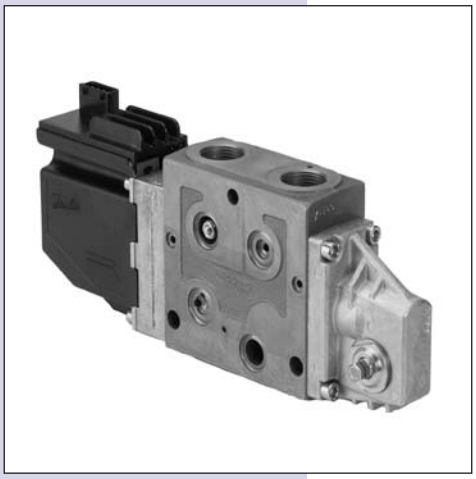
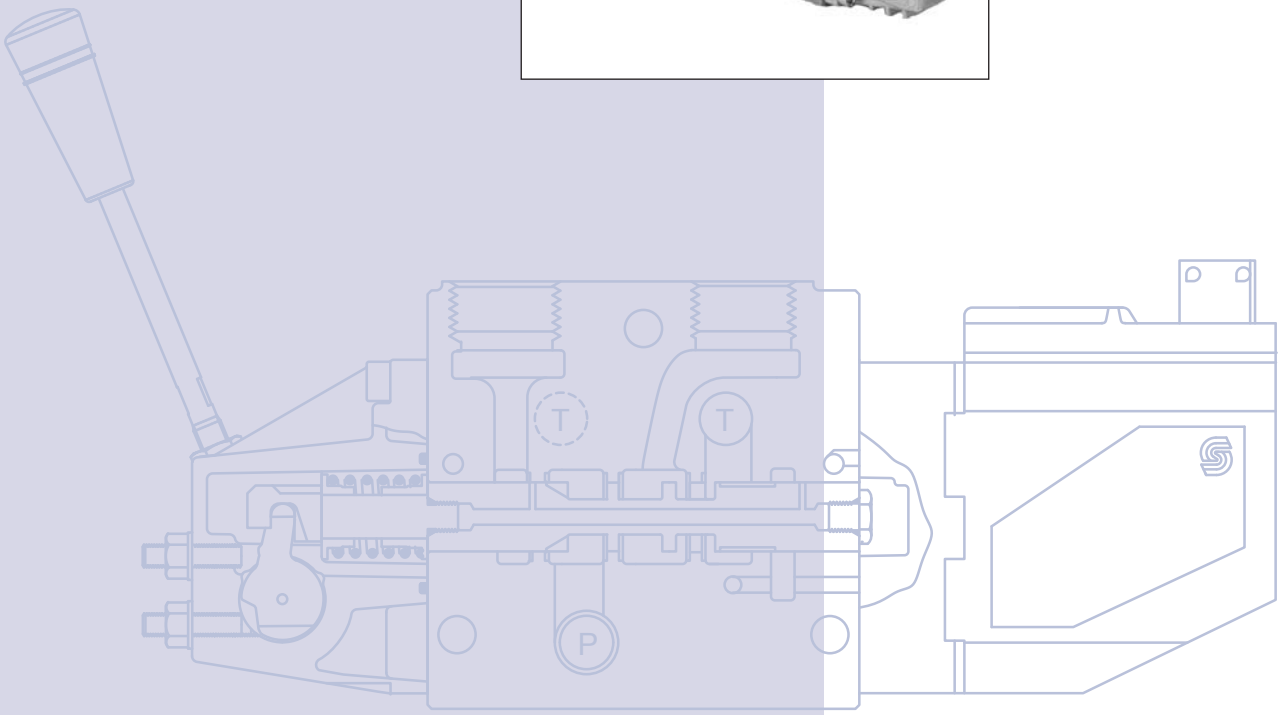
SAUER DANFOSS

PVSK Module with Integrated Diverter Valve and P-Disconnect Function

Tech Note





PVSK Module
Tech Note
Contens

Revision History

Table of Revisions

Date	Page	Changed	Rev
Jun 2004	All	First edition	AA
Jan 2010	8	Japan location	AB
Jan 2010	4, 6	Drawings changed	BA
Dec 2010	8	New back cover	BB

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Front cover illustrations: P300647, F300648, F300649 and F300650
drawing: 157-547

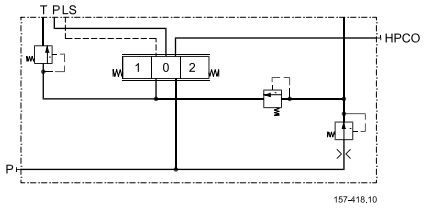
Introduction

Sauer-Danfoss now introduces PVSK-modules with integrated diverter valve and P-disconnect function. The new module is intended for cranes, telescope lifts and other applications that have special demands on functionality and safety. The PVSK-module can be integrated in PVG 32 valve groups for open- as well as closed-centre systems.

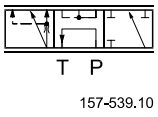
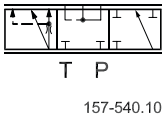
Function of the PVSK-module:

- When the diverter valve is in neutral position, there is no pressure (only tank pressure) in the P-channel of the valve group.
- When the diverter valve spool is actuated in A-direction, it enables the basic modules in the PVG-group to receive pump flow supply.
- When the diverter valve spool is actuated in B-direction, it enables the (High Pressure Carry Over) HPCO-port in the PVSK module and the P-cannel in the valve group to receive pump flow supply.

Specification and Code Numbers for PVSK Modules

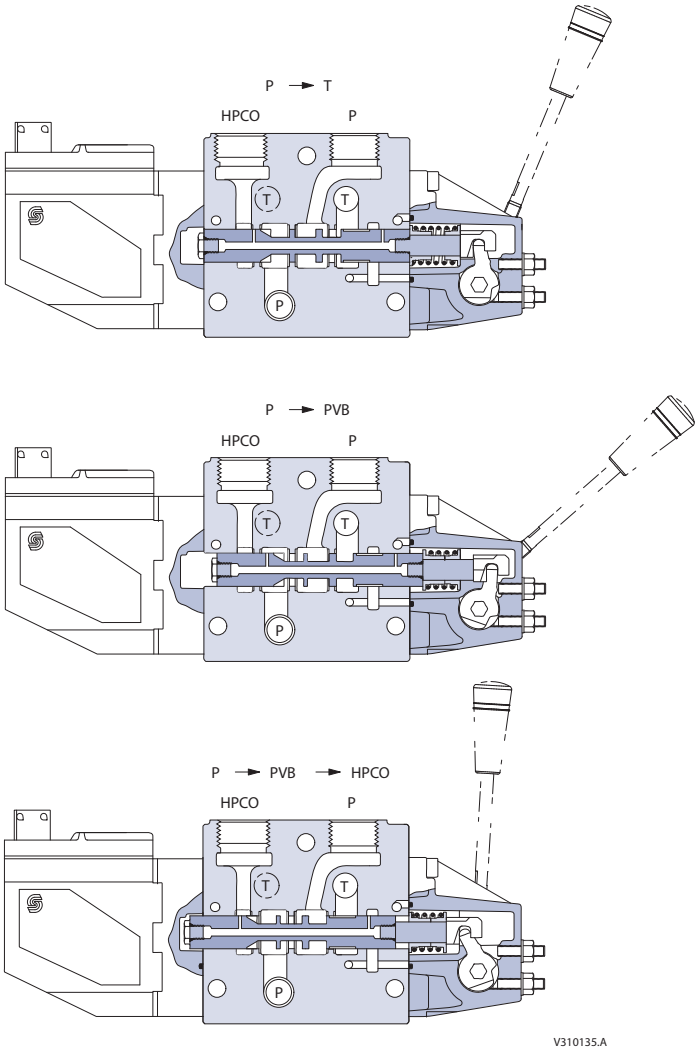
Symbol	Description	Code no.
	Open and closed center inlet With pilot supply for electrical actuation Max. pump pressure 350 bar [5076 psi] Max. pump flow 120 l/min [31.70 US gal/min] P= 3/4" HPCO= 3/4"	157B6961

Specification and Code Numbers for PVSK Spools

	4 way - 3 position spool for fixed displacement pump HPCO flow 40 l/min [10.57 US gal/min] Open neutral position P -> T	157B9657
	4 way - 3 position spool for variable displacement pump HPCO flow 40 l/min [10.57 US gal/min] Closed neutral position P -> T	157B9658

PVSK spools 157B9657 and 157B9658 must be option mounted - see example page 7

PVSK

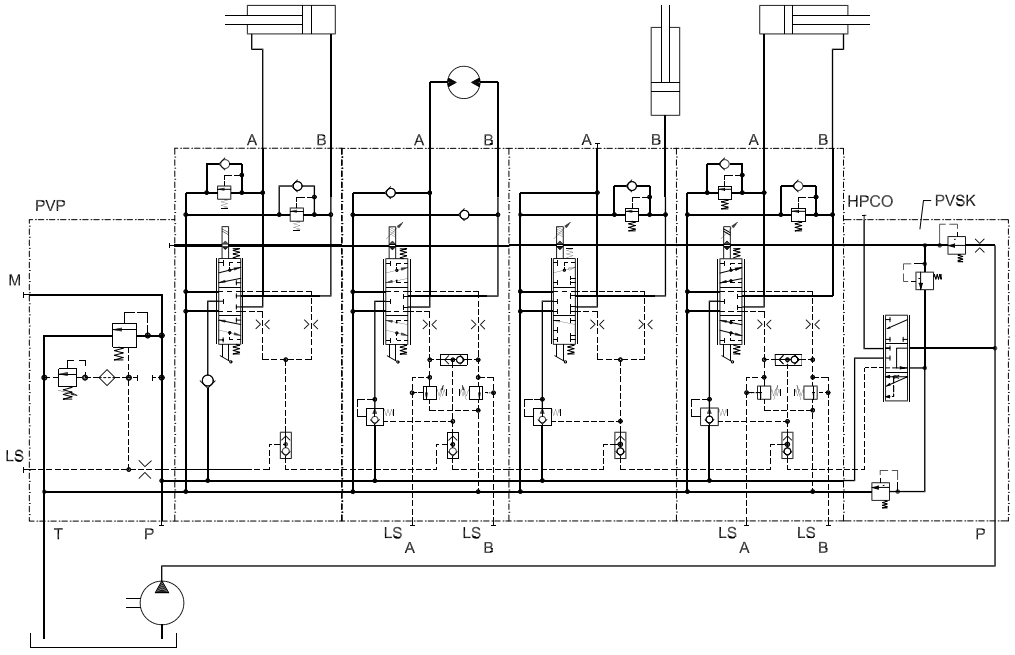


As the PVSK-module is provided with pump (P) and HPCO (High Pressure Carry Over) connections, the standard pump connection in PVP, PVPV or PVPM must be sealed with a steel plug (see example on page 6). Note that the steel plug is not included upon delivery. In neutral position, the spool in the PVSK-module interrupts the connection from the pump to the P-channel in the valve group. This not only ensures a low pressure (tank pressure) in the P-channel, but also a low pressure-drop in flow circulating between pump and tank (see diagram 157-521 on page 5).

As the PVSK-module replaces endplate PVS/I, the code number field (field 11) in the specification sheet must be left open. In general, the diverter function must be specified as a working function PVB, which means that PVE, PVSK spool and PVM must be specified separately (see example on page 7).

To ensure an adequate supply to the PVE pilot reduction valve, the tank channel of PVSK includes a backpressure valve. In open-centre systems, the pump flow must be min. 40 l/min (10.57 US gal/min) to maintain a sufficient pressure-drop across the backpressure valve.

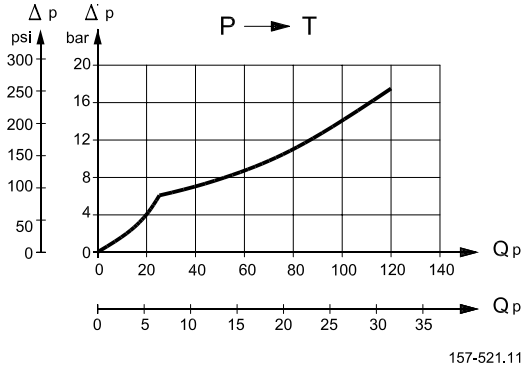
PVSK



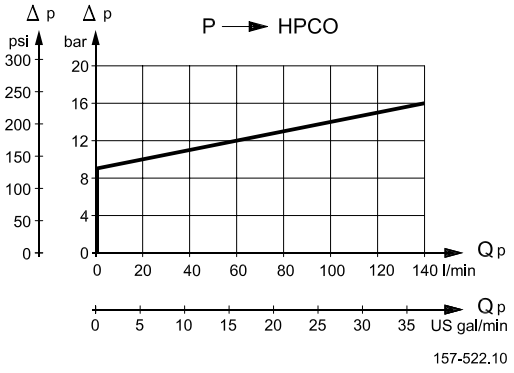
As the PVSK-module has an integrated pilot oil supply, always use standard PVP 32 **without** pilot oil supply in PVG 32 valve groups.

PVSK Characteristics

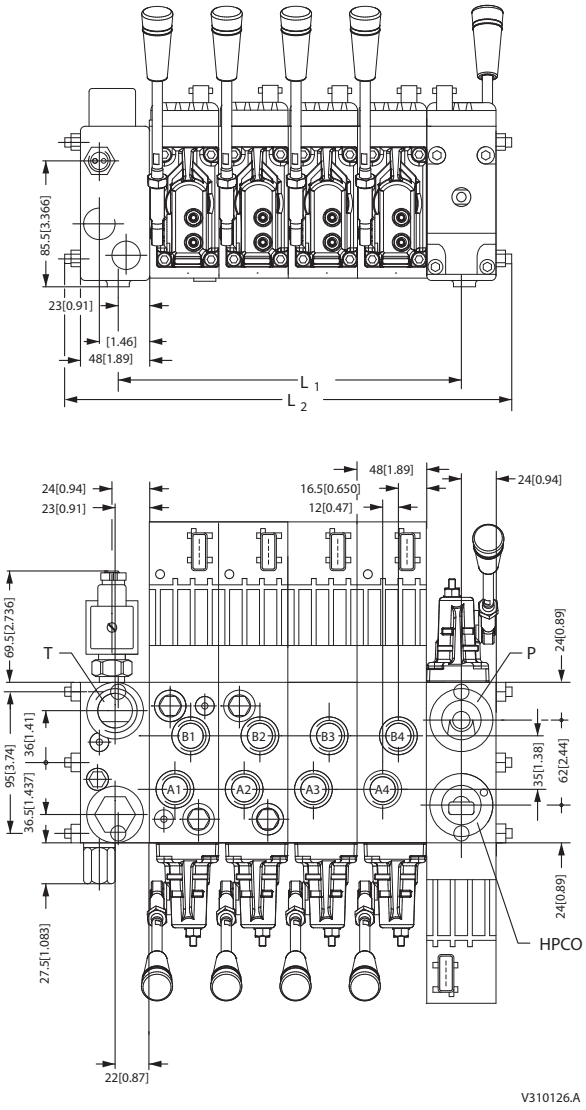
Pressure drop P → T with PVSK spool in neutral position



Pressure drop P → T in PVP



Dimensions



Because of limited space conditions, PVE and PVM on the work sections have to be mounted as shown on the above drawing.

Stay Bolt Set, PVAS for PVSK

Qty, Basic modules	L1	L2	Code no.	Weight	
				kg	[lb]
1	95	165	157B8021	0.25	[0.55]
2	143	213	157B8022	0.30	[0.66]
3	191	262	157B8023	0.35	[0.77]
4	239	311	157B8024	0.45	[0.99]
5	287	360	157B8025	0.50	[1.10]
6	335	409	157B8026	0.55	[1.21]
7	383	458	157B8027	0.65	[1.43]
8	431	507	157B8028	0.70	[1.54]
9	479	551	157B8029	0.75	[1.65]
10	528	600	157B8030	0.85	[1.87]

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PVG 32
Specification Sheet

Subsidiary / Dealer	PVG No.
Customer	Customer No.
Application	Revision No.

Function	A-Port							B-Port		
			0	157B 5100		157B				
				p = 100	bar	157B				
	a 157B 3171		**1**	157B 6130		157B 7004	**13**	157B 4216		**c**
	b 157B 2100			LS_A	bar	LS_B	bar	157B 2100		**b**
	a 157B 3171		**2**	157B 6233		157B 7024	**13**	157B 4016		**c**
	b 157B 2001			LS_A 100	bar	LS_B 100	bar	157B 2001		**b**
	a 157B 3171		**3**	157B 6230		157B 7004	**13**	157B 4016		**c**
	b 157B 2001			LS_A	bar	LS_B	bar	157B 2100		**b**
	a 157B 3171		**4**	157B 6233		157B 7021	**13**	157B 4216		**c**
	b 157B 2250			LS_A 220	bar	LS_B 220	bar	157B 2250		**b**
	a 157B 4216		**5**	157B 6961		157B 9657	**13**	157B 3171		**c**
	b 157B			LS_A	bar	LS_B	bar	157B		**b**
	a 157B		**6**	157B		157B	**13**	157B		**c**
	b 157B			LS_A	bar	LS_B	bar	157B		**b**
	a 157B		**7**	157B		157B	**13**	157B		**c**
	b 157B			LS_A	bar	LS_B	bar	157B		**b**
	a 157B		**8**	157B		157B	**13**	157B		**c**
	b 157B			LS_A	bar	LS_B	bar	157B		**b**
	a 157B		**9**	157B		157B	**13**	157B		**c**
	b 157B			LS_A	bar	LS_B	bar	157B		**b**
	a 157B		**10**	157B		157B	**13**	157B		**c**
	b 157B			LS_A	bar	LS_B	bar	157B		**b**
Remarks			**11**	157B -						
			12	157B 8024						

Filled in by	Date

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520L0556 • Rev BB • Dec 2010

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