

- **Measurement principle: spring/piston system**
- **Flow measurement with direction indication**
- **Response time < 2 ms**
- **Compact design**
- **Withstands pressures up to 420 bar**
- **Wide range of viscosity**
- **p/T/Q measurement possible with connection block**



Flow measurement with direction indication for mobile and stationary measurement jobs

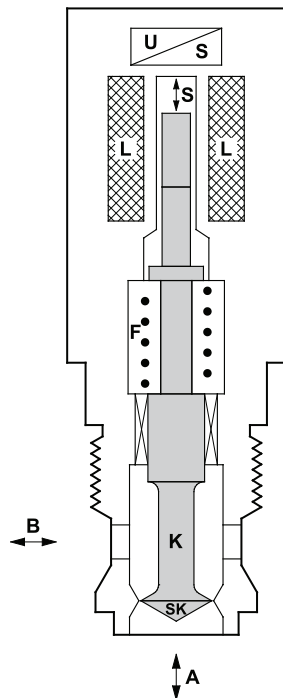
Function

When there is a flow from A to B or B to A, the piston (K) is moved. When at rest, the spring (F) and piston (K) are in equilibrium. The stroke change (S) is proportional to the flow volume and is converted by the built-in electronics to a measured value. By the change in direction of the piston (B to A) flow directions can be shown (e.g. -45.8 l/min.). The response time of the piston movement is less than 0.002 s.

Application

In the field of high pressure hydraulics, the rapid capture of the amount of flow is of great significance. The reaction times of the SCQ's enable the dynamic behaviour of hydraulic systems to be measured. The indication of direction is helpful when searching for faults in hydraulic systems. Rapid load changes, which can cause damage for example in valves and pumps, can be determined. Installation with a connection block permits the combined measurement of p, T and Q. Rapid assembly of the SCQ's is achieved with an in-line adapter for tube or hose installation.

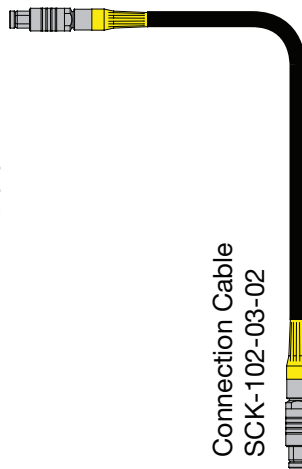
Robust design makes possible extreme condition applications, such as, for example, high load changes or rates of pressure increase.



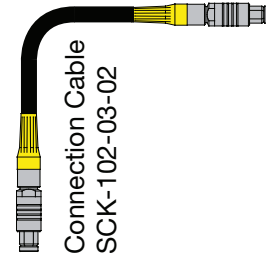
SCQ measurement principle



The Parker Service Master *Plus*
or The Parker Service Master *Easy*



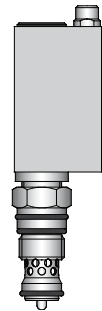
Connection Cable
SCK-102-03-02



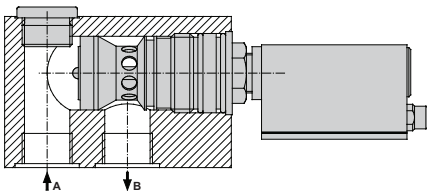
Connection Cable
SCK-102-03-02



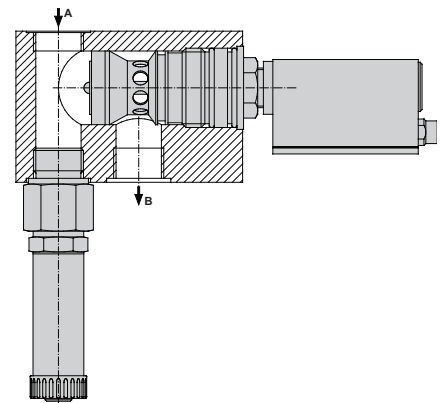
Serviceman
SCM-152-x-02



Flow Meter
SCQ-060-0-02

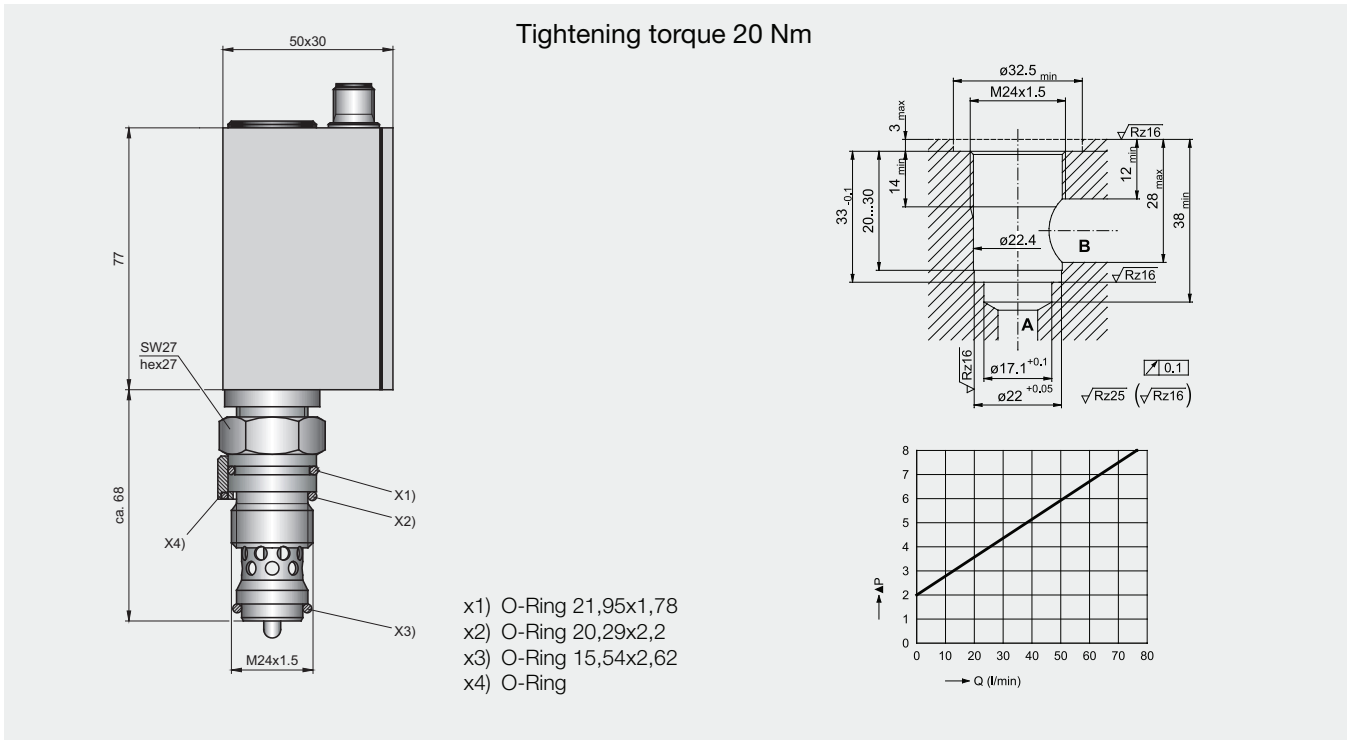


Flow Meter SCQ
in Connection Block SCAQ

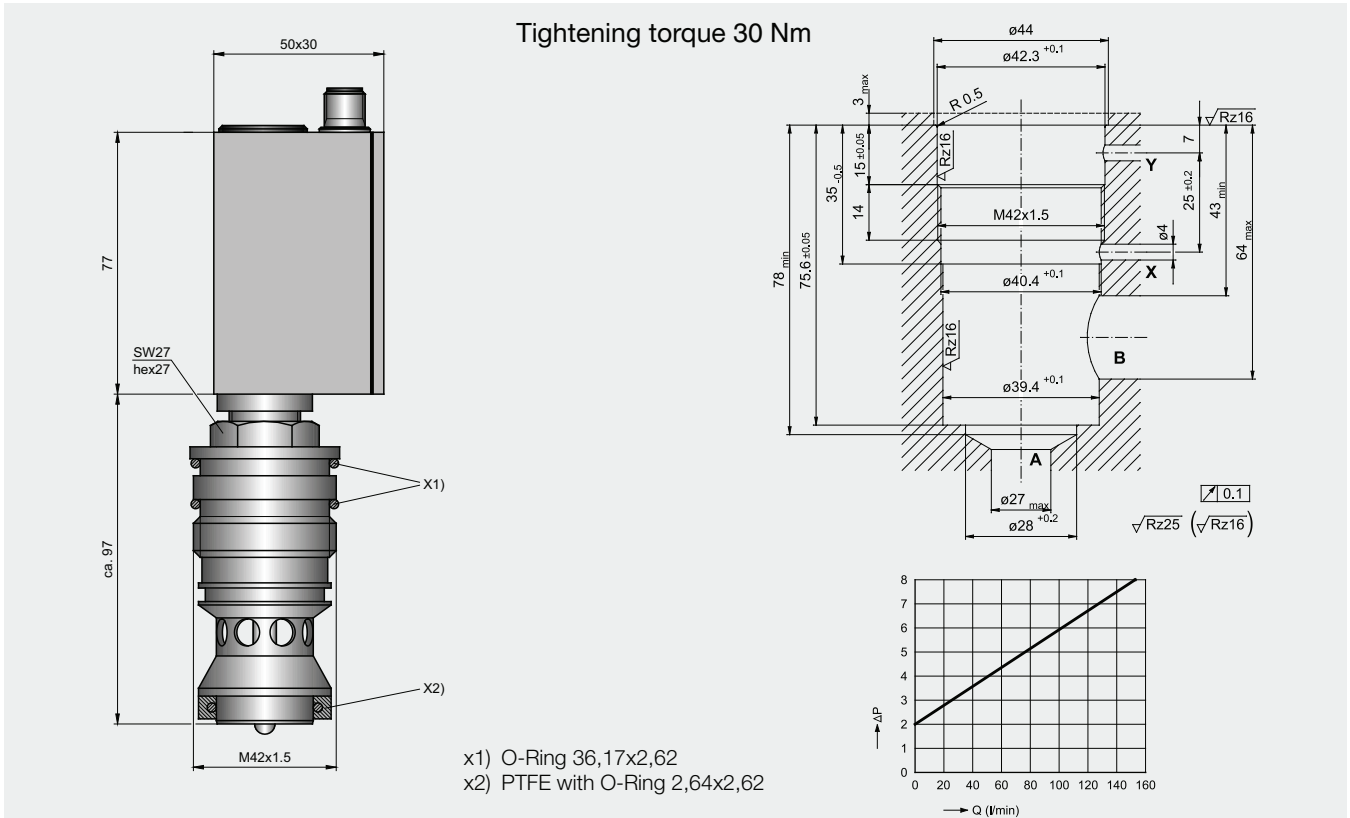


Flow Meter SCQ with
Temperature Sensor SCPT
in Connection Block SCAQ

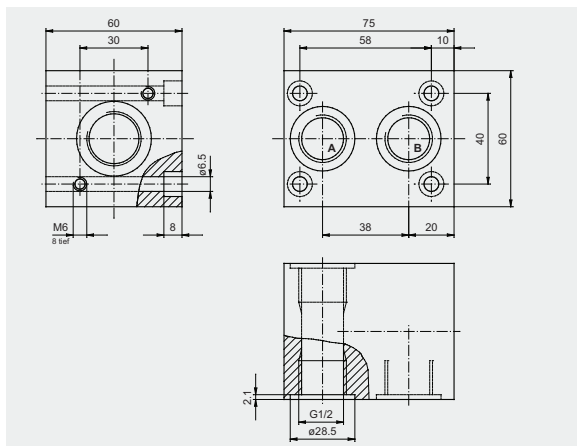
Port dimensions and pressure drop graph SCQ-060



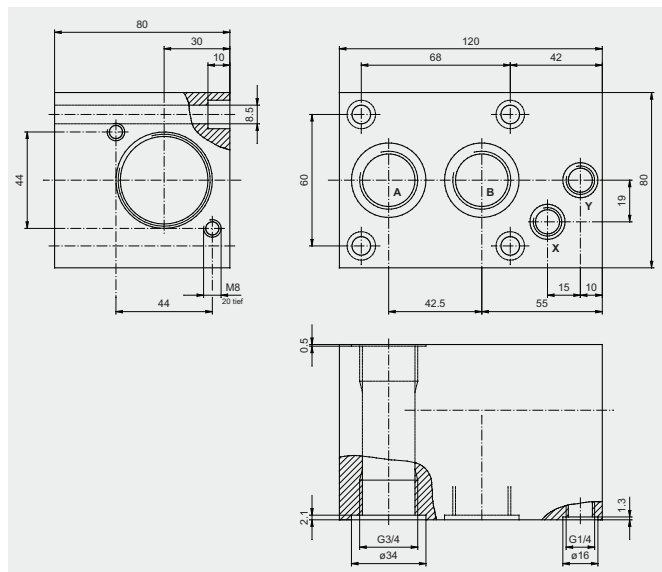
Port dimensions and pressure drop graph SCQ-150



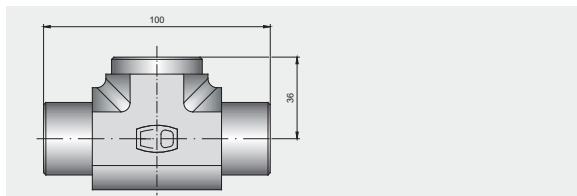
Connection Block SCAQ-060



Connection Block SCAQ-150



IN-LINE Adapter SCAQ-GIR1/2



SCQ Flow Meter (0...±60 l/min)	#
0...60 l/min (incl. Distance ring)	SCQ-060-0-02
Distance ring (O-Ring SCQ-060)	SC-910
Seals for SCQ-060	SC-911

SCAQ IN-LINE Adapter (60 l/min)	#
1/2" BSPP female (A-B) und M24 female for SCQ-060	SCAQ-GIR1/2A4CX
with Screw Plugs:	
Cartridge Port M24 male (SCQ-060)	SCQ-M24X1.5-ED

SCAQ Block (60 l/min)	#
1/2" BSPP female (A-B) und M24 female for SCQ-060	SCAQ-060
with Screw Plugs:	
Cartridge Port M24 male (SCQ-060)	SCQ-M24X1.5-ED
1/2" BSPP male port (A-B)	SCQ-R1/2-ED

SCQ Flow Meter (0...±150 l/min)	#
0...150 l/min	SCQ-150-0-02
Seals for SCQ-150	SC-912

SCAQ Block (150 l/min)	#
3/4" BSPP female (A-B) und M42 female for SCQ-150	SCAQ-150
with Screw Plugs:	
Cartridge Port M24 male (SCQ-060)	SCQ-M42X1.5-ED
3/4" BSPP male port (A-B)	SCQ-R3/4-ED

	SCQ-060	SCQ-150
Flow Range Q_N	-60...+60 l/min	-150...+150 l/min
Q_{max}	-66...+66 l/min	-165...+165 l/min
Ports	M24 (NG10)	M42 (NG16)
Weight (g)	670	1.050

Accuracy	
Deviation from Characteristic Curve	± 2 % FS @ 46cSt.
Response Time	2 ms
Thermal Drift	$\pm 0,05$ % FS/ $^{\circ}$ C
Repeat Accuracy	$\pm 0,5$ % FS
Resistance to Pressure	
Pressure Range	3...420 bar
Operating Pressure P_N	315 bar
Overload Pressure P_{max}	420 bar
Pressure Drop ΔP (bar) @ (FS)	see diagram
Material	
Housing	Steel
Sealing	NBR
Parts in Contact with Media	Steel, NBR

FS = FullScale

Ambient Conditions	
Operating Temperature	+10...+60 $^{\circ}$ C
Storage Temperature	-20...80 $^{\circ}$ C
T_{max} Fluid ($^{\circ}$ C)	+80 $^{\circ}$ C
Filtration	25 μ m
Viscosity Range	15...100 cSt.
Protection	IP54 DIN EN 60529
Electrical Connection to Hand-Held Measuring Instrument	
Plug connection	5-pin, push-pull
Power Supply	+7...+15 VDC
Output	± 3 VDC
Electromagnetic Compatibility	
Interference Emissions	EN 61000-6-3
Interference Resistance	EN 61000-6-2

SCK Connection Cables	#
Serviceman/The Parker Service Master <i>Family</i>	
3 m (male 5 pin - male 5 pin)	SCK-102-03-02
5 m (male 5 pin - male 5 pin)	SCK-102-05-02
5 m Extension cable (male 5 pin - female 5 pin)	SCK-102-05-12