	50 (1.97)	62.5 (2.46)	175 (6.89)	62 (2.44)	11 (0.43)	70 (2.76)	10 (0.39)	90 (3.54)	10.5 (0.41)		G 3/4	2.2 (4.9)
35 (1.38)	125 (4.92)	10 (0.39)	80 (3.15)	32.5 (1.28)	36 (1.42)	54.5 (2.15)	145 (5.71)	62 (2.44)	11 (0.43)	54 (2.13)	8 (0.32)	70 (2.76)	8.5 (0.34)		G 1/2	1.45 (3.2)
S	L6	L5	L4	L3	L2	L1	L	I	H3	H2	H1	H	F		Y	Weight kg (lbs)

Ordering code

05.42.05	X	Y	Z

Dual counterbalance, relief compensated

Pilot ratio

= 02	8.2:1
= 10	3.2:1

	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min.) bar (psi)
= 20	60-210 (900-3000)	54 (783)	200 (2900)
= 35	100-350 (1450-5000)	95 (1378)	350 (5000)

Port sizes	V1-V2	C1-C2	
= 03	G 1/2	G 1/2	
= 04	G 3/4	G 3/4	

Type	Material number
054205020320000	R930001786
05420502033500A	R930001787
054205020420000	R930001789
05420502043500B	R930001790
054205100320000	R930001942
05420510033500A	R930001794
054205100420000	R930001943
05420510043500A	R930001799

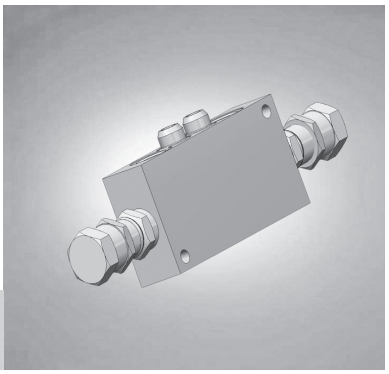
Type	Material number

Heizmann

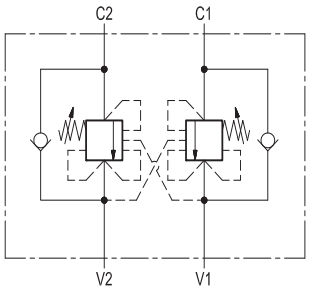
MANUAL

Senkbrems-Ventil Lasthalteventil (230843)
Soupapes d'équilibrage

RE 18307-68/04.10
Replaces: RE 00171/02.07



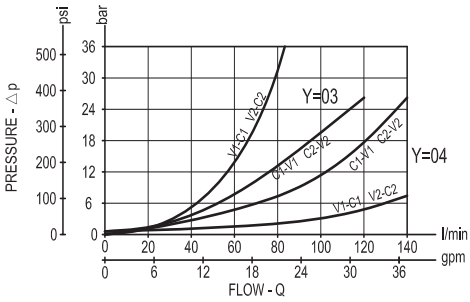
VBSO-DE-CC **05.42.05 - X - Y - Z**



Description

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports C1 and C2. This valve module includes 2 sections, each one composed by a check and a relief valve with balanced piston, pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Relief operates at the valve setting independent of back-pressure, but the piloted opening remains subject to additive pressure at V1 or V2.

Performance



Technical data

Hydraulic

Operating pressure	bar (psi)	up to 210 (3000)
Max. flow: see performance graph		

General

Manifold material		Aluminium
Note: aluminium bodies are often strong enough for operating pressures exceeding 210 bar (3000 psi), depending from the fatigue life expected in the specific application. If in doubt, consult our Service Network.		
Weight		see “Dimensions”
Fluid temperature range	°C (°F)	between -30 (-22) and +100 (212)
Other technical data		see data sheet RE 18350-50

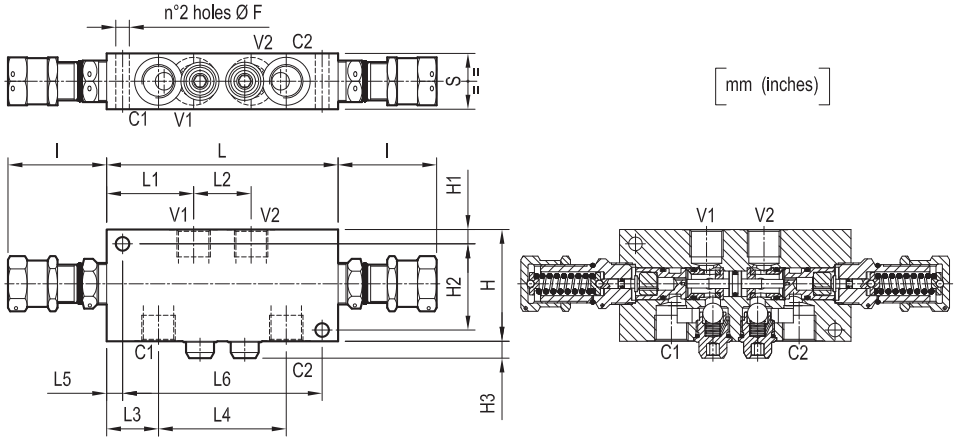
Note: for applications outside these parameters, please consult us.

Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230843)
Soupapes d'équilibrage

Dimensions



40 (1.58)	155 (6.1)	10 (0.39)	107 (4.21)	34 (1.34)	50 (1.97)	62.5 (2.46)	175 (6.89)	62 (2.44)	11 (0.43)	70 (2.76)	10 (0.39)	90 (3.54)	10.5 (0.41)		G 3/4	2.2 (4.9)
35 (1.38)	125 (4.92)	10 (0.39)	80 (3.15)	32.5 (1.28)	36 (1.42)	54.5 (2.15)	145 (5.71)	62 (2.44)	11 (0.43)	54 (2.13)	8 (0.32)	70 (2.76)	8.5 (0.34)		G 1/2	1.45 (3.2)
S	L6	L5	L4	L3	L2	L1	L	I	H3	H2	H1	H	F		Y	Weight kg (lbs)

Ordering code

05.42.05	X	Y	Z

Dual counterbalance, relief compensated

Pilot ratio

= 02	8.2:1
= 10	3.2:1

	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min.) bar (psi)
= 20	60-210 (900-3000)	54 (783)	200 (2900)
= 35	100-350 (1450-5000)	95 (1378)	350 (5000)

Port sizes	V1-V2	C1-C2	
= 03	G 1/2	G 1/2	
= 04	G 3/4	G 3/4	

Type	Material number
054205020320000	R930001786
05420502033500A	R930001787
054205020420000	R930001789
05420502043500B	R930001790
054205100320000	R930001942
05420510033500A	R930001794
054205100420000	R930001943
05420510043500A	R930001799

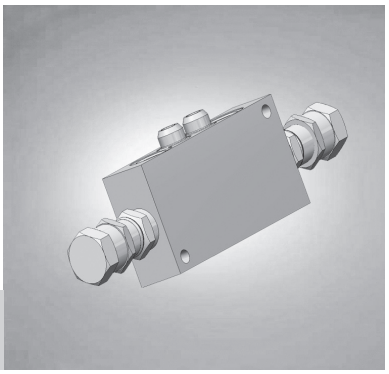
Type	Material number

Heizmann

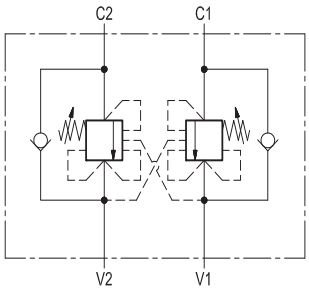
MANUAL

Senkbrems-Ventil Lasthalteventil (230429)
Soupapes d'équilibrage

RE 18307-68/04.10
Replaces: RE 00171/02.07



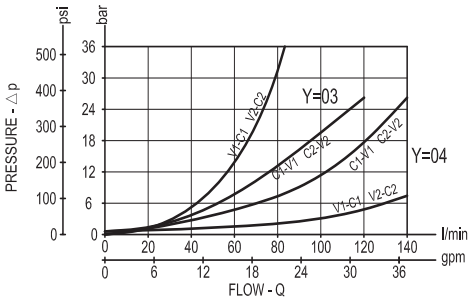
VBSO-DE-CC **05.42.05 - X - Y - Z**



Description

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports C1 and C2. This valve module includes 2 sections, each one composed by a check and a relief valve with balanced piston, pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Relief operates at the valve setting independent of back-pressure, but the piloted opening remains subject to additive pressure at V1 or V2.

Performance



Technical data

Hydraulic

Operating pressure	bar (psi)	up to 210 (3000)
Max. flow: see performance graph		

General

Manifold material		Aluminium
Note: aluminium bodies are often strong enough for operating pressures exceeding 210 bar (3000 psi), depending from the fatigue life expected in the specific application. If in doubt, consult our Service Network.		
Weight		see “Dimensions”
Fluid temperature range	°C (°F)	between -30 (-22) and +100 (212)
Other technical data		see data sheet RE 18350-50

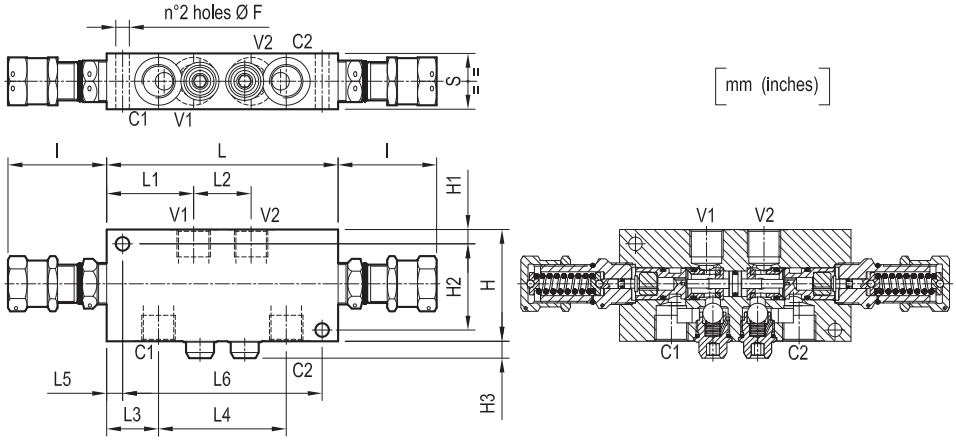
Note: for applications outside these parameters, please consult us.

Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230429)
Soupapes d'équilibrage

Dimensions



40 (1.58)	155 (6.1)	10 (0.39)	107 (4.21)	34 (1.34)	50 (1.97)	62.5 (2.46)	175 (6.89)	62 (2.44)	11 (0.43)	70 (2.76)	10 (0.39)	90 (3.54)	10.5 (0.41)		G 3/4	2.2 (4.9)
35 (1.38)	125 (4.92)	10 (0.39)	80 (3.15)	32.5 (1.28)	36 (1.42)	54.5 (2.15)	145 (5.71)	62 (2.44)	11 (0.43)	54 (2.13)	8 (0.32)	70 (2.76)	8.5 (0.34)		G 1/2	1.45 (3.2)
S	L6	L5	L4	L3	L2	L1	L	I	H3	H2	H1	H	F		Y	Weight kg (lbs)

Ordering code

05.42.05	X	Y	Z

Dual counterbalance, relief compensated

Pilot ratio

= 02	8.2:1
= 10	3.2:1

Port sizes	V1-V2	C1-C2	
= 03	G 1/2	G 1/2	
= 04	G 3/4	G 3/4	

	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min.) bar (psi)
= 20	60-210 (900-3000)	54 (783)	200 (2900)
= 35	100-350 (1450-5000)	95 (1378)	350 (5000)

Type	Material number
054205020320000	R930001786
05420502033500A	R930001787
054205020420000	R930001789
05420502043500B	R930001790
054205100320000	R930001942
05420510033500A	R930001794
054205100420000	R930001943
05420510043500A	R930001799

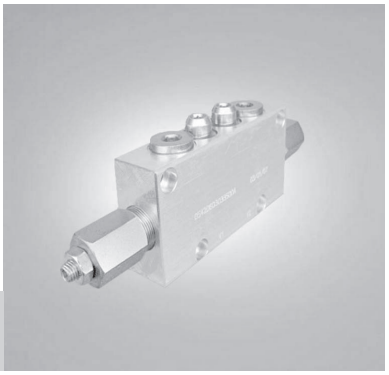
Type	Material number

Heizmann

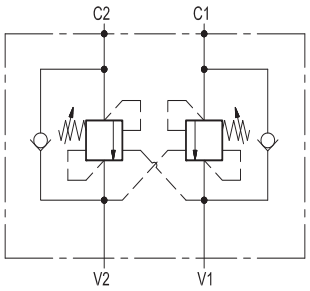
MANUAL

Senkbrems-Ventil Lasthalteventil (230430)
Soupapes d'équilibrage

RE 18307-64/04.10
Replaces: RE 00171/02.07



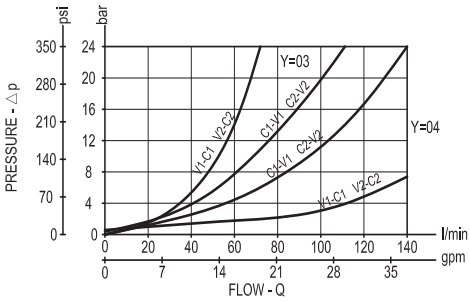
VBSO-DE-FC2 **05.42.06 - X - Y - Z**



Description

It provides static and dynamic control of load by regulating the flow IN and OUT of the actuator, through ports C1 and C2. This valve module includes 2 sections, each one composed by a check and a relief valve pilot assisted by pressure in the opposite line: the check section allows free flow into the actuator, then holds the load against reverse movement; with pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse flow. Back-pressure at V1 or V2 is additive to the pressure setting in all functions. For better safety and compact assembly, the C1 and C2 ports are gasket mounted directly on the actuator.

Performance



Technical data

Hydraulic

Operating pressure	bar (psi)	up to 210 (3000)
Max. flow	l/min (gpm)	see performance graph

Relief setting: at least 1.3 times the highest expected load.

General

Manifold material		Aluminium
Note: aluminium bodies are often strong enough for operating pressures exceeding 210 bar (3000 psi), depending from the fatigue life expected in the specific application. If in doubt, consult our Service Network.		
Weight		see “Dimensions”
Fluid temperature range	°C (°F)	between -30 (-22) and +100 (212)
Other technical data		see data sheet RE 18350-50

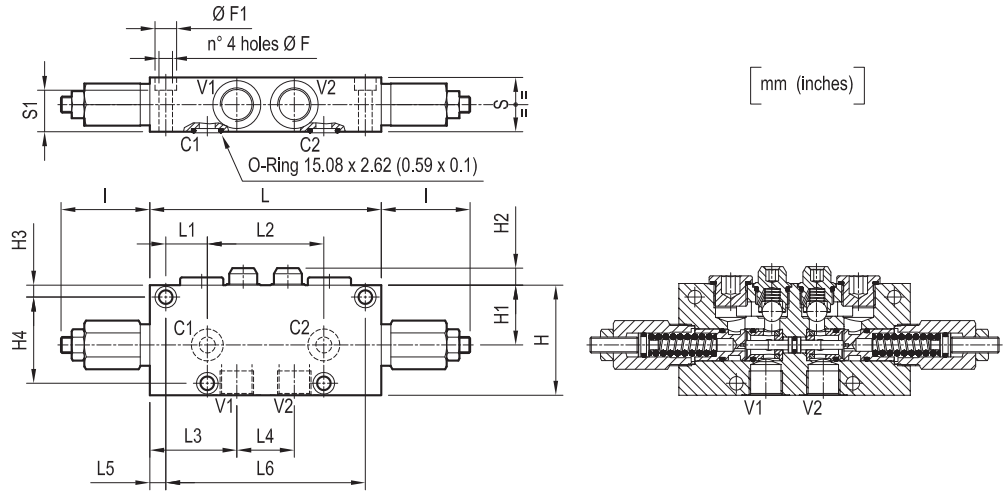
Note: for applications outside these parameters, please consult us.

Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230430)
Soupapes d'équilibrage

Dimensions



mm (inches)

39 (1.54)	29 (1.14)	155 (6.1)	10 (0.39)	50 (1.97)	62.5 (2.46)	100 (3.94)	27.5 (1.08)	175 (6.89)	56 (2.21)	70 (2.76)	10 (0.39)	11 (0.43)	52 (2.05)	90 (3.54)	10.5 (0.41)	16.5 (0.65)	G 3/4	2.2 (4.9)
34 (1.34)	26 (1.02)	125 (4.92)	10 (0.39)	36 (1.42)	54.5 (2.15)	73 (2.87)	26 (1.02)	145 (5.71)	56 (2.21)	54 (2.13)	7.5 (0.3)	11 (0.43)	37.5 (1.48)	69 (2.72)	8.5 (0.34)	13.5 (0.53)	G 1/2	1.4 (3.09)
S	S1	L6	L5	L4	L3	L2	L1	L	I	H4	H3	H2	H1	H	F	F1	Y	Weight kg (lbs)

Ordering code

05.42.06	X	Y	Z

Dual counterbalance

Pilot ratio

= 03	8.2:1
= 10	3.2:1

Port sizes	V1-V2	C1-C2	
= 03	G 1/2	Ø 10 (0.39)	
= 04	G 3/4	Ø 14 (0.55)	

	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min.) bar (psi)
= 35	120-350 (1750-5000)	106 (1537)	350 (5000)

Type	Material number
05420603033500A	R930001803
05420603043500A	R930001805
05420610033500A	R930001806
054206100435000	R930001807

Type	Material number

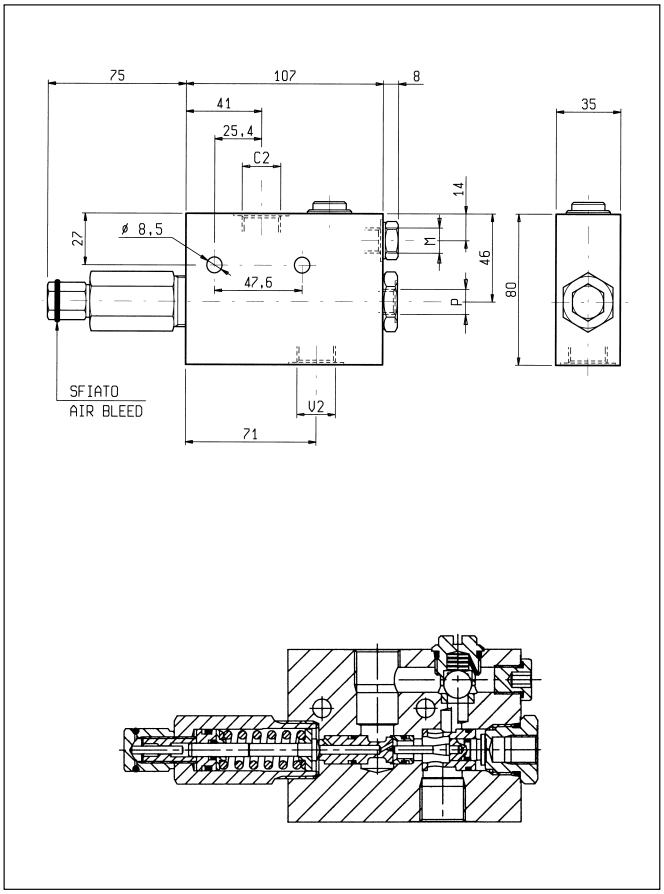
Heizmann

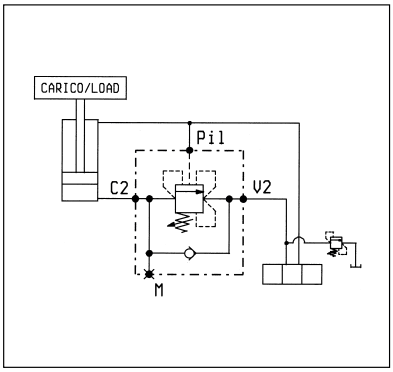
MANUAL

Senkbrems-Ventil Lasthalteventil (230433)
Soupapes d'équilibrage

BILANCIAMENTO, SEMPLICE EFFETTO, SERIE "NBA", VERSIONE "CC"
PILOT ASSISTED, "CC" TYPE, SERIES "NBA" OVERCENTRE

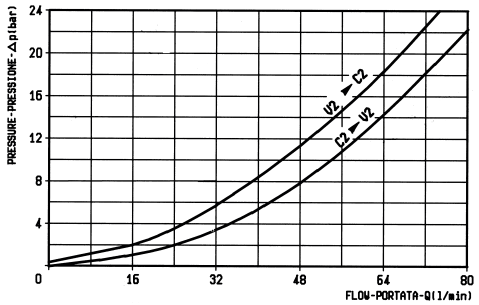
VBSO-SE-NBA **05.43.01 - X - Y - Z**





DATI TECNICI / TECHNICAL DATA

Pressione max. Max. pressure	350 bar
Portata max. Flow max.	70 l/min
Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico Pressure setting: at least 1.3 times the load induced pressure	
Peso Weight	1.05 kg



X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	10.5 : 1
10	3 : 1

Z	MOLLE / SPRINGS				
	Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q = 5 l/min) Std. setting bar (Q = 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
20	60-210	68	200	03.51.01.152	verde green
35	100-350	105	350	03.51.01.142	giallo yellow

Y	ATTACCHI / PORT SIZE	
	V2-C2	PIL-M
03	G 1/2	G 1/4

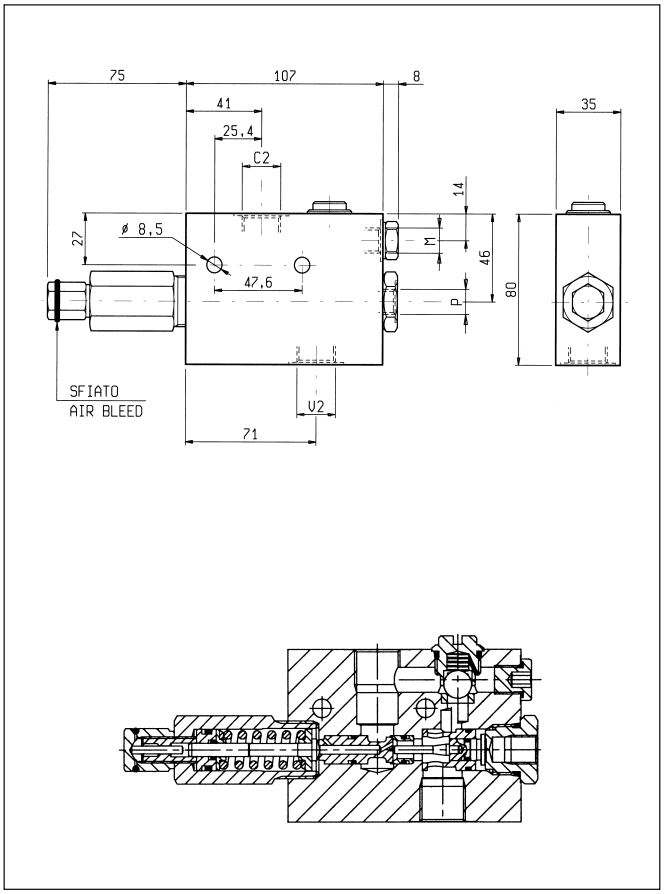
Heizmann

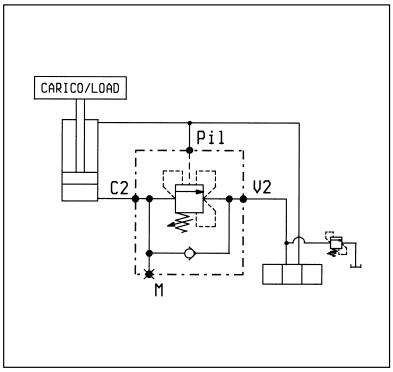
MANUAL

Senkbrems-Ventil Lasthalteventil (230434)
Soupapes d'équilibrage

BILANCIAMENTO, SEMPLICE EFFETTO, SERIE "NBA", VERSIONE "CC"
PILOT ASSISTED, "CC" TYPE, SERIES "NBA" OVERCENTRE

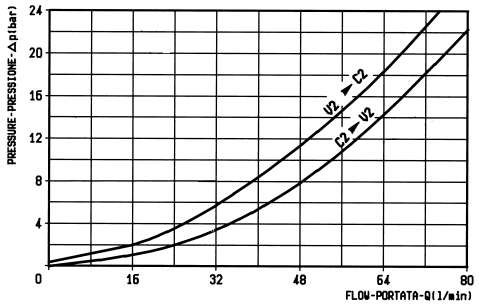
VBSO-SE-NBA **05.43.01 - X - Y - Z**





DATI TECNICI / TECHNICAL DATA

Pressione max. Max. pressure	350 bar
Portata max. Flow max.	70 l/min
Taratura della valvola: almeno 1.3 volte superiore alla pressione indotta dal carico Pressure setting: at least 1.3 times the load induced pressure	
Peso Weight	1.05 kg



X	RAPPORTO DI PILOTAGGIO PILOT RATIO
03	10.5 : 1
10	3 : 1

Z	MOLLE / SPRINGS				
	Campo taratura min - max bar Adj. press. range bar	Incremento press. bar / giro vite Press. increase bar / turn	Taratura standard bar (Q = 5 l/min) Std. setting bar (Q = 5 l/min)	Cod. ordinazione Ordering code	Colore Colour
20	60-210	68	200	03.51.01.152	verde green
35	100-350	105	350	03.51.01.142	giallo yellow

Y	ATTACCHI / PORT SIZE	
	V2-C2	PIL-M
03	G 1/2	G 1/4

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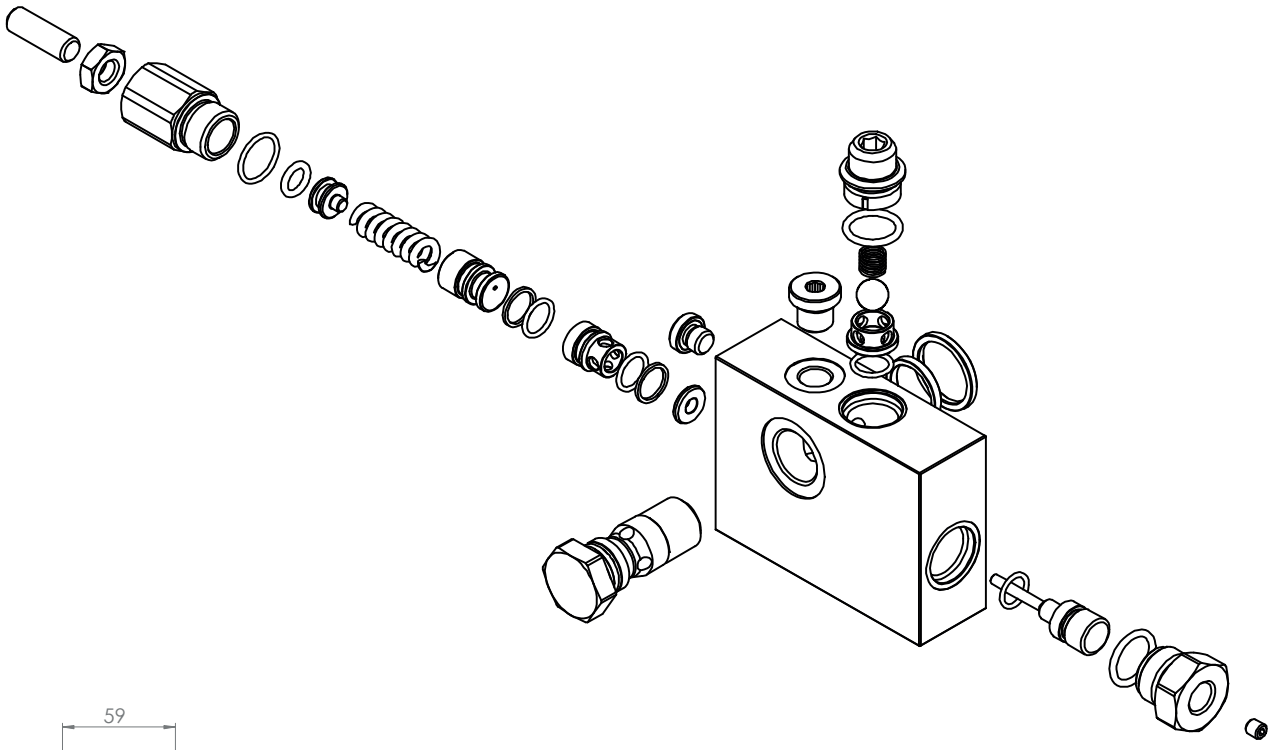
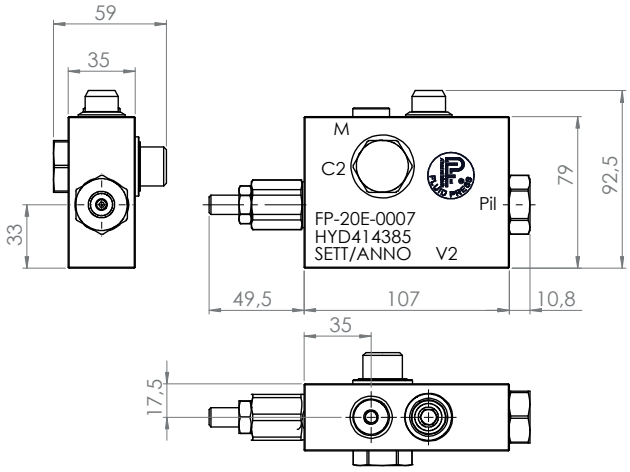
MANUAL

Senkbrems-Ventil Lasthalteventil (231048)
Soupapes d'équilibrage





Hydraulic scheme

Main features:

- max. pressure: 350 bar;
- setting: 280 bar;
- max. flow: 70 L/min;
- aluminium body;
- steel internal components;
- V2,C2 ports: 1/2" BSPP;
- M,PIL. ports: 1/4" BSPP;
- pilot ratio: 10,5:1

DENOMINAZIONE

FPOE 70 S 1/2 V L M 35

PESO:1.18 Kg

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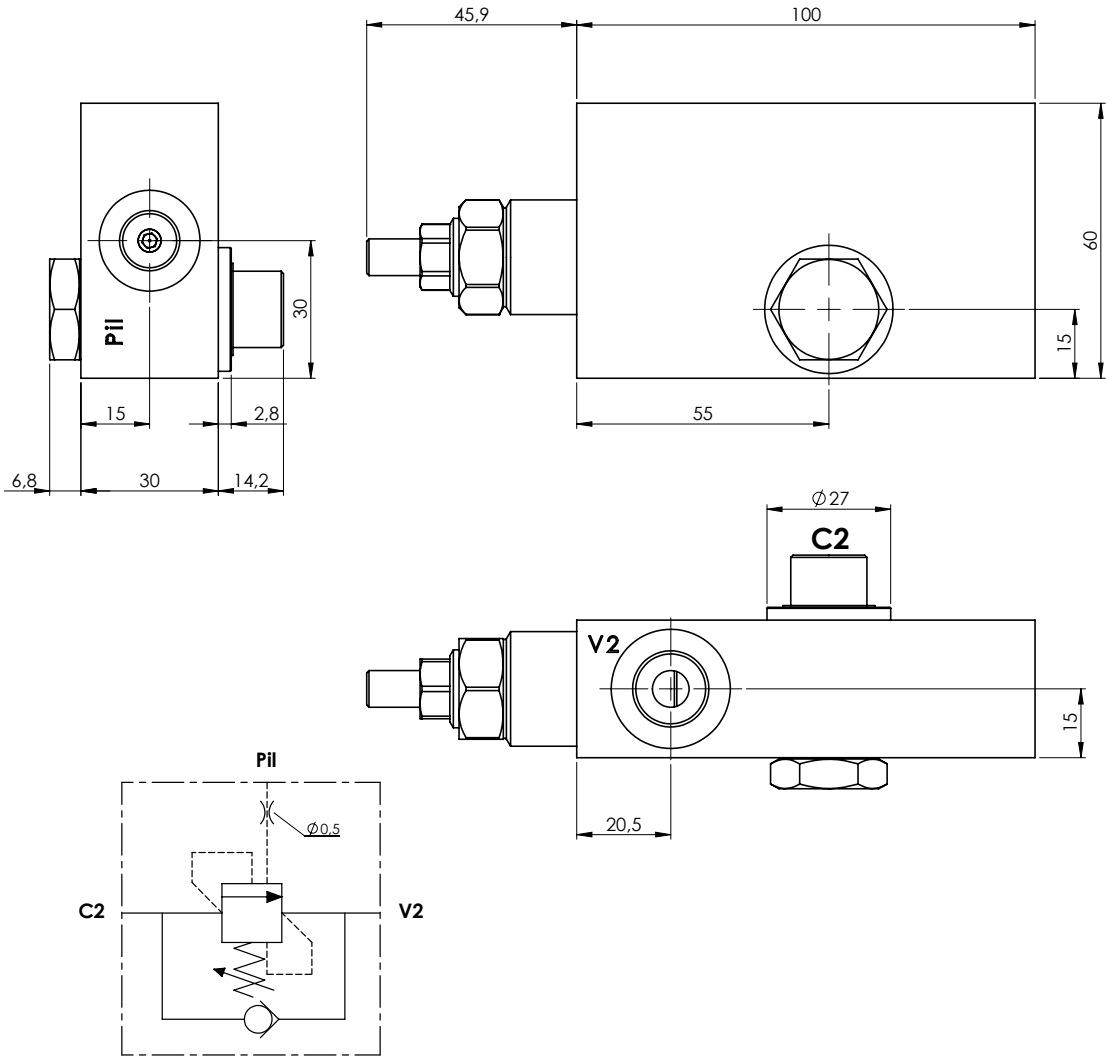
MANUAL

Senkbrems-Ventil Lasthalteventil (231087)
Soupapes d'équilibrage



Pressione massima: 350 bar
Portata nominale: 40 l/min

Campo di taratura: 100/350 bar
Taratura standard: 350 bar
Rapporto di pilotaggio: 4:1

Attacchi V2: G 3/8
C2: G 3/8 Banjo
Pil: G 1/4

Collettore in alluminio

MB000102

Heizmann AG | Neumattstrasse 8 | CH-5000 Aarau | T +41 62 834 06 06 | info@heizmann.ch | www.heizmann.ch

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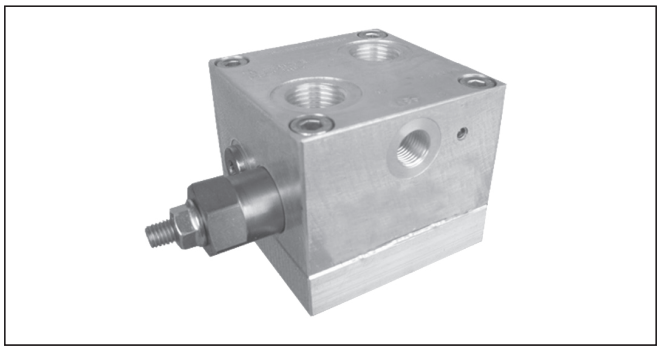
MANUAL

Senkbrems-Ventil Lasthalteventil (230448)
Soupapes d'équilibrage

VBSO-DE-VF-30-FM

06.03.01 - X

RE 18308-56
Edition: 03.2016
Replaces: 04.2010



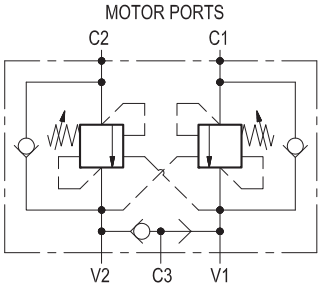
Description

It provides static and dynamic motion control by regulating the flow IN and OUT of the hydraulic motor, through ports C1 and C2. It includes 2 sections, each one composed by a check and a relief valve pilot assisted by pressure in the opposite line: the check allows free flow into the motor, then locks and prevents reverse movement. With pilot pressure applied at the line across, the pressure setting of the relief is reduced in proportion to the stated ratio until opening and allowing controlled reverse motion. With motor turning and without pilot pressure, the relief function builds up back-pressure at the motor port in order to stop the motion. Back-pressure at V1 or V2 is additive to the pressure setting in all functions. Through port C3, a shuttle valve directs either V1 or V2 line pressure to the spring actuated brake for brake releasing.

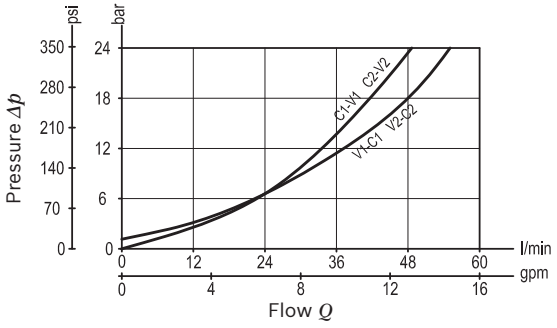
Technical data

Operating pressure	up to 210 bar (3000 psi)
Max. flow	60 l/min. (16 gpm)
Flangeable on SAUER-DANFOSS orbital motors OMS series.	
Relief setting: at least 1.3 times the highest expected load. In addition, both the relief setting and the pilot ratio must be determined in order to achieve building-up of pilot pressure in V1 or V2 high enough to release the brake prior to any valve opening.	
Weight	1.6 kg (3.5 lbs)
Manifold material	Aluminium
Note: aluminium bodies are often strong enough for operating pressures exceeding 210 bar (3000 psi), depending from the fatigue life expected in the specific application. If in doubt, consult our Service Network.	
Fluid	Mineral oil (HL, HLP) according DIN 51524
Fluid temperature range	-30 °C to 100 (-22 to 212 °F)
Viscosity range	10 to 500 mm^2/s (cSt)
Recommended degree of fluid contamination	Class 19/17/14 according to ISO 4406
Other technical data	see data sheet 18350-50

Note: for applications outside these parameters, please consult us.



Characteristic curve



Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230448)
Soupapes d'équilibrage

VBSO-DE-VF-30-FM | Dual counterbalance

Ordering code

06.03.01	X

Dual counterbalance with brake release port

Pilot ratio

013	4.2:1
023	11:1

	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min.) bar (psi)
for X=**013**	60-210 (900-3000)	56 (812)	200 (2900)
for X=**023**	60-250 (900-3600)	70 (1015)	250 (3600)

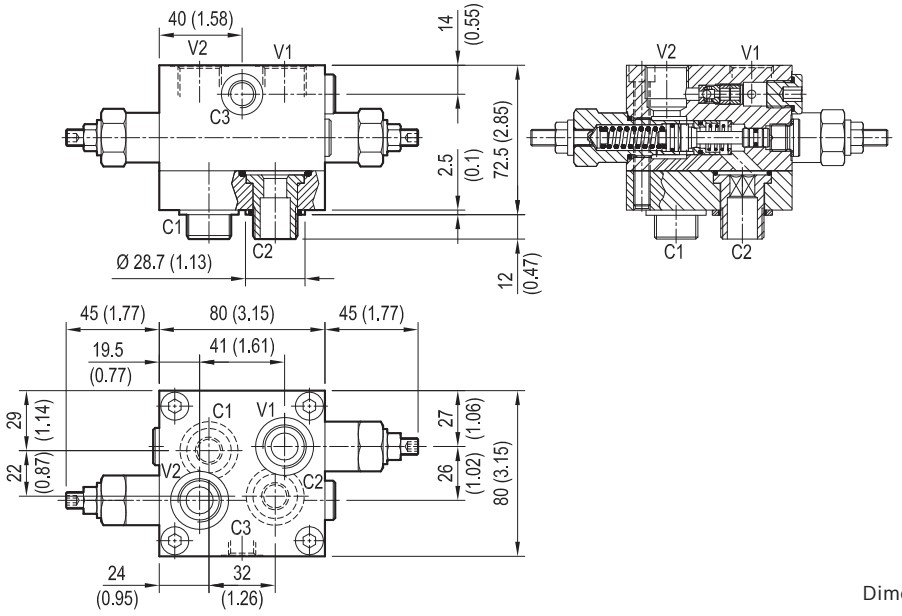
Port sizes	V1 - V2	C1 - C2	C3
	G 1/2	G 1/2	G 1/4

Tamper resistant cap
ordering code 11.04.23.002
Mat. no. R930000752

Type	Material number
06030101300000C	R930002738
06030102300000D	R930002751

Type	Material number

Dimensions



Dimensions [mm (inches)]

Heizmann

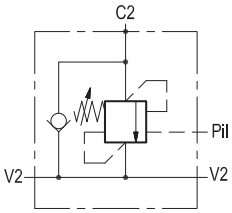
MANUAL

Senkbrems-Ventil Lasthalteventil (230452)
Soupapes d'équilibrage

RE 18307-38/07.10
Replaces: RE 00171/02.07

Single counterbalance

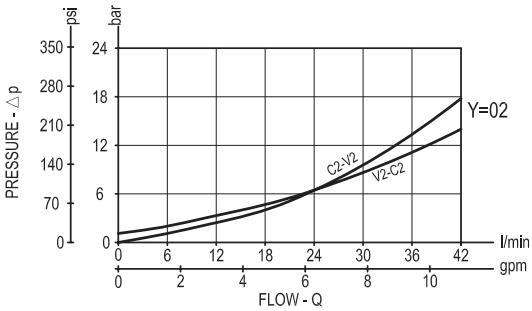
A-VBSO-SE-30-FC1 **08.41.02 - X - Y - Z**



Description

When pressure at V2 rises above the spring bias pressure, the check seat is pushed away from the piston and flow is allowed from V2 to C2. When load pressure at C2 rises above the pressure setting, the direct operated relief function is activated and flow is relieved from C2 to V2. With pilot pressure at Pil, the pressure setting is reduced in proportion to the stated ratio of the valve, until opening and allowing flow from C2 to V2. The spring chamber is drained to V2, and back-pressure at V2 is additive to the pressure setting in all functions. For safety and compactness, the C2 port is gasket mounted the actuator.

Performance



Technical data

Hydraulic

Max. operating pressure	bar (psi)	350 (5000)
Max. flow	l/min (gpm)	40 (11)

Relief setting: at least 1.3 times the highest expected load.

General

Manifold material		Steel
Weight	kg (lbs)	1.05 (2.32)
Fluid temperature range	°C (°F)	between -30 (-22) and +100 (212)
Other technical data		see data sheet RE 18350-50

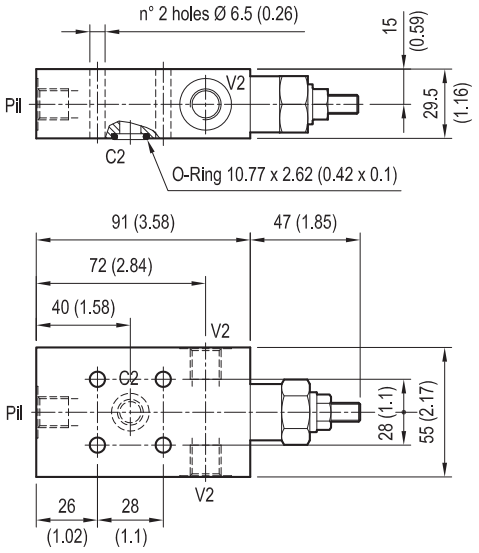
Note: for applications outside these parameters, please consult us.

Heizmann

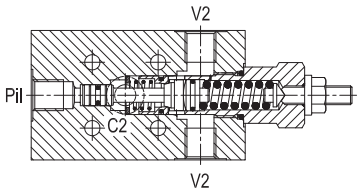
MANUAL

Senkbrems-Ventil Lasthalteventil (230452)
Soupapes d'équilibrage

Dimensions



[mm (inches)]



Ordering code

08.41.02	X	Y	Z

Single counterbalance

Pilot ratio

= 03 4.2 : 1

Port sizes	V2	C2	Pil
= 09	G 1/4	Ø 9 (0.35)	G 1/4
= 02	G 3/8	Ø 9 (0.35)	G 3/8

	SPRINGS		
	Adj. pressure range bar (psi)	Pres. increase bar/turn (psi/turn)	Std. setting Q=5 (l/min.) bar (psi)
= 20	60-210 (870-3000)	63 (914)	200 (2900)
= 35	100-350 (1450-5000)	138 (2001)	350 (5000)

Tamper resistant cap
code 11.04.23.002
R930000752

Type	Material number
08410203022000B	R930003285
08410203023500B	R930003286
08410203092000A	R930003287
08410203093500B	R930003288

Type	Material number

Heizmann

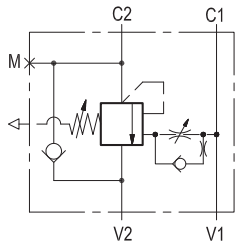
MANUAL

Senkbrems-Ventil Lasthalteventil (230454)
Soupapes d'équilibrage

RD 18307-52/07.12
Ersetzt: RD 18307-52/04.10

Senkbremsventil, einfachwirkend, atmosphärisch entlastet

A-VBSO-SE-CCAP-33-PL **08.45.86 - X - Y - Z**

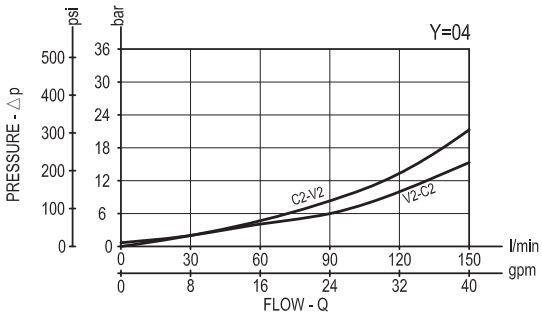


Bezeichnung

Wenn der Druck bei V2 über den Vorspanndruck der Feder ansteigt, wird der Rückschlagventilsitz vom Kolben abgehoben und der Durchfluss von V2 nach C2 freigegeben. Steigt der Lastdruck bei C2 über die Druckeinstellung, wird die direktbetätigte, über Differenzflächen wirkende Druckbegrenzungsfunktion aktiviert und der Durchfluss von C2 nach V2 freigegeben. Wenn Vorsteuerdruck bei V1-C1 anliegt, reduziert sich der Druckeinstellwert proportional zum angegebenen Vorsteuerverhältnis des Ventils, bis die Druckbegrenzung öffnet und den Durchfluss von C2 nach V2 freigibt. Die Federkammer wird zur Atmosphäre entlastet, was den Betrieb aller Funktionen unabhängig vom Gegendruck bei V2 erlaubt.

Anmerkung: Mit „M“ gekennzeichnete Anschlüsse sind nicht mit kalibrierter Drossel geschützt, sondern stehen in direkter Verbindung mit Druckkanälen.

Kennlinien



Technische Daten

Hydraulisch

Max. Betriebsdruck	bar (psi)	350 (5000)
Max. Volumenstrom	l/min (gpm)	150 (40)

Druckbegrenzungseinstellung: mindestens das 1,3-fache der höchsten erwarteten Last.

Die Vorsteuerleitung beinhaltet eine verstellbare hydraulische Dämpfung zur Feinabstimmung von Stabilität und Ansprechverhalten.

Allgemeines

Gehäusewerkstoff		Stahl
Masse		siehe „Abmessungen“
Flüssigkeitstemperaturbereich	°C (°F)	-30 (-22) bis +100 (212)
Sonstige technische Daten		siehe Datenblatt RD 18307-50

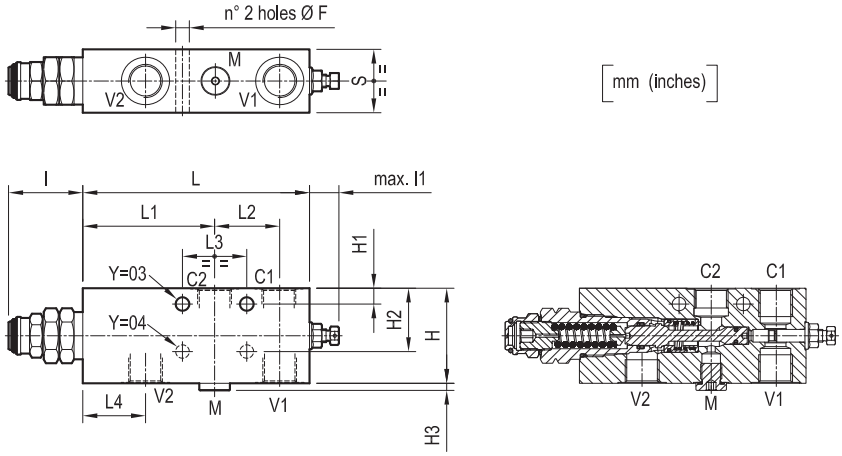
Anmerkung: Bei Anwendungen außerhalb dieser Parameter wenden Sie sich bitte an uns.

Heizmann

MANUAL

Senkbrems-Ventil Lasthalteventil (230454)
Soupapes d'équilibrage

Abmessungen



40 (1.58)	39 (1.54)	40 (1.58)	43 (1.69)	82 (3.23)	147 (5.79)	13.5 (0.53)	18.5 (0.73)	46.5 (1.83)	4.5 (0.18)	60 (2.36)	- -	80 (3.15)	10.5 (0.41)		G 3/4	3.1 (6.8)
40 (1.58)	39 (1.54)	40 (1.58)	40 (1.58)	82 (3.23)	141 (5.55)	13.5 (0.53)	17.5 (0.69)	46.5 (1.83)	4.5 (0.18)	- -	10 (0.39)	60 (2.36)	8.5 (0.34)		G 1/2	2.4 (5.3)
S	L4	L3	L2	L1	L	I1	I1	I	H3	H2	H1	H	F		Y	Weight kg (lbs)

Bestellangaben

08.45.86	X	Y	Z

Senkbremsventil, einfachwirkend, atmosphärisch entlastet

Vorsteuerverhältnis

= 13	4:1
= 15	8:1

Anschluss-größen	V1-V2	C1-C2	M
= 03	G 1/2	G 1/2	G 1/4
= 04	G 3/4	G 3/4	G 1/4

		Druckstufen		
		Einstelldruck-bereich bar (psi)	Druckänderung bar/Umdrehung (psi/Umdrehung)	Standardeinstellung Q=5 (l/min.) bar (psi)
= 35	für X=13	100-350 (1450-5000)	110 (1595)	350 (5000)
	für X=15	150-350 (2200-5000)	84 (1218)	350 (5000)

Typ	Materialnummer
08458613033500D	R930003562
08458613043500C	R987262555
08458615033500C	R930003568
08458615043500C	R930003569

Typ	Materialnummer