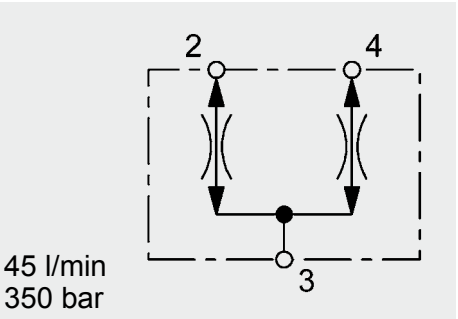
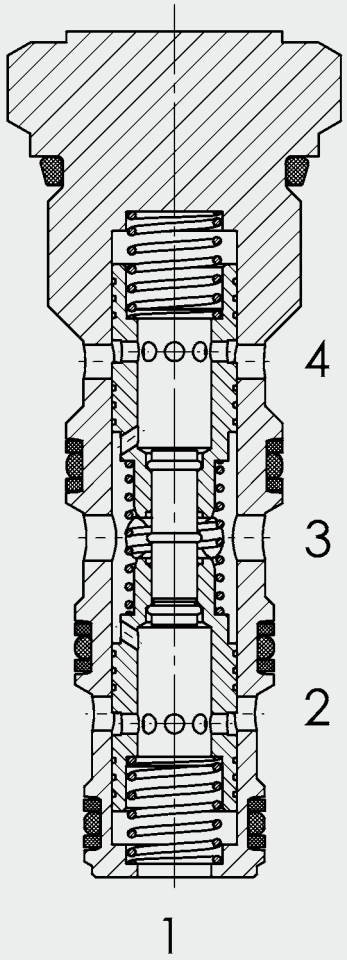


Flow Divider / Combiner SAE-10 Cartridge – 350 bar

UNF

ST10-01

FUNCTION



Note:
Port 1 is not used

The ST10 flow divider is a spring-loaded pressure compensated spool type valve. It divides a flow in two and keeps both flows constant. The division is made according to the specified ratio - from port 3 to ports 2 and 4.
As a flow combiner it combines two partial flows together – from ports 2 and 4 to port 3.
Port 1 is not used.

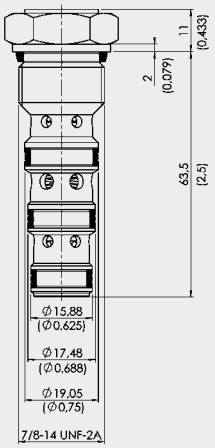
FEATURES

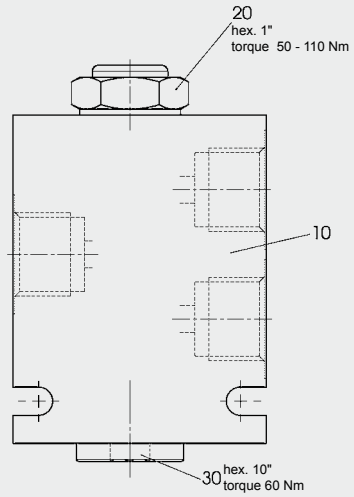
- External surfaces corrosion-proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Excellent dividing and combining accuracy
- Wide flow range down to 25% of nominal flow rating
- Low pressure drop throughout flow range
- Can be used for differential locks in drive applications
- Synchronizing flow in both operating modes
- Compact design

SPECIFICATIONS

Operating pressure:	max. 350 bar	
Nominal flow:	max. 45 l/min	
Inlet flow:	7.6 l/min 15.2 l/min 22.8 l/min 30.4 l/min 37.8 l/min 45.6 l/min	Code 11 Code 22 Code 33 Code 44 Code 55 Code 66
Accuracy:	See performance graphs	
Media operating temperature range:	min. -30 °C to max. +100 °C	
Ambient temperature range:	min. -30 °C to max. +100 °C	
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2	
Viscosity range:	min. 7.4 mm²/s to max. 420 mm²/s	
Filtration:	Class 21/19/16 to ISO 4406 or cleaner	
$MTTF_d$:	150 years (see "Conditions and instructions for valves" in brochure 5.300)	
Materials:	Valve body: Spool: Seals: Back-up rings:	steel hardened and ground steel NBR (standard) FKM (optional, media temperature range -20 °C to +120 °C) PTFE
Cavity:	FC10-4 (port 1 not used)	
Weight:	0.122 kg	

DIMENSIONS

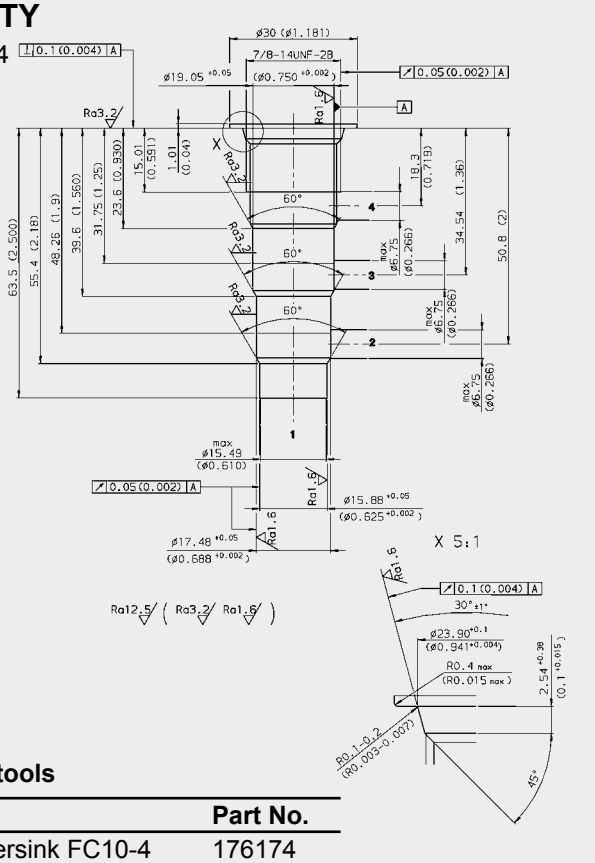




millimeter (inch)
subject to technical modifications

CAVITY

FC10-4



Form tools

Tool	Part No.
Countersink FC10-4	176174
Reamer FC10-4	176175

millimeter (inch)
subject to technical modifications

MODEL CODE

ST10-01 – C – N – 33

Basic model
Flow divider / Combiner, UNF

Body and ports*
C = cartridge only
SB4 = G1/2 ports, steel body
AB4 = G1/2 ports, aluminium body

Seals
N = NBR (standard)
V = FKM

Flow rate code & flow range

Code	Ratio Port 2 [%]	Ratio Port 4 [%]	Max. inlet flow [l/min]	Balance flow rate Combining [l/min] 2-4 at 100 bar	Dividing [l/min] 2-4 at 100 bar
11	50	50	7.6	0.7	0.7
22	50	50	15.2	1.3	1.1
33	50	50	22.8	2.3	2.1
44	50	50	30.4	2.6	2.8
55	50	50	37.8	3	3.4
66	50	50	45.6	5.2	3.1

Standard models

Model code	Part No.
ST10-01-C-N-11	562884
ST10-01-C-N-22	562885
ST10-01-C-N-33	562886
ST10-01-C-N-44	562887
ST10-01-C-N-55	562888
ST10-01-C-N-66	562889

*Standard in-line bodies

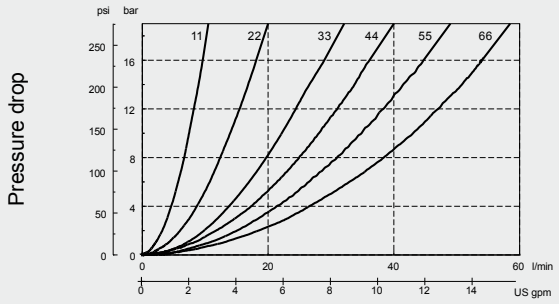
Code	Part No.	Material	Ports	Pressure
FH104-SB4	3037784	Steel, zinc-plated	G1/2	420 bar
FH104-AB4	3038097	Aluminium, anodized	G1/2	210 bar

Seal kits

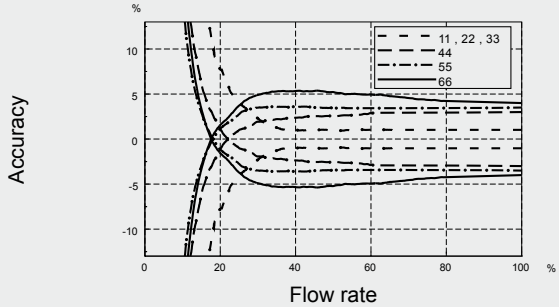
Code	Material	Part No.
FH104-N SEAL KIT	NBR	3051912
FH104-V SEAL KIT	FKM	3071275

PERFORMANCE

Measured at ν = 34 mm²/s T_{Oil} = 46 °C



Flow rate at port 3



Flow rate

NOTE

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.

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