

Butterfly Valve

# DANAÏS 150



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DANAÏS 150

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## Information

### Related documents

For more information refer to the documents listed below and to the KSB web site.

Information/documents

Document	Reference number
DANAIS 150 type series booklet	8460.11
Operating manual	8450.810

### Flow velocities

The following is a typical selection of actuators for butterfly valves handling lubricating fluids at the maximum flow velocities shown. Higher flow velocities and further actuator/valve combinations are possible, depending on the operating conditions and hydraulic characteristics. Contact KSB.

Overview table of maximum flow velocities for DANAIS 150

DN	Fluids handled		Gases
	Lubricating fluids	Non-lubricating fluids	
	[m/s]	[m/s]	[m/s]
50-1200	4	4	50

**Actuators**
**Levers**
**S/SR/SP (metal seat)**

**Fig. 1: Unit comprising Danais 150 + S/SR lever**

Metal seat for lubricating fluids

DN	Shaft end		Maximum pressure	Lubricating fluids			
	s	h3		Preferred flow direction		Non-preferred flow direction	
			[bar]	S/SR	SP	S/SR	SP
50	M11	24	6	180 260	260	180 260	260
			10				
			16				
			20				
65	M11	24	6	180 260	260	180 260	260
			10				
			16				
			20				
80	M11	24	6	260	260	260	260
			10				
			16	330			
			20				
100	M14	24	6	330	330	330	330
			10				
			16				
			20				
125	M14	30	6	-	-	-	-
			10	-	-	-	-
			16	-	-	-	-
			20	-	-	-	-
150	M17	32	6	-	-	-	-
			10	-	-	-	-
			16	-	-	-	-
			20	-	-	-	-

8460.21/01-EN

## Metal-seat for non-lubricating fluids

DN	Shaft end		Maximum pressure [bar]	Non-lubricating fluids			
	s	h3		Preferred flow direction		Non-preferred flow direction	
				S/SR	SP	S/SR	SP
50	M11	24	6	260	260	260	260
			10				
			16	330	330	330	330
			20				
65	M11	24	6	330	330	330	330
			10				
			16				
			20				
80	M11	24	6	330	330	330	330
			10				
			16				
			20				
100	M14	24	6	-	-	-	-
			10	-	-	-	-
			16	-	-	-	-
			20	-	-	-	-
125	M14	30	6	-	-	-	-
			10	-	-	-	-
			16	-	-	-	-
			20	-	-	-	-
150	M17	32	6	-	-	-	-
			10	-	-	-	-
			16	-	-	-	-
			20	-	-	-	-

## S/SR/SP (PTFE seat)

PTFE seat

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		S/SR	SP	S/SR	SP
50	M11	24	6	180 260	260	180 260	260
			10				
			16				
			20				
65	M11	24	6	180 260	260	180 260	260
			10				
			16				
			20	260	260		
80	M11	24	6	180 260	260	180 260	260
			10				
			16				
			20				
100	M14	24	6	330	330	330	330
			10				
			16				
			20				
125	M14	30	6	330	330	330	330
			10				
			16	-	-	-	-
			20	-	-	-	-
150	M17	32	6	-	-	-	-
			10	-	-	-	-
			16	-	-	-	-
			20	-	-	-	-

## CR/CM (metal seat)



**Fig. 2:** Unit comprising Danais 150 + CR/CM lever

Metal seat for lubricating fluids

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction CR/CM	Non-preferred flow direction CR/CM
	s	h3			
50	M11	24	6	230	230
			10		
			16		
			20		
65	M11	24	6	230	230
			10		
			16		
			20		
80	M11	24	6	230	230
			10		
			16		
			20		
100	M14	24	6	230 300	230 300
			10		
			16	300	300
			20		
125	M14	30	6	300 510	300 510
			10		
			16		
			20		
150	M17	32	6	510	510
			10		
			16		
			20		
200	M19	35	6	-	-
			10		
			16		
			20		



## Metal-seat for non-lubricating fluids

DN	Shaft end		Maximum pressure	Preferred flow direction	Non-preferred flow direction
	s	h3	[bar]	CR/CM	CR/CM
50	M11	24	6	230	230
			10		
			16		
			20		
65	M11	24	6	230	230
			10		
			16		
			20		
80	M11	24	6	230	230
			10		
			16		
			20		
100	M14	24	6	300	300
			10		
			16		
			20		
125	M14	30	6	510	510
			10		
			16		
			20		
150	M17	32	6	-	-
			10		
			16		
			20		
200	M19	35	6	-	-
			10	-	-
			16	-	-
			20	-	-

## CR/CM (PTFE seat)

PTFE seat

DN	Shaft end		Maximum pressure	Preferred flow direction	Non-preferred flow direction
	s	h3	[bar]	CR/CM	CR/CM
50	M11	24	6	230	230
			10		
			16		
			20		
65	M11	24	6	230	230
			10		
			16		
			20		
80	M11	24	6	230	230
			10		
			16		
			20		
100	M14	24	6	230 300	230 300
			10		
			16		
			20		
125	M14	30	6	230 300	230 300
			10		
			16		
			20		
150	M17	32	6	300 510	300 510
			10		
			16		
			20		
200	M19	35	6	510	510
			10		
			16		
			20		

Manual Gearboxes

## MR/AB (metal seat)

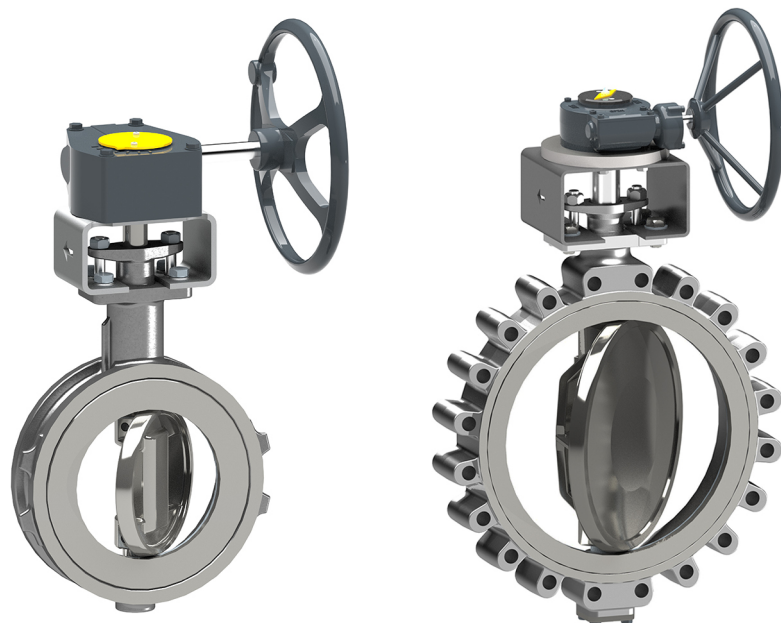


Fig. 3: Unit comprising DANAIS 150 + MR/AB manual gearbox

Metal seat for lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		-
80		24		-		-
100	M14	24	MR100	-	MR100	-
125		30		-		-
150	M17	32	MR200	-	MR200	-
200	M19	35		-		-
250	C25	45	MR50	-	MR50	-
300		45		-		-
350	C30	55	MR400	-	MR400	-
400		55		-		-
450		65		-		-
500	C40	65	AB2000	-	AB2000	-
600		65		-		-

Metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		-
80		24		-		-
100	M14	24	MR50	-	MR50	-
125		30		-		-
150	M17	32	MR200	-	MR200	-
200	M19	35		-		-
250	C25	45	MR100	-	MR100	-
300		45		-		-
350	C30	55	MR200	-	MR200	-
						-

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
400	C36	55	MR400	AB2000	MR400	AB2000
450		65				
500		65				
600	C50	65	MR600	AB1950/PR4	MR600	AB1950/PR4

**Metal seat for lubricating fluids (10 bar)**

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		
80		24		-		
100	M14	24	MR100	-	MR100	-
125		30		-		
150	M17	32	MR50	-	MR50	-
200	M19	35	MR100	-	MR200	-
250	C25	45	MR200	-	MR200	-
300	C27	45	MR400	-	MR400	-
350	C30	55	MR600	-	MR600	-
400	C36	55	MR600	AB2000	MR600	AB2000
450	C40	65	MR600	AB1950/PR4	MR600	AB1950/PR4
500		65	MR600	AB1950/PR4	MR600	AB1950/PR4
600	C50	65	MR600	AB1950/PR4	MR600	AB1950/PR4

**Metal seat for non-lubricating fluids (10 bar)**

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		
80		24		-		
100	M14	24	MR100	-	MR100	-
125		30		-		
150	M17	32	MR50	-	MR50	-
200	M19	35	MR100	-	MR100	-
250	C25	45	MR200	-	MR200	-
300	C27	45	MR400	-	MR400	-
350	C30	55	MR600	-	MR600	-
400	C36	55	MR600	AB2000	MR600	AB2000
450	C40	65	MR600	AB1950/PR4	MR600	AB1950/PR4
500		65	MR600	AB1950/PR4	MR600	AB1950/PR4
600	C50	65	MR600	AB1950/PR4	MR600	AB1950/PR4

**Metal seat for lubricating fluids (16 bar)**

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		-
80		24		-		-
100	M14	24		-		-
125		30		-		-
150	M17	32		-		-
200	M19	35	MR50	-	MR50	-
250	C25	45	MR100	-	MR100	-
300		45		-		-
350	C30	55	MR200	-	MR200	-
400		55		-		-
450	C40	65	MR400	AB2000	MR400	AB2000
500		65				
600	C50	65	MR600	AB1950/PR4	MR600	AB1950/PR4

**Metal seat for non-lubricating fluids (16 bar)**

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		-
80		24		-		-
100	M14	24		-		-
125		30		MR50		-
150	M17	32		-		-
200	M19	35	MR100	-	MR100	-
250	C25	45	MR200	-	MR200	-
300		45		-		-
350	C30	55	MR400	AB2000	MR400	AB2000
400		55				
450	C40	65			MR600	
500		65				
600	C50	65	MR800		MR800	

## Metal seat for lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		-
80		24		-		-
100	M14	24	MR50	-	MR50	-
125		30		-		-
150	M17	32	MR100	-	MR100	-
200	M19	35		-		-
250	C25	45		-		-
300	C27	45	MR200	-	MR200	-
350		C30		55		-
400	C36	55	MR400	-	MR400	AB2000
450		65		AB2000		
500		65				
600	C50	65	MR600	AB1950/PR4	MR800	AB1950/PR4

## Metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		-
80		24		-		-
100	M14	24	MR50	-	MR50	-
125		30		-		-
150	M17	32	MR100	-	MR100	-
200	M19	35		-		-
250	C25	45		-		-
300	C27	45	MR200	-	MR200	-
350		C30		55		-
400	C36	55	MR400	AB2000	MR400	AB2000
450		65		MR600		
500		65				
600	C50	65	MR1600		MR1600	

## MR/AB (PTFE seat)

PTFE seat (6 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		
80		24		-		
100	M14	24	MR100	-	MR100	-
125		30		-		
150	M17	32	MR50	-	MR50	-
200	M19	35		-		
250	C25	45	MR200	-	MR200	-
300		C27		45		-
350	C30	55	MR400	-	MR400	-
400		C36		55		-
450	C40	65	MR600	-	MR600	-
500		65		-		
600	C50	65	MR800	AB2000	MR800	AB2000
650	C55	80		AB1950/PR4		AB1950/PR4
700	C60	80	MR1200	A200/PR10	MR1200	A200/PR10
750		80				
800	C70	110	MR1600	A200/PR10	MR1600	A200/PR10
900		110				
1000	C80	110	MR1600	A200/PR10	MR1600	A200/PR10
1200	C90	110				

PTFE seat (10 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		
80		24		-		
100	M14	24	MR100	-	MR100	-
125		30		-		
150	M17	32	MR50	-	MR50	-
200	M19	35		-		
250	C25	45	MR200	-	MR200	-
300		C27		45		-
350	C30	55	MR400	-	MR400	-
400		C36		55		-
450	C40	65	MR600	-	MR600	-
500		65		-		
600	C50	65	MR800	AB2000	MR800	AB2000 N LH
650	C55	80		AB1950/PR4		AB1950/PR4
700	C60	80	MR1200	A200/PR10	MR1200	A200/PR10
750		80				
800	C70	110	MR1600	A200/PR10	MR1600	A200/PR10
900		110				
1000	C80	110	MR1600	A200/PR10	MR1600	A200/PR10
1200	C90	110				

## PTFE seat (16 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		
80		24		-		
100	M14	24	MR25	-	MR25	-
125		30		-		
150	M17	32	MR25	-	MR25	-
200	M19	35		-		
250	C25	45	MR50	-	MR50	-
300	C27	45	MR100	-	MR100	-
350	C30	55	MR200	-	MR200	-
400	C36	55		-		
450	C40	65	MR400	-	MR400	AB2000
500		65		AB2000		
600	C50	65	MR600	AB1950/PR4	MR600	AB1950/PR4
650	C55	80			MR800	
700	C60	80	MR800	AB3000/PR6	MR1200	A200/PR10
750		80			MR1200	
800	C70	110	MR1200	A200/PR10	MR1600	A200/PR10
900		110			MR1600	
1000	C80	110	MR1600	A200/PR10	-	-
1200	C90	110	-	-	-	-

## PTFE seat (20 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
50	M11	24	MR25	-	MR25	-
65		24		-		
80		24		-		
100	M14	24	MR25	-	MR25	-
125		30		-		
150	M17	32	MR25	-	MR25	-
200	M19	35		MR50		-
250	C25	45	MR100	-	MR100	-
300	C27	45	MR200	-	MR200	-
350	C30	55		-		
400	C36	55	MR400	-	MR400	AB2000
450	C40	65		AB2000		
500		65	MR600	AB1950/PR4	MR600	AB1950/PR4
600	C50	65			MR800	AB3000/PR6
650	C55	80	MR800	AB3000/PR6	MR1200	A200/PR10
700	C60	80			MR1200	
750		80	MR1200	A200/PR10	MR1600	A200/PR10
800	C70	110			MR1600	
900		110	MR1600	A200/PR10	-	-
1000	C80	110	-	-	-	-
1200	C90	110	-	AB250/PR10	-	-



## MR/AB (FKM/VITON seat)

FKM/VITON seat (6 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction		
	s	h3	KSB	ROTORK	KSB	ROTORK	
			Type MR	Type AB	Type MR	Type AB	
80	M11	24	MR25	-	MR25	-	
100	M14	24		-		-	
125		30		-		-	
150		M17		32		-	-
200	M19	35		-		-	
250	C25	45	MR50	-	MR50	-	
300	C27	45		-		-	
350	C30	55	MR100	-	MR100	-	
400	C36	55		-		-	
450	C40	65	MR200	-	MR200	-	
500		65		-		-	
550		65		-		-	
600	C50	80	MR400	AB2000	MR400	AB2000	
650				AB1950/PR4		AB1950/PR4	
700			C60	80	MR600	MR600	AB3000/PR6
750			80	AB3000/PR6			
800	C70	110	MR600				

FKM/VITON seat (10 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction		
	s	h3	KSB	ROTORK	KSB	ROTORK	
			Type MR	Type AB	Type MR	Type AB	
80	M11	24	MR25	-	MR25	-	
100	M14	24		-		-	
125		30		-		-	
150		M17		32		-	-
200	M19	35		-		-	
250	C25	45	MR50	-	MR50	-	
300	C27	45		-		-	
350	C30	55	MR100	-	MR100	-	
400	C36	55		-		-	
450	C40	65	MR200	-	MR200	-	
500		65		-		-	
550		65		-		-	
600	C50	80	MR400	AB2000	MR400	AB2000	
650				AB1950/PR4		AB1950/PR4	
700			C60	80	MR600	MR600	AB3000/PR6
750			80	MR600			
800	C70	110					

FKM/VITON seat (16 bar)

DN	Shaft end		Preferred flow direction		Non-preferred flow direction	
	s	h3	KSB	ROTORK	KSB	ROTORK
			Type MR	Type AB	Type MR	Type AB
80	M11	24	MR25	-	MR25	-
100	M14	24	MR25	-	MR25	-
125		30		-		-
150	M17	32		-		-
200	M19	35		-		-
250	C25	45		MR50		-
300	C27	45	MR100	-	MR100	-
350	C30	55	MR200	-	MR200	-
400	C36	55		-	-	
450	C40	65		-	MR400	AB2000
500	C50	65	MR400	AB2000		
550		65	MR600	AB1950/PR4	MR600	
600		80			MR600	AB1950/PR4
650	C55	80			MR600	AB1950/PR4
700	C60	80	MR800	AB3000/PR6	MR800	AB3000/PR6
750		80			MR800	
800		C70			110	MR800

Double-acting Pneumatic Actuator

# ACTAIR NG (metal seat)



Fig. 4: Unit comprising Danais 150 + ACTAIR NG actuator

Shut-off function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
			3	4	5	6	3	4	5	6
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	
50	M11	24	NG5	NG2	NG2	NG2	NG5	NG2	NG2	NG2
65		24		NG5	NG5			NG5	NG5	
80		24	NG10		NG5	NG10		NG5		
100	M14	24	NG15	NG10	NG10	NG10	NG15	NG10	NG10	NG10
125		30		NG15				NG15		
150	M17	32	NG30	NG20	NG15	NG15	NG30	NG20	NG15	NG15
200	M19	35	NG40	NG30	NG30	NG20	NG40	NG30	NG30	NG20
250	C25	45	NG80	NG60	NG40	NG40	NG80	NG60	NG40	NG40
300	C27	45	NG120	NG80	NG60	NG60	NG120	NG80	NG60	NG60
350	C30	55	NG160	NG120	NG80	NG80	NG160	NG120	NG80	NG80
400	C36	55	NG240	NG160	NG120	NG120	NG240	NG160	NG120	NG120
450	C40	65	NG340	NG240	NG160	NG160		NG240	NG160	NG160
500		65		NG240		NG340	NG240	NG240		
600	C50	65	NG500	NG500		NG240	NG500	NG500		NG240

Throttling function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction			
			Control pressure						
			4	5	6	4	5	6	
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]		
50	M11	24	NG5	NG2	NG2	NG5	NG5	NG2	NG2
65		24		NG5	NG5			NG5	NG5
80		24	NG10		NG10		NG10		
100	M14	24	NG15	NG10	NG10	NG10	NG15	NG10	NG10
125		30		NG15				NG15	
150	M17	32	NG30	NG20	NG15	NG30	NG20	NG15	
200	M19	35	NG40	NG30	NG30	NG40	NG30	NG30	
250	C25	45	NG80	NG60	NG40	NG80	NG60	NG40	
300	C27	45	NG120	NG80	NG60	NG120	NG80	NG60	
350	C30	55	NG160	NG120	NG80	NG160	NG120	NG80	

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DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
400	C36	55	NG240	NG160	NG120	NG240	NG160	NG120
450	C40	65	NG340	NG240	NG160			
500		65			NG240	NG500	NG500	NG500
600	C50	65	NG500	NG500	NG500			

Shut-off function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
	s	h3	3 [bar]	4 [bar]	5 [bar]	6 [bar]	3 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG10	NG5	NG5	NG5	NG10	NG5	NG5	NG5
65		24	NG15	NG10	NG10	NG10	NG15	NG10	NG10	NG10
80		24	NG20	NG15	NG15		NG15	NG15	NG15	
100	M14	24		NG20		NG15	NG15	NG20	NG30	NG30
125		30	NG30	NG30	NG20	NG30	NG30	NG20		NG20
150	M17	32	NG60	NG40	NG30	NG30	NG60	NG40	NG30	NG30
200	M19	35	NG80	NG60	NG60	NG40	NG80	NG60	NG60	NG40
250	C25	45	NG160	NG120	NG80	NG80	NG160	NG120	NG80	NG80
300	C27	45	NG240	NG160	NG120	NG120	NG240	NG160	NG120	NG120
350	C30	55	NG340	NG240	NG160	NG160	NG340	NG240	NG160	
400	C36	55	NG500	NG340	NG240	NG240	NG500	NG340	NG240	NG240
450	C40	65	NG700	NG500	NG340	NG340	NG700	NG500	NG340	
500		65		NG500	NG500			NG340	NG700	NG340
600	C50	65	-	NG700	NG700	NG500	-	NG700	NG500	NG500

Throttling function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction				
			Control pressure							
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]		
50	M11	24	NG10	NG5	NG5	NG10	NG5	NG5		
65		24	NG15	NG10	NG10	NG15	NG10	NG10		
80		24	NG20	NG15	NG15		NG15	NG15	NG15	
100	M14	24		NG20		NG15	NG15	NG20		NG30
125		30	NG30	NG30	NG20	NG30	NG30	NG20		
150	M17	32	NG60	NG40	NG30	NG30	NG60	NG40	NG30	
200	M19	35	NG80	NG60	NG60	NG60	NG80	NG60	NG60	
250	C25	45	NG160	NG120	NG80	NG80	NG160	NG120	NG80	
300	C27	45	NG240	NG160	NG120	NG120	NG240	NG160	NG120	
350	C30	55	NG340	NG240	NG160	NG160	NG340	NG240	NG160	
400	C36	55	NG500	NG340	NG240	NG240	NG500	NG340	NG240	NG240
450	C40	65		NG500	NG340	NG340		NG500	NG340	
500		65	NG700	NG700	NG500	NG500	NG700	NG700	NG500	NG340
600	C50	65	-		NG700	NG700	-		NG700	NG500

Shut-off function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
			3	4	5	6	3	4	5	6
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	
50	M11	24	NG5	NG5	NG5	NG2	NG5	NG5	NG5	NG2
65		24	NG10			NG5	NG10			NG5
80		24		NG10				NG10		
100	M14	24	NG15	NG15	NG10	NG10	NG15	NG15	NG10	NG10
125		30	NG20		NG15		NG20		NG15	
150	M17	32	NG30	NG20	NG20	NG15	NG30	NG20	NG20	NG15
200	M19	35	NG60	NG40	NG30	NG30	NG60	NG40	NG30	NG30
250	C25	45	NG80	NG60	NG60	NG40	NG80	NG60	NG60	NG40
300	C27	45	NG120	NG80	NG80	NG60	NG120	NG120	NG80	NG60
350	C30	55	NG160	NG120	NG120	NG80	NG240	NG160	NG120	NG120
400		55	NG240	NG160	NG160	NG120		NG240	NG160	
450	C40	65	NG340	NG240	NG240	NG160	NG340		NG240	NG160
500		65	NG500	NG340		NG240	NG500	NG340		NG240
600	C50	65	NG700	NG500	NG500	NG340	NG700	NG500	NG500	NG340

Throttling function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction			
			Control pressure						
			4	5	6	4	5	6	
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]		
50	M11	24	NG5	NG5	NG5	NG5	NG5	NG5	
65		24	NG10			NG10			
80		24		NG10			NG10		
100	M14	24	NG15	NG15	NG10	NG15	NG15	NG10	
125		30	NG20		NG15	NG20		NG15	
150	M17	32	NG30	NG20	NG20	NG30	NG20	NG20	
200	M19	35	NG60	NG40	NG30	NG60	NG40	NG30	
250	C25	45	NG80	NG60	NG60	NG80	NG60	NG60	
300	C27	45	NG120	NG80	NG80	NG120	NG120	NG80	
350	C30	55	NG160	NG120	NG120	NG240	NG160	NG120	NG120
400		55	NG240	NG160	NG160		NG240	NG160	
450	C40	65	NG340	NG240	NG240	NG340		NG240	NG240
500		65	NG500	NG340		NG500	NG340		
600	C50	65	NG700	NG500	NG500	NG700	NG500	NG500	

Shut-off function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
			3	4	5	6	3	4	5	6
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	
50	M11	24	NG10	NG10	NG5	NG5	NG10	NG10	NG5	NG5
65		24	NG15		NG10	NG10	NG15		NG10	NG10
80		24		NG15				NG15		
100	M14	24	NG30	NG20	NG15	NG15	NG30	NG20	NG15	NG15
125		30	NG40	NG30	NG30	NG20	NG40	NG30	NG30	NG20
150	M17	32	NG60	NG40		NG30	NG60	NG40		NG30
200	M19	35	NG120	NG80	NG60	NG60	NG120	NG80	NG60	NG60
250	C25	45	NG160	NG120	NG120	NG80	NG160	NG120	NG120	NG80
300	C27	45	NG240	NG160		NG120	NG240	NG160		NG120
350	C30	55	NG340	NG240	NG240	NG160	NG340	NG240	NG240	NG160
400		55	NG500	NG340		NG240	NG500	NG340		NG240
450	C40	65	NG700	NG500	NG340	NG340	NG700	NG500	NG340	NG340
500		65			NG500				NG500	
600	C50	65	-	-	NG700	NG500	-	-	NG700	NG700

Throttling function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG10	NG10	NG5	NG10	NG10	NG5
65		24	NG15		NG10	NG15		NG10
80		24		NG15			NG15	
100	M14	24	NG30	NG20	NG15	NG30	NG20	NG15
125		30	NG40	NG30	NG30	NG40	NG30	NG30
150	M17	32	NG60	NG40		NG60	NG40	
200	M19	35	NG120	NG80	NG60	NG120	NG80	NG60
250	C25	45	NG160	NG120	NG120	NG160	NG120	NG120
300						C27	45	NG240
350	C30	55	NG340	NG240	NG240	NG340	NG240	NG240
400	C36	55	NG500	NG340		NG500	NG340	
450	C40	65	NG700	NG500	NG340	NG700	NG500	NG340
500		65			NG500			NG500
600	C50	65	-	-	NG700	-	-	NG700

Shut-off function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
	s	h3	3 [bar]	4 [bar]	5 [bar]	6 [bar]	3 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG5	NG5	NG5	NG2	NG5	NG5	NG5	NG2
65		24	NG10			NG5	NG10			NG5
80		24	NG15	NG10	NG10		NG15	NG10	NG10	
100	M14	24		NG15		NG10		NG15		NG10
125		30	NG20		NG15	NG15	NG20		NG15	NG15
150	M17	32	NG40	NG30	NG20	NG20	NG40	NG30	NG20	NG20
200	M19	35	NG60	NG60	NG40	NG30	NG60	NG60	NG40	NG30
250	C25	45	NG120	NG80	NG60	NG60	NG120	NG80	NG60	NG60
300	C27	45	NG160	NG120	NG80	NG80	NG160	NG120	NG120	NG80
350	C30	55	NG240	NG160	NG120	NG120	NG240	NG240	NG160	NG120
400	C36	55	NG340	NG240	NG240	NG160	NG340		NG240	NG160
450	C40	65	NG500	NG340		NG240	NG500	NG340	NG340	NG240
500		65		NG500	NG340	NG340	NG700	NG500		NG340
600	C50	65	-	NG700	NG500	NG500	-	NG700	NG700	NG500

Throttling function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG5	NG5	NG5	NG5	NG5	NG5
65		24	NG10			NG10		
80		24	NG15	NG10	NG10	NG15	NG10	NG10
100	M14	24		NG15			NG15	
125		30	NG20		NG15	NG20		NG15
150	M17	32	NG40	NG30	NG20	NG40	NG30	NG20
200	M19	35	NG60	NG60	NG40	NG60	NG60	NG40
250	C25	45	NG120	NG80	NG60	NG120	NG80	NG60
300	C27	45	NG160	NG120	NG80	NG160	NG120	NG120
350	C30	55	NG240	NG160	NG120	NG240	NG240	NG160
400	C36	55	NG340	NG240	NG240	NG340		NG240
450	C40	65	NG500	NG340		NG500	NG340	NG340
500		65		NG500	NG340	NG700	NG500	
600	C50	65	-	NG700	NG500	-	NG700	NG700

Shut-off function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction									
			Control pressure													
			3	4	5	6	3	4	5	6						
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]							
50	M11	24	NG15	NG15	NG10	NG5	NG15	NG15	NG10	NG5						
65		24									NG20	NG15	NG10	NG20	NG15	NG10
80		24														
100	M14	24	NG30	NG30	NG20	NG15	NG30	NG30	NG20	NG15						
125		30									NG40	NG30	NG20	NG40	NG30	NG20
150	M17	32	NG60	NG60	NG40	NG30	NG60	NG60	NG40	NG30						
200	M19	35	NG120	NG80	NG80	NG60	NG120	NG80	NG80	NG60						
250	C25	45	NG240	NG160	NG120	NG120	NG240	NG160	NG120	NG120						
300											C27	45	NG240	NG160	NG160	NG240
350	C30	55	NG500	NG340	NG240	NG240	NG500	NG340	NG240	NG240						
400											C36	55	NG500	NG340	NG500	NG340
450	C40	65	NG700	NG500	NG340	NG700	NG700	NG500	NG500							
500		65								-	NG700	NG500	-			
600	C50	65	-	-	-	NG700	-	-	-	NG700						

Throttling function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction						
			Control pressure									
			4	5	6	4	5	6				
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]					
50	M11	24	NG15	NG15	NG10	NG15	NG15	NG10				
65		24							NG20	NG15	NG20	NG15
80		24										
100	M14	24	NG30	NG30	NG20	NG30	NG30	NG20				
125		30							NG40	NG30	NG40	NG30
150	M17	32	NG60	NG60	NG40	NG60	NG60	NG40				
200	M19	35	NG120	NG80	NG80	NG120	NG80	NG80				
250	C25	45	NG240	NG160	NG120	NG240	NG160	NG120				
300									C27	45	NG240	NG160
350	C30	55	NG500	NG340	NG240	NG500	NG340	NG240				
400									C36	55	NG500	NG340
450	C40	65	NG700	NG500	NG340	NG700	NG700	NG500				
500		65							-	NG700	-	
600	C50	65	-	-	-	-	-	-				

Shut-off function: metal seat for lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction								
			Control pressure												
			3	4	5	6	3	4	5	6					
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]						
50	M11	24	NG5	NG5	NG5	NG2	NG5	NG5	NG5	NG2					
65		24									NG10	NG10	NG5	NG10	NG10
80		24													
100	M14	24	NG20	NG15	NG15	NG10	NG20	NG15	NG15	NG10					
125		30									NG30	NG20	NG15	NG30	NG20
150	M17	32	NG40	NG30	NG30	NG20	NG40	NG30	NG30	NG20					
200	M19	35	NG80	NG60	NG40	NG40	NG80	NG60	NG40	NG40					
250	C25	45	NG120	NG120	NG80	NG60	NG120	NG120	NG80	NG60					
300											C27	45	NG160	NG120	NG80
350	C30	55	NG240	NG240	NG160	NG120	NG340	NG240	NG160	NG160					
400											C36	55	NG340	NG240	NG160
450	C40	65	NG500	NG500	NG340	NG240	NG700	NG500	NG340	NG340					
500		65									NG700	NG500	NG340	NG500	
600	C50	65	-	NG700	NG700	NG500	-	-	NG700	NG700					

Throttling function: metal seat for lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG5	NG5	NG5	NG5	NG5	NG5
65		24	NG10	NG10	NG10	NG10	NG10	NG10
80		24	NG15	NG15		NG15	NG15	
100	M14	24	NG20	NG15	NG15	NG20	NG15	NG15
125		30	NG30	NG20	NG30	NG30	NG20	NG30
150	M17	32	NG40	NG30	NG30	NG40	NG30	NG30
200	M19	35	NG80	NG60	NG40	NG80	NG60	NG40
250	C25	45	NG120	NG120	NG80	NG120	NG120	NG80
300	C27	45	NG160	NG240	NG120	NG240	NG160	NG120
350	C30	55	NG240		NG160	NG340	NG240	NG160
400	C36	55	NG340	NG240	NG240	NG500	NG340	NG240
450	C40	65	NG500	NG500	NG340	NG700	NG500	NG340
500		65	NG700	NG700	NG500	NG500	NG500	NG500
600	C50	65	-	NG700	NG700	-	-	NG700

Shut-off function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
	s	h3	3 [bar]	4 [bar]	5 [bar]	6 [bar]	3 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG15	NG10	NG10	NG5	NG15	NG10	NG10	NG5
65		24	NG15	NG15	NG10	NG15	NG15	NG10	NG10	
80		24	NG20	NG20	NG15	NG15	NG20	NG15	NG15	
100	M14	24	NG30	NG30	NG20	NG30	NG30	NG30	NG20	
125		30	NG60	NG40	NG30	NG30	NG60	NG40	NG30	
150	M17	32	NG80	NG60	NG40	NG40	NG80	NG60	NG40	
200	M19	35	NG120	NG120	NG80	NG60	NG120	NG120	NG80	
250	C25	45	NG240	NG160	NG120	NG120	NG240	NG160	NG120	
300	C27	45	NG340	NG240	NG160	NG160	NG340	NG240	NG160	
350	C30	55	NG500	NG340	NG240	NG240	NG500	NG340	NG240	
400	C36	55	NG700	NG500	NG340	NG340	NG700	NG500	NG340	
450	C40	65	-	NG700	NG500	NG500	-	NG700	NG500	
500		65	-	NG700	NG700	NG700	-	-	NG700	
600	C50	65	-	-	-	NG700	-	-	-	

Throttling function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG15	NG10	NG10	NG15	NG10	NG10
65		24	NG15	NG15	NG10	NG15	NG15	NG10
80		24	NG20	NG20	NG15	NG20	NG15	NG15
100	M14	24	NG30	NG30	NG20	NG30	NG30	NG20
125		30	NG60	NG40	NG30	NG60	NG40	NG30
150	M17	32	NG80	NG60	NG40	NG80	NG60	NG40
200	M19	35	NG120	NG120	NG80	NG120	NG120	NG80
250	C25	45	NG240	NG160	NG120	NG240	NG160	NG120
300	C27	45	NG340	NG240	NG160	NG340	NG240	NG160
350	C30	55	NG500	NG340	NG240	NG500	NG340	NG240
400	C36	55	NG700	NG500	NG340	NG700	NG500	NG340
450	C40	65	-	NG700	NG500	-	NG700	NG500
500		65	-	NG700	NG700	-	-	NG700
600	C50	65	-	-	-	-	-	-



## ACTAIR NG (PTFE seat)

Shut-off function: PTFE seat (6 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction						
			Control pressure										
			3	4	5	6	3	4	5	6			
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]				
50	M11	24	NG5	NG2	NG2	NG2	NG5	NG2	NG2	NG2			
65		24		NG5				NG5					
80		24		NG5				NG5					
100	M14	24	NG10	NG10	NG10	NG10	NG10	NG10	NG10	NG5			
125		30									NG15	NG10	NG10
150	M17	32	NG20	NG15	NG15	NG15	NG30	NG15	NG15	NG15			
200	M19	35	NG30	NG30	NG30	NG20		NG20	NG40	NG40	NG40		
250	C25	45	NG60	NG40	NG40	NG40	NG60	NG40	NG40	NG40			
300	C27	45	NG80	NG80	NG80	NG80		NG60	NG60	NG60			
350	C30	55	NG120	NG120	NG120	NG120	NG120	NG80	NG60	NG60			
400	C36	55	NG160					NG80	NG80	NG80	NG80	NG80	
450	C40	65	NG240	NG160	NG160	NG160	NG160	NG160	NG160	NG160			
500		65						NG240					
600	C50	65	NG500	NG340	NG240	NG240	NG500	NG340	NG240	NG240			
650	C55	80		NG500				NG500			NG500	NG500	NG500
700	C60	80		NG700				-			NG700	NG700	NG700
750	C70	80	-	-	-	-	-	-	-	-			
800		110	-	-	-	-	-	-	-	-			
900		110	-	-	-	-	-	-	-	-			
1000	C80	110	-	-	-	-	-	-	-	-			
1200	C90	110	-	-	-	-	-	-	-	-			

Throttling function: PTFE seat (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction							
			Control pressure										
			4	5	6	4	5	6					
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]						
50	M11	24	NG5	NG2	NG2	NG2	NG5	NG2	NG2	NG2			
65		24		NG5				NG5					
80		24		NG5				NG5					
100	M14	24	NG10	NG10	NG10	NG10	NG10	NG10	NG10	NG10			
125		30									NG15	NG15	NG15
150	M17	32	NG20	NG15	NG15	NG15	NG30	NG15	NG15	NG15			
200	M19	35	NG30	NG30	NG30	NG20		NG20	NG40	NG40	NG40		
250	C25	45	NG60	NG40	NG40	NG40	NG60	NG40	NG40	NG40			
300	C27	45	NG80	NG80	NG80	NG80		NG60	NG60	NG60			
350	C30	55	NG120	NG120	NG120	NG120	NG120	NG80	NG60	NG60			
400	C36	55	NG160					NG120	NG120	NG120	NG80	NG80	
450	C40	65	NG240	NG160	NG160	NG160	NG160	NG160	NG160	NG160			
500		65						NG240					
600	C50	65	NG500	NG340	NG240	NG240	NG500	NG340	NG240	NG240			
650	C55	80		NG500				NG500			NG500	NG500	NG500
700	C60	80		NG700				-			NG700	NG700	NG700
750	C70	80	-	-	-	-	-	-	-	-			
800		110	-	-	-	-	-	-	-	-			
900		110	-	-	-	-	-	-	-	-			
1000	C80	110	-	-	-	-	-	-	-	-			
1200	C90	110	-	-	-	-	-	-	-	-			

Shut-off function: PTFE seat (10 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
			3	4	5	6	3	4	5	6
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	
50	M11	24	NG5	NG2	NG2	NG2	NG5	NG2	NG2	NG2
65		24		NG5	NG5					
80		24	NG10	NG10	NG10	NG5		NG10	NG10	
100	M14	24					NG15			NG15
125	M17	30	NG20	NG20	NG20	NG20	NG30	NG30	NG20	NG30
150		32		NG15	NG15					
200		M19	35	NG30	NG20	NG20		NG20	NG30	
250	C25	45	NG60	NG40	NG40	NG40	NG60	NG40	NG40	NG40
300		45		NG80	NG60					
350		C30	55	NG120	NG120	NG80		NG60	NG120	
400	C36	55	NG160	NG120	NG80	NG80	NG240	NG160	NG120	NG120
450		65		NG240	NG160					
500		65	NG340	NG240	NG240	NG340		NG340	NG240	
600	C50	65	NG500	NG340	NG340	NG240	NG500	NG500	NG340	NG240
650		80		NG700	NG500					
700		C60	80	-	NG700	-		-	-	
750	C70	80	-	-	-	-	-	-	-	-
800		110	-	-	-	-	-	-	-	-
900		110	-	-	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-	-	-
1200		C90	110	-	-	-	-	-	-	-

Throttling function: PTFE seat (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction				
			Control pressure							
			4	5	6	4	5	6		
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]			
50	M11	24	NG5	NG2	NG2	NG2	NG5	NG2	NG2	
65		24		NG5	NG5					
80		24	NG10	NG10	NG10	NG5		NG10		NG5
100	M14	24					NG15		NG15	
125	M17	30	NG20	NG20	NG20	NG20	NG30	NG30	NG20	
150		32		NG15	NG15					NG15
200		M19	35	NG30	NG20	NG20		NG20		NG30
250	C25	45	NG60	NG40	NG40	NG40	NG60	NG40	NG40	
300		45		NG80	NG60					NG60
350		C30	55	NG120	NG120	NG80		NG60		NG120
400	C36	55	NG160	NG120	NG80	NG80	NG240	NG160	NG120	NG120
450		65		NG240	NG160					
500		65	NG340	NG240	NG240	NG340		NG340	NG240	
600	C50	65	NG500	NG340	NG340	NG340	NG500	NG500	NG340	NG340
650		80		NG700	NG500					
700		C60	80	-	NG700	-		-	-	
750	C70	80	-	-	-	-	-	-	-	-
800		110	-	-	-	-	-	-	-	-
900		110	-	-	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-	-	-
1200		C90	110	-	-	-	-	-	-	-

Shut-off function: PTFE seat (16 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
			3	4	5	6	3	4	5	6
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	
50	M11	24	NG5	NG5	NG5	NG2	NG5	NG2	NG2	NG2
65		24						NG5	NG5	
80		24	NG10			NG5	NG10			NG5
100	M14	24	NG15	NG10	NG10		NG15	NG10	NG10	
125		30		NG15		NG10		NG15		NG10
150	M17	32	NG30	NG20	NG15	NG15	NG30	NG20	NG15	NG15
200	M19	35	NG40	NG30	NG30	NG20	NG40	NG30	NG30	NG20
250	C25	45	NG80	NG60	NG60	NG40	NG80	NG60	NG60	NG40
300	C27	45	NG120	NG80		NG60	NG120	NG80	NG80	NG60
350	C30	55	NG160	NG120	NG120	NG80	NG240	NG160	NG120	NG120
400		55	NG240	NG160	NG160	NG120		NG240	NG160	
450		65	NG340	NG240	NG240	NG160	NG500	NG340	NG240	NG240
500	C40	65	NG500	NG340		NG240				
600		65	NG700	NG500	NG500	NG340	-	NG700	NG500	NG500
650		80	-	NG700		NG500	-		NG700	
700	C60	80	-				-	-		NG700
750		80	-	-	NG700	NG700	-	-	-	-
800	C70	110	-	-	-	-	-	-	-	-
900		110	-	-	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-	-	-
1200	C90	110	-	-	-	-	-	-	-	-

Throttling function: PTFE seat (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
			4	5	6	4	5	6
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	
50	M11	24	NG5	NG5	NG5	NG5	NG2	NG2
65		24					NG5	NG5
80		24	NG10				NG10	
100	M14	24	NG15	NG10	NG10	NG15	NG10	NG10
125		30		NG15			NG15	
150	M17	32	NG30	NG20	NG15	NG30	NG20	NG15
200	M19	35	NG40	NG30	NG30	NG40	NG30	NG30
250	C25	45	NG80	NG60	NG60	NG80	NG60	NG60
300	C27	45	NG120	NG80		NG120	NG80	NG80
350	C30	55	NG160	NG120	NG120	NG240	NG160	NG120
400		55	NG240	NG160	NG160		NG240	NG160
450		65	NG340	NG240	NG240	NG500	NG340	NG240
500	C40	65	NG500	NG340				
600		65	NG700	NG500	NG500	-	NG700	NG500
650		80	-	NG700			-	
700	C60	80	-			-	-	
750		80	-	-	NG700	-	-	-
800	C70	110	-	-	-	-	-	-
900		110	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-
1200	C90	110	-	-	-	-	-	-

Shut-off function: PTFE seat (20 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
	s	h3	3 [bar]	4 [bar]	5 [bar]	6 [bar]	3 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG5	NG5	NG5	NG2	NG5	NG2	NG2	NG2
65		24	NG10	NG10	NG10	NG5	NG10	NG5	NG5	NG10
80		24	NG15			NG10		NG10	NG15	
100	M14	24		NG20	NG15	NG15	NG15	NG30	NG20	NG15
125		30	NG30							
150	M17	32		NG30	NG20	NG30	NG20	NG60	NG40	NG30
200	M19	35	NG40	NG30	NG30	NG20	NG60	NG40	NG30	NG30
250	C25	45	NG80	NG60	NG60	NG40	NG120	NG80	NG60	NG60
300	C27	45	NG120	NG120	NG80	NG60	NG160	NG120	NG80	NG80
350	C30	55	NG240	NG160	NG120	NG120	NG240	NG160	NG120	NG120
400	C36	55	NG340	NG240	NG240	NG160	NG340	NG240	NG240	NG160
450	C40	65	NG500	NG340	NG340	NG240	NG500	NG340	NG340	NG240
500		65		NG500				NG340		
600	C50	65	-	NG700	NG500	NG500	-	NG700	NG700	NG500
650	C55	80	-	-	-	-	-	-	-	-
700	C60	80	-	-	-	-	-	-	-	-
750		80	-	-	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-	-	-
900		110	-	-	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-	-	-
1200	C90	110	-	-	-	-	-	-	-	-

Throttling function: PTFE seat (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction				
			Control pressure							
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]		
50	M11	24	NG5	NG5	NG5	NG5	NG2	NG2		
65		24	NG10	NG10	NG10	NG10	NG5	NG5		
80		24	NG15				NG10	NG10	NG15	NG10
100	M14	24		NG20	NG15	NG15	NG30	NG20	NG15	NG15
125		30	NG30							
150	M17	32		NG30	NG20	NG30	NG20	NG60	NG40	NG30
200	M19	35	NG40	NG30	NG30	NG20	NG60	NG40	NG30	NG30
250	C25	45	NG80	NG60	NG60	NG40	NG120	NG80	NG60	NG60
300	C27	45	NG120	NG120	NG80	NG60	NG160	NG120	NG80	NG80
350	C30	55	NG240	NG160	NG120	NG120	NG240	NG160	NG120	NG120
400	C36	55	NG340	NG240	NG240	NG160	NG340	NG240	NG240	NG160
450	C40	65	NG500	NG340	NG340	NG240	NG500	NG340	NG340	NG240
500		65		NG500				NG340		
600	C50	65	-	NG700	NG500	NG500	-	NG700	NG700	NG500
650	C55	80	-	-	-	-	-	-	-	-
700	C60	80	-	-	-	-	-	-	-	-
750		80	-	-	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-	-	-
900		110	-	-	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-	-	-
1200	C90	110	-	-	-	-	-	-	-	-

## ACTAIR NG (FKM/VITON seat)

Shut-off function: FKM/VITON seat (6 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
			3	4	5	6	3	4	5	6
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	
50	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-
80	M11	24	NG5	NG5	NG5	NG2	NG5	NG5	NG5	NG2
100	M14	24	NG10	NG10	NG10	NG5	NG10	NG10	NG10	NG5
125		30	NG15			NG10	NG10	NG15		
150	M17	32	NG20	NG15	NG15	NG15	NG20	NG15	NG15	NG15
200	M19	35	NG30	NG20	NG40	NG40	NG30	NG20	NG40	NG40
250	C25	45	NG60	NG40			NG60	NG40		
300	C27	45	NG80	NG60	NG60	NG60	NG80	NG60	NG60	NG60
350	C30	55	NG120	NG80			NG120	NG80		
400	C36	55	NG160	NG120	NG80	NG80	NG160	NG120	NG80	NG80
450	C40	65	NG240	NG160	NG160	NG160	NG240	NG160	NG160	NG160
500		65								
550	C50	65	NG340	NG240	NG240	NG240	NG340	NG240	NG240	NG240
600			NG500	NG340			NG500	NG340		
650	C55	80	NG500	NG500	NG500	NG500	NG500	NG500	NG500	NG500
700	C60	80								
750		80	NG700				NG700			
800	C70	110	-	-	-	-	-	-	-	-

Throttling function: FKM/VITON seat (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
			4	5	6	4	5	6
s	h3	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	
50	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-
80	M11	24	NG5	NG5	NG5	NG5	NG5	NG5
100	M14	24	NG10	NG10	NG10	NG5	NG10	NG10
125		30	NG15			NG10	NG15	
150	M17	32	NG20	NG15	NG15	NG20	NG15	NG15
200	M19	35	NG30	NG20	NG40	NG30	NG20	NG40
250	C25	45	NG60	NG40		NG60	NG40	
300	C27	45	NG80	NG60	NG60	NG80	NG60	NG60
350	C30	55	NG120	NG80		NG120	NG80	
400	C36	55	NG160	NG120	NG80	NG160	NG120	NG80
450	C40	65	NG240	NG160	NG160	NG240	NG160	NG160
500		65						
550	C50	65	NG340	NG240	NG240	NG340	NG240	NG240
600			NG500	NG340			NG500	NG340
650	C55	80	NG500	NG500	NG500	NG500	NG500	NG500
700	C60	80						
750		80	NG700				NG700	
800	C70	110	-	-	-	-	-	-

Shut-off function: FKM/VITON seat (10 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
	s	h3	3 [bar]	4 [bar]	5 [bar]	6 [bar]	3 [bar]	4 [bar]	5 [bar]	6 [bar]
50	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-
80	M11	24	NG10	NG5	NG5	NG5	NG5	NG5	NG5	NG2
100	M14	24		NG10			NG10	NG10		NG5
125		30	NG15	NG15	NG10	NG10	NG15		NG10	NG10
150	M17	32	NG20		NG15	NG15	NG20	NG15	NG15	NG15
200	M19	35	NG30	NG30	NG20		NG30	NG30	NG20	
250	C25	45	NG60	NG40	NG40	NG40	NG60	NG40	NG40	NG40
300	C27	45	NG80	NG60	NG60		NG80	NG60	NG60	
350	C30	55	NG120	NG120	NG80	NG60	NG120	NG120	NG80	NG60
400	C36	55	NG160		NG120	NG80	NG240	NG160	NG120	NG120
450	C40	65	NG240	NG160	NG160	NG120		NG240	NG160	
500		65	NG340	NG240		NG160	NG340		NG240	NG160
550	C50	65	NG500	NG340	NG240	NG240	NG500	NG340		NG240
600					NG340			NG500	NG340	
650	C55	80	NG700	NG500	NG500	NG500	NG700		NG500	NG500
700	C60	80					-	NG700		
750		80	-	NG700			-	-	NG700	NG700
800	C70	110	-	-	-	-	-	-	-	-

Throttling function: FKM/VITON seat (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-
80	M11	24	NG10	NG5	NG5	NG5	NG5	NG5
100	M14	24		NG10		NG10	NG10	
125		30	NG15	NG15	NG10	NG15		NG10
150	M17	32	NG20		NG15	NG20	NG15	NG15
200	M19	35	NG30	NG30	NG20	NG30	NG30	NG20
250	C25	45	NG60	NG40	NG40	NG60	NG40	NG40
300	C27	45	NG80	NG60	NG60	NG80	NG60	NG60
350	C30	55	NG120	NG120	NG80	NG120	NG120	NG80
400	C36	55	NG160		NG120	NG240	NG160	NG120
450	C40	65	NG240	NG160	NG160		NG240	NG160
500		65	NG340	NG240		NG340		NG240
550	C50	65	NG500	NG340	NG240	NG500	NG340	
600					NG340		NG500	NG340
650	C55	80	NG700	NG500	NG500	NG700		NG500
700	C60	80				-	NG700	
750		80	-	NG700		-	-	NG700
800	C70	110	-	-	-	-	-	-

Shut-off function: FKM/VITON seat (16 bar)

DN	Shaft end		Preferred flow direction				Non-preferred flow direction			
			Control pressure							
	s	h3	3 [bar]	4 [bar]	5 [bar]	6 [bar]	3 [bar]	4 [bar]	5 [bar]	6 [bar]
50	-	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-	-
80	M11	24	NG10	NG5	NG5	NG5	NG10	NG5	NG5	NG5
100	M14	24	NG15	NG10	NG10	NG10	NG15	NG10	NG10	NG10
125		30		NG15			NG15			
150	M17	32	NG30	NG20	NG15	NG15	NG30	NG20	NG15	NG15
200	M19	35	NG40	NG30	NG30	NG20	NG40	NG30	NG30	NG20
250	C25	45	NG80	NG60	NG60	NG40	NG80	NG60	NG60	NG40
300	C27	45	NG120	NG80		NG60	NG120	NG80	NG80	NG80
350	C30	55	NG160	NG120	NG120	NG80	NG240	NG160	NG120	NG120
400	C36	55	NG240	NG160	NG160	NG120		NG240	NG160	NG160
450	C40	65	NG340	NG240	NG240	NG160	NG500	NG340	NG240	NG240
500		65	NG500	NG340		NG240		NG340		
550	C50	65	NG700	NG500	NG340	NG340	NG700	NG500	NG500	NG340
600					NG500	-	NG700	NG500		
650	C55	80	-	NG700	NG500	-	NG700	NG700	NG700	
700	C60	80	-							
750	C70	80	-	-	NG700	NG700	-	-	-	-
800		110	-	-	-	-	-	-	-	-

Throttling function: FKM/VITON seat (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction			
			Control pressure						
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]	
50	-	-	-	-	-	-	-	-	
65	-	-	-	-	-	-	-	-	
80	M11	24	NG10	NG5	NG5	NG10	NG5	NG5	
100	M14	24	NG15	NG10	NG10	NG15	NG10	NG10	NG10
125		30		NG15			NG15		
150	M17	32	NG30	NG20	NG15	NG30	NG20	NG15	
200	M19	35	NG40	NG30	NG30	NG40	NG30	NG30	
250	C25	45	NG80	NG60	NG60	NG80	NG60	NG60	
300	C27	45	NG120	NG80		NG120	NG80	NG80	NG80
350	C30	55	NG160	NG120	NG120	NG240	NG160	NG120	NG120
400	C36	55	NG240	NG160	NG160		NG240	NG160	NG160
450	C40	65	NG340	NG240	NG240	NG500	NG340	NG240	NG240
500		65	NG500	NG340			NG340		
550	C50	65	NG700	NG500	NG340	NG700	NG500	NG500	NG500
600					NG500	-	NG700	NG500	
650	C55	80	-	NG700	NG500	-	NG700	NG700	
700	C60	80	-						
750	C70	80	-	-	NG700	-	-	-	-
800		110	-	-	-	-	-	-	-

Single-acting Pneumatic Actuator

## DYNACTAIR NG (metal seat)



Fig. 5: Unit comprising Danais 150 + DYNACTAIR NG actuator

Shut-off function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
	s	h3	Control pressure					
			4	5	6	4	5	6
			[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
50	M11	24	NG4/4	NG2	NG2	NG4/4	NG2	NG2
65		24	NG6/4	NG4	NG4	NG6/4	NG4	NG4
80		24		NG6	NG6		NG6	NG6
100	M14	24	NG12/4	NG8	NG8	NG12/4	NG8	NG8
125		30		NG12	NG12		NG12	NG12
150	M17	32	NG25/4	NG16	NG16	NG25/4	NG16	NG16
200	M19	35	NG50/4	NG35	NG35	NG35/4	NG25	NG25
250	C25	45	NG80/4	NG50	NG50	NG80/4	NG50	NG50
300	C27	45	NG120/4	NG80	NG80	NG120/4	NG80	NG80
350	C30	55	NG160/4	NG120	NG120	NG160/4	NG120	NG120
400	C36	55	NG240/4	NG160	NG160	NG240/4	NG160	NG160
450	C40	65	NG350/4	NG240	NG240	NG350/4	NG240	NG240
500		65						
600	C50	65	-	-	-	-	-	-

Throttling function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
	s	h3	Control pressure					
			4	5	6	4	5	6
			[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
50	M11	24	NG4/4	NG4/4	NG2	NG4/4	NG4/4	NG2
65		24	NG6/4	NG6/4	NG4	NG6/4	NG6/4	NG4
80		24			NG6			NG6
100	M14	24	NG12/4	NG12/4	NG8	NG12/4	NG12/4	NG8
125		30			NG12			NG12
150	M17	32	NG25/4	NG25/4	NG16	NG25/4	NG25/4	NG16
200	M19	35	NG50/4	NG50/4	NG35	NG35/4	NG35/4	NG25
250	C25	45	NG80/4	NG80/4	NG50	NG80/4	NG80/4	NG50
300	C27	45	NG120/4	NG120/4	NG80	NG120/4	NG120/4	NG80
350	C30	55	NG160/4	NG160/4	NG120	NG160/4	NG160/4	NG120



DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
	s	h3	Control pressure					
			4	5	6	4	5	6
			[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
400	C36	55	NG240/4	NG240/4	NG160	NG240/4	NG240/4	NG160
450	C40	65	NG350/4	NG350/4	NG240	NG350/4	NG350/4	NG240
500		65						
600	C50	65	-	-	-	-	-	-

Shut-off function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction			
	s	h3	Control pressure						
			4	5	6	4	5	6	
			[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	
50	M11	24	NG6/4	NG6	NG6	NG6/4	NG6	NG6	
65		24							NG8/4
80		24							NG12/4
100	M14	24	NG25/4	NG16	NG16	NG25/4	NG16	NG16	
125		30							NG35/4
150	M17	32	NG50/4	NG35	NG35	NG50/4	NG35	NG35	
200	M19	35	NG120/4	NG80	NG80	NG80/4	NG50	NG50	
250	C25	45	NG160/4	NG120	NG120	NG160/4	NG120	NG120	
300	C27	45	NG240/4	NG160	NG160	NG240/4	NG160	NG160	
350	C30	55	NG350/4	NG240	NG240	NG350/4	NG240	NG240	
400	C36	55	-	NG350	NG350	-	NG350	NG350	
450	C40	65	-	-	-	-	-	-	
500		65	-	-	-	-	-	-	
600	C50	65	-	-	-	-	-	-	

Throttling function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction				
	s	h3	Control pressure							
			4	5	6	4	5	6		
			[bar]	[bar]	[bar]	[bar]	[bar]	[bar]		
50	M11	24	NG6/4	NG6/4	NG6	NG6/4	NG6/4	NG6		
65		24							NG8/4	NG8/4
80		24							NG12/4	NG12/4
100	M14	24	NG25/4	NG25/4	NG16	NG25/4	NG25/4	NG16		
125		30							NG35/4	NG35/4
150	M17	32	NG50/4	NG50/4	NG35	NG50/4	NG50/4	NG35		
200	M19	35	NG120/4	NG120/4	NG80	NG80/4	NG80/4	NG50		
250	C25	45	NG160/4	NG160/4	NG120	NG160/4	NG160/4	NG120		
300	C27	45	NG240/4	NG240/4	NG160	NG240/4	NG240/4	NG160		
350	C30	55	NG350/4	NG350/4	NG240	NG350/4	NG350/4	NG240		
400	C36	55	-	-	NG350	-	-	NG350		
450	C40	65	-	-	-	-	-	-		
500		65	-	-	-	-	-	-		
600	C50	65	-	-	-	-	-	-		

Shut-off function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG6/4	NG4	NG4	NG6/4	NG4	NG4
65		24	NG8/4	NG6	NG6		NG6	NG6
80		24				NG8/4		
100	M14	24	NG12/4	NG8	NG8	NG12/4	NG8	NG8
125		30	NG16/4	NG12	NG12	NG16/4	NG12	NG12
150	M17	32	NG25/4	NG25	NG25	NG25/4	NG25	NG25
200	M19	35	NG50/4	NG35	NG35	NG50/4	NG35	NG35
250	C25	45	NG120/4	NG80	NG80	NG120/4	NG80	NG80
300	C27	45	NG160/4	NG120	NG120	NG160/4	NG120	NG120
350	C30	55	NG240/4			NG240/4		
400	C36	55		NG240	NG240		NG240	NG240
450	C40	65	NG350/4			NG350/4	NG350	NG350
500		65	-	NG350	NG350	-	-	-
600	C50	65	-	-	-	-	-	-

Throttling function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG6/4	NG6/4	NG4	NG6/4	NG6/4	NG4
65		24	NG8/4	NG8/4	NG6		NG6	NG6
80		24				NG8/4	NG8/4	
100	M14	24	NG12/4	NG12/4	NG8	NG12/4	NG12/4	NG8
125		30	NG16/4	NG16/4	NG12	NG16/4	NG16/4	NG12
150	M17	32	NG25/4	NG25/4	NG25	NG25/4	NG25/4	NG25
200	M19	35	NG50/4	NG50/4	NG35	NG50/4	NG50/4	NG35
250	C25	45	NG120/4	NG120/4	NG80	NG120/4	NG120/4	NG80
300	C27	45	NG160/4	NG160/4	NG120	NG160/4	NG160/4	NG120
350	C30	55	NG240/4	NG240/4		NG240/4	NG240/4	
400	C36	55			NG240			NG240
450	C40	65	NG350/4	NG350/4		NG350/4	NG350/4	NG350
500		65	-	-	NG350	-	-	-
600	C50	65	-	-	-	-	-	-

Shut-off function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG8/4	NG6	NG6	NG8/4	NG6	NG6
65		24	NG12/4	NG8	NG8	NG12/4	NG8	NG8
80		24		NG12	NG12		NG12	NG12
100	M14	24	NG25/4	NG16	NG16	NG25/4	NG16	NG16
125		30	NG35/4	NG25	NG25	NG35/4	NG25	NG25
150	M17	32	NG50/4	NG35	NG35	NG50/4	NG35	NG35
200	M19	35	NG120/4	NG80	NG80	NG120/4	NG80	NG80
250	C25	45	NG160/4	NG120	NG120	NG160/4	NG120	NG120
300	C27	45	NG240/4	NG160	NG160	NG240/4	NG240	NG240
350	C30	55	NG350/4	NG240	NG240	NG350/4		
400	C36	55	-	NG350	NG350	-	NG350	NG350
450	C40	65	-	-	-	-	-	-
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-

Throttling function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG8/4	NG8/4	NG6	NG8/4	NG8/4	NG6
65		24	NG12/4	NG12/4	NG8	NG12/4	NG12/4	NG8
80		24			NG12			NG12
100	M14	24	NG25/4	NG25/4	NG16	NG25/4	NG25/4	NG16
125		30	NG35/4	NG35/4	NG25	NG35/4	NG35/4	NG25
150	M17	32	NG50/4	NG50/4	NG35	NG50/4	NG50/4	NG35
200	M19	35	NG120/4	NG120/4	NG80	NG120/4	NG120/4	NG80
250	C25	45	NG160/4	NG160/4	NG120	NG160/4	NG160/4	NG120
300	C27	45	NG240/4	NG240/4	NG160	NG240/4	NG240/4	NG240
350	C30	55	NG350/4	NG350/4	NG240	NG350/4	NG350/4	
400	C36	55	-	-	NG350	-	-	NG350
450	C40	65	-	-	-	-	-	-
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-

Shut-off function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG6/4	NG4	NG4	NG6/4	NG4	NG4
65		24		NG6	NG6		NG6	NG6
80		24	NG8/4		NG8/4			
100	M14	24	NG12/4	NG12	NG12	NG12/4	NG12	NG12
125		30	NG25/4	NG16	NG16	NG25/4	NG16	NG16
150	M17	32	NG35/4	NG25	NG25	NG35/4	NG25	NG25
200	M19	35	NG50/4	NG50	NG50	NG50/4	NG50	NG50
250	C25	45	NG120/4	NG80	NG80	NG120/4	NG120	NG120
300		45	NG160/4	NG120	NG120	NG160/4		
350	C30	55	NG240/4	NG240	NG240	NG240/4	NG240	NG240
400	C36	55	NG350/4			NG350/4		
450	C40	65	-	NG350	NG350	-	NG350	NG350
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-

Throttling function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG6/4	NG6/4	NG4	NG6/4	NG6/4	NG4
65		24			NG6			NG6
80		24	NG8/4	NG8/4		NG8/4	NG8/4	
100	M14	24	NG12/4	NG12/4	NG12	NG12/4	NG12/4	NG12
125		30	NG25/4	NG25/4	NG16	NG25/4	NG25/4	NG16
150	M17	32	NG35/4	NG35/4	NG25	NG35/4	NG35/4	NG25
200	M19	35	NG50/4	NG50/4	NG50	NG50/4	NG50/4	NG50
250	C25	45	NG120/4	NG120/4	NG80	NG120/4	NG120/4	NG120
300		45	NG160/4	NG160/4	NG120	NG160/4	NG160/4	
350	C30	55	NG240/4	NG240/4	NG240	NG240/4	NG240/4	NG240
400	C36	55	NG350/4	NG350/4		NG350/4	NG350/4	
450	C40	65	-	-	NG350	-	-	NG350
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-

Shut-off function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG8/4	NG6	NG6	NG8/4	NG6	NG6
65		24	NG12/4	NG8	NG8	NG12/4	NG8	NG8
80		24	NG16/4	NG12	NG12	NG16/4	NG12	NG12
100	M14	24	NG25/4	NG25	NG25	NG25/4	NG25	NG25
125		30	NG50/4	NG35	NG35	NG50/4	NG35	NG35
150	M17	32	NG80/4	NG50	NG50	NG80/4	NG50	NG50
200	M19	35	NG120/4	NG120	NG120	NG120/4	NG120	NG120
250	C25	45	NG240/4	NG160	NG160	NG240/4	NG160	NG160
300	C27	45	NG350/4	NG240	NG240	NG350/4	NG240	NG240
350	C30	55	-	NG350	NG350	-	NG350	NG350
400	C36	55	-	-	-	-	-	-
450	C40	65	-	-	-	-	-	-
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-

Throttling function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG8/4	NG8/4	NG6	NG8/4	NG8/4	NG6
65		24	NG12/4	NG12/4	NG8	NG12/4	NG12/4	NG8
80		24	NG16/4	NG16/4	NG12	NG16/4	NG16/4	NG12
100	M14	24	NG25/4	NG25/4	NG25	NG25/4	NG25/4	NG25
125		30	NG50/4	NG50/4	NG35	NG50/4	NG50/4	NG35
150	M17	32	NG80/4	NG80/4	NG50	NG80/4	NG80/4	NG50
200	M19	35	NG120/4	NG120/4	NG120	NG120/4	NG120/4	NG120
250	C25	45	NG240/4	NG240/4	NG160	NG240/4	NG240/4	NG160
300	C27	45	NG350/4	NG350/4	NG240	NG350/4	NG350/4	NG240
350	C30	55	-	-	NG350	-	-	NG350
400	C36	55	-	-	-	-	-	-
450	C40	65	-	-	-	-	-	-
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-

Shut-off function: metal seat for lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG6/4	NG4	NG4	NG6/4	NG4	NG4
65		24	NG8/4	NG6	NG6	NG8/4	NG6	NG6
80		24						
100	M14	24	NG16/4	NG12	NG12	NG16/4	NG12	NG12
125		30	NG25/4	NG16	NG16	NG25/4	NG16	NG16
150	M17	32	NG35/4	NG25	NG25	NG35/4	NG25	NG25
200	M19	35	NG80/4	NG50	NG50	NG80/4	NG50	NG50
250	C25	45	NG160/4	NG120	NG120	NG160/4	NG120	NG120
300	C27	45	NG240/4			NG240/4		
350	C30	55	NG350/4	NG240	NG240	NG350/4	NG240	NG240
400	C36	55	-	NG350	NG350	-	NG350	NG350
450	C40	65	-	-	-	-	-	-
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-

Throttling function: metal seat for lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG6/4	NG6/4	NG4	NG6/4	NG6/4	NG4
65		24	NG8/4	NG8/4	NG6	NG8/4	NG8/4	NG6
80		24						
100	M14	24	NG16/4	NG16/4	NG12	NG16/4	NG16/4	NG12
125		30	NG25/4	NG25/4	NG16	NG25/4	NG25/4	NG16
150	M17	32	NG35/4	NG35/4	NG25	NG35/4	NG35/4	NG25
200	M19	35	NG80/4	NG80/4	NG50	NG80/4	NG80/4	NG50
250	C25	45	NG160/4	NG160/4	NG120	NG160/4	NG160/4	NG120
300	C27	45	NG240/4	NG240/4		NG240/4	NG240/4	
350	C30	55	NG350/4	NG350/4	NG240	NG350/4	NG350/4	NG240
400	C36	55	-	-	NG350	-	-	NG350
450	C40	65	-	-	-	-	-	-
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-

Shut-off function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG8/4	NG6	NG6	NG8/4	NG6	NG6
65		24	NG12/4	NG12	NG12	NG12/4	NG12	NG12
80		24	NG16/4			NG16/4		
100	M14	24	NG35/4	NG25	NG25	NG35/4	NG25	NG25
125		30	NG50/4	NG35	NG35	NG50/4	NG35	NG35
150	M17	32	NG80/4	NG50	NG50	NG80/4	NG50	NG50
200	M19	35	NG160/4	NG120	NG120	NG160/4	NG120	NG120
250	C25	45	NG240/4	NG160	NG160	NG240/4	NG160	NG160
300	C27	45	NG350/4	NG240	NG240	NG350/4	NG240	NG240
350	C30	55	-	NG350	NG350	-	NG350	NG350
400	C36	55	-	-	-	-	-	-
450	C40	65	-	-	-	-	-	-
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-

Throttling function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG8/4	NG8/4	NG6	NG8/4	NG8/4	NG6
65		24	NG12/4	NG12/4	NG12	NG12/4	NG12/4	NG12
80		24	NG16/4	NG16/4		NG16/4	NG16/4	
100	M14	24	NG35/4	NG35/4	NG25	NG35/4	NG35/4	NG25
125		30	NG50/4	NG50/4	NG35	NG50/4	NG50/4	NG35
150	M17	32	NG80/4	NG80/4	NG50	NG80/4	NG80/4	NG50
200	M19	35	NG160/4	NG160/4	NG120	NG160/4	NG160/4	NG120
250	C25	45	NG240/4	NG240/4	NG160	NG240/4	NG240/4	NG160
300	C27	45	NG350/4	NG350/4	NG240	NG350/4	NG350/4	NG240
350	C30	55	-	-	NG350	-	-	NG350
400	C36	55	-	-	-	-	-	-
450	C40	65	-	-	-	-	-	-
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-

## DYNACTAIR NG (PTFE seat)

Shut-off function: PTFE seat (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG4/4	NG2	NG2	NG4/4	NG2	NG2
65		24	NG6/4	NG4	NG4			
80		24				NG6/4	NG4	NG4
100	M14	24	NG8/4	NG6	NG6	NG8/4	NG6	NG6
125		30	NG12/4	NG8	NG8			
150	M17	32	NG16/4	NG12	NG12	NG12/4	NG12	NG12
200	M19	35	NG25/4	NG16	NG16	NG25/4	NG16	NG16
250	C25	45	NG50/4	NG35	NG35	NG50/4	NG35	NG35
300	C27	45	NG80/4	NG50	NG50	NG80/4	NG50	NG50
350	C30	55	NG120/4	NG80	NG80	NG120/4	NG80	NG80
400	C36	55	NG160/4	NG120	NG120	NG160/4	NG120	NG120
450	C40	65	NG240/4	NG160	NG160	NG240/4		
500		65	NG350/4	NG240	NG240		NG240	NG240
600	C50	65	-	NG350	NG350	-	NG350	NG350
650	C55	80	-			-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-
900		110	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-
1200	C90	110	-	-	-	-	-	-

Throttling function: PTFE seat (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG4/4	NG4/4	NG2	NG4/4	NG4/4	NG2
65		24	NG6/4	NG6/4	NG4			
80		24				NG6/4	NG6/4	NG4
100	M14	24	NG8/4	NG8/4	NG6	NG8/4	NG8/4	NG6
125		30	NG12/4	NG12/4	NG8			
150	M17	32	NG16/4	NG16/4	NG12	NG12/4	NG12/4	NG12
200	M19	35	NG25/4	NG25/4	NG16	NG25/4	NG25/4	NG16
250	C25	45	NG50/4	NG50/4	NG35	NG50/4	NG50/4	NG35
300	C27	45	NG80/4	NG80/4	NG50	NG80/4	NG80/4	NG50
350	C30	55	NG120/4	NG120/4	NG80	NG120/4	NG120/4	NG80
400	C36	55	NG160/4	NG160/4	NG120	NG160/4	NG160/4	NG120
450	C40	65	NG240/4	NG240/4	NG160	NG240/4	NG240/4	NG240
500		65	NG350/4	NG350/4	NG240			
600	C50	65	-	-	NG350	-	-	NG350
650	C55	80	-	-		-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-
900		110	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-
1200	C90	110	-	-	-	-	-	-



Shut-off function: PTFE seat (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG4/4	NG2	NG2	NG4/4	NG2	NG2
65		24	NG6/4	NG4	NG4			
80		24	NG8/4	NG6	NG6			
100	M14	24	NG12/4	NG8	NG8	NG6/4	NG4	NG4
125		30				NG8/4	NG6	NG6
150	M17	32	NG16/4	NG12	NG12	NG16/4	NG12	NG12
200	M19	35	NG25/4	NG25	NG25	NG35/4	NG25	NG25
250	C25	45	NG50/4	NG50	NG50	NG50/4	NG50	NG50
300	C27	45	NG80/4			NG120/4		
350	C30	55	NG160/4	NG240	NG240	NG160/4	NG120	NG120
400	C36	55	NG240/4			NG350/4		
450	C40	65	NG350/4	-	-	-	-	-
500		65						
600	C50	65	-	-	-	-	-	-
650	C55	80	-	-	-	-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-
900		110	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-
1200	C90	110	-	-	-	-	-	-

Throttling function: PTFE seat (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG4/4	NG4/4	NG2	NG4/4	NG4/4	NG2
65		24	NG6/4	NG6/4	NG4			
80		24	NG8/4	NG8/4	NG6			
100	M14	24			NG8/4	NG8/4	NG8/4	NG8/4
125		30	NG12/4	NG12/4	NG8	NG12/4	NG12/4	NG8
150	M17	32	NG16/4	NG16/4	NG12	NG16/4	NG16/4	NG12
200	M19	35	NG25/4	NG25/4	NG25	NG35/4	NG35/4	NG25
250	C25	45	NG35/4	NG35/4	NG50	NG50/4	NG50/4	NG50
300	C27	45	NG50/4	NG50/4		NG120/4	NG120/4	NG80
350	C30	55	NG160/4	NG160/4	NG240	NG160/4	NG160/4	NG120
400	C36	55	NG240/4	NG240/4		NG350/4	NG240/4	
450	C40	65	NG350/4	NG350/4	-	-	-	-
500		65						
600	C50	65	-	-	-	-	-	-
650	C55	80	-	-	-	-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-
900		110	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-
1200	C90	110	-	-	-	-	-	-

Shut-off function: PTFE seat (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction			
			Control pressure						
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]	
50	M11	24	NG6/4	NG4	NG4	NG4/4	NG2	NG2	
65		24				NG6/4			NG4
80		24				NG6			NG6
100	M14	24	NG8/4	NG12	NG12	NG8/4	NG12	NG12	
125		30	NG12/4			NG12/4			NG12
150	M17	32	NG25/4	NG16	NG16	NG25/4	NG16	NG16	
200	M19	35	NG35/4	NG25	NG25	NG35/4	NG25	NG25	
250	C25	45	NG80/4	NG50	NG50	NG80/4	NG50	NG50	
300	C27	45	NG120/4	NG80	NG80	NG160/4	NG120	NG120	
350	C30	55	NG240/4	NG120	NG120	NG240/4			
400	C36	55	NG350/4	NG240	NG240	NG350/4	NG240	NG240	
450	C40	65		-	NG350	NG350	-	NG350	NG350
500		65		-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-	
650	C55	80	-	-	-	-	-	-	
700	C60	80	-	-	-	-	-	-	
750		80	-	-	-	-	-	-	
800	C70	110	-	-	-	-	-	-	
900		110	-	-	-	-	-	-	
1000	C80	110	-	-	-	-	-	-	
1200	C90	110	-	-	-	-	-	-	

Throttling function: PTFE seat (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction				
			Control pressure							
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]		
50	M11	24	NG6/4	NG6/4	NG4	NG4/4	NG4/4	NG2		
65		24				NG6/4			NG6/4	NG4
80		24				NG6			NG6	NG6
100	M14	24	NG8/4	NG8/4	NG12	NG8/4	NG8/4	NG12		
125		30	NG12/4	NG12/4		NG12	NG12/4		NG12/4	
150	M17	32	NG25/4	NG25/4	NG16	NG25/4	NG25/4	NG16		
200	M19	35	NG35/4	NG35/4	NG25	NG35/4	NG35/4	NG25		
250	C25	45	NG80/4	NG80/4	NG50	NG80/4	NG80/4	NG50		
300	C27	45	NG120/4	NG120/4	NG80	NG160/4	NG160/4	NG120		
350	C30	55	NG240/4	NG240/4	NG120	NG240/4	NG240/4			
400	C36	55	NG350/4	NG350/4	NG240	NG350/4	NG350/4	NG240		
450	C40	65			-	-	NG350	-	-	NG350
500		65			-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-		
650	C55	80	-	-	-	-	-	-		
700	C60	80	-	-	-	-	-	-		
750		80	-	-	-	-	-	-		
800	C70	110	-	-	-	-	-	-		
900		110	-	-	-	-	-	-		
1000	C80	110	-	-	-	-	-	-		
1200	C90	110	-	-	-	-	-	-		

Shut-off function: PTFE seat (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG6/4	NG4	NG4	NG4/4	NG2	NG2
65		24		NG6	NG6			
80		24	NG8/4				NG6	NG6
100	M14	24	NG12/4	NG8	NG8	NG12/4	NG8	NG8
125		30	NG16/4	NG12	NG12	NG16/4	NG12	NG12
150	M17	32	NG25/4	NG16	NG16	NG25/4	NG16	NG16
200	M19	35	NG50/4	NG35	NG35	NG50/4	NG35	NG35
250	C25	45	NG120/4	NG80	NG80	NG120/4	NG80	NG80
300	C27	45	NG160/4	NG120	NG120	NG160/4	NG120	NG120
350	C30	55	NG240/4	NG160	NG160	NG240/4	NG240	NG240
400	C36	55	NG350/4	NG240	NG240	NG350/4		
450	C40	65	-	NG350	NG350	-	NG350	NG350
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-
650	C55	80	-	-	-	-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-
900		110	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-
1200	C90	110	-	-	-	-	-	-

Throttling function: PTFE seat (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
50	M11	24	NG6/4	NG6/4	NG4	NG4/4	NG4/4	NG2
65		24			NG6			
80		24	NG8/4	NG8/4				NG6
100	M14	24	NG12/4	NG12/4	NG8	NG12/4	NG12/4	NG8
125		30	NG16/4	NG16/4	NG12	NG16/4	NG16/4	NG12
150	M17	32	NG25/4	NG25/4	NG16	NG25/4	NG25/4	NG16
200	M19	35	NG50/4	NG50/4	NG35	NG50/4	NG50/4	NG35
250	C25	45	NG120/4	NG120/4	NG80	NG120/4	NG120/4	NG80
300	C27	45	NG160/4	NG160/4	NG120	NG160/4	NG160/4	NG120
350	C30	55	NG240/4	NG240/4	NG160	NG240/4	NG240/4	NG240
400	C36	55	NG350/4	NG350/4	NG240	NG350/4	NG350/4	
450	C40	65	-	-	NG350	-	-	NG350
500		65	-	-	-	-	-	-
600	C50	65	-	-	-	-	-	-
650	C55	80	-	-	-	-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-
900		110	-	-	-	-	-	-
1000	C80	110	-	-	-	-	-	-
1200	C90	110	-	-	-	-	-	-

## DYNACTAIR NG (PTFE seat)

Shut-off function: FKM/VITON seat (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
80	M11	24	NG6/4	NG4	NG4	NG6/4	NG4	NG4
100	M14	24	NG8/4	NG6	NG6	NG8/4	NG6	NG6
125		30	NG12/4	NG8	NG8			
150	M17	32	NG16/4	NG12	NG12	NG12/4	NG12	NG12
200	M19	35	NG25/4	NG16	NG16	NG25/4	NG16	NG16
250	C25	45	NG50/4	NG35	NG35	NG50/4	NG35	NG35
300	C27	45	NG80/4	NG50	NG50	NG80/4	NG50	NG50
350	C30	55	NG120/4	NG80	NG80	NG120/4	NG80	NG80
400	C36	55	NG160/4	NG120	NG120	NG160/4	NG120	NG120
450	C40	65	NG240/4	NG160	NG160	NG240/4		
500		65	NG350/4	NG240	NG240	NG350/4	NG240	NG240
550	C50	65	-	NG350	NG350		-	NG350
600						NG350		NG350
650	C55	80	-	-	-	-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-

Throttling function: FKM/VITON seat (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
80	M11	24	NG6/4	NG6/4	NG4	NG6/4	NG6/4	NG4
100	M14	24	NG8/4	NG8/4	NG6	NG8/4	NG8/4	NG6
125		30	NG12/4	NG12/4	NG8			
150	M17	32	NG16/4	NG16/4	NG12	NG12/4	NG12/4	NG12
200	M19	35	NG25/4	NG25/4	NG16	NG25/4	NG25/4	NG16
250	C25	45	NG50/4	NG50/4	NG35	NG50/4	NG50/4	NG35
300	C27	45	NG80/4	NG80/4	NG50	NG80/4	NG80/4	NG50
350	C30	55	NG120/4	NG120/4	NG80	NG120/4	NG120/4	NG80
400	C36	55	NG160/4	NG160/4	NG120	NG160/4	NG160/4	NG120
450	C40	65	NG240/4	NG240/4	NG160	NG240/4	NG240/4	
500		65	NG350/4	NG350/4	NG240	NG350/4	NG350/4	NG240
550	C50	65	-	-	NG350			-
600						NG350	NG350	
650	C55	80	-	-	-	-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-

Shut-off function: FKM/VITON seat (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
80	M11	24	NG6/4	NG6	NG6	NG6/4	NG4	NG4
100	M14	24	NG8/4	NG8	NG8	NG8/4	NG6	NG6
125		30	NG12/4			NG12/4	NG8	NG8
150	M17	32	NG16/4	NG12	NG12	NG16/4	NG12	NG12
200	M19	35	NG25/4	NG25	NG25	NG35/4	NG25	NG25
250	C25	45	NG50/4	NG50	NG50	NG50/4	NG50	NG50
300	C27	45	NG80/4	NG80	NG80	NG120/4	NG80	NG80
350	C30	55	NG160/4	NG120	NG120	NG160/4	NG120	NG120
400	C36	55	NG240/4			NG240/4		
450	C40	65	NG350/4	NG240	NG240	NG350/4	NG240	NG240
500		65						
550	C50	65	-	NG350	NG350	-	NG350	NG350
600		-	-	-	-	-	-	-
650		C55	80	-	-	-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-

Throttling function: FKM/VITON seat (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
80	M11	24	NG6/4	NG6/4	NG6	NG6/4	NG6/4	NG4
100	M14	24	NG8/4	NG8/4		NG8/4	NG8/4	NG6
125		30	NG12/4	NG12/4	NG8	NG12/4	NG12/4	NG8
150	M17	32	NG16/4	NG16/4	NG12	NG16/4	NG16/4	NG12
200	M19	35	NG25/4	NG25/4	NG25	NG35/4	NG35/4	NG25
250	C25	45	NG50/4	NG50/4	NG50	NG50/4	NG50/4	NG50
300	C27	45	NG80/4	NG80/4	NG80	NG120/4	NG120/4	NG80
350	C30	55	NG160/4	NG160/4	NG120	NG160/4	NG160/4	NG120
400	C36	55	NG240/4			NG240/4		
450	C40	65	NG350/4	NG350/4	NG240	NG350/4	NG350/4	NG240
500		65						
550	C50	65	-	-	NG350	-	-	NG350
600		-	-	-	-	-	-	-
650		C55	80	-	-	-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-

Shut-off function: FKM/VITON seat (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
80	M11	24	NG6/4	NG6	NG6	NG6/4	NG6	NG6
100	M14	24	NG8/4	NG12	NG12	NG8/4	NG12	NG12
125		30	NG12/4			NG12/4		
150	M17	32	NG25/4	NG16	NG16	NG25/4	NG16	NG16
200	M19	35	NG35/4	NG25	NG25	NG35/4	NG25	NG25
250	C25	45	NG80/4	NG50	NG50	NG80/4	NG50	NG50
300	C27	45	NG120/4	NG80	NG80	NG160/4	NG120	NG120
350	C30	55	NG240/4	NG120	NG120	NG240/4		
400	C36	55	NG350/4	NG240	NG240	NG350/4	NG240	NG240
450	C40	65		-	NG350	NG350	-	NG350
500	C50	65	-	-	-	-	-	-
550		65	-	-	-	-	-	-
600		65	-	-	-	-	-	-
650	C55	80	-	-	-	-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-

Throttling function: FKM/VITON seat (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Control pressure					
	s	h3	4 [bar]	5 [bar]	6 [bar]	4 [bar]	5 [bar]	6 [bar]
80	M11	24	NG6/4	NG6/4	NG6	NG6/4	NG6/4	NG6
100	M14	24	NG8/4	NG8/4	NG12	NG8/4	NG8/4	NG12
125		30	NG12/4	NG12/4		NG12/4	NG12/4	
150	M17	32	NG25/4	NG25/4	NG16	NG25/4	NG25/4	NG16
200	M19	35	NG35/4	NG35/4	NG25	NG35/4	NG35/4	NG25
250	C25	45	NG80/4	NG80/4	NG50	NG80/4	NG80/4	NG50
300	C27	45	NG120/4	NG120/4	NG80	NG160/4	NG160/4	NG120
350	C30	55	NG240/4	NG240/4	NG120	NG240/4	NG240/4	
400	C36	55	NG350/4	NG350/4	NG240	NG350/4	NG350/4	NG240
450	C40	65			-	-	-	-
500	C50	65	-	-	NG350	-	-	-
550		65	-	-	-	-	-	-
600		65	-	-	-	-	-	-
650	C55	80	-	-	-	-	-	-
700	C60	80	-	-	-	-	-	-
750		80	-	-	-	-	-	-
800	C70	110	-	-	-	-	-	-

Electric Actuators

## AQ/AQL - BERNARD CONTROLS (metal seat)

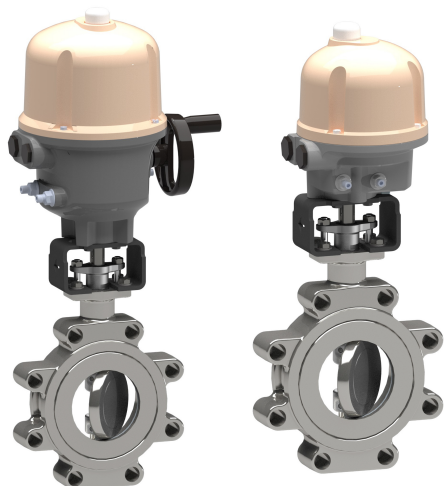


Fig. 6: Unit comprising DANAIS 150 + AQ/AQL actuator

Shut-off function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	6	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24	-	-	AQ10	-	AQ10
125		30					
150	M17	32	-	AQ15	-	-	AQ15
200	M19	35	-	AQ25	-	-	AQ25
250	C25	45	-	AQ50	-	-	AQ50
300	C27	45	-	-	-	-	-
350	C30	55	-	-	-	-	-
400	C36	55	-	-	-	-	-

Throttling function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	6	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24	-	-	AQ10	-	AQ10
125		30					
150	M17	32	-	AQ15	-	-	AQ15
200	M19	35	-	AQ25	-	-	AQ25
250	C25	45	-	AQ50	-	-	AQ50
300	C27	45	-	-	-	-	-
350	C30	55	-	-	-	-	-
400	C36	55	-	-	-	-	-

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Shut-off function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	6	AQ7L	AQ5	AQ7L	AQ5
65		24			AQ10		AQ10
80		24		-	-		
100	M14	24		-	AQ15	-	AQ15
125		30		-	AQ25	-	AQ25
150	M17	32		-	AQ30	-	AQ30
200	M19	35		-	AQ50	-	AQ50
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Throttling function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	6	AQ7L	AQ5	AQ7L	AQ5
65		24			AQ10		AQ10
80		24		-	-		
100	M14	24		-	AQ15	-	AQ15
125		30		-	AQ25	-	AQ25
150	M17	32		-	AQ30	-	AQ30
200	M19	35		-	AQ50	-	AQ50
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Shut-off function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	10	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	AQ10	-	AQ10
125		30		-	AQ15	-	AQ15
150	M17	32		-	AQ25	-	AQ25
200	M19	35		-	AQ30	-	AQ30
250	C25	45		-	AQ50	-	AQ50
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	



Throttling function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	10	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	AQ10	-	AQ10
125		30		-	AQ15	-	AQ15
150	M17	32		-	AQ25	-	AQ25
200	M19	35		-	AQ30	-	AQ30
250	C25	45		-	AQ50	-	AQ50
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Shut-off function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	10	AQ7L	AQ5	AQ7L	AQ5
65		24			AQ10		AQ10
80		24		-	-		
100	M14	24		-	AQ15	-	AQ15
125		30		-	AQ25	-	AQ25
150	M17	32		-	AQ50	-	AQ50
200	M19	35		-	-	-	-
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Throttling function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	10	AQ7L	AQ5	AQ7L	AQ5
65		24			AQ10		AQ10
80		24		-	-		
100	M14	24		-	AQ15	-	AQ15
125		30		-	AQ25	-	AQ25
150	M17	32		-	AQ50	-	AQ50
200	M19	35		-	-	-	-
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Shut-off function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	16	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	-		
125		30		-	AQ15	-	AQ15
150	M17	32		-	AQ25	-	AQ25
200	M19	35		-	AQ50	-	AQ50
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Throttling function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	16	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	-		
125		30		-	AQ15	-	AQ15
150	M17	32		-	AQ25	-	AQ25
200	M19	35		-	AQ50	-	AQ50
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Shut-off function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction			
	s	h3		AQL	AQ	AQL	AQ		
50	M11	24	16	AQ7L	AQ10	AQ7L	AQ10		
65		24						-	-
80		24						-	AQ15
100	M14	24		-	AQ25	-	AQ25		
125		30		-	AQ30	-	AQ30		
150	M17	32		-	AQ50	-	AQ50		
200	M19	35		-	-	-	-		
250	C25	45		-	-	-	-		
300	C27	45		-	-	-	-		
350	C30	55		-	-	-	-		
400	C36	55	-	-	-	-			

Throttling function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	16	AQ7L	AQ10	AQ7L	AQ10
65		24		-			
80		24		-	AQ15	-	AQ15
100	M14	24		-	AQ25	-	AQ25
125		30		-	AQ30	-	AQ30
150	M17	32		-	AQ50	-	AQ50
200	M19	35		-	-	-	-
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Shut-off function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	20	AQ7L	AQ10	AQ7L	AQ10
65		24		-			
80		24		-	AQ15	-	AQ15
100	M14	24		-	AQ25	-	AQ25
125		30		-	AQ30	-	AQ30
150	M17	32		-	AQ50	-	AQ50
200	M19	35		-	-	-	-
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Throttling function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	20	AQ7L	AQ10	AQ7L	AQ10
65		24		-			
80		24		-	AQ15	-	AQ15
100	M14	24		-	AQ25	-	AQ25
125		30		-	AQ30	-	AQ30
150	M17	32		-	AQ50	-	AQ50
200	M19	35		-	-	-	-
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Shut-off function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	20	AQ7L	AQ10	AQ7L	AQ10
65		24		-	-	-	-
80		24		-	AQ15	-	AQ15
100	M14	24		-	AQ25	-	AQ25
125		30		-	AQ30	-	AQ30
150	M17	32		-	AQ50	-	AQ50
200	M19	35		-	-	-	-
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Throttling function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	20	AQ7L	AQ10	AQ7L	AQ10
65		24		-	-	-	-
80		24		-	AQ15	-	AQ15
100	M14	24		-	AQ25	-	AQ25
125		30		-	AQ30	-	AQ30
150	M17	32		-	AQ50	-	AQ50
200	M19	35		-	-	-	-
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

## AQ/AQL - BERNARD CONTROLS (PTFE seat)

Shut-off function: PTFE seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	6	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	-	-	-
125		30					
150	M17	32		-	-	-	-
200	M19	35		-	AQ25	-	AQ15
250	C25	45		-	AQ30	-	AQ30
300	C27	45		-	AQ50	-	AQ50
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Throttling function: PTFE seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	6	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	-	-	-
125		30					
150	M17	32		-	-	-	-
200	M19	35		-	AQ25	-	AQ15
250	C25	45		-	AQ30	-	AQ30
300	C27	45		-	AQ50	-	AQ50
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Shut-off function: PTFE seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	10	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	-	-	-
125		30					
150	M17	32		-	AQ15	-	AQ15
200	M19	35		-	AQ25	-	AQ25
250	C25	45		-	AQ50	-	AQ50
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Throttling function: PTFE seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	10	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	AQ10	-	AQ10
125		30					
150	M17	32		-	AQ15	-	AQ15
200	M19	35		-	AQ25	-	AQ25
250	C25	45		-	AQ50	-	AQ50
300		45		-			
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Shut-off function: PTFE seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	16	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	AQ10	-	AQ10
125		30		-			
150	M17	32		-	AQ15	-	AQ15
200	M19	35		-	AQ25	-	AQ25
250	C25	45		-	AQ50	-	AQ50
300		45		-			
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Throttling function: PTFE seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	16	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	AQ10	-	AQ10
125		30		-			
150	M17	32		-	AQ15	-	AQ15
200	M19	35		-	AQ25	-	AQ25
250	C25	45		-	AQ50	-	AQ50
300		45		-			
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Shut-off function: PTFE seat (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	20	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	AQ10	-	AQ10
125		30					
150	M17	32		-	AQ25	-	AQ25
200	M19	35		-	AQ30	-	AQ30
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

Throttling function: PTFE seat (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	M11	24	20	AQ7L	AQ5	AQ7L	AQ5
65		24					
80		24					
100	M14	24		-	AQ10	-	AQ10
125		30					
150	M17	32		-	AQ25	-	AQ25
200	M19	35		-	AQ30	-	AQ30
250	C25	45		-	-	-	-
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55	-	-	-	-	

## AQ/AQL - BERNARD CONTROLS (FKM/VITON seat)

Shut-off function: FKM/VITON seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	-	-	6	-	-	-	-
65	-	-		-	-	-	-
80	M11	24		AQ7L	AQ5	AQ7L	AQ5
100	M14	24		-	-	-	-
125		30					
150	M17	32		-	-	-	-
200	M19	35		-	AQ25	-	AQ15
250	C25	45		-	AQ30	-	AQ30
300	C27	45		-	AQ50	-	AQ50
350	C30	55		-	-	-	-
400	C36	55		-	-	-	-

Throttling function: FKM/VITON seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	-	-	6	-	-	-	-
65	-	-		-	-	-	-
80	M11	24		AQ7L	AQ5	AQ7L	AQ5
100	M14	24		-	-	-	-
125		30					
150	M17	32		-	-	-	-
200	M19	35		-	AQ25	-	AQ15
250	C25	45		-	AQ30	-	AQ30
300	C27	45		-	AQ50	-	AQ50
350	C30	55		-	-	-	-
400	C36	55		-	-	-	-

Shut-off function: FKM/VITON seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	-	-	10	-	-	-	-
65	-	-		-	-	-	-
80	M11	24		AQ7L	AQ5	AQ7L	AQ5
100	M14	24		-	-	-	-
125		30					
150	M17	32		-	AQ15	-	AQ15
200	M19	35		-	AQ25	-	AQ25
250	C25	45		-	AQ50	-	AQ50
300	C27	45		-	-	-	-
350	C30	55		-	-	-	-
400	C36	55		-	-	-	-



Throttling function: FKM/VITON seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	-	-	10	-	-	-	-
65	-	-		-	-	-	-
80	M11	24		AQ7L	AQ5	AQ7L	AQ5
100	M14	24		-	AQ10	-	AQ10
125		30					
150	M17	32		-	AQ15	-	AQ15
200	M19	35		-	AQ25	-	AQ25
250	C25	45		-	AQ50	-	AQ50
300	C27	45		-		-	
350	C30	55		-	-	-	-
400	C36	55		-	-	-	-

Shut-off function: FKM/VITON seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	-	-	16	-	-	-	-
65	-	-		-	-	-	-
80	M11	24		AQ7L	AQ5	AQ7L	AQ5
100	M14	24		-	AQ10	-	AQ10
125		30					
150	M17	32		-	AQ15	-	AQ15
200	M19	35		-	AQ25	-	AQ25
250	C25	45		-	AQ50	-	AQ50
300	C27	45		-		-	
350	C30	55		-	-	-	-
400	C36	55		-	-	-	-

Throttling function: FKM/VITON seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction		Non-preferred flow direction	
	s	h3		AQL	AQ	AQL	AQ
50	-	-	16	-	-	-	-
65	-	-		-	-	-	-
80	M11	24		AQ7L	AQ5	AQ7L	AQ5
100	M14	24		-	AQ10	-	AQ10
125		30					
150	M17	32		-	AQ15	-	AQ15
200	M19	35		-	AQ25	-	AQ25
250	C25	45		-	AQ50	-	AQ50
300	C27	45		-		-	
350	C30	55		-	-	-	-
400	C36	55		-	-	-	-

## SQ - BERNARD CONTROLS (metal seat)



Fig. 7: Unit comprising DANAIS 150 + SQ - BERNARD CONTROLS actuator

Shut-off function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	6	SQ6	SQ6
65		24			
80		24			
100	M14	24		SQ10	SQ10
125		30			
150	M17	32		SQ15	SQ15
200	M19	35		SQ25	SQ25
250	C25	45		SQ60	SQ60
300	C27	45			
350	C30	55	SQ120	SQ120	
400	C36	55	-	-	

Throttling function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	6	SQ10	SQ10
65		24			
80		24			
100	M14	24		SQ15	SQ15
125		30			
150	M17	32		SQ25	SQ25
200	M19	35		SQ60	SQ60
250	C25	45			
300	C27	45			
350	C30	55	SQ120	SQ120	
400	C36	55	-	-	

Shut-off function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	6	SQ6	SQ6
65		24			
80		24			
100	M14	24		SQ10	SQ10
125		30			
150	M17	32		SQ15	SQ15
200	M19	35		SQ25	SQ25
250	C25	45		SQ60	SQ60
300	C27	45			
350	C30	55		SQ120	SQ120
400	C36	55	-	-	

Throttling function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	6	SQ10	SQ10
65		24			
80		24			
100	M14	24		SQ15	SQ15
125		30			
150	M17	32		SQ25	SQ25
200	M19	35		SQ60	SQ60
250	C25	45			
300	C27	45			
350	C30	55		SQ120	SQ120
400	C36	55	-	-	

Shut-off function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	10	SQ6	SQ6
65		24			
80		24			
100	M14	24		SQ10	SQ10
125		30			
150	M17	32		SQ15	SQ15
200	M19	35		SQ25	SQ25
250	C25	45		SQ60	SQ60
300	C27	45		SQ80	SQ80
350	C30	55		SQ120	-
400	C36	55	-	-	

Throttling function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	10	SQ10	SQ10
65		24			
80		24			
100	M14	24		SQ15	SQ15
125		30			
150	M17	32		SQ25	SQ25
200	M19	35		SQ60	SQ60
250	C25	45		SQ80	SQ80
300	C27	45			
350	C30	55			
400	C36	55	-	-	

Shut-off function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	10	SQ6	SQ6
65		24		SQ10	SQ10
80		24			
100	M14	24		SQ15	SQ15
125		30		SQ25	SQ25
150	M17	32		SQ60	SQ60
200	M19	35		SQ120	SQ120
250	C25	45			
300	C27	45			
350	C30	55		-	-
400	C36	55	-	-	

Throttling function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	10	SQ10	SQ10
65		24			
80		24			
100	M14	24		SQ15	SQ15
125		30			
150	M17	32		SQ25	SQ25
200	M19	35		SQ60	SQ60
250	C25	45		SQ120	SQ120
300	C27	45			
350	C30	55			
400	C36	55	-	-	

Shut-off function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	16	SQ6	SQ6
65		24			
80		24			
100	M14	24		SQ10	SQ10
125		30		SQ15	SQ15
150	M17	32		SQ25	SQ25
200	M19	35		SQ60	SQ60
250	C25	45		SQ80	SQ80
300	C27	45		SQ120	SQ120
350	C30	55		-	-
400	C36	55	-	-	

Throttling function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	16	SQ10	SQ10
65		24			
80		24			
100	M14	24			
125		30		SQ15	SQ15
150	M17	32		SQ25	SQ25
200	M19	35		SQ60	SQ60
250	C25	45		SQ80	SQ80
300	C27	45		SQ120	SQ120
350	C30	55		-	-
400	C36	55	-	-	

Shut-off function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	16	SQ6	SQ6
65		24		SQ10	SQ10
80		24		SQ15	SQ15
100	M14	24		SQ25	SQ25
125		30		SQ60	SQ60
150	M17	32			
200	M19	35		SQ80	SQ80
250	C25	45		-	-
300	C27	45		-	-
350	C30	55		-	-
400	C36	55	-	-	

Throttling function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	16	SQ10	SQ10
65		24			
80		24			
100	M14	24		SQ15	SQ15
125		30		SQ25	SQ25
150	M17	32		SQ60	SQ60
200	M19	35		SQ80	SQ80
250	C25	45		-	-
300	C27	45		-	-
350	C30	55		-	-
400	C36	55	-	-	

Shut-off function: metal seat for lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	20	SQ6	SQ6
65		24			
80		24			
100	M14	24		SQ10	SQ10
125		30		SQ15	SQ15
150	M17	32		SQ25	SQ25
200	M19	35		SQ60	SQ60
250	C25	45		SQ80	SQ80
300	C27	45		SQ120	-
350	C30	55		-	-
400	C36	55	-	-	

Throttling function: metal seat for lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	20	SQ10	SQ10
65		24			
80		24			
100	M14	24		SQ15	SQ15
125		30			
150	M17	32			
200	M19	35		SQ60	SQ60
250	C25	45		SQ80	SQ80
300	C27	45		SQ120	-
350	C30	55		-	-
400	C36	55	-	-	

Shut-off function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	20	SQ6	SQ6
65		24		SQ10	SQ10
80		24		SQ15	SQ15
100	M14	24		SQ25	SQ25
125		30		SQ60	SQ60
150	M17	32			
200	M19	35		SQ80	SQ80
250	C25	45		-	-
300	C27	45		-	-
350	C30	55		-	-
400	C36	55	-	-	

Throttling function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Preferred flow direction
	s	h3			
50	M11	24	20	SQ10	SQ10
65		24			
80		24		SQ15	SQ15
100	M14	24		SQ25	SQ25
125		30		SQ60	SQ60
150	M17	32			
200	M19	35		SQ80	SQ80
250	C25	45		-	-
300	C27	45		-	-
350	C30	55		-	-
400	C36	55	-	-	

## SQ - BERNARD CONTROLS (PTFE seat)

Shut-off function: PTFE seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	6	SQ6	SQ6
65		24			
80		24			
100	M14	24		SQ10	SQ10
125		30			
150	M17	32		SQ25	SQ15
200	M19	35		SQ60	SQ60
250	C25	45		SQ80	SQ80
300	C27	45			
350	C30	55			
400	C36	55	SQ120	SQ120	

Throttling function: PTFE seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	6	SQ10	SQ10
65		24			
80		24			
100	M14	24		SQ25	SQ15
125		30			
150	M17	32		SQ60	SQ60
200	M19	35		SQ80	SQ80
250	C25	45			
300	C27	45			
350	C30	55		SQ120	SQ120
400	C36	55			

Shut-off function: PTFE seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	10	SQ6	SQ6
65		24			
80		24			
100	M14	24		SQ10	SQ10
125		30			
150	M17	32		SQ15	SQ15
200	M19	35		SQ25	SQ25
250	C25	45		SQ60	SQ60
300	C27	45		SQ80	SQ80
350	C30	55			
400	C36	55	SQ120		



Throttling function: PTFE seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	10	SQ10	SQ6
65		24			
80		24			
100	M14	24		SQ15	SQ15
125		30			
150	M17	32		SQ25	SQ25
200	M19	35		SQ60	SQ60
250	C25	45		SQ80	SQ80
300	C27	45			
350	C30	55			
400	C36	55	SQ120	SQ120	

Shut-off function: PTFE seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	16	SQ6	SQ6
65		24			
80		24			
100	M14	24		SQ10	SQ10
125		30			
150	M17	32		SQ15	SQ15
200	M19	35		SQ25	SQ25
250	C25	45		SQ60	SQ60
300	C27	45		SQ80	SQ80
350	C30	55		SQ120	-
400	C36	55	-	-	

Throttling function: PTFE seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	16	SQ10	SQ10
65		24			
80		24			
100	M14	24		SQ15	SQ15
125		30			
150	M17	32		SQ25	SQ25
200	M19	35		SQ60	SQ60
250	C25	45		SQ80	SQ80
300	C27	45			
350	C30	55			
400	C36	55	-	-	

Shut-off function: PTFE seat (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	20	SQ6	SQ6
65		24			
80		24			
100	M14	24		SQ10	SQ10
125		30			
150	M17	32		SQ25	SQ25
200	M19	35		SQ60	SQ60
250	C25	45		SQ80	SQ80
300	C27	45			
350	C30	55			
400	C36	55			

Throttling function: PTFE seat (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	20	SQ10	SQ10
65		24			
80		24			
100	M14	24		SQ25	SQ25
125		30			
150	M17	32		SQ60	SQ60
200	M19	35		SQ80	SQ80
250	C25	45			
300	C27	45			
350	C30	55			
400	C36	55	-	-	

## SQ - BERNARD CONTROLS (FKM/VITON seat)

Shut-off function: FKM/VITON seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	6	-	-
65	-	-		-	-
80	M11	24		SQ6	SQ6
100	M14	24		SQ10	SQ10
125		30			
150	M17	32		SQ25	SQ15
200	M19	35			
250	C25	45		SQ60	SQ60
300	C27	45		SQ80	SQ120
350	C30	55			
400	C36	55			

Throttling function: FKM/VITON seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	6	-	-
65	-	-		-	-
80	M11	24		SQ10	SQ10
100	M14	24			
125		30			
150	M17	32		SQ25	SQ15
200	M19	35			
250	C25	45		SQ60	SQ60
300	C27	45		SQ80	SQ120
350	C30	55			
400	C36	55			

Shut-off function: FKM/VITON seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	10	-	-
65	-	-		-	-
80	M11	24		SQ6	SQ6
100	M14	24			
125		30		SQ10	SQ10
150	M17	32		SQ15	SQ15
200	M19	35		SQ25	SQ25
250	C25	45		SQ60	SQ60
300	C27	45		SQ80	SQ80
350	C30	55			
400	C36	55			

Throttling function: FKM/VITON seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	10	-	-
65	-	-		-	-
80	M11	24		SQ10	SQ10
100	M14	24			
125		30			
150	M17	32		SQ15	SQ15
200	M19	35		SQ25	SQ25
250	C25	45		SQ60	SQ60
300	C27	45			
350	C30	55		SQ80	SQ80
400	C36	55		SQ120	-

Shut-off function: FKM/VITON seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	16	-	-
65	-	-		-	-
80	M11	24		SQ6	SQ6
100	M14	24			
125		30		SQ10	SQ10
150	M17	32		SQ15	SQ15
200	M19	35		SQ25	SQ25
250	C25	45		SQ60	SQ60
300	C27	45			
350	C30	55		SQ80	SQ80
400	C36	55		SQ120	-
				-	-

Throttling function: FKM/VITON seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	16	-	-
65	-	-		-	-
80	M11	24		SQ10	SQ10
100	M14	24			
125		30			
150	M17	32		SQ15	SQ15
200	M19	35		SQ25	SQ25
250	C25	45		SQ60	SQ60
300	C27	45			
350	C30	55		SQ80	SQ80
400	C36	55		SQ120	-
				-	-

## SQ - AUMA (metal seat)

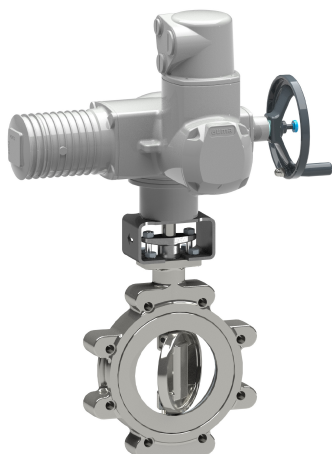


Fig. 8: Unit comprising DANAIS 150 + SQ - AUMA actuator

Shut-off function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction		
	s	h3				SQ - AUMA	
50	M11	24	6	SQ05.2	SQ05.2		
65		24					
80		24					
100	M14	24		SQ07.2	SQ07.2		
125		30					
150	M17	32				SQ10.2	SQ10.2
200	M19	35					
250	C25	45		SQ12.2	SQ12.2		
300	C27	45					
350	C30	55					
400	C36	55					

Throttling function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction		
	s	h3				SQ - AUMA	
50	M11	24	6	SQ05.2	SQ05.2		
65		24					
80		24					
100	M14	24		SQ07.2	SQ07.2		
125		30					
150	M17	32				SQ10.2	SQ10.2
200	M19	35					
250	C25	45		SQ12.2	SQ12.2		
300	C27	45					
350	C30	55					
400	C36	55					

Shut-off function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	6	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ07.2
125		30			
150	M17	32		SQ10.2	SQ10.2
200	M19	35			
250	C25	45		SQ12.2	SQ12.2
300	C27	45			
350	C30	55		-	-
400	C36	55	-	-	

Throttling function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	6	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ07.2
125		30			
150	M17	32		SQ10.2	SQ10.2
200	M19	35			
250	C25	45		SQ12.2	SQ12.2
300	C27	45			
350	C30	55		-	-
400	C36	55	-	-	

Shut-off function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	10	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ07.2
125		30			
150	M17	32		SQ10.2	SQ10.2
200	M19	35			
250	C25	45		SQ12.2	SQ12.2
300	C27	45			
350	C30	55		-	-
400	C36	55	-	-	

Throttling function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction	
	s	h3				
50	M11	24	10	SQ05.2	SQ05.2	
65		24				
80		24				
100	M14	24		SQ - AUMA	SQ07.2	SQ07.2
125		30				
150	M17	32			SQ07.2	SQ07.2
200	M19	35				
250	C25	45			SQ10.2	SQ10.2
300	C27	45			SQ12.2	SQ12.2
350	C30	55			-	-
400	C36	55	-		-	

Shut-off function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction	
	s	h3				
50	M11	24	10	SQ05.2	SQ05.2	
65		24				
80		24				
100	M14	24		SQ - AUMA	SQ07.2	SQ07.2
125		30				
150	M17	32			SQ10.2	SQ10.2
200	M19	35				
250	C25	45			SQ12.2	SQ12.2
300	C27	45			-	-
350	C30	55			-	-
400	C36	55	-		-	

Throttling function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction	
	s	h3				
50	M11	24	10	SQ05.2	SQ05.2	
65		24				
80		24				
100	M14	24		SQ - AUMA	SQ07.2	SQ07.2
125		30				
150	M17	32			SQ10.2	SQ10.2
200	M19	35				
250	C25	45			SQ12.2	SQ12.2
300	C27	45			-	-
350	C30	55			-	-
400	C36	55	-		-	

Shut-off function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction	
	s	h3				
50	M11	24	16	SQ05.2	SQ05.2	
65		24				
80		24				
100	M14	24		SQ - AUMA	SQ07.2	SQ07.2
125		30				
150	M17	32			SQ07.2	SQ07.2
200	M19	35			SQ10.2	SQ10.2
250	C25	45			SQ12.2	SQ12.2
300	C27	45			-	-
350	C30	55			-	-
400	C36	55	-		-	

Throttling function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction	
	s	h3				
50	M11	24	16	SQ05.2	SQ05.2	
65		24				
80		24				
100	M14	24		SQ - AUMA	SQ07.2	SQ07.2
125		30				
150	M17	32			SQ07.2	SQ07.2
200	M19	35			SQ10.2	SQ10.2
250	C25	45			SQ12.2	SQ12.2
300	C27	45			-	-
350	C30	55			-	-
400	C36	55	-		-	

Shut-off function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction	
	s	h3				
50	M11	24	16	SQ05.2	SQ05.2	
65		24				
80		24				
100	M14	24		SQ - AUMA	SQ07.2	SQ07.2
125		30				
150	M17	32			SQ10.2	SQ10.2
200	M19	35			SQ12.2	SQ12.2
250	C25	45			-	-
300	C27	45			-	-
350	C30	55			-	-
400	C36	55	-		-	



Throttling function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	16	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ07.2
125		30			
150	M17	32		SQ10.2	SQ10.2
200	M19	35		SQ12.2	SQ12.2
250	C25	45		-	-
300	C27	45		-	-
350	C30	55		-	-
400	C36	55		-	-

Shut-off function: metal seat for lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	20	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ07.2
125		30			
150	M17	32		SQ10.2	SQ10.2
200	M19	35		SQ12.2	SQ12.2
250	C25	45		-	-
300	C27	45		-	-
350	C30	55		-	-
400	C36	55		-	-

Throttling function: metal seat for lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	20	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ07.2
125		30			
150	M17	32		SQ10.2	SQ10.2
200	M19	35		SQ12.2	SQ12.2
250	C25	45		-	-
300	C27	45		-	-
350	C30	55		-	-
400	C36	55		-	-

Shut-off function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	20	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ07.2
125		30			
150	M17	32		SQ10.2	SQ10.2
200	M19	35		SQ12.2	SQ12.2
250	C25	45		-	-
300	C27	45		-	-
350	C30	55		-	-
400	C36	55	-	-	

Throttling function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	20	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ07.2
125		30			
150	M17	32		SQ10.2	SQ10.2
200	M19	35		SQ12.2	SQ12.2
250	C25	45		-	-
300	C27	45		-	-
350	C30	55		-	-
400	C36	55	-	-	

## SQ - AUMA (PTFE seat)

Shut-off function: PTFE seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	6	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ10.2
125		30			
150	M17	32			
200	M19	35			
250	C25	45		SQ10.2	SQ10.2
300	C27	45		SQ12.2	
350	C30	55			
400	C36	55			SQ12.2

Throttling function: PTFE seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	6	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ10.2
125		30			
150	M17	32			
200	M19	35			
250	C25	45		SQ10.2	SQ10.2
300	C27	45		SQ12.2	
350	C30	55			
400	C36	55			SQ12.2

Shut-off function: PTFE seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	M11	24	10	SQ05.2	SQ05.2
65		24			
80		24			
100	M14	24		SQ07.2	SQ07.2
125		30			
150	M17	32			
200	M19	35			
250	C25	45		SQ10.2	SQ10.2
300	C27	45			
350	C30	55			
400	C36	55			

Throttling function: PTFE seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction		
	s	h3					
50	M11	24	10	SQ05.2	SQ05.2		
65		24					
80		24					
100	M14	24		SQ07.2	SQ07.2		
125		30					
150	M17	32				SQ10.2	SQ10.2
200	M19	35					
250	C25	45		SQ12.2	SQ12.2		
300	C27	45					
350	C30	55					
400	C36	55					

Shut-off function: PTFE seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction		
	s	h3					
50	M11	24	16	SQ05.2	SQ05.2		
65		24					
80		24					
100	M14	24		SQ07.2	SQ07.2		
125		30					
150	M17	32				SQ10.2	SQ10.2
200	M19	35					
250	C25	45		SQ12.2	SQ12.2		
300	C27	45					
350	C30	55					
400	C36	55	-	-			

Throttling function: PTFE seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction		
	s	h3					
50	M11	24	16	SQ05.2	SQ05.2		
65		24					
80		24					
100	M14	24		SQ07.2	SQ07.2		
125		30					
150	M17	32				SQ10.2	SQ10.2
200	M19	35					
250	C25	45		SQ12.2	SQ12.2		
300	C27	45					
350	C30	55					
400	C36	55	-	-			

Shut-off function: PTFE seat (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction		
	s	h3					
50	M11	24	20	SQ05.2	SQ05.2		
65		24					
80		24					
100	M14	24		SQ07.2	SQ07.2		
125		30					
150	M17	32				SQ10.2	SQ10.2
200	M19	35					
250	C25	45					
300	C27	45				SQ12.2	SQ12.2
350	C30	55					
400	C36	55		-	-		

Throttling function: PTFE seat (20 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction		
	s	h3					
50	M11	24	20	SQ05.2	SQ05.2		
65		24					
80		24					
100	M14	24		SQ07.2	SQ07.2		
125		30					
150	M17	32				SQ10.2	SQ10.2
200	M19	35					
250	C25	45					
300	C27	45				SQ12.2	SQ12.2
350	C30	55					
400	C36	55		-	-		

## SQ - AUMA (FKM/VITON seat)

Shut-off function: FKM/VITON seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	6	-	-
65	-	-		-	-
80	M11	24		SQ05.2	SQ05.2
100	M14	24			
125		30			
150	M17	32		SQ07.2	SQ07.2
200	M19	35			
250	C25	45		SQ10.2	SQ10.2
300	C27	45			
350	C30	55			
400	C36	55		-	-

Throttling function: FKM/VITON seat (6 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	6	-	-
65	-	-		-	-
80	M11	24		SQ05.2	SQ05.2
100	M14	24			
125		30			
150	M17	32		SQ07.2	SQ07.2
200	M19	35			
250	C25	45		SQ10.2	SQ10.2
300	C27	45			
350	C30	55			
400	C36	55		-	-

Shut-off function: FKM/VITON seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	10	-	-
65	-	-		-	-
80	M11	24		SQ05.2	SQ05.2
100	M14	24			
125		30			
150	M17	32		SQ07.2	SQ07.2
200	M19	35			
250	C25	45		SQ10.2	SQ10.2
300	C27	45			
350	C30	55			
400	C36	55		SQ12.2	SQ12.2

Throttling function: FKM/VITON seat (10 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	10	-	-
65	-	-		-	-
80	M11	24		SQ05.2	SQ05.2
100	M14	24			
125		30			
150	M17	32			
200	M19	35		SQ07.2	SQ07.2
250	C25	45		SQ10.2	SQ10.2
300	C27	45			
350	C30	55		SQ12.2	SQ12.2
400	C36	55			

Shut-off function: FKM/VITON seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	16	-	-
65	-	-		-	-
80	M11	24		SQ05.2	SQ05.2
100	M14	24			
125		30			
150	M17	32			
200	M19	35		SQ07.2	SQ07.2
250	C25	45		SQ10.2	SQ10.2
300	C27	45		SQ12.2	SQ12.2
350	C30	55			
400	C36	55		-	-

Throttling function: FKM/VITON seat (16 bar)

DN	Shaft end		Maximum pressure [bar]	Preferred flow direction	Non-preferred flow direction
	s	h3			
50	-	-	16	-	-
65	-	-		-	-
80	M11	24		SQ05.2	SQ05.2
100	M14	24			
125		30			
150	M17	32			
200	M19	35		SQ07.2	SQ07.2
250	C25	45		SQ10.2	SQ10.2
300	C27	45		SQ12.2	SQ12.2
350	C30	55			
400	C36	55		-	-

Hydraulic Actuators

# HQ (metal seat)



Fig. 9: Unit comprising DANAIS 150 + HQ actuator

Shut-off function: metal seat for lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]
50	M11	24	10	10	10	10	10	10
65		24						
80		24						
100	M14	24	25	25	25	25	25	25
125		30						
150	M17	32	50	50	50	50	50	50
200	M19	35						
250	C25	45	100	100	100	100	100	100
300		45						
350		55						
400	C36	55	200	200	200	200	200	200
450		65						
500		65						
600	C50	65	400	400	400	400	400	400

Shut-off function: metal seat for non-lubricating fluids (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]
50	M11	24	10	10	10	10	10	10
65		24						
80		24						
100	M14	24	25	25	25	25	25	25
125		30						
150	M17	32	50	50	50	50	50	50
200	M19	35						
250	C25	45	100	100	100	100	100	100
300		45						
350		55						
	C30	55	200	200	200	200	200	200

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DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80	90	120/135	80	90	120/135
			[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
400	C36	55	200	200	200	200	200	200
450	C40	65	400	400		400	400	
500		65						
600	C50	65			400			400

Shut-off function: metal seat for lubricating fluids (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80	90	120/135	80	90	120/135
			[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
50	M11	24	10	10	10	10	10	10
65		24						
80		24						
100	M14	24	25				25	
125		30						
150	M17	32		25	25		25	25
200	M19	35						
250	C25	45	50	50	50	50	50	50
300	C27	45	100	100	100	100	100	100
350	C30	55						
400	C36	55	200	200		200	200	
450	C40	65						
500		65						
600	C50	65	400	400		400	400	400

Shut-off function: metal seat for non-lubricating fluids (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80	90	120/135	80	90	120/135
			[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
50	M11	24	10	10	10	10	10	10
65		24						
80		24						
100	M14	24	25	25			25	
125		30						
150	M17	32	50			50		
200	M19	35		50	50		50	50
250	C25	45	100	100	100	100	100	100
300	C27	45	200	200		200	200	
350	C30	55						
400	C36	55	400	400		400	400	
450	C40	65						
500		65						
600	C50	65			400			400

Shut-off function: metal seat for lubricating fluids (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]
50	M11	24	10	10	10	10	10	10
65		24						
80		24						
100	M14	24	25	25	25	25	25	25
125		30						
150	M17	32	50	50	25	50	50	25
200	M19	35						
250	C25	45						
300	C27	45	100	100	100	100	100	100
350	C30	55						
400	C36	55						
450	C40	65	400	400	200	400	200	200
500		65						
600		C50						

Shut-off function: metal seat for non-lubricating fluids (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]
50	M11	24	10	10	10	10	10	10
65		24						
80		24						
100	M14	24	25	25	25	25	25	25
125		30						
150	M17	32	50	50	50	50	50	50
200	M19	35						
250	C25	45						
300	C27	45	200	200	100	200	200	100
350	C30	55						
400	C36	55						
450	C40	65	400	400	200	400	400	200
500		65						
600		C50						

Shut-off function: metal seat for lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]
50	M11	24	10	10	10	10	10	10
65		24						
80		24						
100	M14	24	25	25	25	25	25	25
125		30						
150	M17	32	400	400	400	400	400	400
200	M19	35						
250	C25	45	200	200	200	200	200	200
300		45						
350	C30	55	400	400	400	400	400	400
400		55						
450	C40	65	800	800	800	800	800	800
500		65						
600	C50	65	800	800	800	800	800	800

Shut-off function: metal seat for non-lubricating fluids (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]
50	M11	24	10	10	10	10	10	10
65		24						
80		24						
100	M14	24	25	25	25	25	25	25
125		30						
150	M17	32	400	400	400	400	400	400
200	M19	35						
250	C25	45	200	200	200	200	200	200
300		45						
350	C30	55	400	400	400	400	400	400
400		55						
450	C40	65	800	800	800	800	800	800
500		65						
600	C50	65	800	800	800	800	800	800

## HQ (PTFE seat)

Shut-off function: PTFE seat (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction								
			Hydraulic pressure											
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]						
50	M11	24	10	10	10	10	10	10						
65		24												
80		24												
100	M14	24	25	25	25	25	25	25						
125		30												
150	M17	32												
200	M19	35												
250	C25	45							50	50	50	50	50	50
300	C27	45												
350	C30	55												
400	C36	55							200	200	200	200	200	200
450	C40	65												
500		65												
600	C50	65							400	400	400	400	400	400
650	C55	80												
700	C60	80												
750		80												
800	C70	110	800	800	800	800	800	800						
900		110												
1000	C80	110							1600	1600	1600	1600	1600	1600
1200	C90	110												

Shut-off function: PTFE seat (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction								
			Hydraulic pressure											
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]						
50	M11	24	10	10	10	10	10	10						
65		24												
80		24												
100	M14	24	25	25	25	25	25	25						
125		30												
150	M17	32												
200	M19	35												
250	C25	45							50	50	50	50	50	50
300	C27	45												
350	C30	55												
400	C36	55							200	200	200	200	200	200
450	C40	65												
500		65												
600	C50	65							400	400	400	400	400	400
650	C55	80												
700	C60	80												
750		80												
800	C70	110	800	800	800	800	800	800						
900		110												
1000	C80	110							1600	1600	1600	1600	1600	1600
1200	C90	110												

Shut-off function: PTFE seat (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction														
			Hydraulic pressure																	
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]												
50	M11	24	10	10	10	10	10	10												
65		24																		
80		24																		
100	M14	24	25	25	25	25	25	25												
125		30																		
150	M17	32																		
200	M19	35																		
250	C25	45							50	50	50	50	50	50						
300		C27													45					
350		C30													55					
400		C36													55	200	200	200	200	200
450															C40					
500															65	400	400	400	400	400
600		C50													65					
650		C55													80					
700		C60	80	800	800	800	800	800							800					
750			80																	
800	C70		110																	
900		110																		
1000	C80	110	1600						1600	1600	1600	1600	1600							
1200	C90	110																		

Shut-off function: PTFE seat (20 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction														
			Hydraulic pressure																	
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]												
50	M11	24	10	10	10	10	10	10												
65		24																		
80		24																		
100	M14	24	25	25	25	25	25	25												
125		30																		
150	M17	32																		
200	M19	35																		
250	C25	45							50	50	50	50	50	50						
300		C27													45					
350		C30													55					
400		C36													55	200	200	200	200	200
450															C40					
500															65	400	400	400	400	400
600		C50													65					
650		C55													80					
700		C60	80	800	800	800	800	800							800					
750			80																	
800	C70		110																	
900		110																		
1000	C80	110	1600						1600	1600	1600	1600	1600							
1200	C90	110																		

## HQ (FKM/VITON seat)

Shut-off function: FKM/VITON seat (6 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	135 [bar]
50	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-
80	M11	24	10	10	10	10	10	10
100	M14	24						
125		30						
150	M17	32	25	25	25	25	25	25
200	M19	35						
250	C25	45	50	50	50	50	50	50
300	C27	45						
350	C30	55						
400	C36	55						
450	C40	65	200	200	200	200	200	200
500		65						
550		C50						
600								
650	C55	80	400	400	400	400	400	400
700	C60	80						
750		80						
800	C70	110	800	800	800	800	800	800

Shut-off function: FKM/VITON seat (10 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]
50	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-
80	M11	24	10	10	10	10	10	10
100	M14	24						
125		30						
150	M17	32	25	25	25	25	25	25
200	M19	35						
250	C25	45	50	50	50	50	50	50
300	C27	45						
350	C30	55						
400	C36	55						
450	C40	65	200	200	200	200	200	200
500		65						
550		C50						
600								
650	C55	80	400	400	400	400	400	400
700	C60	80						
750		80						
800	C70	110	800	800	800	800	800	800

Shut-off function: FKM/VITON seat (16 bar)

DN	Shaft end		Preferred flow direction			Non-preferred flow direction		
			Hydraulic pressure					
	s	h3	80 [bar]	90 [bar]	120/135 [bar]	80 [bar]	90 [bar]	120/135 [bar]
50	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-
80	M11	24	10	10	10	10	10	10
100	M14	24						
125		30						
150	M17	32	25	25	25	25	25	25
200	M19	35						
250	C25	45	50	50	50	50	50	50
300	C27	45						
350	C30	55	100	100	100	100	100	100
400	C36	55						
450	C40	65						
500		65						
550	C50	65	400	400	400	400	400	400
600								
650								
700	C60	80	800	800	800	800	800	800
750								
800	C70	110						









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