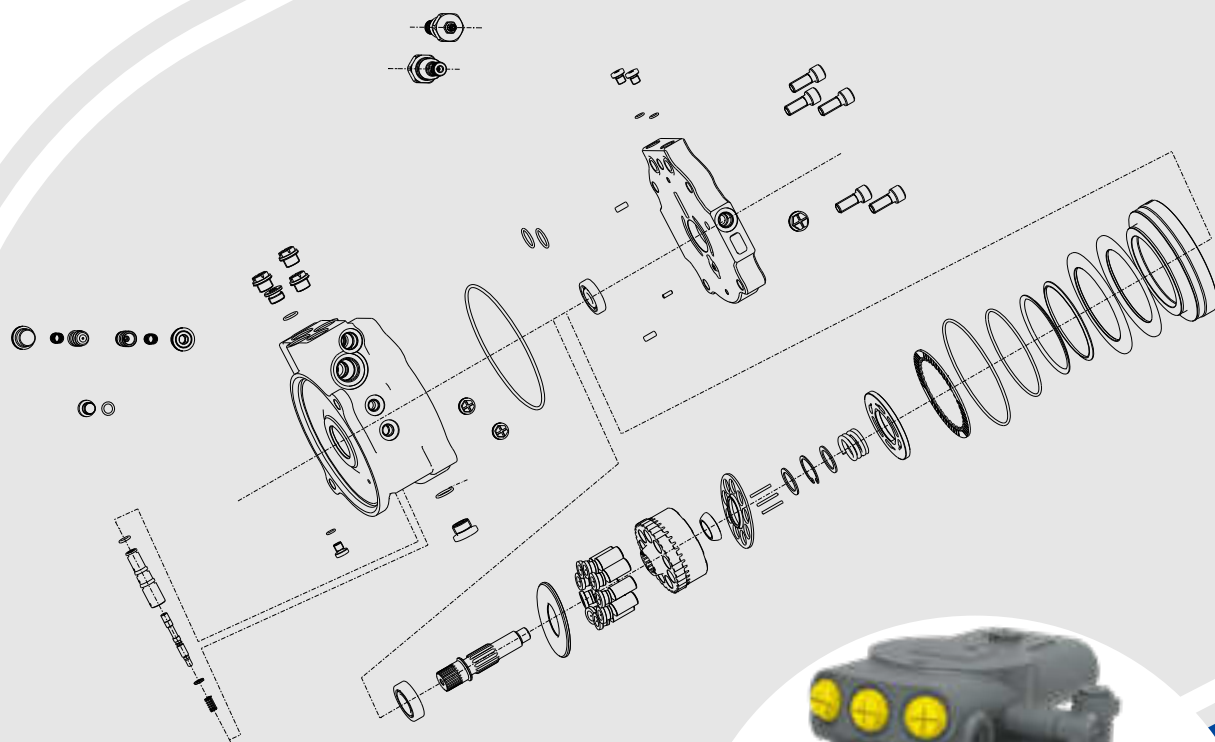




Parts Manual

HM5F Series

Swash-plate Type Axial Piston Fixed
Displacement Motor

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Note: “*” indicates under production.

1 General information

This manual lists parts related information for the full range of HM5F swash-plate type axial piston fixed displacement motor. The main purpose of this manual is to better serve our customers by enabling them to quickly locate parts and find Hengli Genuine Parts.

If you require more detailed information on parts, please contact
Jiangsu Hengli Hydraulic Co.,Ltd.
www.henglihydraulics.com
or consult with the relevant sales engineer.

2 Functional Description

- Based on the information on the nameplate attached to the motor, the basic configuration of the motor can be determined, e.g.: HM5F2910000-RGSS20B
For specific information, please refer to the Hengli catalogue selection to find the corresponding parts.
- With the nameplate information, you can quickly find information such as shaft, housing, bearing and other component material numbers in this manual.

3 HM5F Product Parts

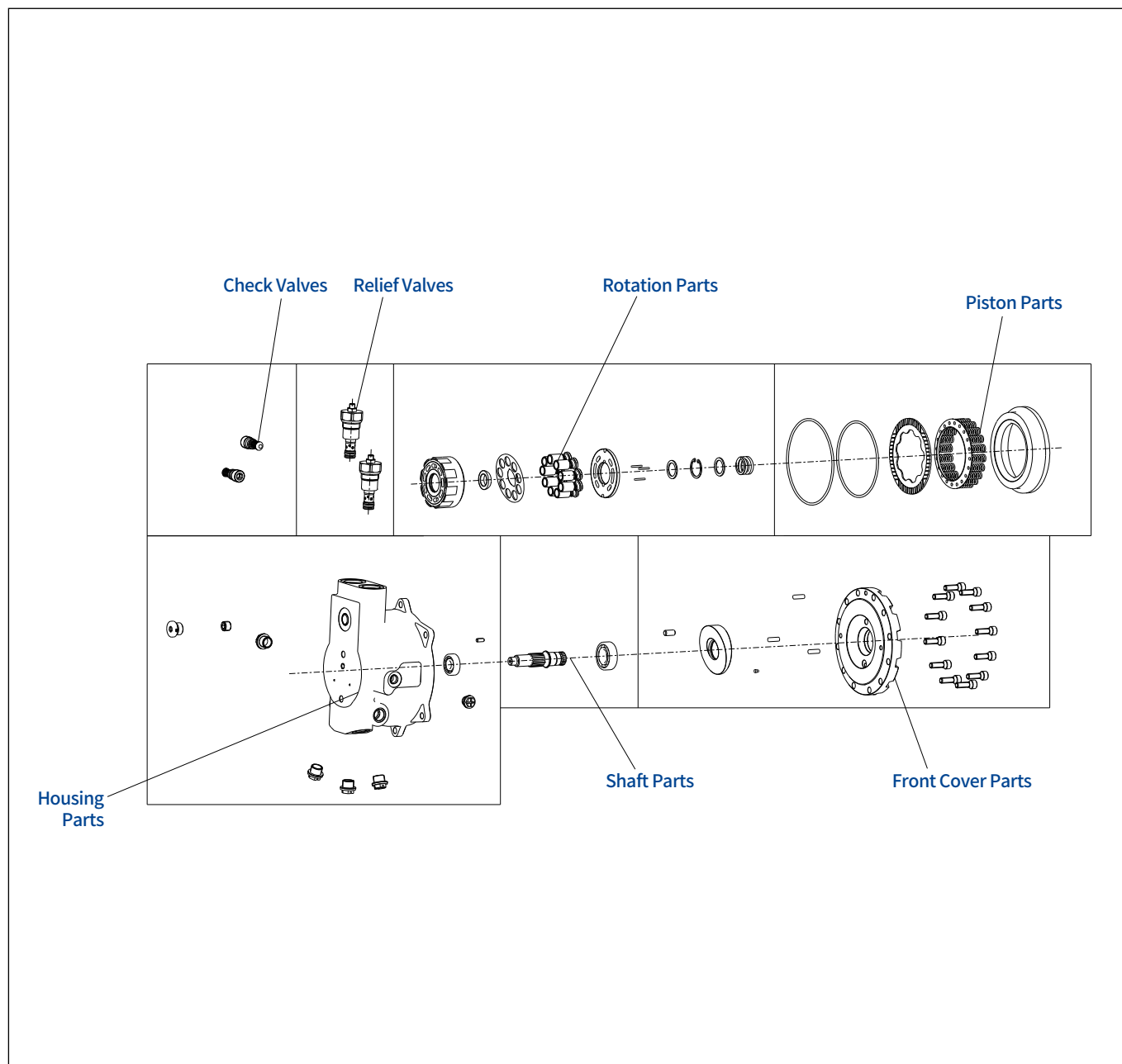
3.1 HM5F15



HM5F-15

3.1 HM5F15

HM5F15 Integral Parts



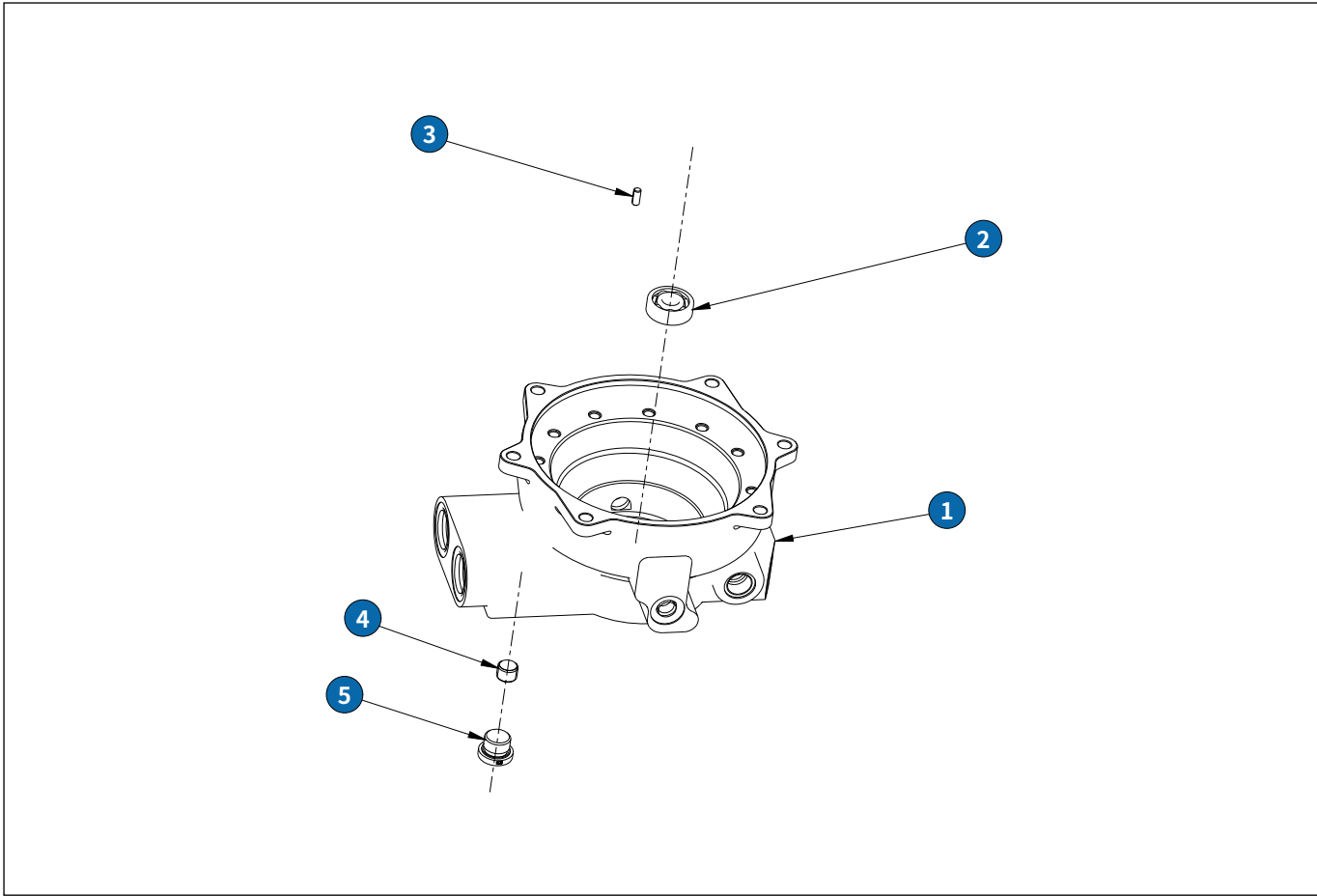
3.1 HM5F15

HM5F15 Parts Catalogue

3.1.1 Housing Parts	
Without delay valve and anti-reaction valve selection code 00	06-07
3.1.2 Front Cover Parts	
Front cover parts	08
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Swashplate parts	09
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3.1.5 Rotation Parts	
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3.1.6 Shaft Parts	
Shaft parts	12
3.1.7 Check Valve Parts	
Check valve parts	13
3.1.8 Relief Valve Parts	
Relief valve peak pressure selection code 216	14

3.1.1 HM5F15 Housing Parts

· Order code 00: Without delay valve and anti-reaction valve.



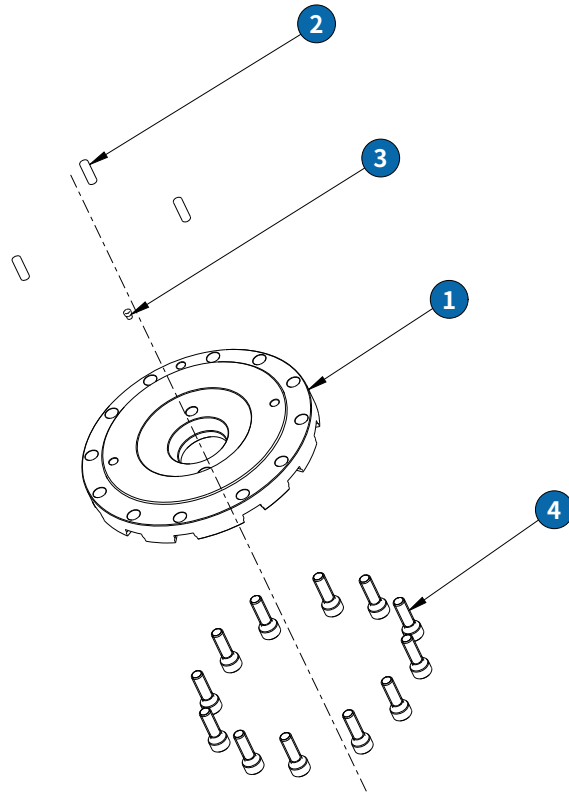
3.1.1 HM5F15 Housing Parts

Oder code: 00

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Housing	HM5F15-0410HSN	210000815863	1	HM5F15-0410HSN
2	Deep groove ball bearing	φ12*φ32*10	210000363704	1	6201 CM
3	Flexible cylindrical pins	5*12-GS-W	210000293180	1	JIS B 2808
4	Hexagon socket plug	M14*1.5	210000377516	1	DIN 906
5	Hexagon socket plug	M18*1.5	210000293557	1	ISO 9974-4

3.1.2 HM5F15 Front Cover Parts

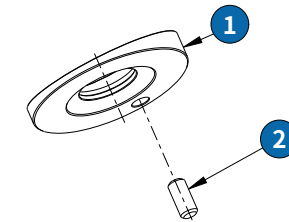
· Order code: Front cover parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Front cover	HM5X15-040001	210000420669	1	HM5X15-040001
2	Cylindrical pin	HM5X18-060002	210000300986	3	HM5X18-060002
3	Strainer	HM5X18-060003	210000296230	1	HM5X18-060003
4	Swashplate	HM5X15-000001	210000420462	1	HM5X15-000001
5	Cylindrical pin	φ8*17	210000299865	1	HM5X18-000002
6	Hexagon socket screws	M8*25	210000206294	12	GB/T 70.1

3.1.3 HM5F15 Swashplate Parts

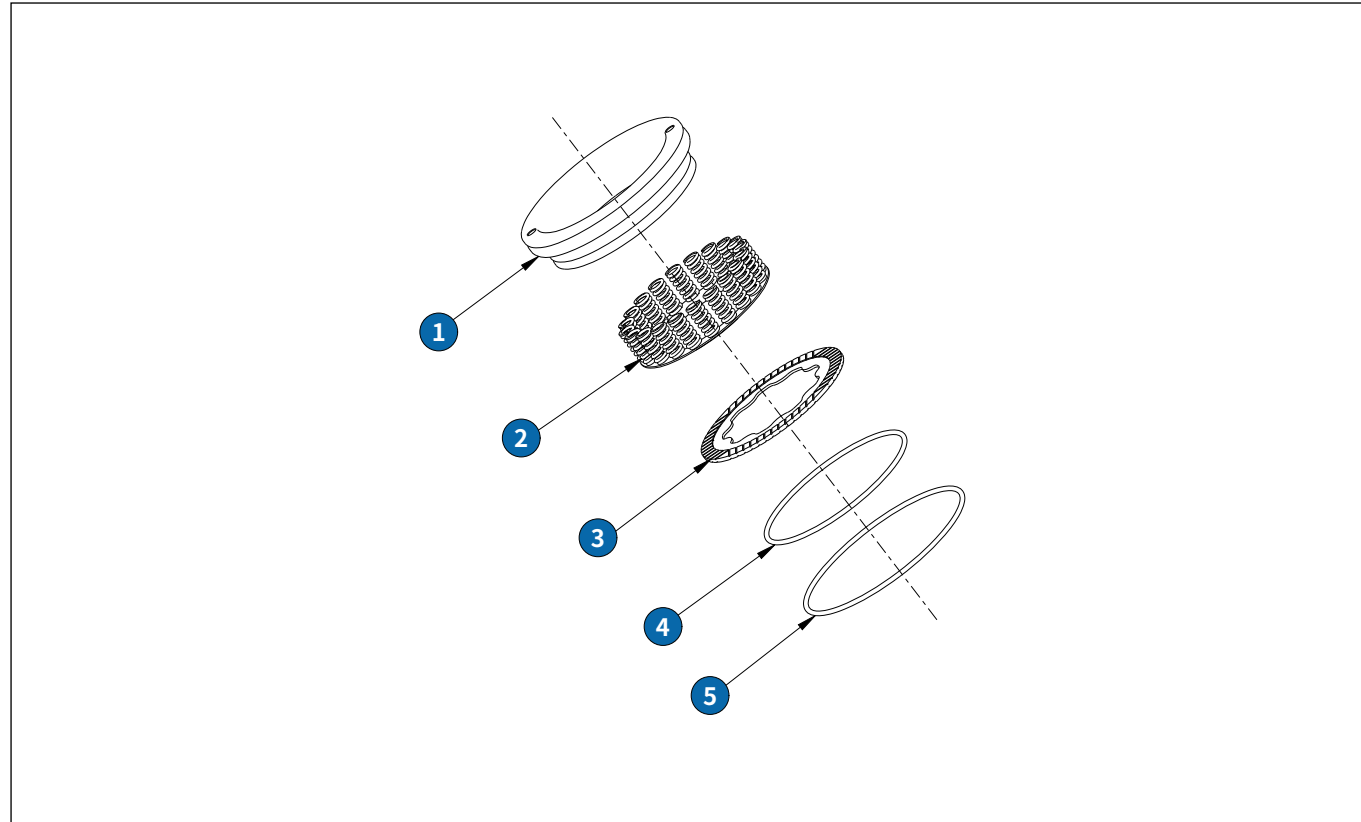
· Order code: Swashplate parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Swashplate	HM5X15-000001	210000420462	1	HM5X15-000001
2	Cylindrical pin	φ8*17	210000299865	1	HM5X18-000002

3.1.4 HM5F15 Piston Parts

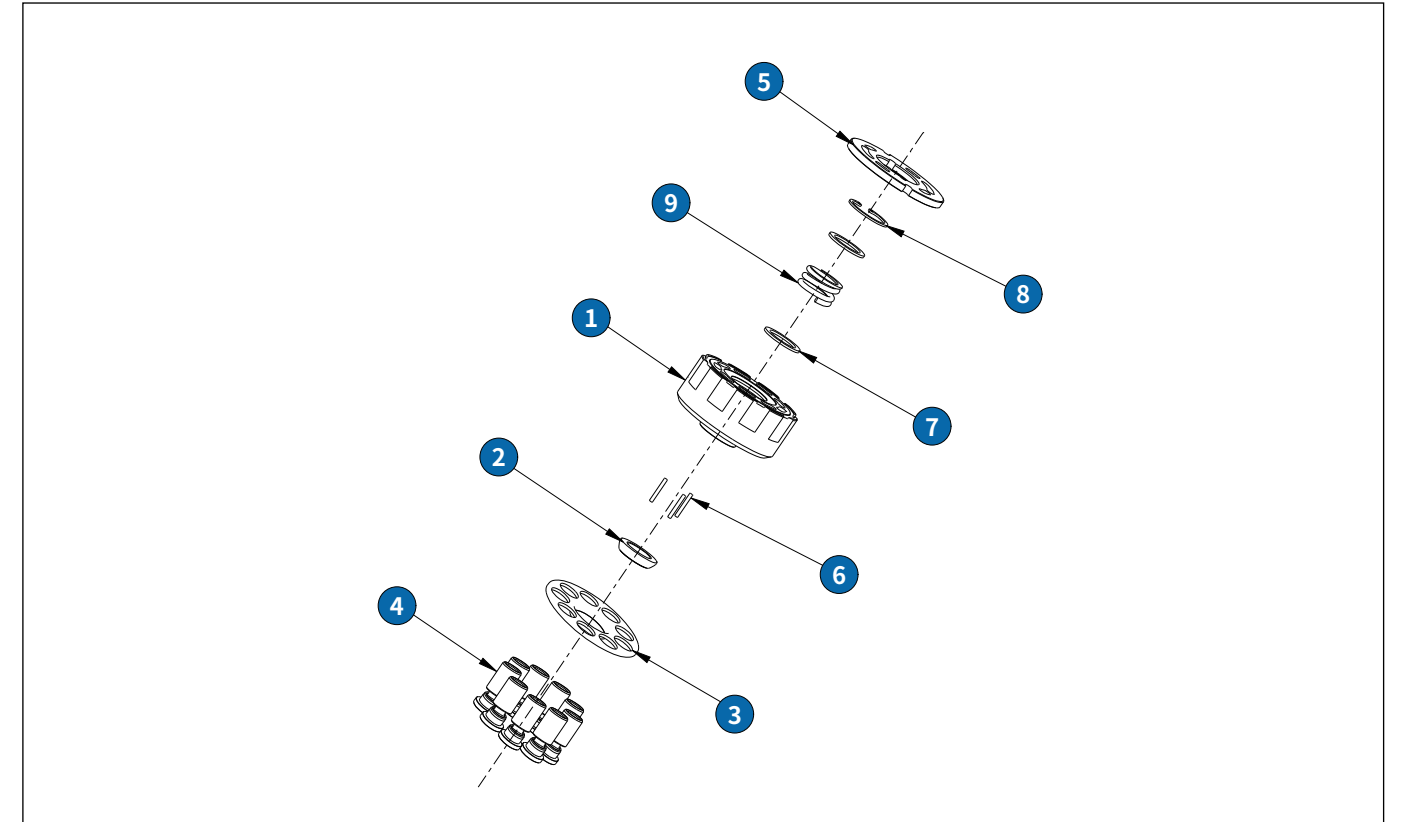
· Order code: Piston parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Brake piston	HM5X18-000004	210000302097	1	HM5X18-000004
2	Piston spring assembly	HM5X18-070000	210000303187	1	HM5X18-070000
3	Friction plate	HM5X18-000003	210000301972	1	HM5X18-000003
4	O-ring	φ109.4*3.1	110000103825	1	ORG110-F5
5	O-ring	φ124.4*3.1	110000001236	1	OR3112440

3.1.5 HM5F15 Rotation Parts

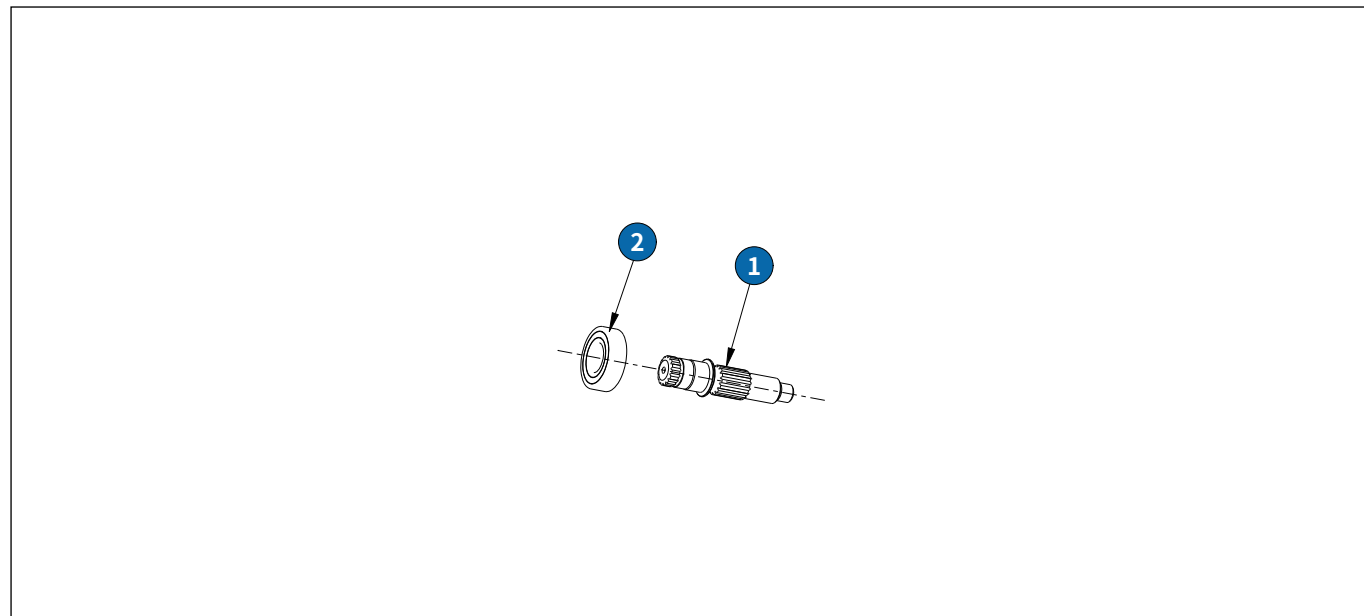
· Order code: Rotation parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Cylinder block	HM5X15-030001	210000420668	1	HM5X15-030001
2	Ball hinge	HM5X18-030003	210000303086	1	HM5X18-030003
3	Return disc	HM5X15-030001	210000425929	1	HM5X15-030001
4	Piston assembly	HM5X15-031000	210000419769	9	HM5X15-031000
5	Valve plate	HM5X18-030002	210000356511	1	HM5X18-030002
6	Cylindrical pin	φ2.35*18	210000420473	3	HM5X15-030003
7	Gasket	φ27.5*φ20.3*1.5	210000302006	2	HM5X18-030006
8	Circlip for C-Shaft	CE-IN 28	210000294475	1	JIS B 2804
9	Spring	HM5X15-030004	210000419768	1	HM5X15-030004

3.1.6 HM5F15 Shaft Parts

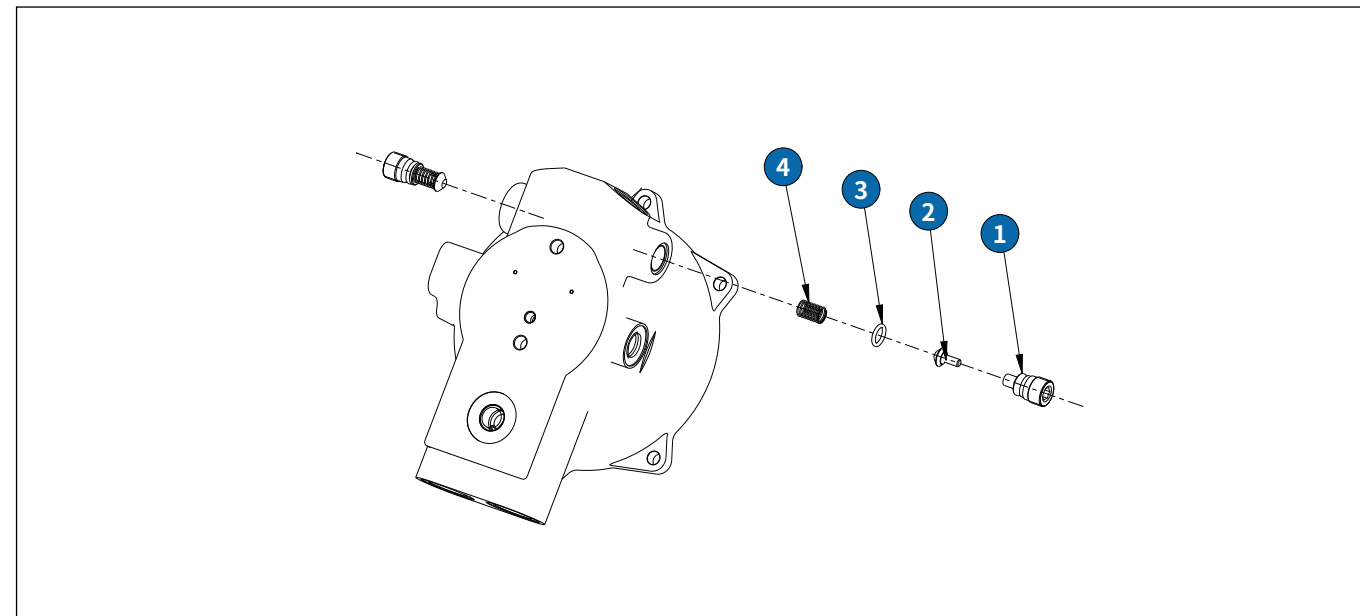
· Order code: Shaft parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Shaft	HM5X15-020001	21000420463	1	HM5X15-020001
2	Deep groove ball bearing	φ12*φ32*10	210000422242	1	6004-Z

3.1.7 HM5F15 Check Valve Parts

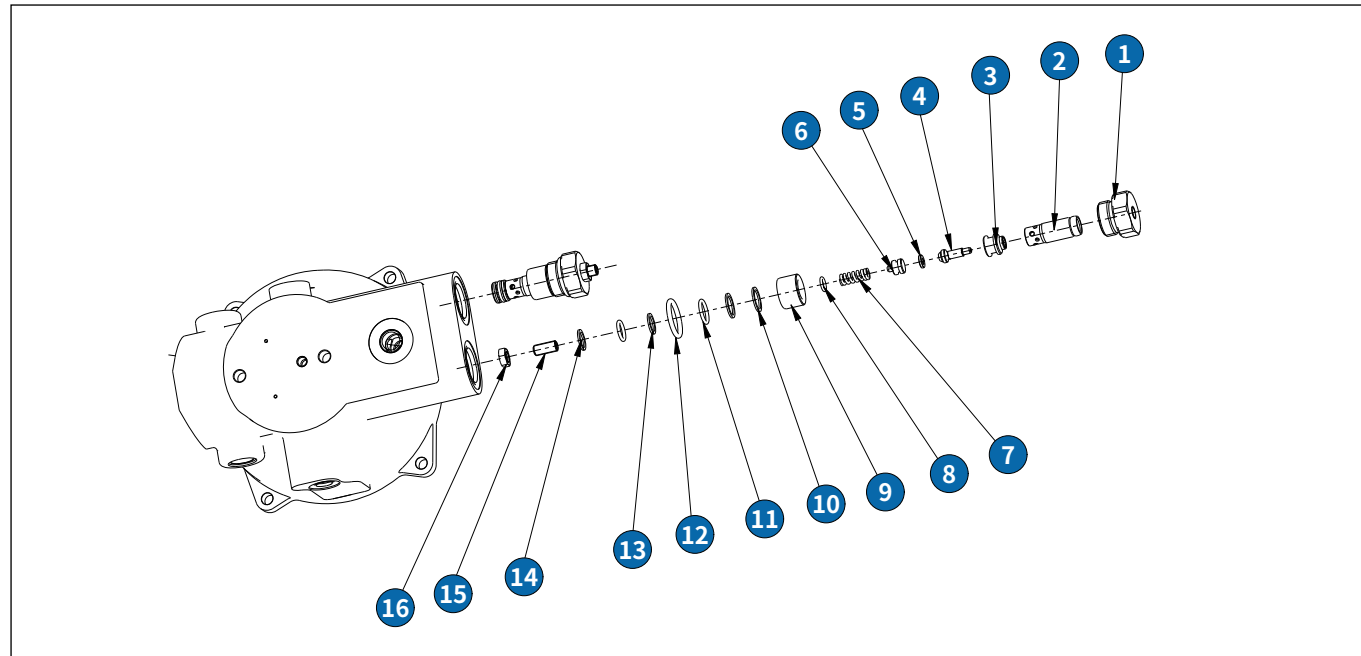
· Order code: Check valve parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Screw	HM5X18-050001	210000299225	1	HM5X18-050001
2	Cone valve spool	HM5X18-050003	210000303321	1	HM5X18-050003
3	O-ring	φ10.8*2.4	110000067694	1	ORP11-N7
4	Spring	HM5X18-050002	210000292361	1	HM5X18-050002

3.1.8 HM5F15 Relief Valve Parts

· Order code 216: Relief valve setpoint peak pessure



Order code: 216

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Plug	G3/4	210000293876	1	HM5X027A-010001
2	Valve sleeve	HM5X027-040004	210000297818	1	HM5X027-040004
3	Valve seat	HM5X027-040001	210000303278	1	HM5X027-040001
4	Cone valve spool	HM5X027-040002	210000303319	1	210000303319
5	Spring gasket	HM5X027-040005	210000303515	1	HM5X027-040005
6	Piston	HM5X027A-010002	210000302062	1	HM5X027A-010002
7	Spring	HM5X027-040003	210000294194	1	HM5X027-040003
8	O-ring	φ13.8*2.4	110000022876	1	P-8
9	Valve sleeve	HM5X027-040007	210000297934	1	HM5X027-040007
10	O-ring retaining ring	19*15*1.25	210000343448	2	P15-T3
11	O-ring	φ14.8*2.4	110000022872	1	P-15
12	O-ring	φ23.7*3.5	110000108198	1	ORP24-F5
13	O-ring retaining ring	φ16*φ12*1.25	210000294337	1	P-12
14	O-ring	φ11.8*2.4	110000051053	1	P-12
15	Adjusting screw	HM5X027A-010003	210000303288	1	HM5X027A-010003
16	Nut	M8*1.25*5	210000354983	1	M8*1.25*5

3 HM5F Product Parts

3.2 HM5F18

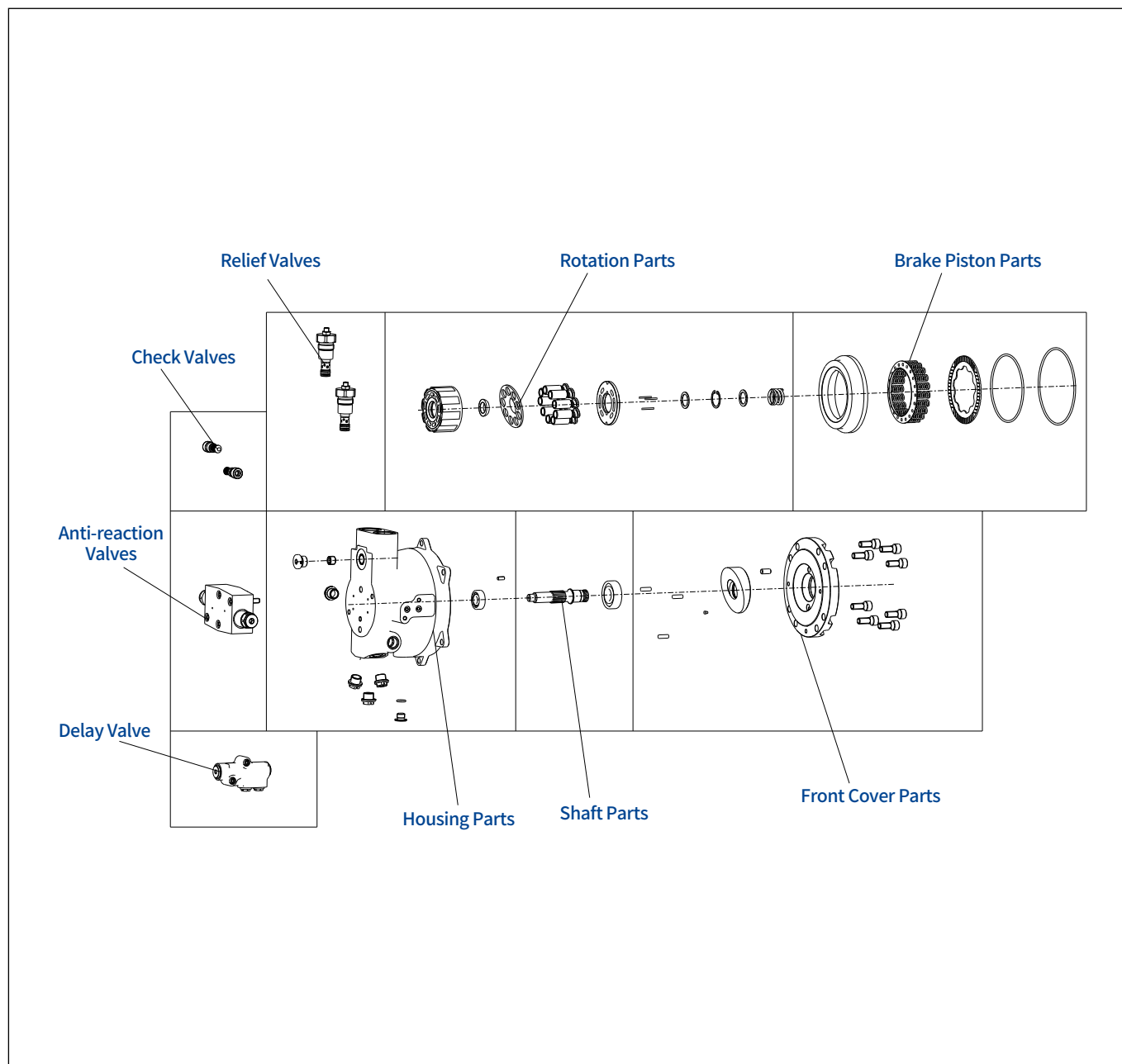


HM5F-18

3.2 HM5F18

·Take housing parts with drain port on side as an example.

HM5F18 Integral Parts



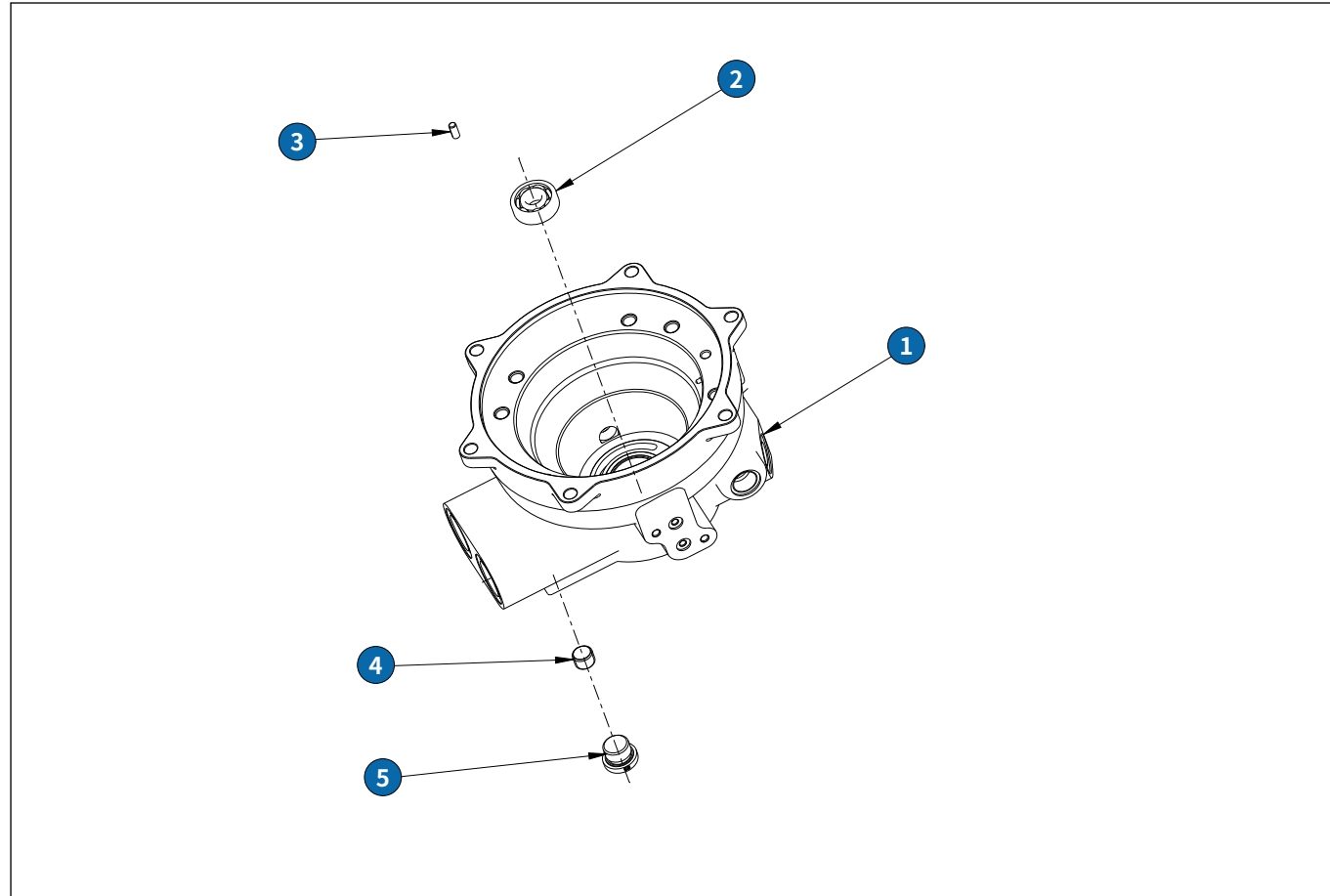
3.2 HM5F18

HM5F18 Parts Catalogue

3.2.1 Housing Parts	
With delay valve selection code 1	18
Without delay valve selection code 0	19
3.2.2 Front Cover Parts	
Front cover parts	20
3.2.3 Swashplate Parts	
Swashplate parts	21
3.2.4 Piston Parts	
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Check valve parts	25
3.2.8 Delay Valve Parts	
Delay valve selection code 1	26
3.2.9 Anti-reaction Valve Parts	
Anti-reaction valve selection code 1	27
3.2.10 Relief Valve Parts	
Relief valve peak pressure selection code 216	28

3.2.1 HM5F18 Housing Parts

· Involving delay valve order code 1 : With delay valve.

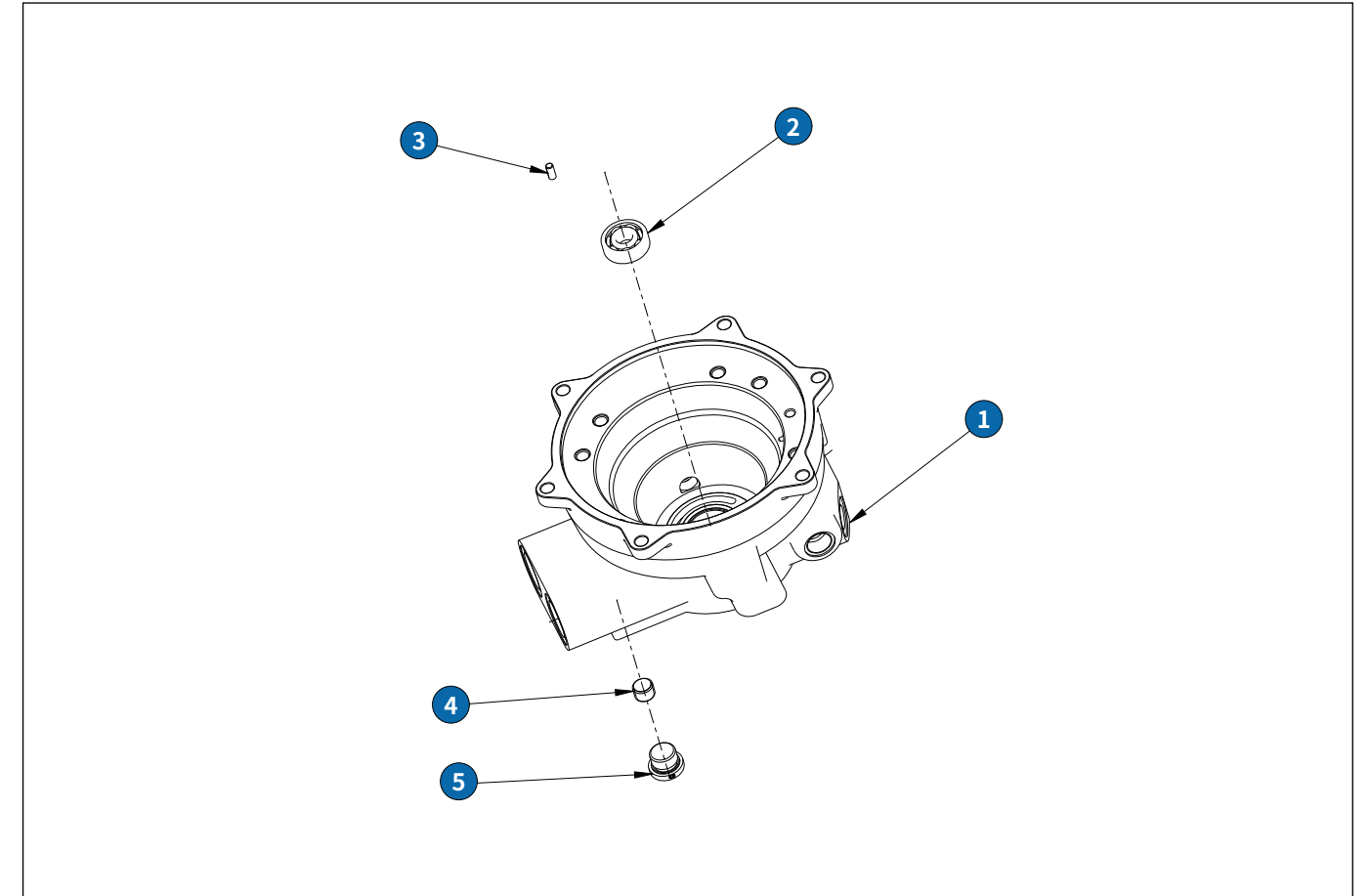


Oder code: 1

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Housing	HM5F18-0410HSN-01	210000999663	1	HM5F18-0410HSN-01
2	Deep groove ball bearing	$\phi 12 * \phi 32 * 10$	210000363704	1	6201 CM
3	Flexible cylindrical pins	5*12-GS-W	210000293180	1	JIS B 2808
4	Hexagon socket plug	M14*1.5	210000377516	1	DIN 906
5	Hexagon socket plug	M18*1.5	210000293557	1	M18*1.5

3.2.1 HM5F18 Housing Parts

· Involving delay valve order code 0 : Without delay valve.

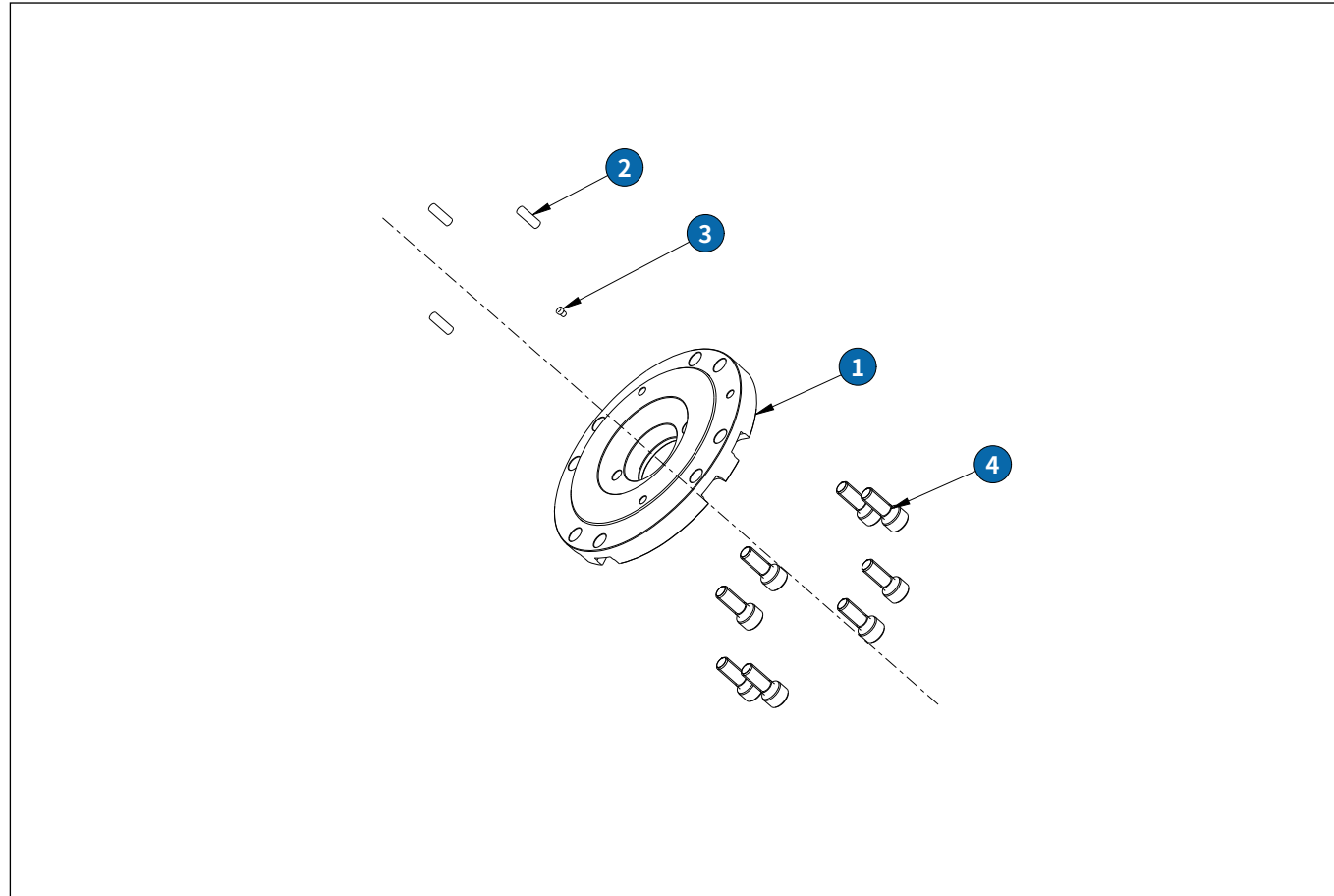


Oder code: 0

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Housing	HM5F18-0410HSN	210000815865	1	HM5F18-0410HSN
2	Deep groove ball bearing	$\phi 12 * \phi 32 * 10$	210000363704	1	6201 CM
3	Flexible cylindrical pins	5*12-GS-W	210000293180	1	JIS B 2808
4	Hexagon socket plug	M14*1.5	210000377516	1	DIN 906
5	Hexagon socket plug	M18*1.5	210000293557	1	M18*1.5

3.2.2 HM5F18 Front Cover Parts

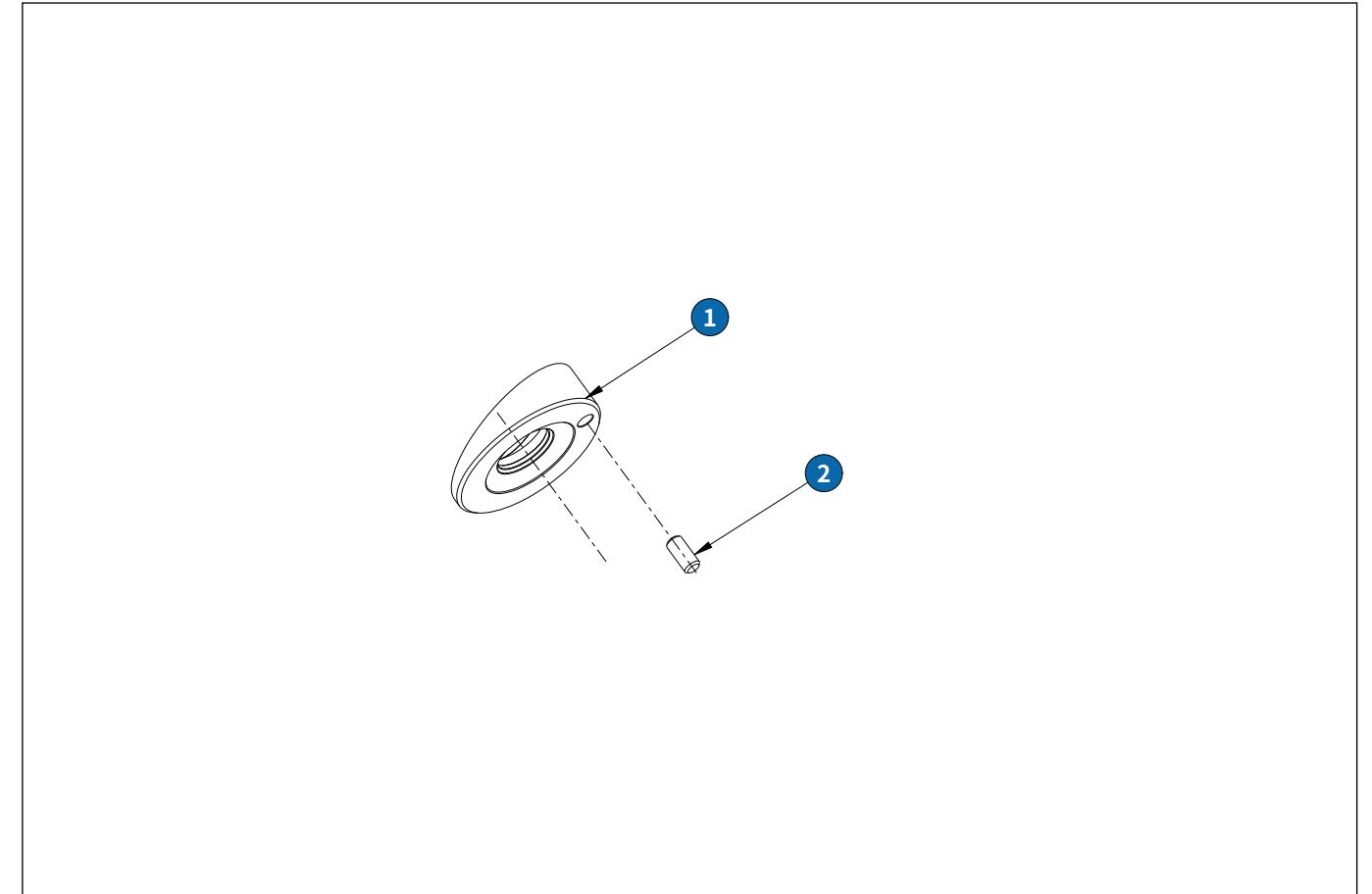
· Order code: Front cover parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Front cover	HM5X18-060001	210000300778	1	HM5X18-060001
2	Cylindrical pin	HM5X18-060002	210000300986	3	HM5X18-060002
3	Strainer	HM5X18-060003	210000296230	1	HM5X18-060003
4	Hexagon socket screws	M10*25	210000206992	8	GB/T 70.1

3.2.3 HM5F18 Swashplate Parts

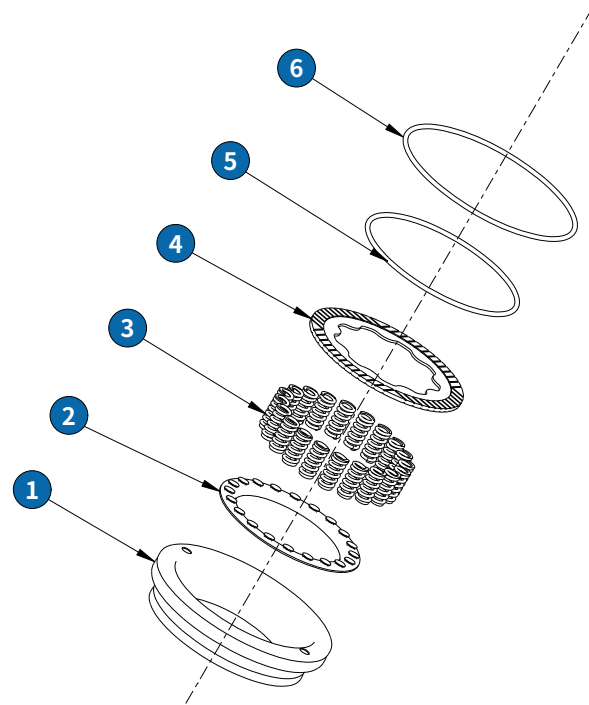
· Order code: Swashplate parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Swashplate	HM5X18-000001	210000300116	1	HM5X18-000001
2	Cylindrical pin	φ8*17	210000299865	1	HM5X18-000002

3.2.4 HM5F18 Piston Parts

· Order code: Piston parts are not subject to selection code.

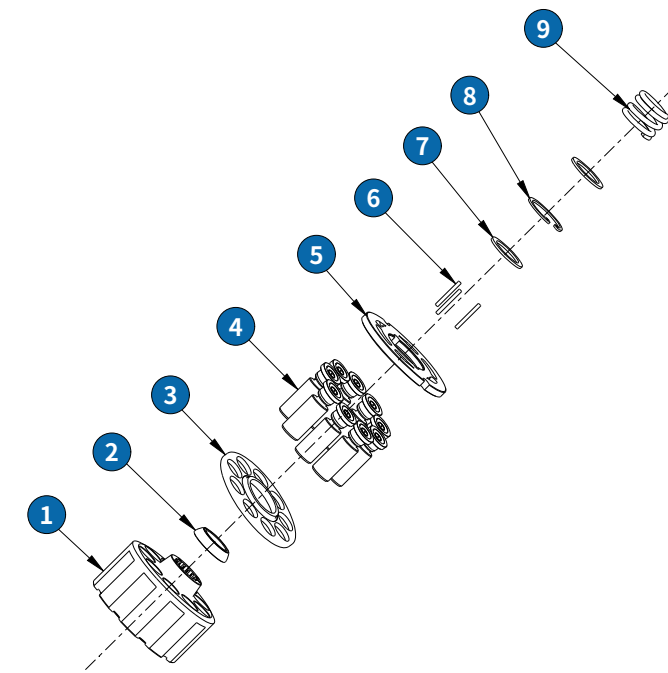


Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Brake piston	HM5X18-000004	210000302097	1	HM5X18-000004
2	Spring pallets*	HM5X18-070002	210000302953	1	HM5X18-070002
3	Spring*	HM5X18-070001	210000292439	1	HM5X18-070001
4	Friction plate	HM5X18-000003	210000301972	1	HM5X18-000003
5	O-ring	φ109.4*3.1	110000103825	1	ORG110-F5
6	O-ring	φ124.4*3.1	110000001236	1	OR3112440

Note: '*' comprises the piston spring assembly.

3.2.5 HM5F18 Rotation Parts

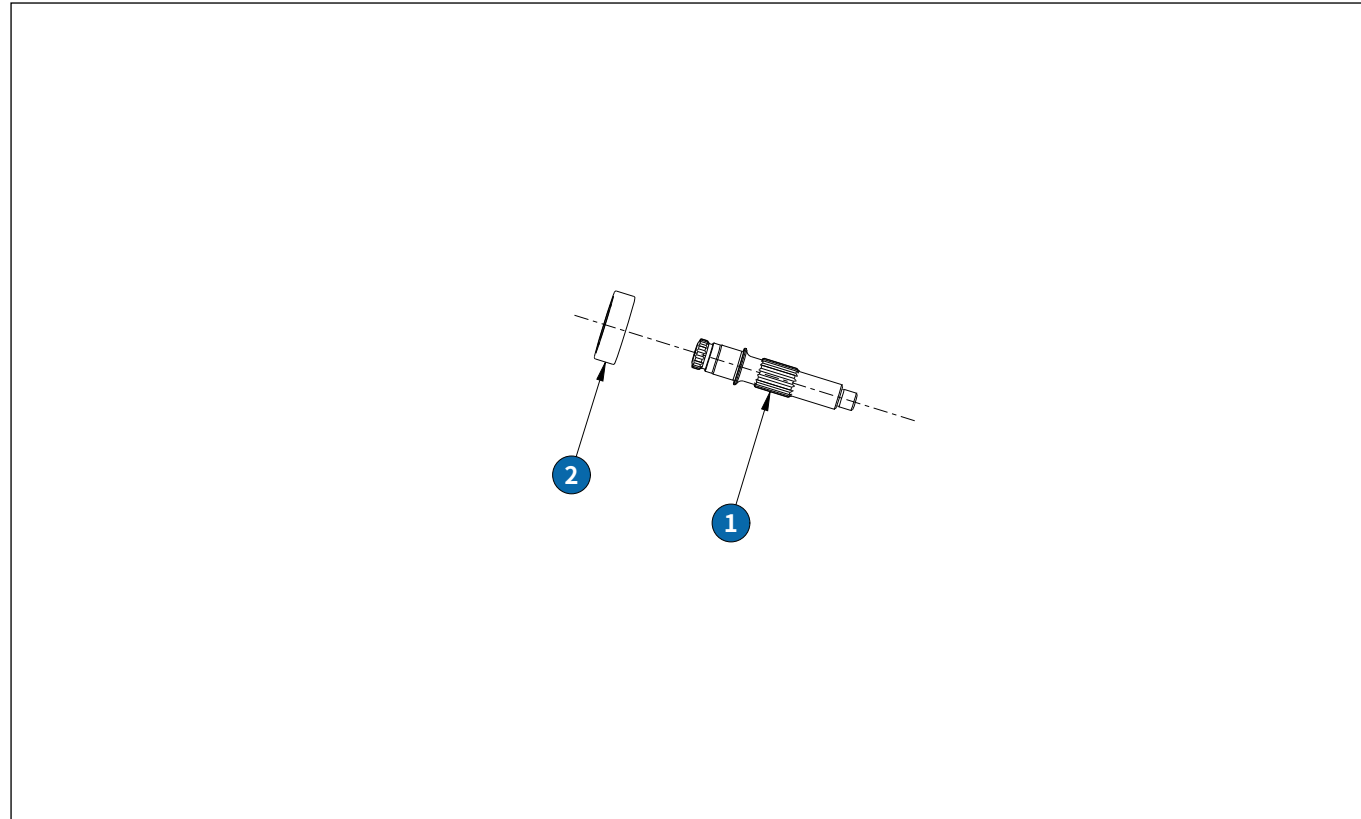
· Order code: Rotation parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Cylinder block	HM5X18-030001	210000302746	1	HM5X18-030001
2	Ball hinge	HM5X18-030003	210000303086	1	HM5X18-030003
3	Return disc	HM5X18-030004	210000297696	1	HM5X18-030004
4	Piston assembly	HM5X18-031000	210000300308	9	HM5X18-031000
5	Valve plate	HM5X18-030002	210000356511	1	HM5X18-030002
6	Cylindrical pin	φ2.35*22	210000299864	3	HM5X18-030007
7	Gasket	φ27.5*φ20.3*1.5	210000302006	2	HM5X18-030006
8	Circlip for C-Shaft	CE-IN 28	210000294475	1	JIS B 2804
9	Spring	23.7/3.5*26.7/3	210000292855	1	HM5X18-030005

3.2.6 HM5F18 Shaft Parts

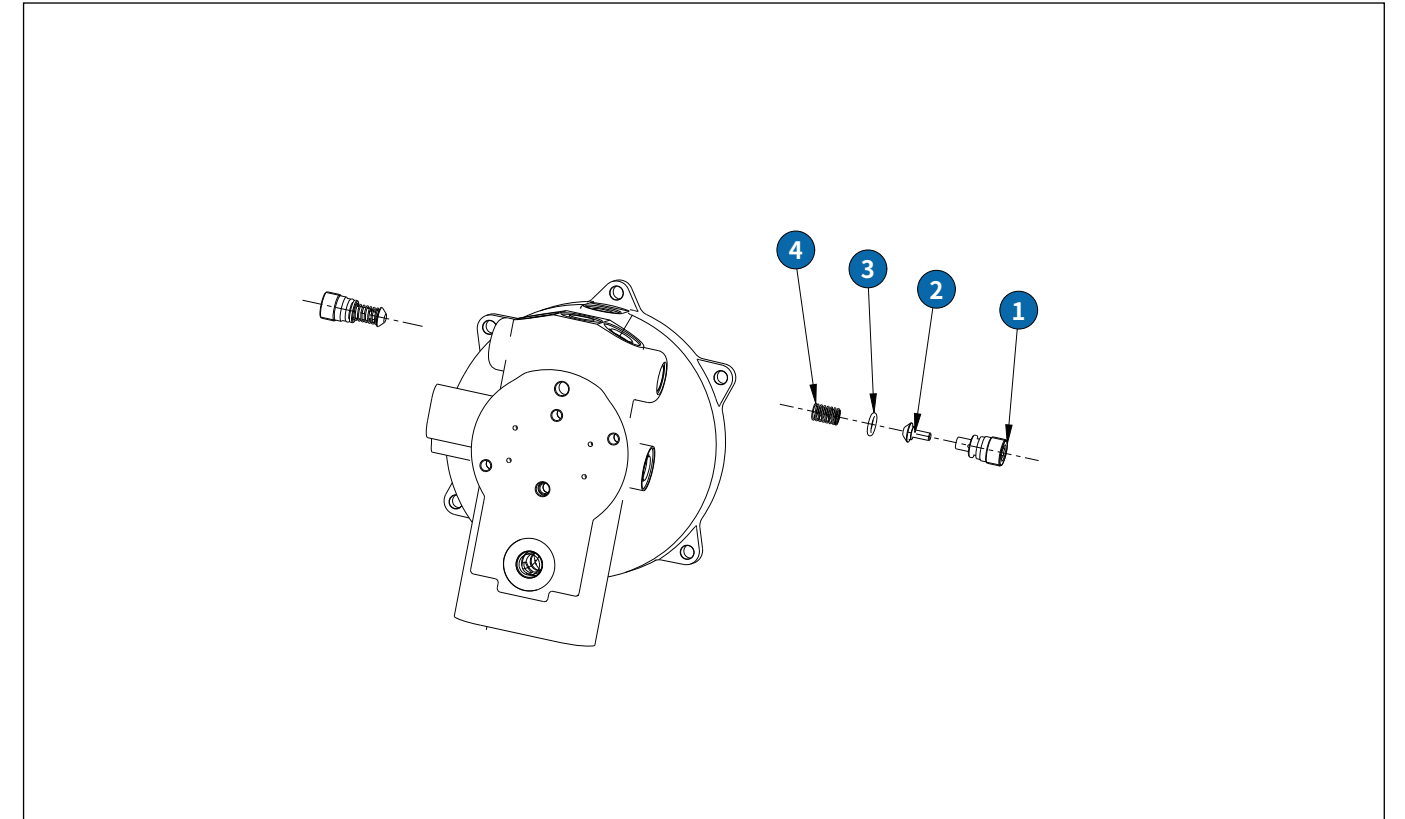
· Order code: Shaft parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Shaft	HM5X18-020001	210000298293	1	HM5X18-020001
2	Deep groove ball bearing	φ20*φ47*14	210000363700	1	6204ZE-Z

3.2.7 HM5F18 Check Valve Parts

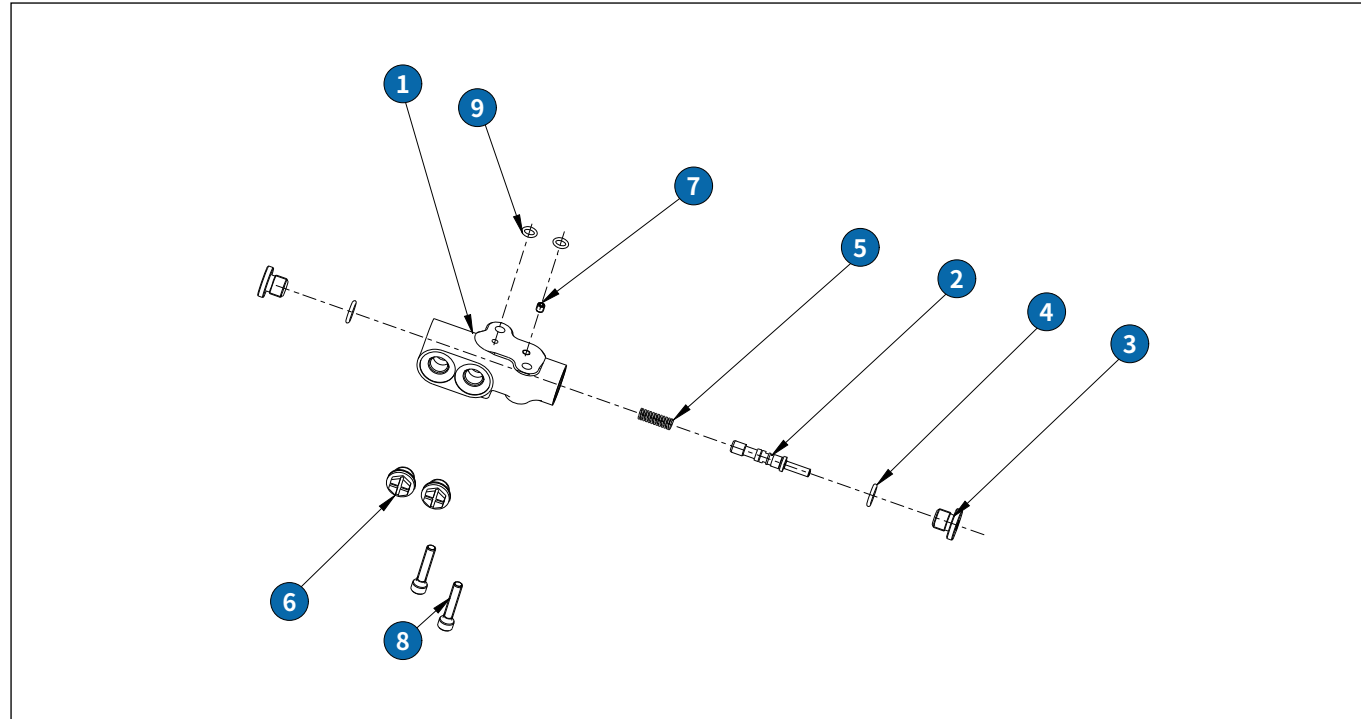
· Order code: Check valve parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Screw	HM5X18-050001	210000299225	1	HM5X18-050001
2	Cone valve spool	HM5X18-050003	210000303321	1	HM5X18-050003
3	O-ring	φ10.8*2.4	110000067694	1	ORP11-N7
4	Spring	HM5X18-050002	210000292361	1	HM5X18-050002

3.2.8 HM5F18 Delay Valve Parts

· Order code 1: With delay valve./ · Order code 0: Without delay valve, please skip it.

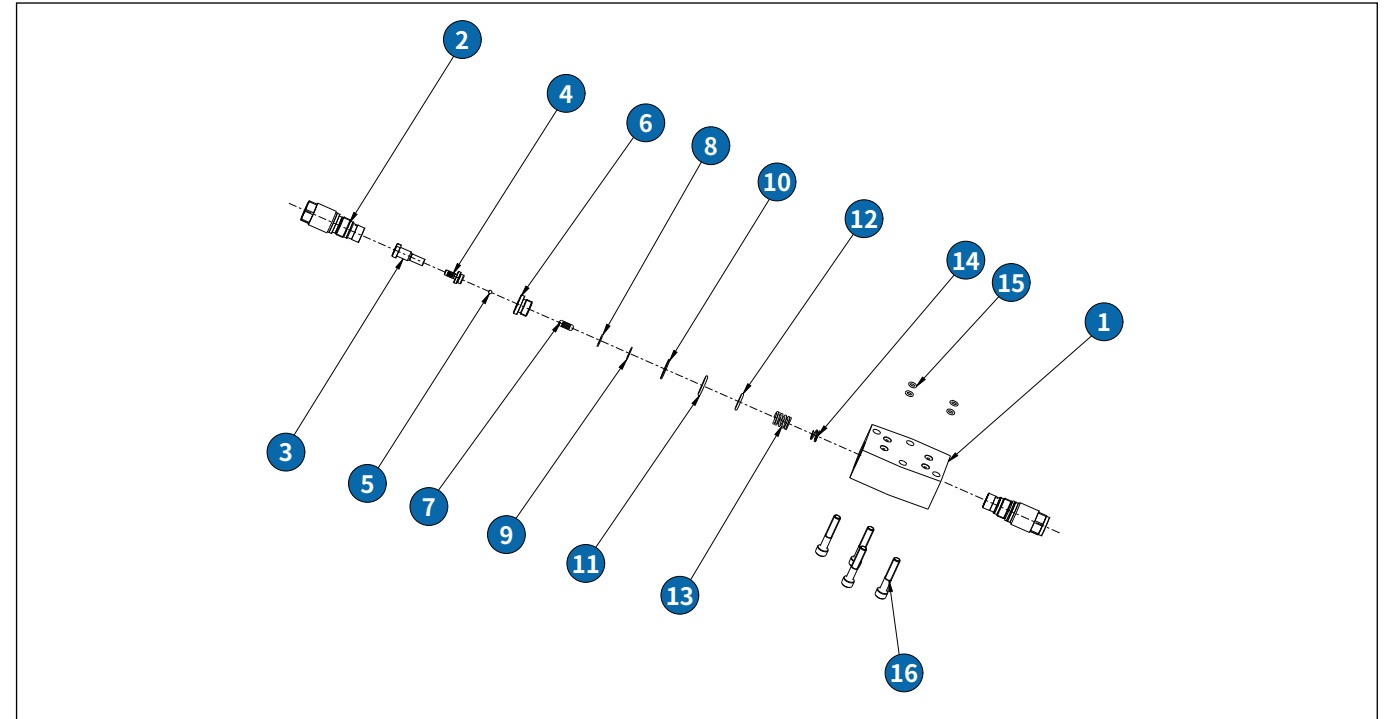


Order code: 1

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Valve body	HM5F34-060001	210000763521	1	HM5F34-060001
2	Spool	HM5X45-06N1SPL-01	210001026195	1	HM5X45-06N1SPL-01
3	Plug	HM5X45-060004	210000293056	2	HM5X45-060004
4	O-ring	φ10.8*2.4	110000067694	2	ORP11-N7
5	Spring	6.5/1*25.7/13.5	210000292700	1	HM5X45-060003
6	External plug (cross-head washer)	G1/4	110000022842	2	G1/4
7	Throttle plug	M5(0.5)	210000424262	1	S0505
8	Hexagon socket screws	M6*30	210000206181	2	GB/T 70.1
9	O-ring	φ6.8*1.9	110000110024	2	ORP7-N7

3.2.9 HM5F18 Anti-reaction Valve Parts

· Order code 1: With anti-reaction valve / · Order code 0: Without anti-reaction valve, please skip it.

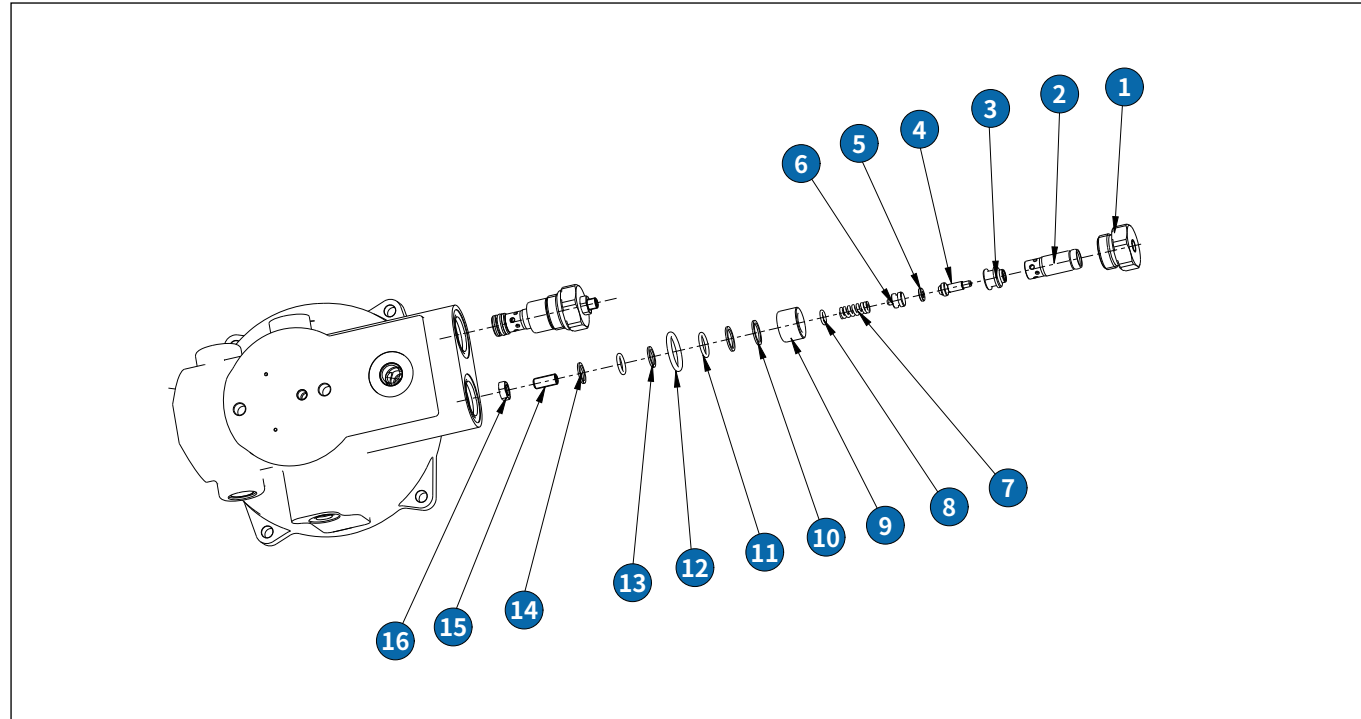


Order code: 1

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Valve body	HM5X18-06P1VST-02	210001001688	1	HM5X027A-010001
2	Valve sleeve	HM5X130-081001-001	210000553931	2	HM5X130-081001-001
3	Valve sleeve	HM5X130-081004	210000303393	2	HM5X130-081004
4	Valve seat	HM5X130-081008	210000412165	2	HM5X130-081008
5	Steel ball	3.969(G20)	210000294614	2	GB/T 308
6	Plug	HM5X130-081002	210000302062	2	HM5X130-081002
7	Spool	HM5X130-081003	210000300658	2	HM5X027-040003
8	Gasket	φ14.8*φ11.1*0.9	210000303159	2	HM5X130-081005
9	Gasket	φ14.8*φ11.1*0.6	210000891213	2	HM5X130-081006
10	O-ring retaining ring	φ24*φ20*1.25	210000294249	2	P20-T2
11	O-ring	φ19.8*2.4	110000065132	2	ORP20-F5
12	O-ring	φ15.8*2.4	110000110171	2	ORP16-N7
13	Spring	13.2/2*26.5/5	210000293689	2	HM5X130-081007
14	Conical spring	HM5X130-081009	210000293667	2	HM5X130-081009
15	O-ring	φ5.8*1.9	110000038433	4	YY-20-05-010-089-A
16	Hexagon socket screws	M8*45	210000206204	4	GB/T 70.1

3.2.10 HM5F18 Relief Valve Parts

· Order code 216: Relief valve setpoint peak pressure



Order code: 216

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Plug	G3/4	210000293876	1	HM5X027A-010001
2	Valve sleeve	HM5X027-040004	210000297818	1	HM5X027-040004
3	Valve seat	HM5X027-040001	210000303278	1	HM5X027-040001
4	Cone valve spool	HM5X027-040002	210000303319	1	210000303319
5	Spring gasket	HM5X027-040005	210000303515	1	HM5X027-040005
6	Piston	HM5X027A-010002	210000302062	1	HM5X027A-010002
7	Spring	HM5X027-040003	210000294194	1	HM5X027-040003
8	O-ring	φ13.8*2.4	110000022876	1	P-8
9	Valve sleeve	HM5X027-040007	210000297934	1	HM5X027-040007
10	O-ring retaining ring	19*15*1.25	210000343448	2	P15-T3
11	O-ring	φ14.8*2.4	110000022872	1	P-15
12	O-ring	φ23.7*3.5	110000108198	1	ORP24-F5
13	O-ring retaining ring	φ16*φ12*1.25	210000294337	1	P-12
14	O-ring	φ11.8*2.4	110000051053	1	P-12
15	Adjusting screw	HM5X027A-010003	210000303288	1	HM5X027A-010003
16	Nut	M8*1.25*5	210000354983	1	M8*1.25*5

3 HM5F Product Parts

3.3 HM5F23

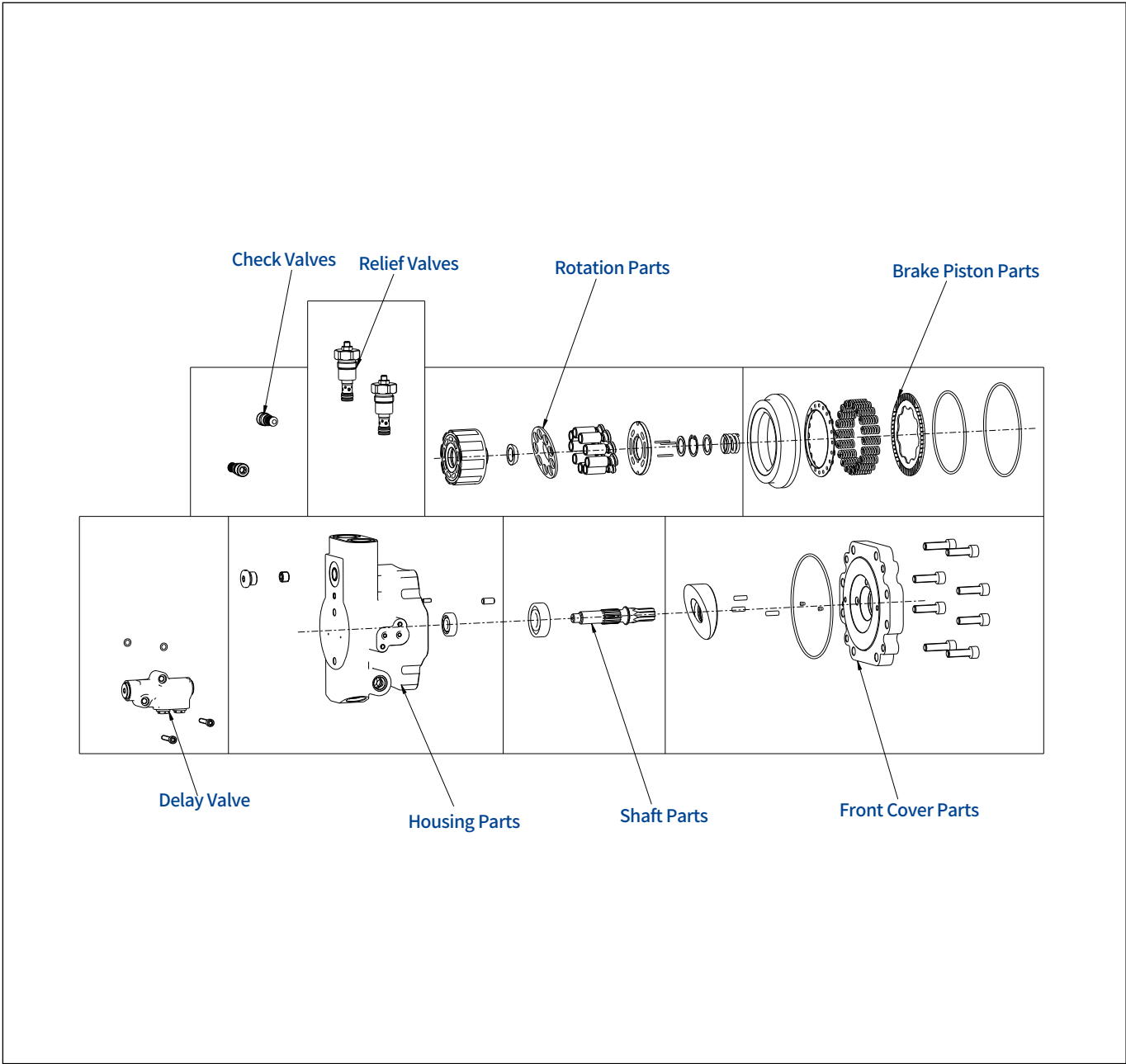


HM5F-23

3.3 HM5F23

·Take housing parts with drain port on side as an example.

HM5F23 Integral Parts



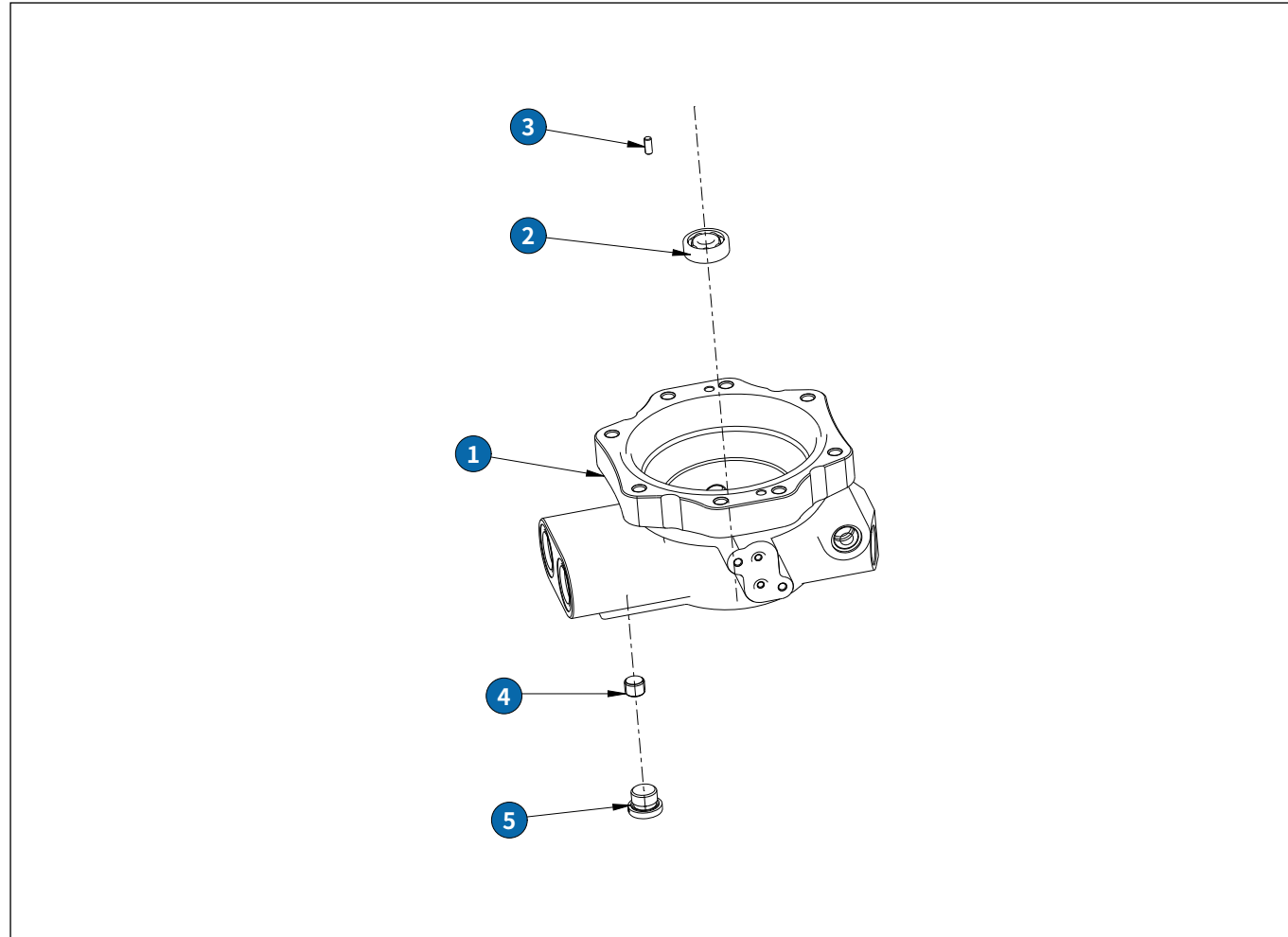
3.3 HM5F23

HM5F23 Parts Catalogue

3.3.1 Housing Parts	
With delay valve selection code 1	32
Without delay valve selection code 0	33
3.3.2 Front Cover Parts	
Front cover parts	34
3.3.3 Swashplate Parts	
Swashplate parts	35
3.3.4 Piston Parts	
Piston parts	36
3.3.5 Rotation Parts	
Rotation parts	37
3.3.6 Shaft Parts	
Shaft parts	38
3.3.7 Check Valve Parts	
Check valve parts	39
3.3.8 Delay Valve Parts	
Delay valve selection code 1	40
3.3.9 Relief Valve Parts	
Relief valve peak pressure selection code 216	41

3.3.1 HM5F23 Housing Parts

· Involving delay valve order code 1 : With delay valve.

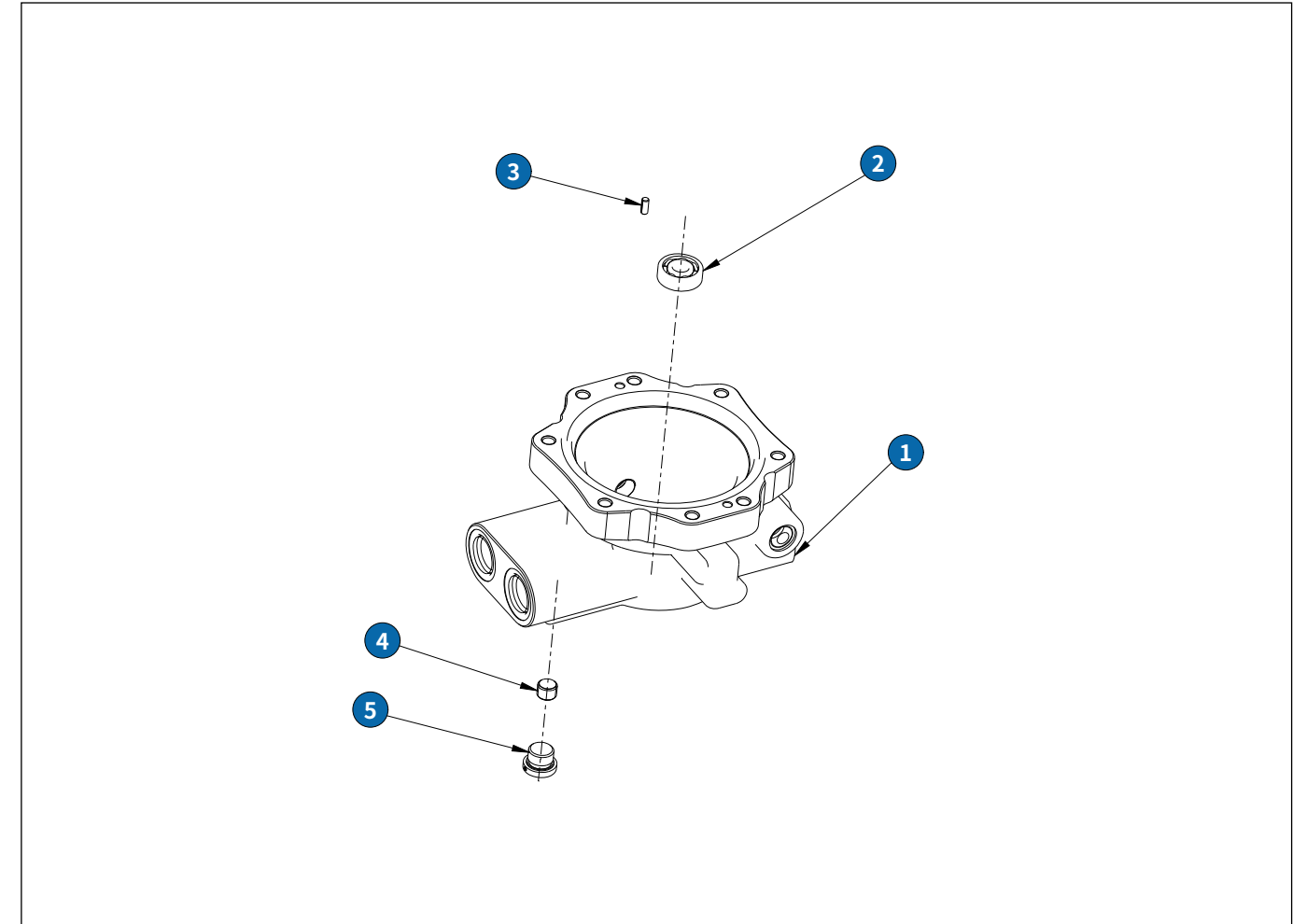


Order code: 1

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Housing	HM5F23-0410HSN-02	210001135016	1	HM5F23-0410HSN-02
2	Deep groove ball bearing	$\phi 12 * \phi 32 * 10$	210000363704	1	6201 CM
3	Flexible cylindrical pins	5*12-GS-W	210000293180	1	JIS B 2808
4	Hexagon socket plug	M14*1.5	210000377516	1	DIN 906
5	Hexagon socket plug	M18*1.5	210000293557	1	M18*1.5

3.3.1 HM5F23 Housing Parts

· Involving delay valve order code 0 : Without delay valve.

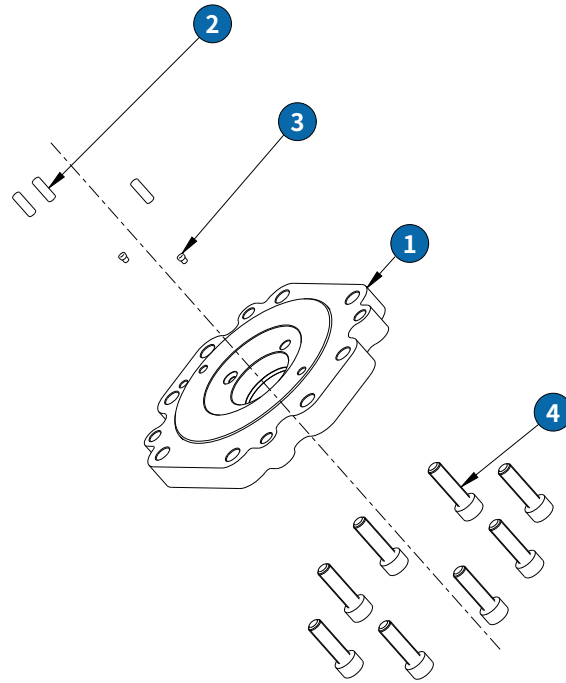


Order code: 0

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Housing	HM5F23-0410HSN	210000786633	1	HM5F23-0410HSN
		HM5F23-0410HSN-01	210000973649	1	HM5F23-0410HSN-01
2	Deep groove ball bearing	$\phi 12 * \phi 32 * 10$	210000363704	1	6201 CM
3	Flexible cylindrical pins	5*12-GS-W	210000293180	1	JIS B 2808
4	Hexagon socket plug	M14*1.5	210000377516	1	DIN 906
5	Hexagon socket plug	M18*1.5	210000293557	1	M18*1.5

3.3.2 HM5F23 Front Cover Parts

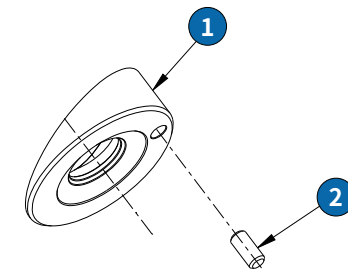
· Order code: Front cover parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Front cover	HM5X23-030001	210000383309	1	HM5X23-030001
2	Cylindrical pin	HM5X18-060002	210000300986	3	HM5X18-060002
3	Strainer	HM5X18-060003	210000296230	2	HM5X18-060003
4	Hexagon socket screws	M10*35	210000294642	8	GB/T 70.1

3.3.3 HM5F23 Swashplate Parts

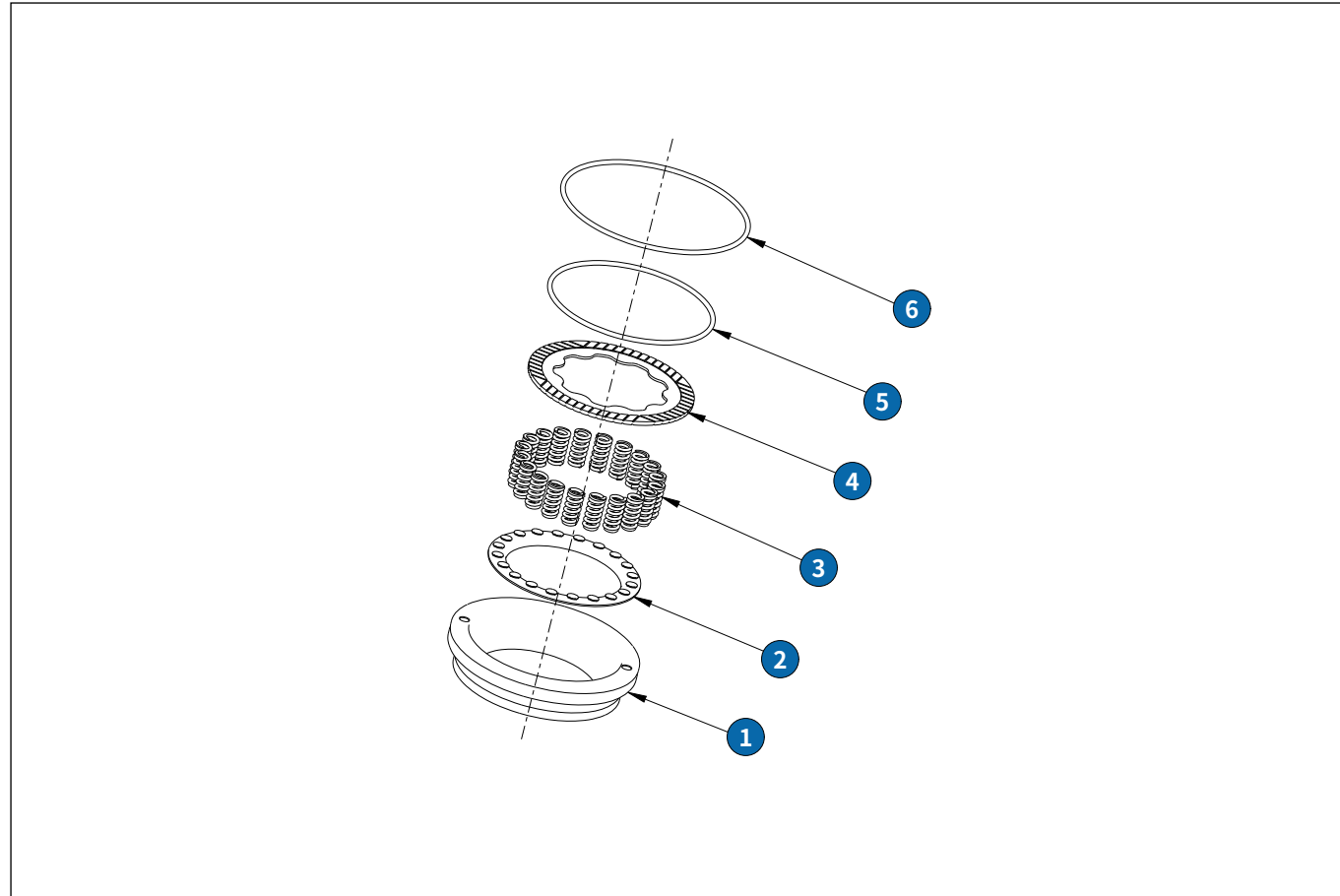
· Order code: Swashplate parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Swashplate	HM5X23-000001	210000383312	1	HM5X23-000001
2	Cylindrical pin	φ8*17	210000299865	1	HM5X18-000002

3.3.4 HM5F23 Piston Parts

· Order code: Piston parts are not subject to selection code.

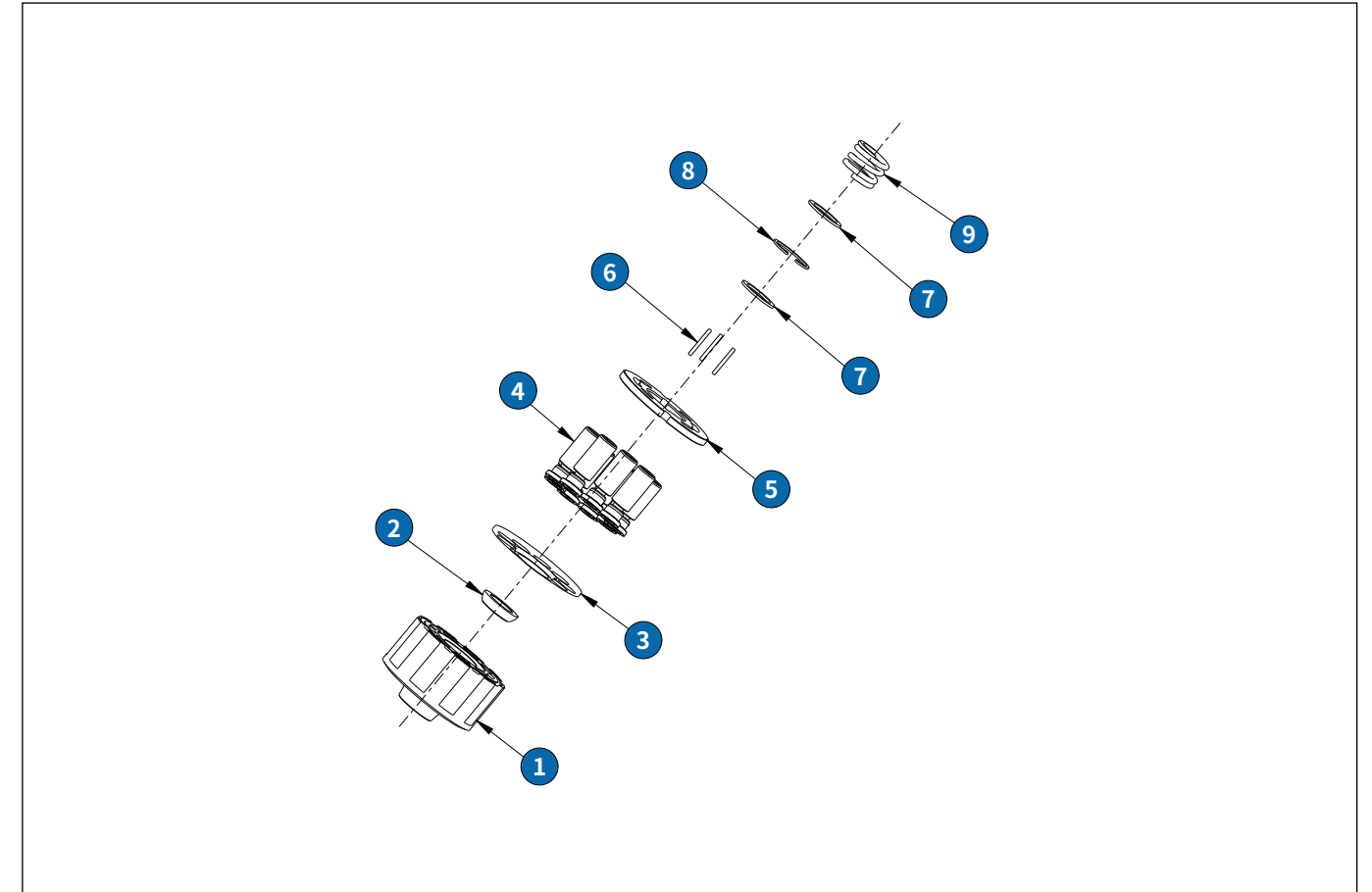


Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Brake piston	HM5X18-000004	210000302097	1	HM5X18-000004
2	Spring pallets*	HM5X18-070002	210000302953	1	HM5X18-070002
3	Spring*	HM5X18-070001	210000292439	1	HM5X18-070001
4	Friction plate	HM5X18-000003	210000301972	1	HM5X18-000003
5	O-ring	φ109.4*3.1	110000103825	1	ORG110-F5
6	O-ring	φ124.4*3.1	110000001236	1	OR3112440

Note: ‘*’ comprises the piston spring assembly.

3.3.5 HM5F23 Rotation Parts

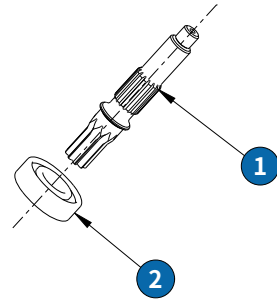
· Order code: Rotation parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Cylinder block	HM5X18-030001	210000302746	1	HM5X18-030001
2	Ball hinge	HM5X18-030003	210000303086	1	HM5X18-030003
3	Return disc	HM5X18-030004	210000297696	1	HM5X18-030004
4	Piston assembly	HM5X18-031000	210000300308	9	HM5X18-031000
5	Valve plate	HM5X18-030002	210000356511	1	HM5X18-030002
6	Cylindrical pin	φ2.35*22	210000299864	3	HM5X18-030007
7	Gasket	φ27.5*φ20.3*1.5	210000302006	2	HM5X18-030006
8	Circlip for C-Shaft	CE-IN 28	210000294475	1	JIS B 2804
9	Spring	23.7/3.5*26.7/3	210000292855	1	HM5X18-030005

3.3.6 HM5F23 Shaft Parts

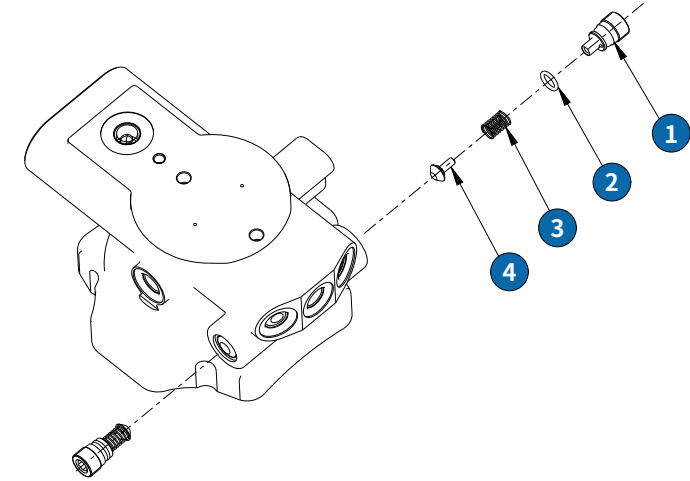
· Order code: Shaft parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Shaft	HM5X23-0110DSF-G9-02	210000969403	1	HM5X23-0110DSF-G9-02
2	Deep groove ball bearing	φ20*φ47*14	210000363700	1	6204ZE-Z

3.3.7 HM5F23 Check Valve Parts

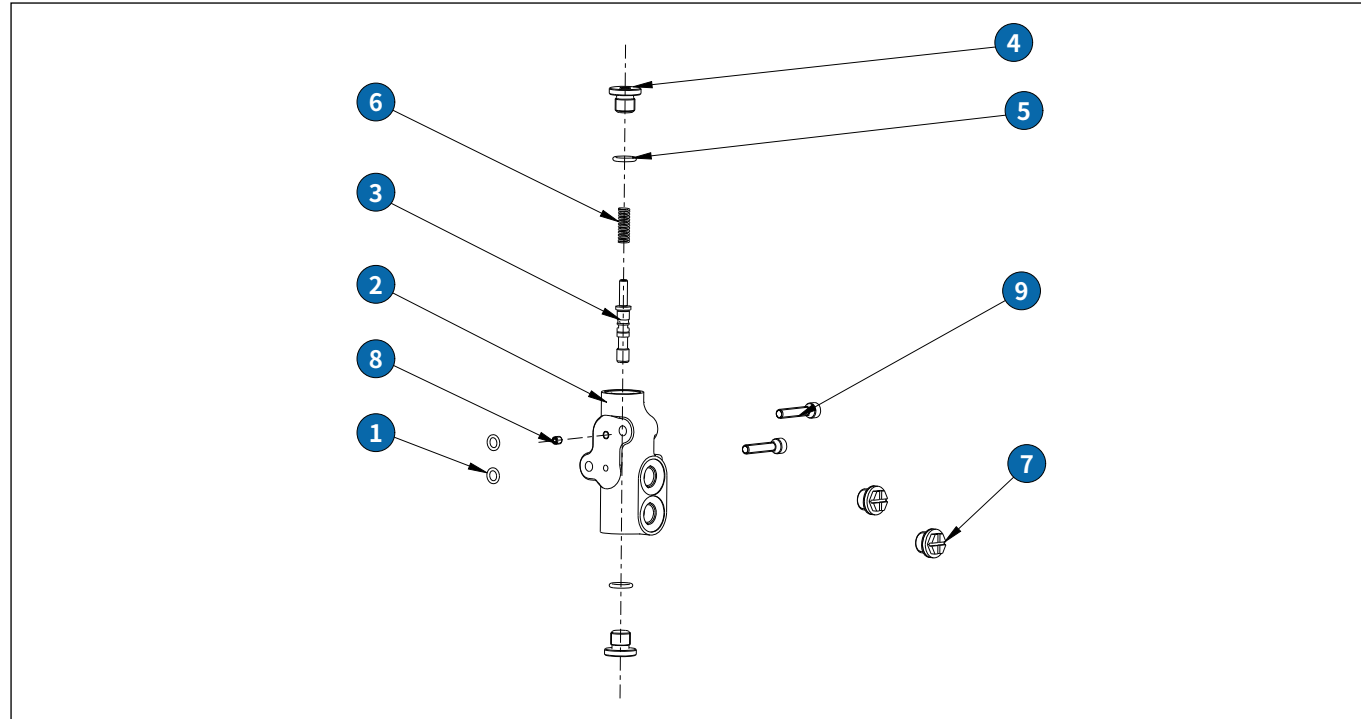
· Order code: Check valve parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Screw	HM5X18-050001	210000299225	1	HM5X18-050001
2	Cone valve spool	HM5X18-050003	210000303321	1	HM5X18-050003
3	O-ring	φ10.8*2.4	110000067694	1	ORP11-N7
4	Spring	HM5X18-050002	210000292361	1	HM5X18-050002

3.3.8 HM5F18 Delay Valve Parts

· Order code 1: With delay valve./ · Order code 0: Without delay valve, please skip it.

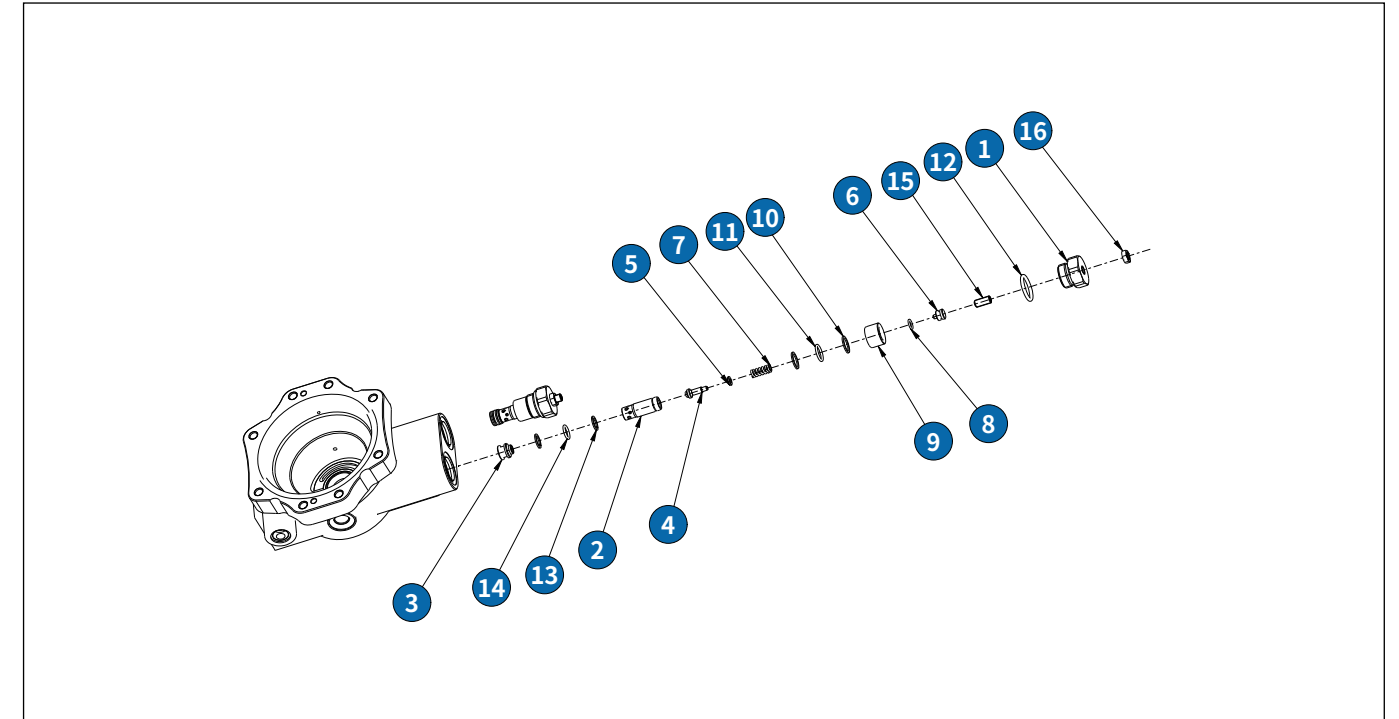


Order code: 1

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Valve body	HM5F34-060001	210000763521	1	HM5F34-060001
2	Spool	HM5X45-06N1SPL-01	210001026195	1	HM5X45-06N1SPL-01
3	Plug	HM5X45-060004	210000293056	2	HM5X45-060004
4	O-ring	φ10.8*2.4	110000067694	2	ORP11-N7
5	Spring	6.5/1*25.7/13.5	210000292700	1	HM5X45-060003
6	External plug (cross-head washer)	G1/4	110000022842	2	G1/4
7	Throttle plug	M5(0.5)	210000424262	1	S0505
8	Hexagon socket screws	M6*30	210000206181	2	GB/T 70.1
9	O-ring	φ6.8*1.9	110000110024	2	ORP7-N7

3.3.9 HM5F18 Relief Valve Parts

· Order code 216: Relief valve setpoint peak pressure



Order code: 216

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Plug	G3/4	210000293876	1	HM5X027A-010001
2	Valve sleeve	HM5X027-040004	210000297818	1	HM5X027-040004
3	Valve seat	HM5X027-040001	210000303278	1	HM5X027-040001
4	Cone valve spool	HM5X027-040002	210000303319	1	210000303319
5	Spring gasket	HM5X027-040005	210000303515	1	HM5X027-040005
6	Piston	HM5X027A-010002	210000302062	1	HM5X027A-010002
7	Spring	HM5X027-040003	210000294194	1	HM5X027-040003
8	O-ring	φ13.8*2.4	110000022876	1	P-8
9	Valve sleeve	HM5X027-040007	210000297934	1	HM5X027-040007
10	O-ring retaining ring	19*15*1.25	210000343448	2	P15-T3
11	O-ring	φ14.8*2.4	110000022872	1	P-15
12	O-ring	φ23.7*3.5	110000108198	1	ORP24-F5
13	O-ring retaining ring	φ16*φ12*1.25	210000294337	1	P-12
14	O-ring	φ11.8*2.4	110000051053	1	P-12
15	Adjusting screw	HM5X027A-010003	210000303288	1	HM5X027A-010003
16	Nut	M8*1.25*5	210000354983	1	M8*1.25*5

3 HM5F Product Parts

3.4 HM5F29

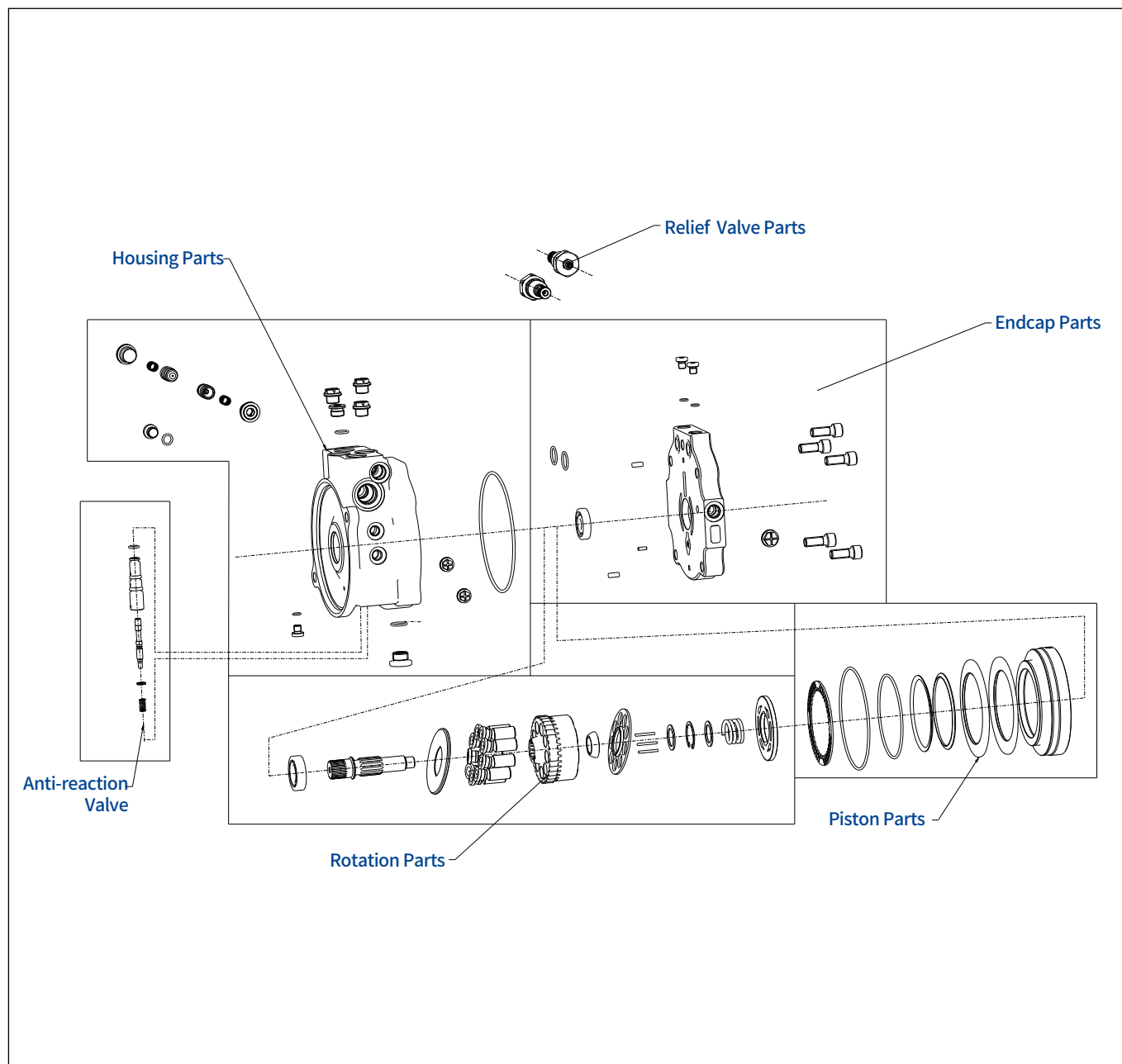


HM5F-29

3.4 HM5F29

·Take endcap parts with drain port on side as an example.

HM5F29 Integral Parts



3.4 HM5F29

HM5F29 Parts Catalogue

3.4.1 Housing Parts

With delay valve selection code 1	46
Without delay valve selection code 0	47

3.4.2 Endcap Parts

Drain port on side	48
Drain port on top	49

3.4.3 Rotation Parts

Rotation parts	50
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3.4.4 Shaft Parts

Shaft parts	51
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3.4.5 Piston Parts

Piston parts	52
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3.4.6 Delay Valve Parts

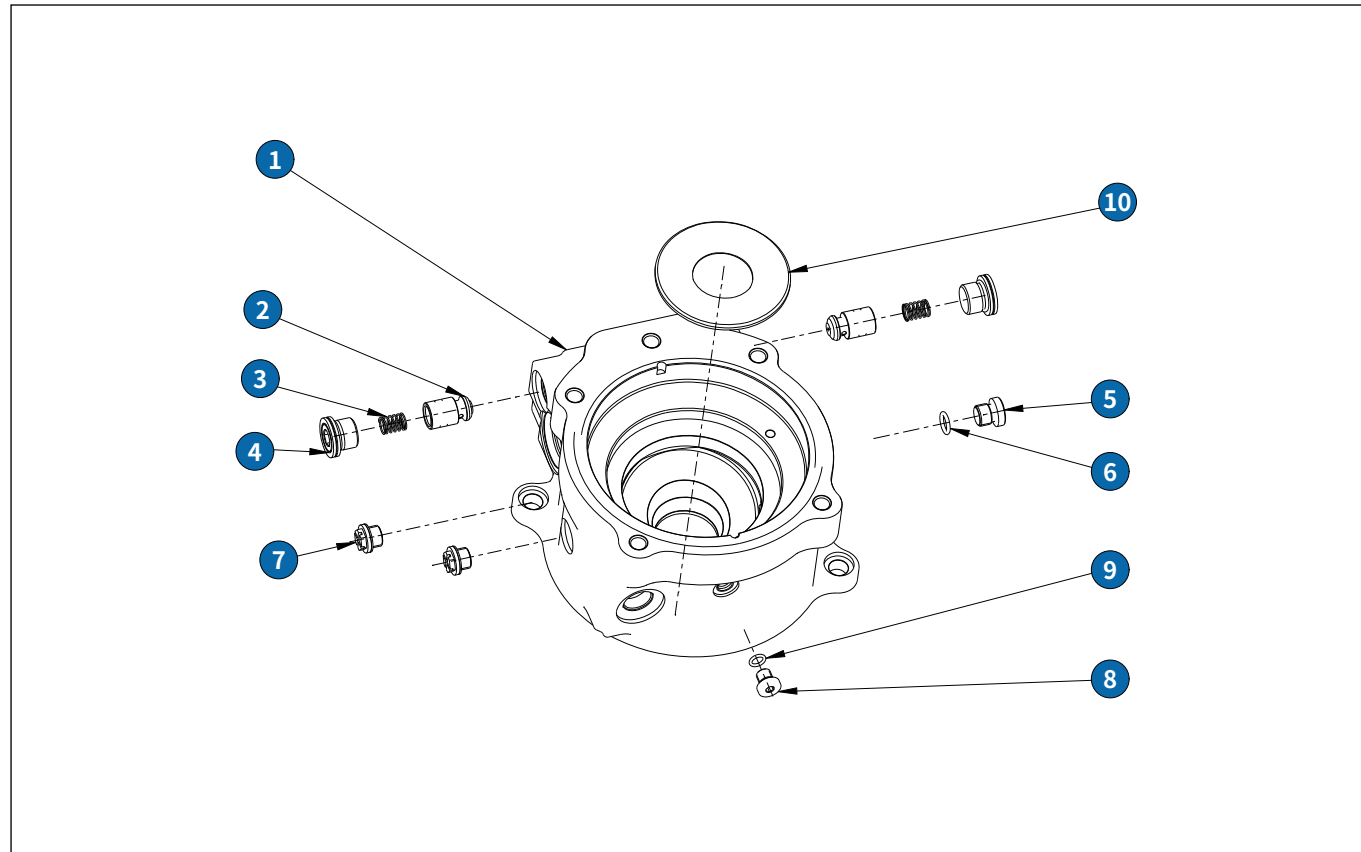
Delay valve selection code 1	53
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3.4.7 Relief Valve Parts

Relief valve peak pressure selection code 230	54
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3.4.1 HM5F29 Housing Parts

· Involving delay valve order code 1 : With delay valve, pilot port.

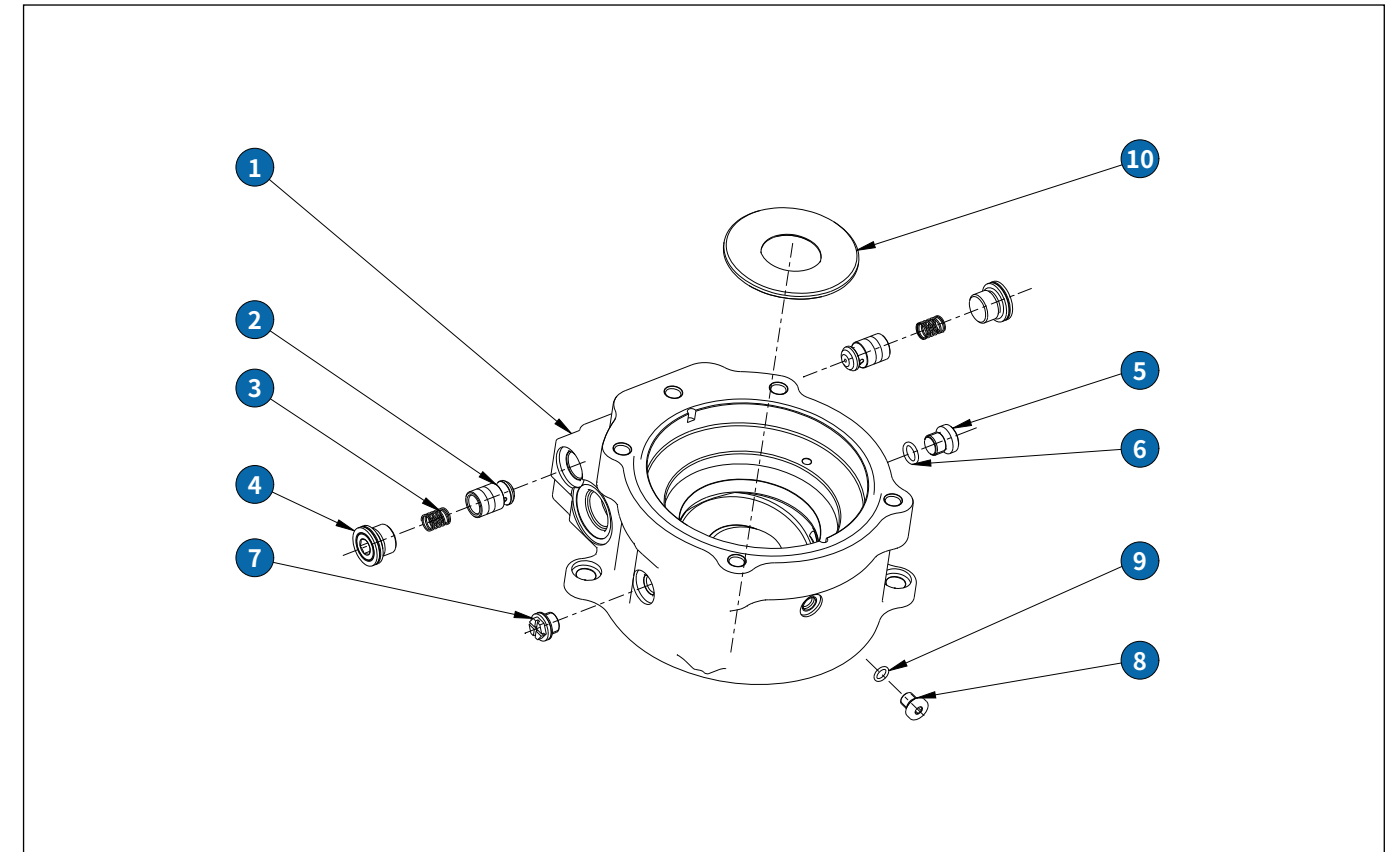


Order code: 1

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Housing	HM5F29-0410HSN	210001105592	1	HM5F29-0410HSN
2	Spool	HM5X27-0691SPL-01	210000945330	2	HM5X27-0691SPL-01
3	Spring	10.8/0.8*27/9	210000943352	2	HM5X27-0691CSP-01
4	Hexagon socket plug (with O-ring)	M20*1.5(with O-ring)	210000422698	2	M20*1.5(with O-ring)
5	Hexagon socket plug	G1/4	210000293555	1	G1/4
6	O-ring	φ10.8*2.4	110000067694	1	φ10.8*2.4
7	External plug (cross-head washer)	G1/4	110000022842	2	G1/4
8	Plug	HLPV28-050006	210000293833	1	HLPV28-050006
9	O-ring	φ7.8*1.9	110000001194	1	φ7.8*1.9
10	Friction disc	HM5X027-000001	210000627259	1	HM5X027-000001

3.4.1 HM5F29 Housing Parts

· Involving delay valve order code 0 : Without delay valve, pilot port.

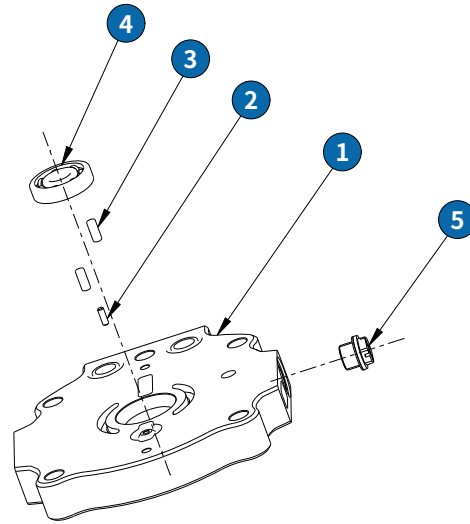


Order code: 0

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Housing	HM5F29-0410HSN-01	210001194702	1	HM5F29-0410HSN-01
2	Spool	HM5X27-0691SPL-01	210000945330	2	HM5X27-0691SPL-01
3	Spring	10.8/0.8*27/9	210000943352	2	HM5X27-0691CSP-01
4	Hexagon socket plug (with O-ring)	M20*1.5(with O-ring)	210000422698	2	M20*1.5(with O-ring)
5	Hexagon socket plug	G1/4	210000293555	1	G1/4
6	O-ring	φ10.8*2.4	110000067694	1	φ10.8*2.4
7	External plug (cross-head washer)	G1/4	110000022842	2	G1/4
8	Plug	HLPV28-050006	210000293833	1	HLPV28-050006
9	O-ring	φ7.8*1.9	110000001194	1	φ7.8*1.9
10	Friction disc	HM5X027-000001	210000627259	1	HM5X027-000001

3.4.2 HM5F29 Endcap Parts

· Order code: Endcap parts are not subject to selection code.

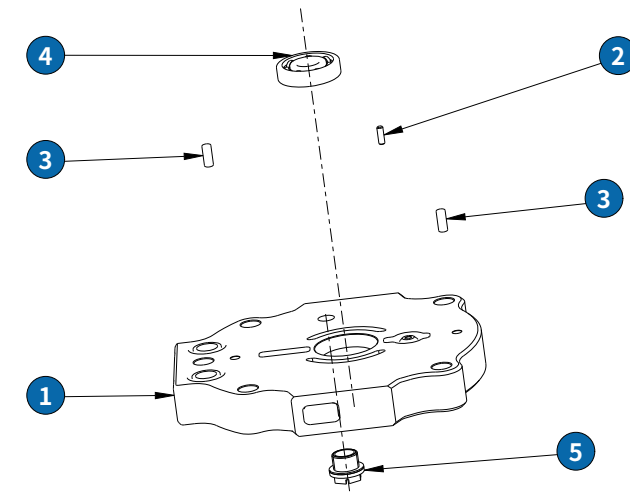


Drain port on side

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Endcap	HM5F29-0510RFG	210001106860	1	HM5F29-0510RFG
2	Cylindrical pin	$\phi 4 \times 12$	210000200965	1	HM5X27027-020002
3	Cylindrical pin	$\phi 6 \times 14.5$	210000300966	2	HM5X27027-020003
4	Deep groove ball bearing	$\phi 15 \times \phi 42 \times 13$	210000294623	1	6302
5	Outer plug	G3/8	110000022844	1	G3/8

3.4.2 HM5F29 Endcap Parts

· Order code: Endcap parts are not subject to selection code.

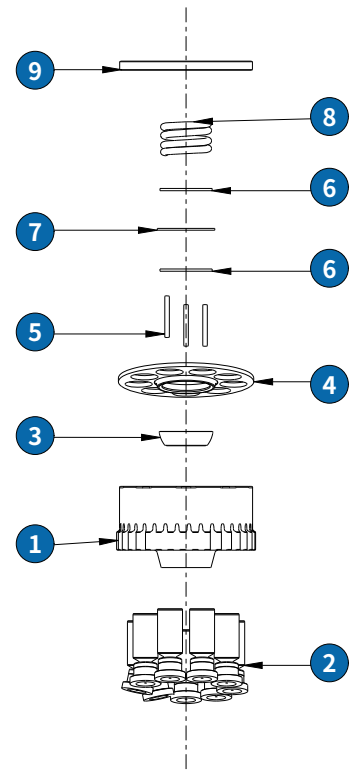


Drain port on top

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Endcap	HM5F29-0510RFG-01	210001156855	1	HM5F29-0510RFG-01
2	Cylindrical pin	$\phi 4 \times 12$	210000200965	1	HM5X27027-020002
3	Cylindrical pin	$\phi 6 \times 14.5$	210000300966	2	HM5X27027-020003
4	Deep groove ball bearing	$\phi 15 \times \phi 42 \times 13$	210000294623	1	6302
5	Outer plug	G3/8	110000022844	1	G3/8

3.4.3 HM5F29 Rotation Parts

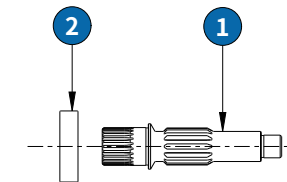
· Order code: Rotation parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Cylinder block	HM5F29-0211CYD	210001105594	1	HM5F29-0211CYD
2	Piston assembly	HM5X34-031000	210000300311	9	HM5X34-031000
3	Ball hinge	HM5X34-030003	210000302607	1	HM5X34-030003
4	Return disc	HM5X34-030004	210000303005	1	HM5X34-030004
5	Cylindrical pin	HM5X34-030007	210000299687	3	HM5X34-030007
6	Gasket	HM5X34-030006	210000303174	2	HM5X34-030006
7	Circlip for C-Shaft	CE-IN35	210000294435	1	CE-IN35
8	Spring	HM5X34-030005	210000292857	1	HM5X34-030005
9	Valve plate	HM5F29-0212CTP	210001105967	1	HM5F29-0212CTP

3.4.4 HM5F29 Shaft Parts

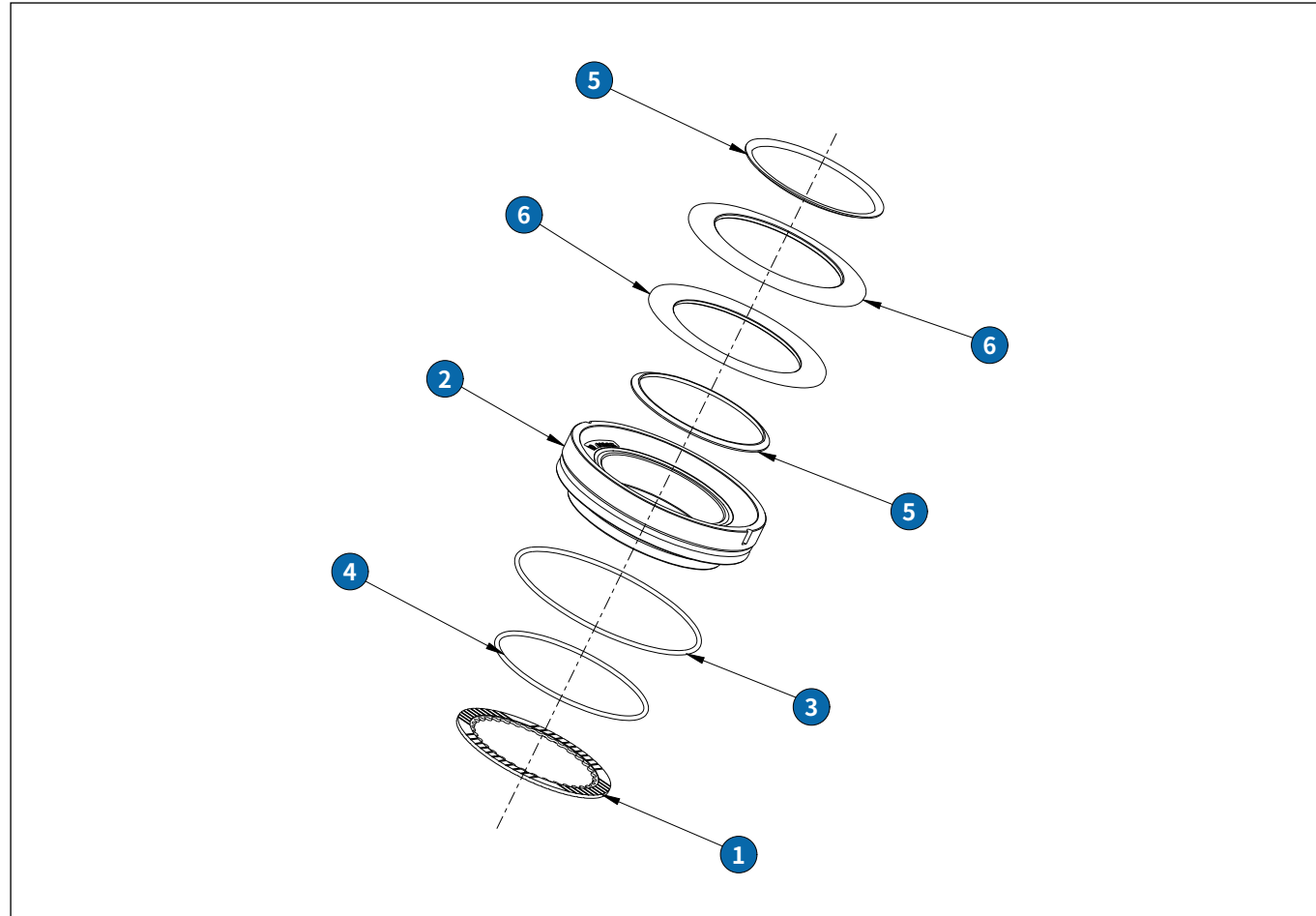
· Order code: Shaft parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Shaft	HM5F29-0110DSF-G23	210001105595	1	HM5F29-0110DSF-G23
2	Cylindrical roller bearings	φ25*φ47*12	210001155336	1	φ25*φ47*12

3.4.5 HM5F29 Piston Parts

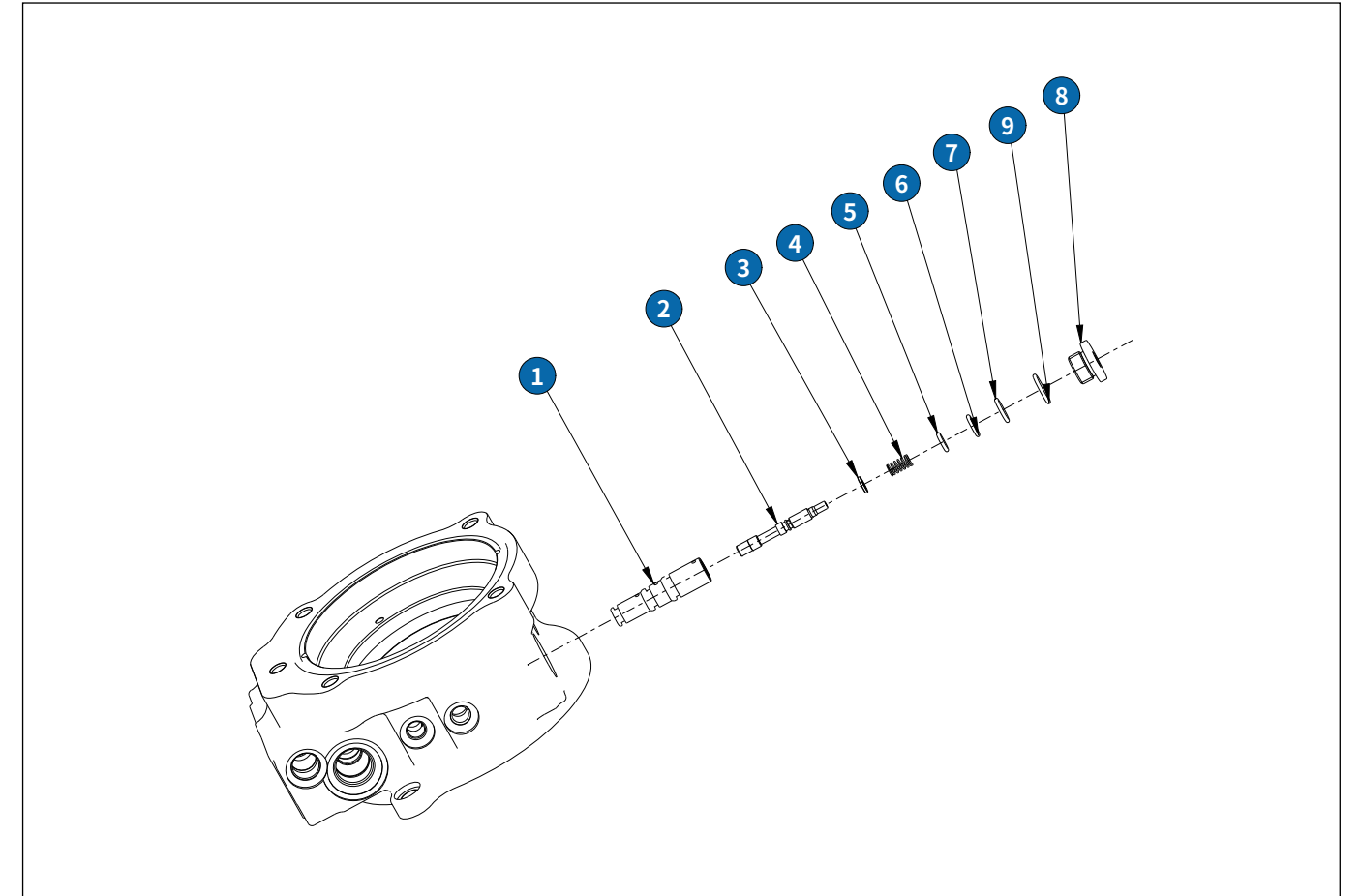
· Order code: Piston parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Friction plate	HM5X027-000005	210000301970	1	HM5X027-000005
2	Piston	HM5F29-0320RPS	210001114438	1	HM5F29-0320RPS
3	O-ring	φ134.4*3.1	110000118071	1	ORG135-N7
4	O-ring	φ109.4*3.1	110000081124	1	ORG110-N7
5	Disc spring seat	HM5X027-000004	210000298027	2	HM5X027-000004
6	Butterfly spring	HM5X027-000003	210000293647	2	HM5X027-000003

3.4.6 HM5F29 Delay Valve Parts

· Order code 1: With delay valve./ · Order code 0: Without delay valve, please skip it.

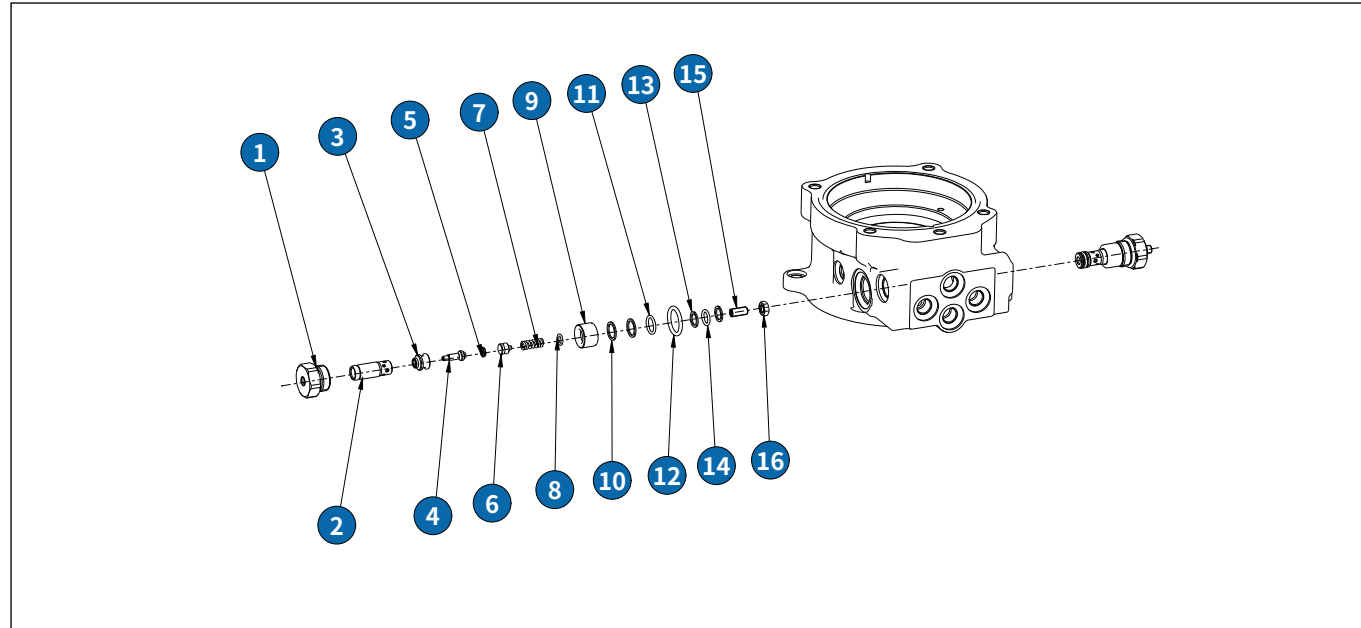


Order code: 1

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Valve sleeve	HM5X027-010001	210000303219	1	HM5X027-010001
2	Spool	HM5X027B-010002	210000297840	1	HM5X027B-010002
3	Gasket	HM5X027B-010003	210000303163	1	HM5X027B-010003
4	Spring	HM5X027B-010004	210000292705	1	HM5X027B-010004
5	O-ring	φ9.8*2.4	210000294276	1	P-10A
6	O-ring	φ11.8*2.4	110000109131	1	ORP12-N7
7	O-ring	φ13.8*2.4	110000082543	1	ORP14-N7
8	Plug	G1/2	210000295785	1	HM5X027B-000001
9	O-ring	φ17.8*2.4	110000063955	1	ORP18-N7

3.4.7 HM5F29 Relief Valve Parts

· Order code 230: Relief valve setpoint peak pessure



Order code: 230

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Plug	HM5X027A-010001	210000293876	1	HM5X027A-010001
2	Valve sleeve	HM5X027-040004	210000297818	1	HM5X027-040004
3	Valve seat	HM5X027-040001	210000303278	1	HM5X027-040001
4	Cone valve spool	HM5X027-040002	210000303319	1	210000303319
5	Spring gasket	HM5X027-040005	210000303515	1	HM5X027-040005
6	Piston	HM5X027A-010002	210000302062	1	HM5X027A-010002
7	Spring	HM5X027-040003	210000294194	1	HM5X027-040003
8	O-ring	φ13.8*2.4	110000022876	1	P-8
9	Valve sleeve	HM5X027-040007	210000297934	1	HM5X027-040007
10	O-ring retaining ring	19*15*1.25	210000343448	2	P15-T3
11	O-ring	φ14.8*2.4	110000022872	1	P-15
12	O-ring	φ23.7*3.5	110000108198	1	ORP24-F5
13	O-ring retaining ring	φ16*φ12*1.25	210000294337	1	P-12
14	O-ring	φ11.8*2.4	110000051053	1	P-12
15	Adjusting screw	HM5X027A-010003	210000303288	1	HM5X027A-010003
16	Nut	M8*1.25*5	210000354983	1	M8*1.25*5

3 HM5F Product Parts

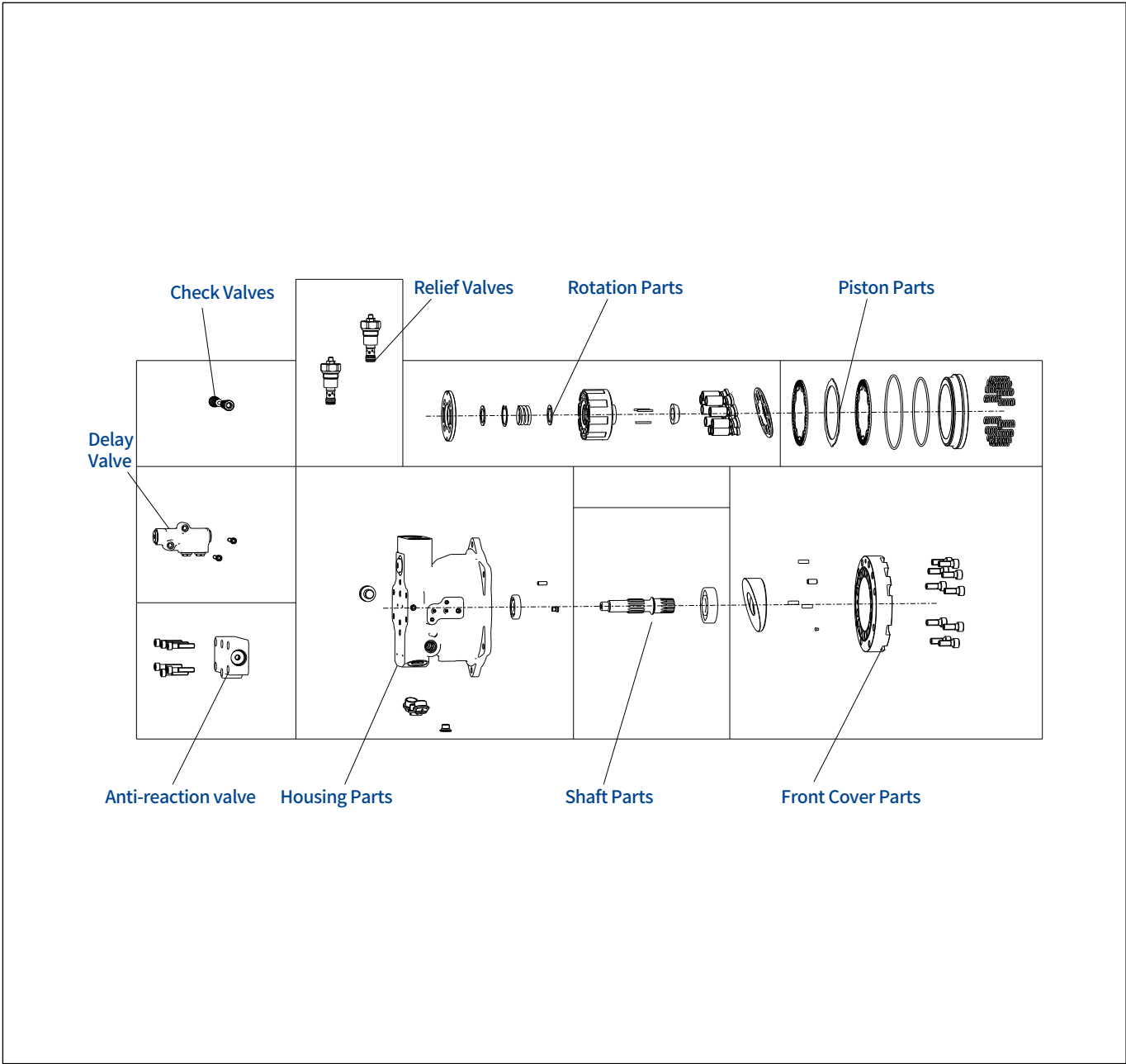
3.5 HM5F34



HM5F-34

3.5 HM5F34

HM5F34 Integral Parts



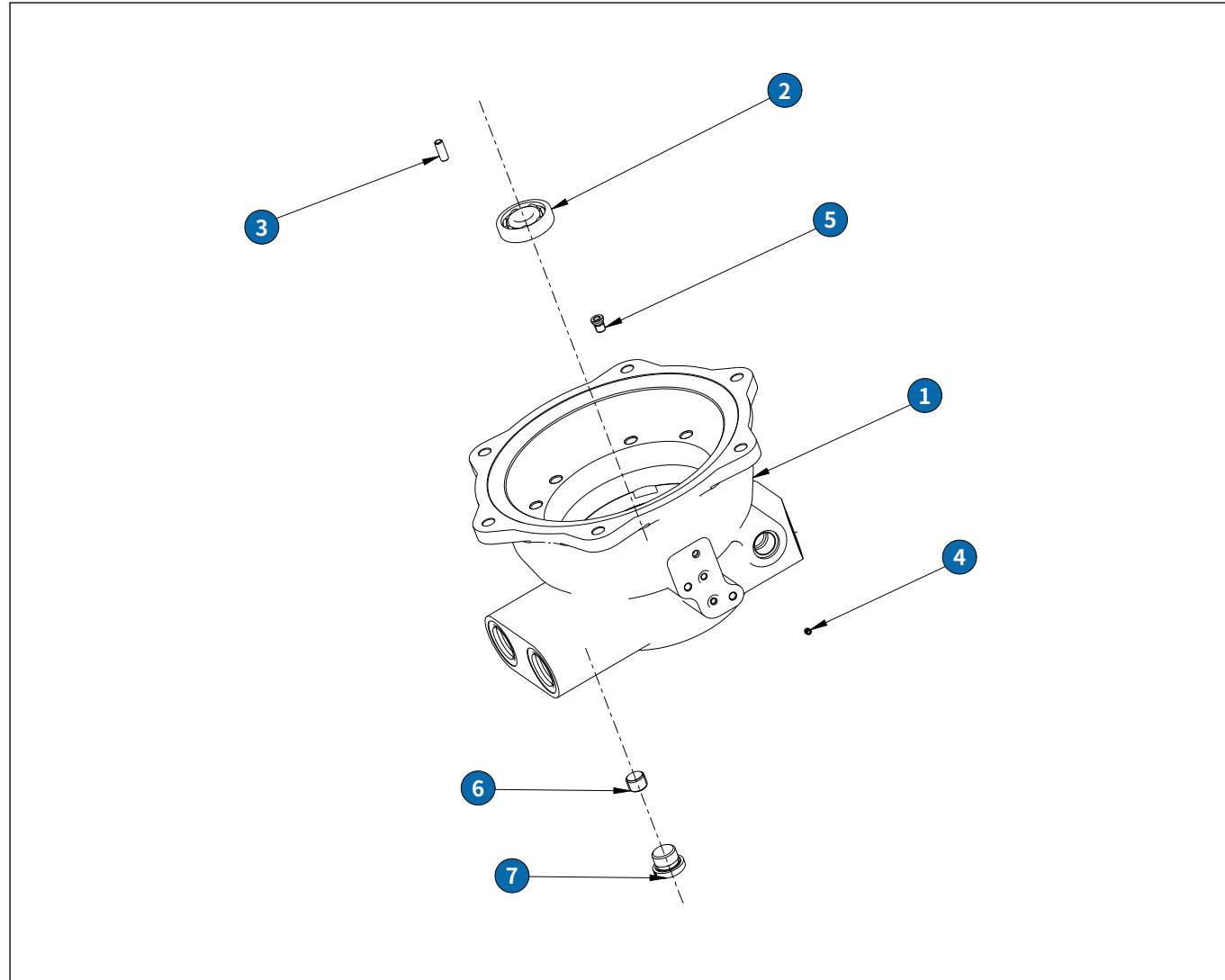
3.5 HM5F34

HM5F34 Parts Catalogue

3.5.1 Housing Parts	
With delay valve selection code 1	58
Without delay valve selection code 0	59
3.5.2 Front Cover Parts	
Front cover parts	60
3.5.3 Piston Parts	
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Swashplate parts	62
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3.5.7 Check Valve Parts	
Check valve parts	65
3.5.8 Delay Valve Parts	
Delay valve selection code 1	66-67
3.5.9 Anti-reaction Valve Parts	
Anti-reaction valve parts selection code 1	68-69
3.5.10 Relief Valve Parts	
Relief valve peak pressure selection code 230	70-71

3.5.1 HM5F34 Housing Parts

· Involving delay valve order code 1 : With delay valve. Without anti-reaction valve.

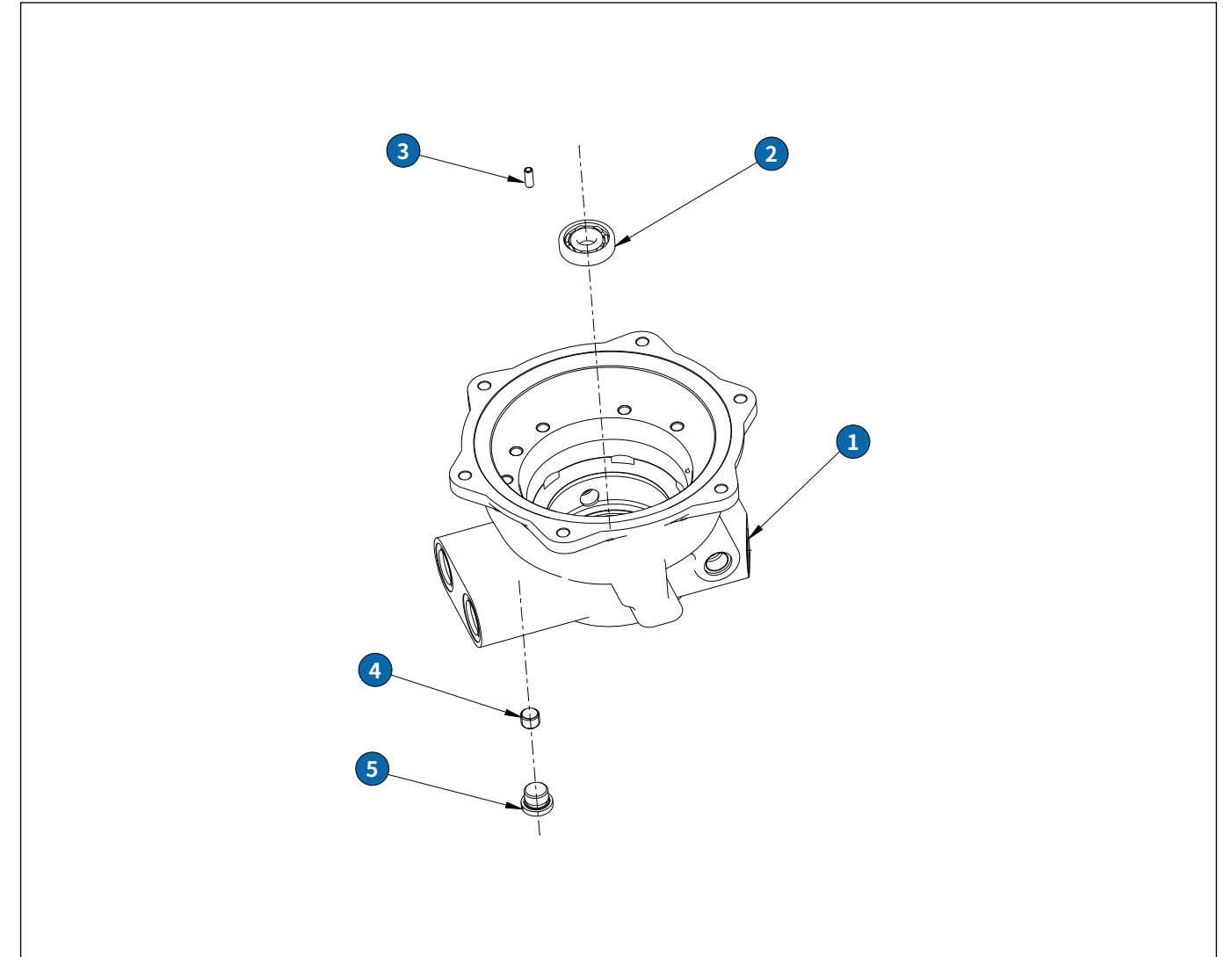


Order code: 1

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Housing	HM5F23-0410HSN	210000779462	1	HM5F23-0410HSN
2	Deep groove ball bearing	$\phi 15^* \phi 42^* 13$	210000294623	1	6302
3	Flexible cylindrical pins	6*16-GS-W	210000294649	1	JIS B 2808
4	Ball expansion plugs	MB850-040	210000343019	1	300135419
5	Plug	M7*0.75	210000292750	1	V30G205-000008
6	Hexagon socket plug	M14*1.5	210000377516	1	DIN 906

3.5.1 HM5F34 Housing Parts

· Involving delay valve order code 0: Without delay valve. Without anti-reaction valve.



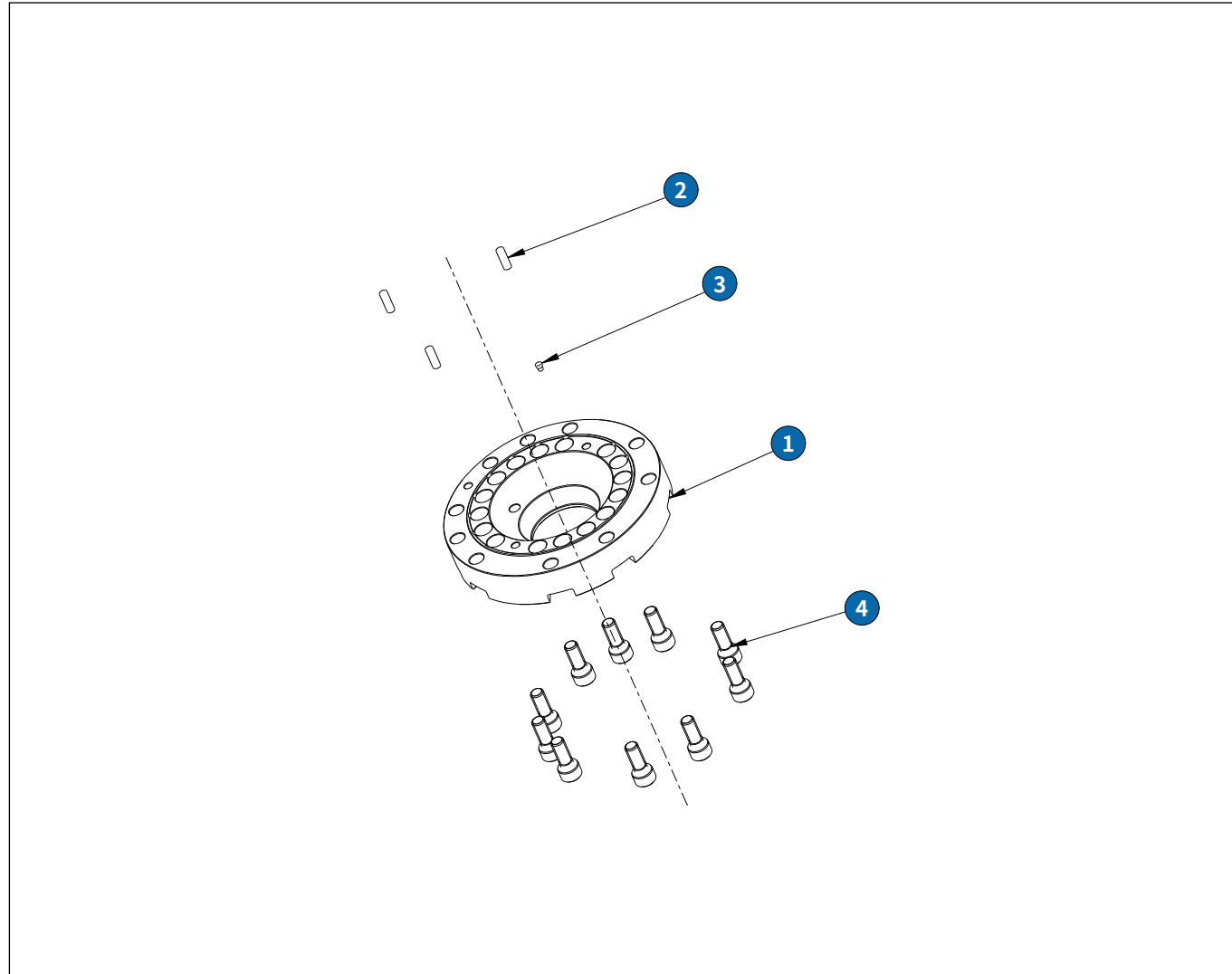
Order code: 0

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Housing*	HM5F23-0410HSN-01	210001087078	1	HM5F23-0410HSN-01
	Housing	HM5F23-0410HSN-02	210001135016	1	HM5F23-0410HSN-02
2	Deep groove ball bearing	$\phi 15^* \phi 42^* 13$	210000294623	1	6302
3	Flexible cylindrical pins	6*16-GS-W	210000294649	1	JIS B 2808
4	Hexagon socket plug	M14*1.5	210000377516	1	DIN 906
5	Hexagon socket plug	M18*1.5	210000293557	1	ISO 9974-4

Note: "*" indicates no braking configuration.

3.5.2 HM5F34 Front Cover Parts

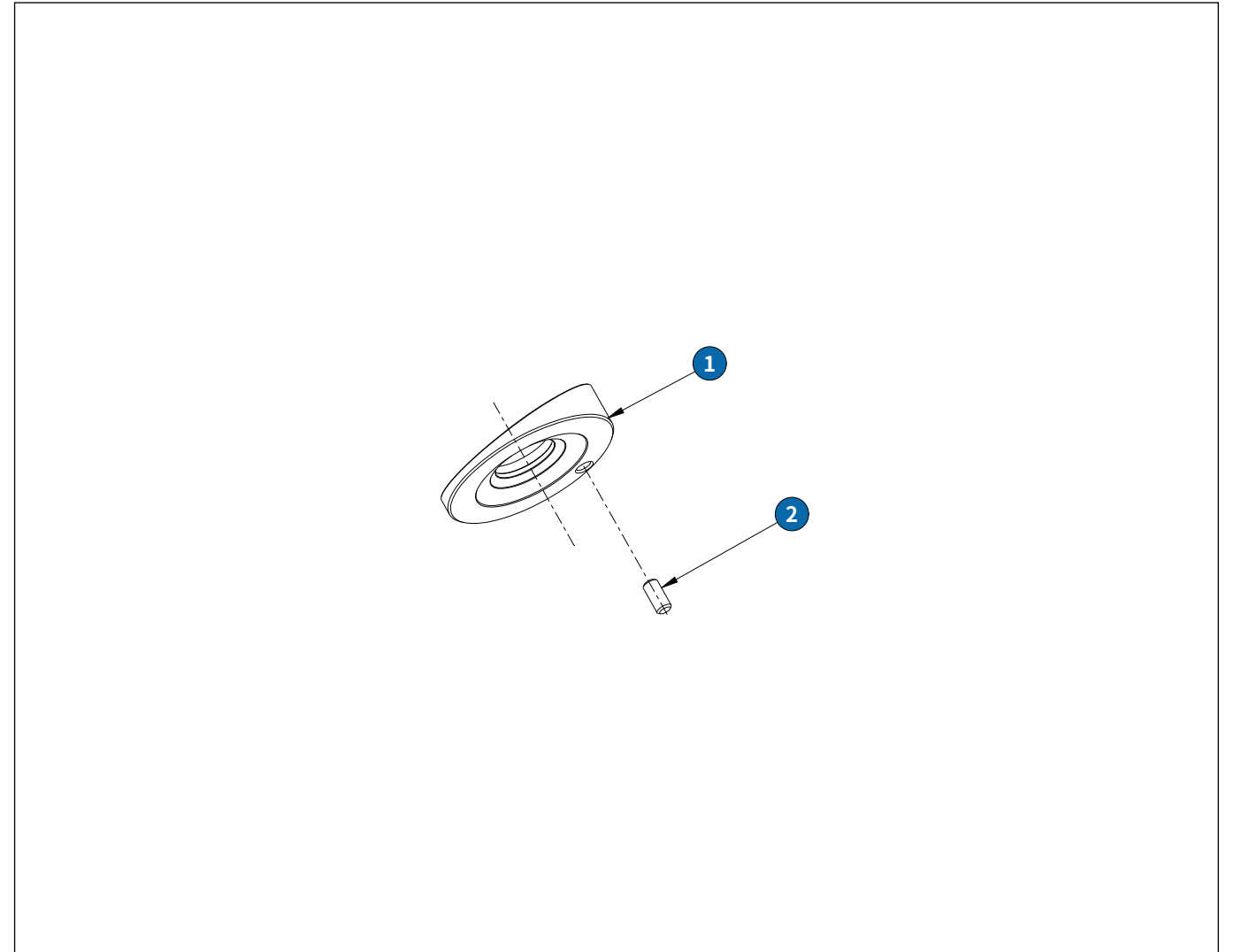
· Order code: Front cover parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Front cover	HM5X34-050001	210000298184	1	HM5X34-050001
2	Cylindrical pin	HM5X18-060002	210000300986	3	HM5X18-060002
3	Strainer	HM5X18-060003	210000296230	1	HM5X18-060003
4	Hexagon socket screws	M10*25	210000205819	10	GB/T 70.1

3.5.3 HM5F34 Swashplate Parts

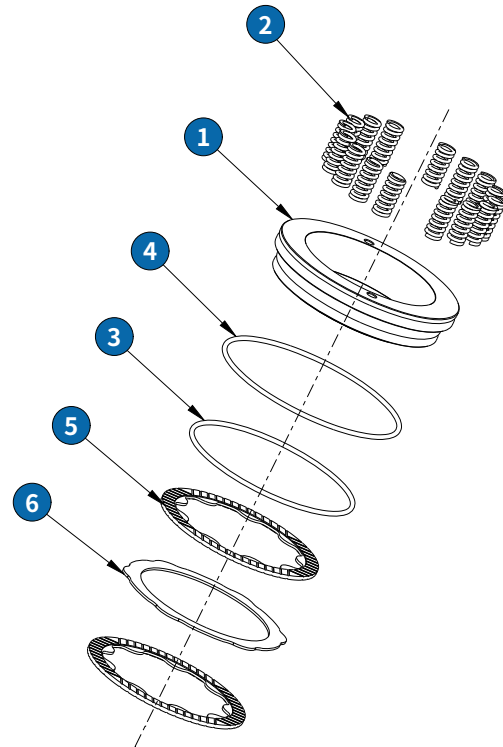
· Order code: Swashplate parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Swashplate	HM5X34-000001	210000556606	1	HM5X34-000001
2	Cylindrical pin	HM5X18-000002	210000299865	1	HM5X18-000002

3.5.4 HM5F34 Piston Parts

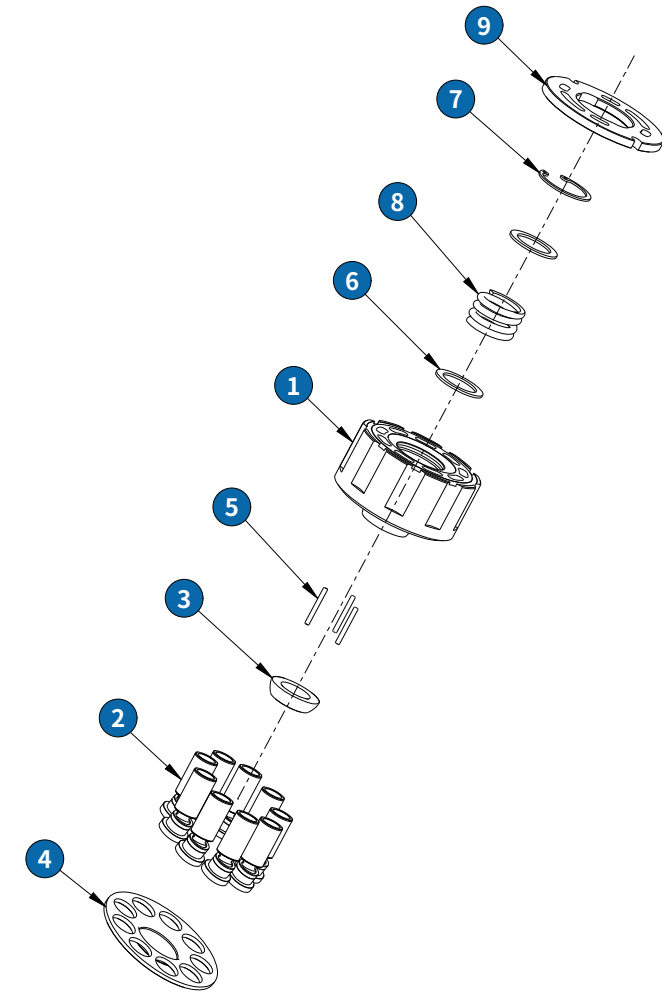
· Order code: Piston parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Brake piston	HM5X34-000004	210000299682	1	HM5X34-000004
2	Spring	10.2/2.3*33.7/8	210000293662	16	HM5X34-000005
3	O-ring	φ114.4*3.1	110000058457	1	ORG115-F5
4	O-ring	φ124.4*3.1	110000001236	1	OR3112440
5	Friction disc	HM5X34-0000003	210000301972	2	HM5X34-0000003
6	Separation disc	HM5X34-000002	210000299010	1	HM5X34-000002

3.5.5 HM5F34 Rotation Parts

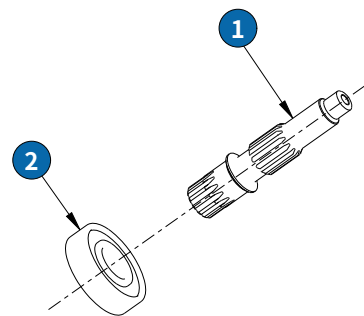
· Order code: Rotation parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Cylinder block	HM5F29-0211CYD	210001105594	1	HM5F29-0211CYD
2	Piston assembly	HM5X34-031000	210000300311	9	HM5X34-031000
3	Ball hinge	HM5X34-030003	210000302607	1	HM5X34-030003
4	Return disc	HM5X34-030004	210000303005	1	HM5X34-030004
5	Cylindrical pin	HM5X34-030007	210000299687	3	HM5X34-030007
6	Gasket	HM5X34-030006	210000303174	2	HM5X34-030006
7	Circlip for C-Shaft	CE-IN35	210000294435	1	CE-IN35
8	Spring	HM5X34-030005	210000292857	1	HM5X34-030005
9	Valve plate	HM5F29-0212CTP	210001105967	1	HM5F29-0212CTP

3.5.6 HM5F34 Shaft Parts

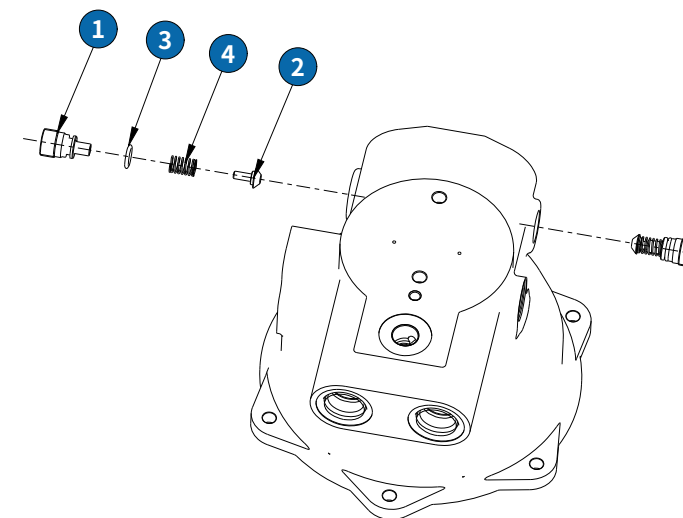
· Order code: Shaft parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Shaft	HM5X34-020001	210000298343	1	HM5X34-020001
2	Deep groove ball bearing	φ25*φ62*17	210000294215	1	6305ZE

3.5.7 HM5F34 Check Valve Parts

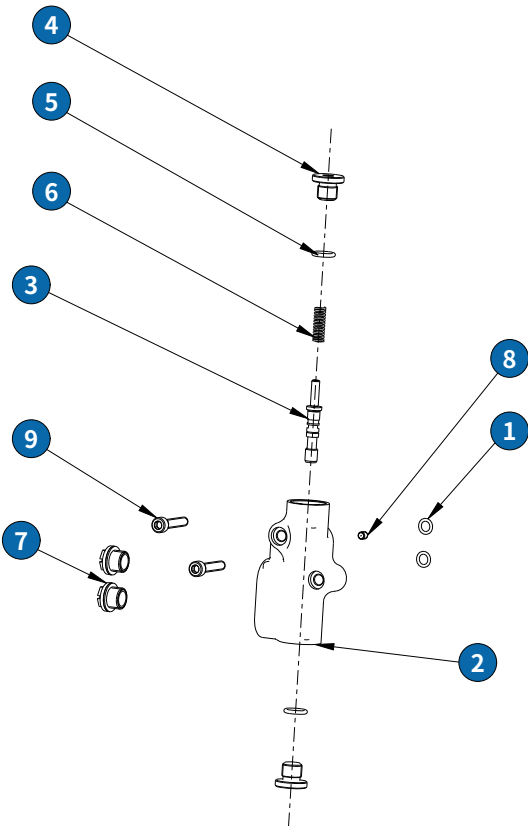
· Order code: Check valve parts are not subject to selection code.



Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Screw	HM5X18-050001	210000299225	1	HM5X18-050001
2	Cone valve spool	HM5X18-050003	210000303321	1	HM5X18-050003
3	O-ring	φ10.8*2.4	110000067694	1	ORP11-N7
4	Spring	HM5X18-050002	210000292361	1	HM5X18-050002

3.5.8 HM5F34 Delay Valve Parts

· Order code 1: With delay valve./ · Order code 0: Without delay valve, please skip it.



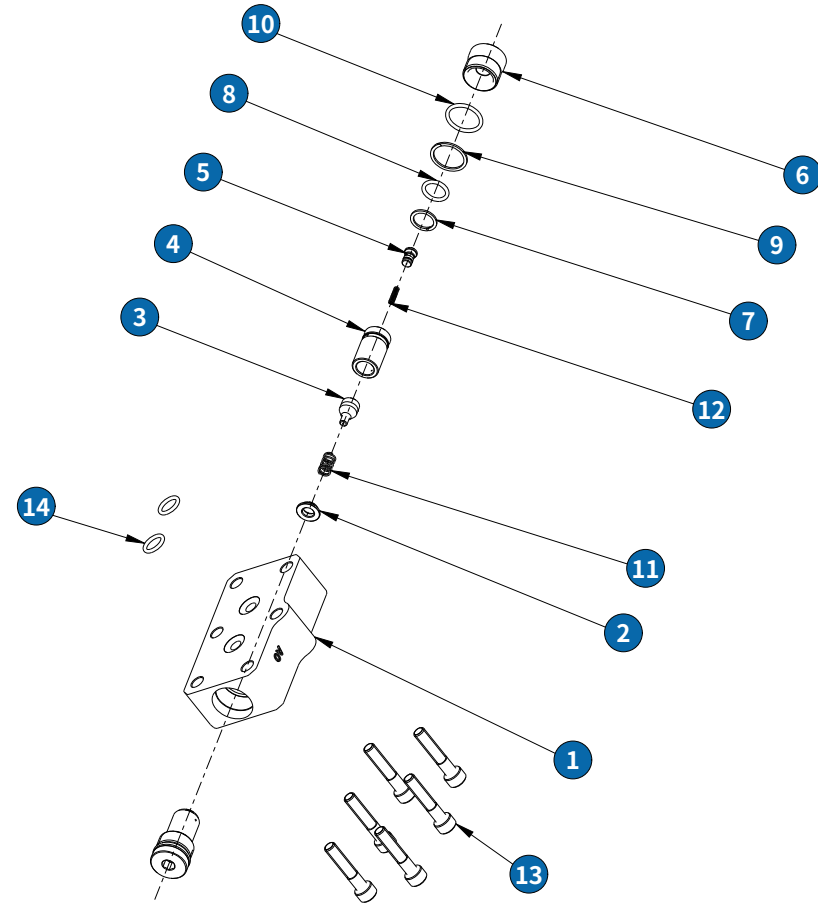
3.5.8 HM5F34 Delay Valve Parts

Order code: 1

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Valve body	HM5F34-060001	210000763521	1	HM5F34-060001
2	Spool	HM5X45-06N1SPL-01	210001026195	1	HM5X45-06N1SPL-01
3	Plug	G1/4	210000293056	2	HM5X45-060004
4	O-ring	10.8*2.4	110000067694	2	ORP11-N7
5	Spring	6.5/1*25.7/13.5	210000292700	1	HM5X45-060003
6	External plugs	G1/4	110000022842	2	G1/4
7	Throttle plug	M5	210000424262	1	S0505

3.5.9 HM5F34 Anti-reaction Valve Parts

· Order code 1: With anti-reaction valve./ · Order code 0: Without anti-reaction valve, please skip it.



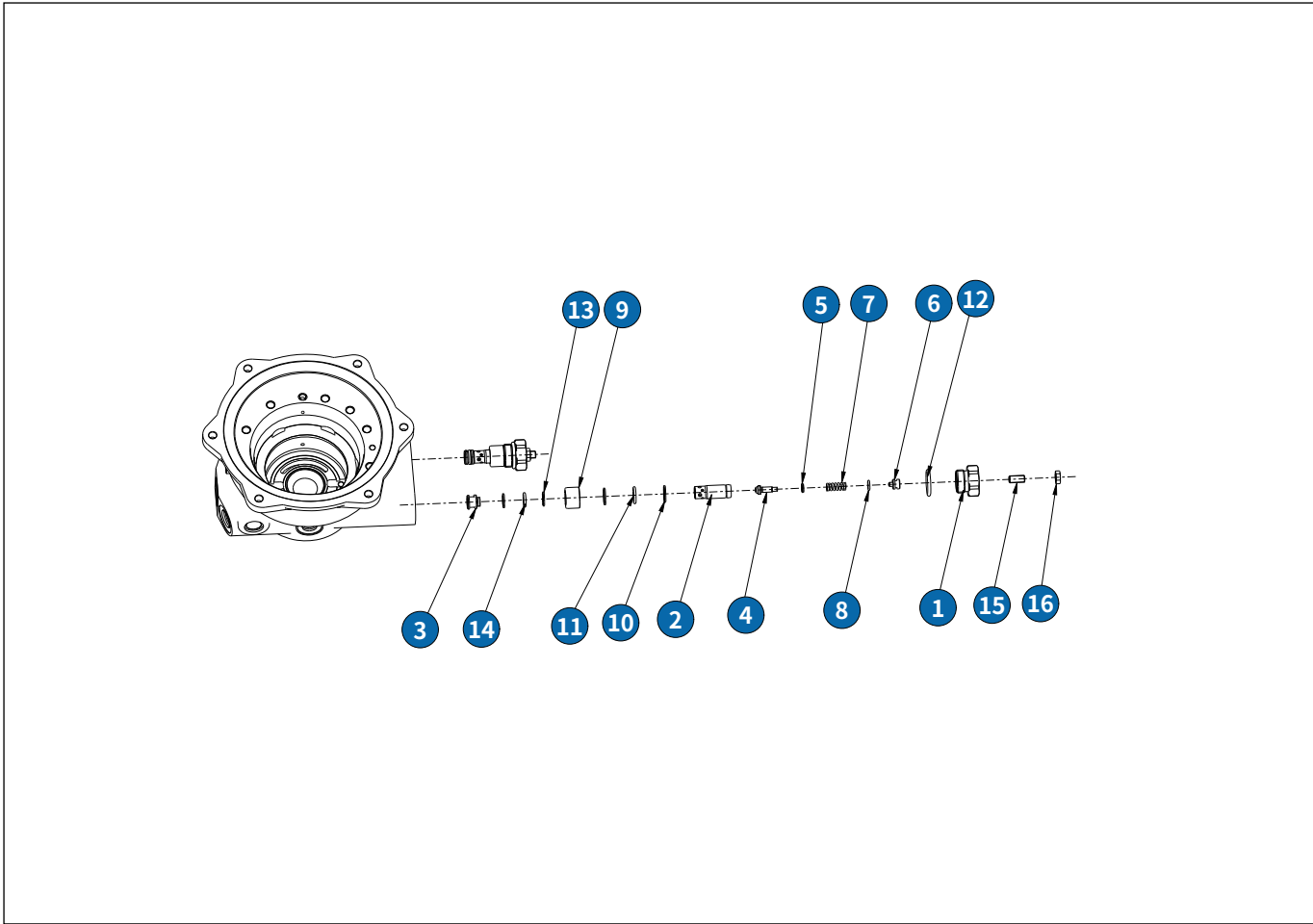
3.5.9 HM5F34 Anti-reaction Valve Parts

Order code: 1

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Valve body	HM5F34-06P1VST-01	210001139292	1	HM5F34-06P1VST-01
2	Valve sleeve	HM5F34-06P1TUB-01	210001160969	2	HM5F34-06P1TUB-01
3	Spool	HM5F34-06P1SOL-01	210001160903	2	HM5F34-06P1SOL-01
4	Valve sleeve	HM5F34-06P1TUB-02	210001160971	2	HM5F34-06P1TUB-02
5	Spool	HM5F34-06P1SOL-02	210001160973	2	HM5F34-06P1SOL-02
6	Plug	M24*1.5	210001162565	2	HM5F34-06P0001-01
7	O-ring retainer	φ18*φ14*1.25	210000294252	2	P14-T2
8	O-ring	φ13.8*2.4	110000082543	2	ORP14-N7
9	O-ring retainer	φ25*φ21*1.25	210000294694	2	P-21
10	O-ring	φ20.8*2.4	110000051049	2	P-21
11	Spring	7.6/0.8*14.6/5	210001160902	2	HM5F34-06P1CSP-01
12	Spring	3/0.5*14.4/14	210001160904	2	HM5F34-06P1CSP-02
13	Hexagon socket head cap screws	M8*40	210000206203	4	GB/T 70.1

3.5.10 HM5F34 Relief Valve Parts

· Order code 230: Relief valve setpoint peak pessure



3.5.10 HM5F34 Relief Valve Parts

Order code: 230

Serial No.	Part Name	Specification	Order No.	QTY.per kit	Drawing No.
1	Plug	G3/4	210000293876	1	HM5X027A-010001
2	Valve sleeve	HM5X027-040004	210000297818	1	HM5X027-040004
3	Valve seat	HM5X027-040001	210000303278	1	HM5X027-040001
4	Cone valve spool	HM5X027-040002	210000303319	1	210000303319
5	Spring gasket	HM5X027-040005	210000303515	1	HM5X027-040005
6	Piston	HM5X027A-010002	210000302062	1	HM5X027A-010002
7	Spring	6.8/2*22/6	210000294194	1	HM5X027-040003
8	O-ring	φ7.8*1.9	110000022876	1	P-8
9	Valve sleeve	HM5X027-040007	210000297934	1	HM5X027-040007
10	O-ring retaining ring	φ19*φ15*1.25	210000343448	2	P15-T3
11	O-ring	φ14.8*2.4	110000022872	1	P-15
12	O-ring	φ23.7*3.5	110000108198	1	ORP24-F5
13	O-ring retaining ring	φ16*φ12*1.25	210000294337	2	P-12
14	O-ring	φ11.8*2.4	110000051053	1	P-12
15	Adjusting screw	HM5X027A-010003	210000303288	1	HM5X027A-010003
16	Nut	M8*1.25*5	210000354983	1	M8*1.25*5



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