Spring Unit For Cam Return

INITIAL PRESSURE AND FINAL PRESSURE TYPE

CAD FILE

CRUVF
CRFVF (Type without ⑤ and ⑥)

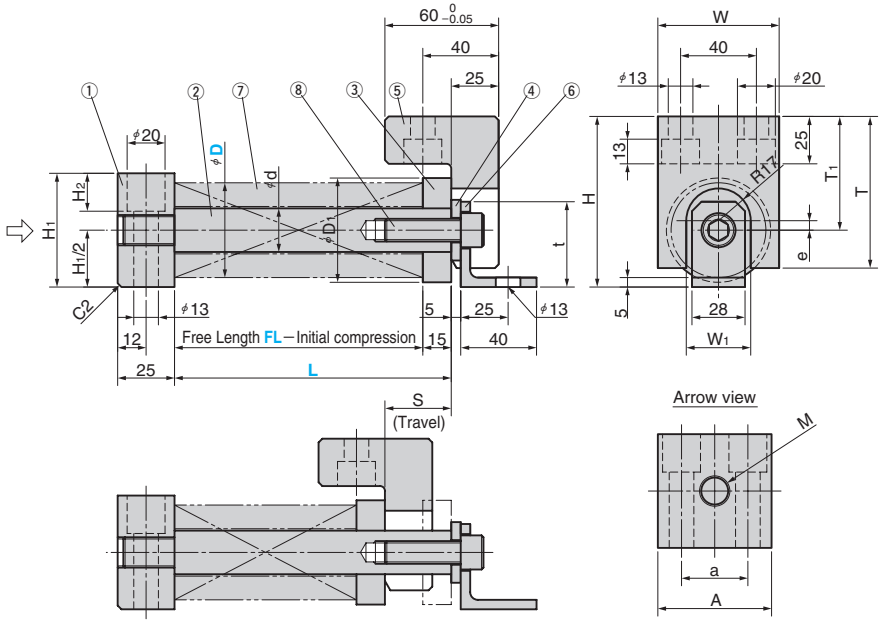


Table of Components

No.	Description	Qty	Material and Remark
①	Spring Block	1	SS400
②	Spring Guide Pin	1	S45C(Polished)
③	Spring Retainer	1	FC250
④	Washer	1	SS400

No.	Description	Qty	Material and Remark
⑤	Return Plate	1	SS400 (Only CRUVF)
⑥	Angle	1	SS400 (Only CRUVF)
⑦	Spring	1	TF (TOHATSU)
⑧	Hexagon Socket Head Bolt	1	SCM435 M12×40

D	d	D_1	H_1	H_2	t	A	a	M	W	W_1	H	T	T_1	e
40	18	45	50	15	40	55	30	M12	64	34	80	75	55	2.5
50	23	55	60	20	45	60	35	M16			90	80	60	5
60	28	65	70	25	50	70	40	M20	74	39	100	85	65	

Coil spring TF load table and reference value for standard travel (Standard value: 500,000 strokes)

D	Free Length FL	Spring Constant N/mm	Free Length ×40% (one million strokes) Compression	Load N	Free Length ×45% (500,000 strokes) Compression	Load N	Free Length × 50% (300,000 strokes) Compression	Load N	Reference Value for Standard Travel (500,000 strokes) S	L	Initial Load N	Final Load N
	90	27.85	36.0		40.5		45.0		20	85	571	
	100	25.07	40.0		45.0		50.0		25	95	501	
	125	20.05	50.0		56.3		62.5		30	114	527	
	150	16.71	60.0		67.5		75.0		35	133	543	
40	175	14.32	70.0	1000	78.8	1128	87.5	1255	40	151	556	1128
	200	12.53	80.0		90.0		100.0		45	170	564	
	225	11.14	90.0		101.3		112.5		50	189	571	
	250	10.03	100.0		112.5		125.0		55	208	577	
	275	9.12	110.0		123.8		137.5		65	231	536	
	300	8.36	120.0		135.0		150.0		70	250	543	
	100	39.22	40.0		45.0		50.0		20	90	981	
	125	31.38	50.0		56.3		62.5		25	109	982	
	150	26.15	60.0		67.5		75.0		30	128	981	
	175	22.41	70.0		78.8		87.5		35	146	982	
	200	19.61	80.0		90.0		100.0		40	165	981	
50	225	17.43	90.0	1569	101.3	1765	112.5	1961	45	184	981	1765
	250	15.69	100.0		112.5		125.0		50	203	981	
	275	14.26	110.0		123.8		137.5		55	221	981	
	300	13.07	120.0		135.0		150.0		60	240	980	
	350	11.21	140.0		157.5		175.0		70	278	981	
	400	9.81	160.0		180.0		200.0		80	315	981	
	100	56.44	40.0		45.0		50.0		20	90	1411	
	125	45.16	50.0		56.3		62.5		25	109	1414	
	150	37.63	60.0		67.5		75.0		30	128	1411	
	175	32.25	70.0		78.8		87.5		35	146	1413	
	200	28.22	80.0		90.0		100.0		40	165	1411	
60	225	25.09	90.0	2260	101.3	2540	112.5	2820	45	184	1413	2540
	250	22.58	100.0		112.5		125.0		50	203	1411	
	275	20.53	110.0		123.8		137.5		55	221	1412	
	300	18.81	120.0		135.0		150.0		60	240	1411	
	350	16.13	140.0		157.5		175.0		70	278	1411	
	400	14.11	160.0		180.0		200.0		80	315	1411	

Catalog No.	D	Free Length FL	Spring Guide Pin L (In increments of 1 mm, Fractions to be rounded)
CRUVF CRFVF	40	Select the value from the table above. Note) Please note, a size not in the table may be specified.	FL - Initial compression + 15
	50		
	60		

Order

Catalog No.	D	–	FL	–	L
CRUVF	40	–	125	–	114
CRFVF	40	–	125	–	114

For your order

Determine the specification with the steps below:

①. Determine the Initial Load, travel and Final Load per unit.

②. Select the outer diameter (D) and the free length (FL) of the coil spring satisfying ① and other conditions.

③. With the calculation formula in L of the table, obtain the length of the spring guide pin.

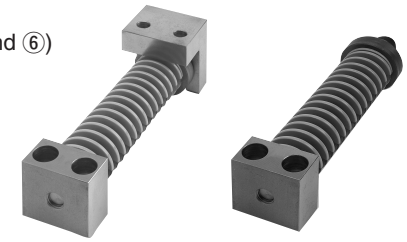
Now, the steps for the specification are completed. The order codes are determined by ② and ③.

Spring Unit For Cam Return

INITIAL PRESSURE AND FINAL PRESSURE TYPE

CAD FILE

CRUVL
CRFVL ((Type without ⑤ and ⑥)



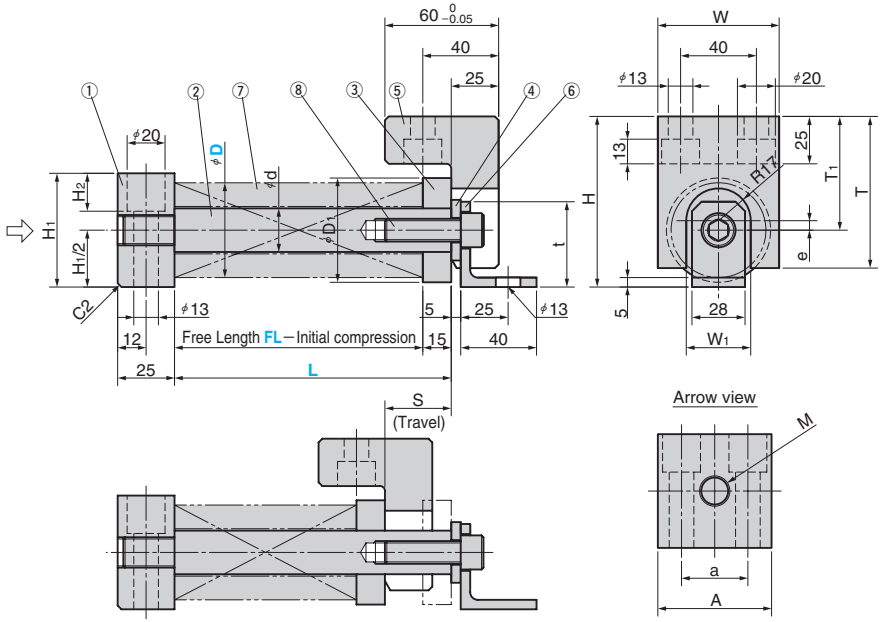


Table of Components

No.	Description	Qty	Material and Remark
①	Spring Block	1	SS400
②	Spring Guide Pin	1	S45C(Polished)
③	Spring Retainer	1	FC250
④	Washer	1	SS400

No.	Description	Qty	Material and Remark
⑤	Return Plate	1	SS400 (Only CRUVL)
⑥	Angle	1	SS400 (Only CRUVL)
⑦	Spring	1	TL(Tohatsu)
⑧	Hexagon Socket Head Bolt	1	SCM435 M12×40

D	d	D_1	H_1	H_2	t	A	a	M	W	W_1	H	T	T_1	e
40	18	45	50	15	40	55	30	M12	64	34	80	75	55	2.5
50	23	55	60	20	45	60	35	M16			90	80	60	5
60	28	65	70	25	50	70	40	M20	74	39	100	85	65	

Coil spring TL load table and reference value for standard travel (Standard value: 500,000 strokes)

D	Free Length FL	Spring Constant N/mm	Free Length x 32% (one million strokes) Compression	Load N	Free Length x 36% (500,000 strokes) Compression	Load N	Free Length x 40% (300,000 strokes) Compression	Load N	Reference Value for Standard Travel (500,000 strokes) S	L	Initial Load N	Final Load N
	90	58.73	28.8		32.4		36.0		20	93	728	
	100	52.86	32.0		36.0		40.0		25	104	581	
	125	42.29	40.0		45.0		50.0		30	125	634	
	150	35.24	48.0		54.0		60.0		35	146	670	
40	175	30.21	56.0	1697	63.0	1903	70.0	2120	40	167	695	1903
	200	26.43	64.0		72.0		80.0		45	188	714	
	225	23.49	72.0		81.0		90.0		50	209	728	
	250	21.14	80.0		90.0		100.0		55	230	740	
	275	19.22	88.0		99.0		110.0		65	256	653	
	300	17.62	96.0		108.0		120.0		70	277	670	
	90	91.98	28.8		32.4		36.0		20	93	1141	
	100	82.78	32.0		36.0		40.0		25	104	911	
	125	66.22	40.0		45.0		50.0		30	125	993	
	150	55.19	48.0		54.0		60.0		35	146	1049	
	175	47.30	56.0		63.0		70.0		40	167	1088	
50	200	41.39	64.0	2650	72.0	2980	80.0	3310	45	188	1118	2980
	225	36.79	72.0		81.0		90.0		50	209	1140	
	250	33.11	80.0		90.0		100.0		55	230	1159	
	275	30.10	88.0		99.0		110.0		60	251	1174	
	300	27.59	96.0		108.0		120.0		70	277	1048	
	350	23.65	112.0		126.0		140.0		80	319	1088	
	90	132.41	28.8		32.4		36.0		20	93	1642	
	100	119.17	32.0		36.0		40.0		25	104	1311	
	125	95.33	40.0		45.0		50.0		30	125	1430	
	150	79.44	48.0		54.0		60.0		35	146	1509	
	175	68.10	56.0		63.0		70.0		40	167	1566	
60	200	59.58	64.0	3810	72.0	4290	80.0	4770	45	188	1609	4290
	225	52.96	72.0		81.0		90.0		50	209	1642	
	250	47.67	80.0		90.0		100.0		60	235	1430	
	275	43.33	88.0		99.0		110.0		65	256	1473	
	300	39.72	96.0		108.0		120.0		70	277	1509	
	350	34.05	112.0		126.0		140.0		80	319	1566	

Catalog No.	D	Free Length FL	Spring Guide Pin L (In increments of 1 mm, Fractions to be rounded)
CRUVL CRFVL	40	Select the value from the table above. Note) Please note, a size not in the table may be specified.	FL - Initial compression + 15
	50		
	60		

Order

Catalog No.	D	–	FL	–	L
CRUVL	50	–	175	–	167
CRFVL	50	–	175	–	167

For your order

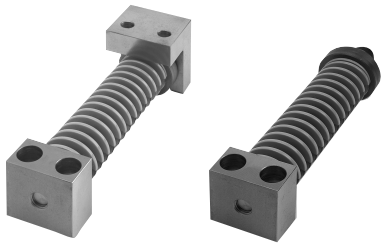
Determine the specification with the steps below:
①. Determine the Initial Load, travel and Final Load per unit.
②. Select the outer diameter (D) and the free length (FL) of the coil spring satisfying ① and other conditions.
③. With the calculation formula in L of the table, obtain the length of the spring guide pin.
Now, the steps for the specification are completed. The order codes are determined by ② and ③.

Spring Unit For Cam Return

INITIAL PRESSURE AND FINAL PRESSURE TYPE

CAD FILE

CRUVM
CRFVM (Type without ⑤ and ⑥)



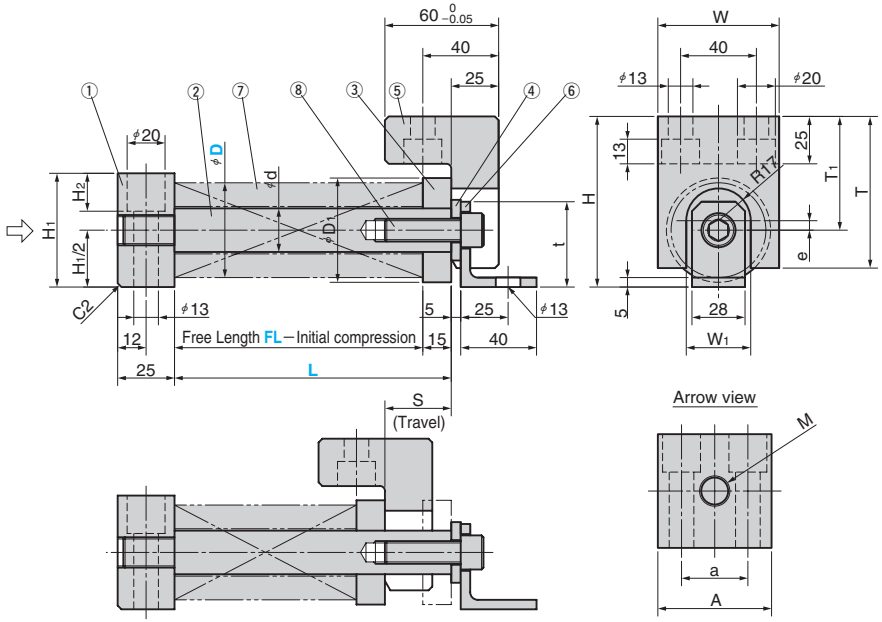


Table of Components

No.	Description	Qty	Material and Remark
①	Spring Block	1	SS400
②	Spring Guide Pin	1	S45C(Polished)
③	Spring Retainer	1	FC250
④	Washer	1	SS400

No.	Description	Qty	Material and Remark
⑤	Return Plate	1	SS400 (Only CRUVM)
⑥	Angle	1	SS400 (Only CRUVM)
⑦	Spring	1	TM(Tohatsu)
⑧	Hexagon Socket Head Bolt	1	SCM435 M12×40

D	d	D_1	H_1	H_2	t	A	a	M	W	W_1	H	T	T_1	e
40	18	45	50	15	40	55	30	M12	64	34	80	75	55	2.5
50	23	55	60	20	45	60	35	M16			90	80	60	5
60	28	65	70	25	50	70	40	M20	74	39	100	85	65	

Coil spring TM load table and reference value for standard travel (Standard value: 300,000 strokes)

D	Free Length FL	Spring Constant N/mm	Free Length x 25.6% (one million strokes) Compression	Load N	Free Length x 28.8% (500,000 strokes) Compression	Load N	Free Length x 32% (300,000 strokes) Compression	Load N	Reference Value for Standard Travel (300,000 strokes) S	L	Initial Load N	Final Load N
	100	97.92	25.6		28.8		32.0		20	103	1175	
	125	78.33	32.0		36.0		40.0		25	125	1175	
	150	65.28	38.4		43.2		48.0		30	147	1175	
	175	55.95	44.8		50.4		56.0		35	169	1175	
40	200	48.96	51.2	2510	57.6	2820	64.0	3140	40	191	1175	3140
	225	43.52	57.6		64.8		72.0		45	213	1175	
	250	39.17	64.0		72.0		80.0		50	235	1175	
	275	35.61	70.4		79.2		88.0		60	262	997	
	300	32.64	76.8		86.4		96.0		70	289	849	
	100	153.13	25.6		28.8		32.0		20	103	1838	
	125	122.50	32.0		36.0		40.0		25	125	1838	
	150	102.08	38.4		43.2		48.0		30	147	1837	
	175	87.50	44.8		50.4		56.0		35	169	1838	
50	200	76.56	51.2	3920	57.6	4410	64.0	4900	40	191	1837	4900
	225	68.06	57.6		64.8		72.0		45	213	1838	
	250	61.25	64.0		72.0		80.0		50	235	1838	
	275	55.68	70.4		79.2		88.0		55	257	1837	
	300	51.04	76.8		86.4		96.0		60	279	1837	
	350	43.75	89.6		100.8		112.0		70	323	1838	
	100	220.49	25.6		28.8		32.0		20	103	2646	
	125	176.39	32.0		36.0		40.0		25	125	2646	
	150	146.99	38.4		43.2		48.0		30	147	2646	
	175	125.99	44.8		50.4		56.0		35	169	2646	
60	200	110.24	51.2	5640	57.6	6350	64.0	7060	40	191	2646	7060
	225	97.99	57.6		64.8		72.0		45	213	2646	
	250	88.19	64.0		72.0		80.0		50	235	2646	
	275	80.18	70.4		79.2		88.0		55	257	2646	
	300	73.50	76.8		86.4		96.0		60	279	2646	
	350	63.00	89.6		100.8		112.0		70	323	2646	

Catalog No.	D	Free Length FL	Spring Guide Pin L (In increments of 1 mm, Fractions to be rounded)
CRUVM CRFVM	40	Select the value from the table above. Note) Please note, a size not in the table may be specified.	FL - Initial compression + 15
	50		
	60		

Order

Catalog No.	D	–	FL	–	L
CRUVM	50	–	150	–	147
CRFVM	50	–	150	–	147

For your order

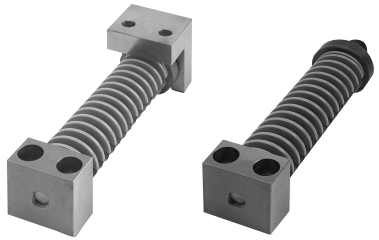
Determine the specification with the steps below:
①. Determine the Initial Load, travel and Final Load per unit.
②. Select the outer diameter (D) and the free length (FL) of the coil spring satisfying ① and other conditions.
③. With the calculation formula in L of the table, obtain the length of the spring guide pin.
Now, the steps for the specification are completed. The order codes are determined by ② and ③.

Spring Unit For Cam Return

INITIAL PRESSURE AND FINAL PRESSURE TYPE

CAD FILE

CRUVH
CRFVH (Type without ⑤ and ⑥)



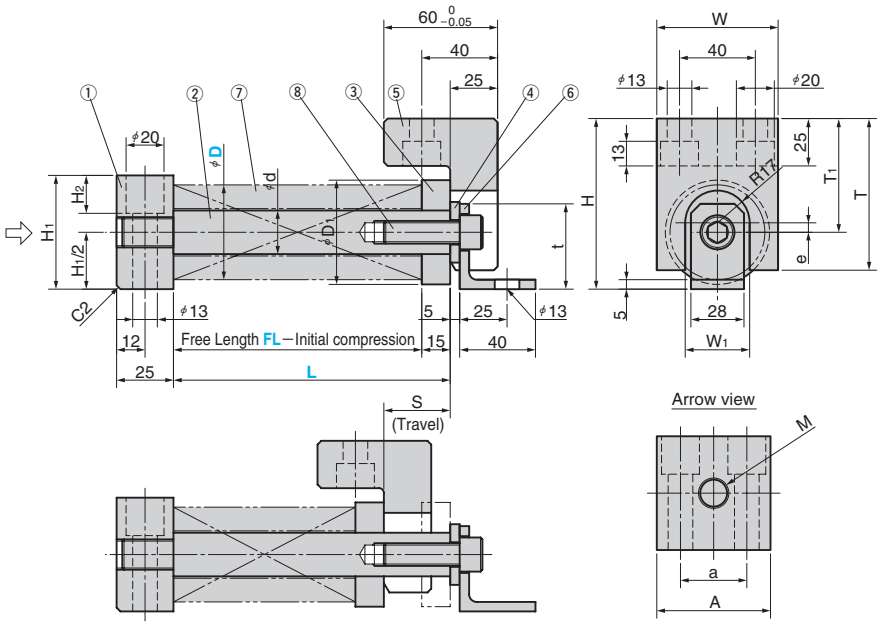


Table of Components

No.	Description	Qty	Material and Remark
①	Spring Block	1	SS400
②	Spring Guide Pin	1	S45C(Polished)
③	Spring Retainer	1	FC250
④	Washer	1	SS400

No.	Description	Qty	Material and Remark
⑤	Return Plate	1	SS400 (Only CRUVH)
⑥	Angle	1	SS400 (Only CRUVH)
⑦	Spring	1	TH(Tohatsu)
⑧	Hexagon Socket Head Bolt	1	SCM435 M12×40

D	d	D_1	H_1	H_2	t	A	a	M	W	W_1	H	T	T_1	e
40	18	45	50	15	40	55	30	M12	64	34	80	75	55	2.5
50	23	55	60	20	45	60	35	M16			90	80	60	5
60	28	65	70	25	50	70	40	M20	74	39	100	85	65	

Coil spring TH load table and reference value for standard travel (Standard value: 300,000 strokes)

D	Free Length FL	Spring Constant N/mm	Free Length x 19.2% (one million strokes) Compression	Load N	Free Length x 21.6% (500,000 strokes) Compression	Load N	Free Length x 24% (300,000 strokes) Compression	Load N	Reference Value for Standard Travel (300,000 strokes) S	L	Initial Load N	Final Load N
	100	196.30	19.2		21.6		24.0		20	111	785	
	125	157.04	24.0		27.0		30.0		25	135	785	
	150	130.86	28.8		32.4		36.0		30	159	785	
	175	112.17	33.6		37.8		42.0		35	183	785	
40	200	98.15	38.4	3770	43.2	4240	48.0	4710	40	207	785	4710
	225	87.24	43.2		48.6		54.0		45	231	785	
	250	78.52	48.0		54.0		60.0		50	255	785	
	275	71.38	52.8		59.4		66.0		55	279	785	
	300	65.43	57.6		64.8		72.0		60	303	785	
	100	306.48	19.2		21.6		24.0		20	111	1226	
	125	245.19	24.0		27.0		30.0		25	135	1226	
	150	204.32	28.8		32.4		36.0		30	159	1226	
	175	175.13	33.6		37.8		42.0		35	183	1226	
50	200	153.24	38.4	5880	43.2	6620	48.0	7360	40	207	1226	7360
	225	136.21	43.2		48.6		54.0		45	231	1226	
	250	122.59	48.0		54.0		60.0		50	255	1226	
	275	111.45	52.8		59.4		66.0		55	279	1226	
	300	102.16	57.6		64.8		72.0		60	303	1226	
	350	87.57	67.2		75.6		84.0		70	351	1226	
	100	441.67	19.2		21.6		24.0		20	111	1767	
	125	353.33	24.0		27.0		30.0		25	135	1767	
	150	294.44	28.8		32.4		36.0		30	159	1767	
	175	252.38	33.6		37.8		42.0		35	183	1767	
60	200	220.83	38.4	8470	43.2	9540	48.0	10590	40	207	1767	10590
	225	196.30	43.2		48.6		54.0		45	231	1767	
	250	176.67	48.0		54.0		60.0		50	255	1767	
	275	160.61	52.8		59.4		66.0		55	279	1767	
	300	147.22	57.6		64.8		72.0		60	303	1767	
	350	126.19	67.2		75.6		84.0		70	351	1767	

Catalog No.	D	Free Length FL	Spring Guide Pin L (In increments of 1 mm, Fractions to be rounded)
CRUVH CRFVH	40	Select the value from the table above. Note) Please note, a size not in the table may be specified.	FL - Initial compression + 15
	50		
	60		

Order

Catalog No.	D	–	FL	–	L
CRUVH	60	–	200	–	207
CRFVH	60	–	200	–	207

For your order

Determine the specification with the steps below:
①. Determine the Initial Load, travel and Final Load per unit.
②. Select the outer diameter (D) and the free length (FL) of the coil spring satisfying ① and other conditions.
③. With the calculation formula in L of the table, obtain the length of the spring guide pin.
Now, the steps for the specification are completed. The order codes are determined by ② and ③.