



Characteristic :

- ◆ Light weight, moment of inertia small torque is high
- ◆ make the drive vibration get buffer, and absorption by motor's uneven operation generated by the impact
- ◆ Can effectively correct the axial and radial and angular installation deviation

Coupling selection :

Coupling selection involves symbols and coefficient shows

Induction force : Installation for the axial prestress by coupling specification, elastomer materials and manufacturing tolerance decision, Elastomer hardness low required axial prestress is small, large conversely.

T_{KN} : coupling of the rated torque (N.m) In the set speed range continuous transferred moment.

T_{KMAX} : coupling of the maximum torque (N.m) In the work transfer more than 105 time dynamic load or 5x104 times alternating load of allowable torque.

T_R : Friction torque (N.m), Shaft and shaft sleeve clamping way connection transfer torque

T_{AN} : The active rated torque (N.m)

T_{AS} : Maximum driving moment (N.m) AC motor produce peak moment, for example, Motor start or stop the time from the moment.

T_s : Coupling peak moment (N.m) According to the maximum driving moment TAS rotational inertia mA or ml and impact factor SAL or SL calculation.

S_t : Temperature coefficient, Elastomer under stress especially in high temperature condition of the deformation work

S_d : Torsional rigidity coefficient, Need to consider different applications of torsional rigidity coupling the different requirements

S_A : Impact coefficient, in the drive end or driven end by shock when consider coefficient.

MA(L) : Drive end (driven end) by impact or vibration to consider when quality distribution coefficient.

Choose coupling is should first consider coupling rated torque than with equipment supporting the use of the motor rated torque.

1. No alternating torque selection

coupling selection should be considered when rated torque and maximum torque

2. Rated torque calculation formula

$$T_N \text{ (N.m)} = \frac{K \times 9550}{\text{rpm}}$$



Condition factor

Rature coefficient St					Torsional rigidity Sd			Impact load coefficient SA		
	±30°C	40°C	60°C	80°C	Machine tool spindle drive	Positioning drive	Encoder	Machine tool spindle drive	Positioning drive	SA
St	1	1.2	1.4	1.4	2-5*	3-8*	10→	Slight impact	≤60	1.0
								Slight impact	≥60 ≤300	1.4
								Serious impact	≤300	1.8

calculation formula

The selected coupling shall meet the following conditions :

$$T_{KN} \geq T_N \cdot S_1 \cdot S_d \quad \text{OR} \quad T_{KN} \geq T_S \cdot S_1 \cdot S_d$$

maximum moment : drive end by impact

$$T_S = T_{AS} \times m_A \times S_A$$

Elastomer



elastomer : 64/sh D
temperature range : ~20~+120°C



elastomer : 98/sh A
temperature range : ~30~+120°C



elastomer : 92/sh A
temperature range : ~40~+90°C

Elastomer						
Rigidity	Colour	Material quality	Operating temperature °C		Optional specification	Application fields
			Moment	Continuation		
64/sh D	GR	Polyurethane	-30~+120	-20~+110	25-80	High Rigidity High pulling torque
98/sh A	RD	Polyurethane	-40~+120	-30~+90	14-135	Positioning drive Machine tool spindle drive
92/sh A	YL	Polyurethane	-50~+120	-40~+90	25-80	Underload Damping



deviation compensation							
specification	Elastomer rigidity	single deviation			double deviation		
		Axial (mm)	lateral (mm)	Angular (°)	Axial (mm)	lateral (mm)	Angular (°)
14	92A	+0.6 -0.3	0.10	1.0°	+0.6 -0.6	0.21	1.0°
	98A		0.06	0.9°		0.19	0.9°
	64D		0.04	0.8°		0.17	0.8°
16	92A	+0.6 -0.3	0.11	1.0°	+0.6 -0.6	0.22	1.0°
	98A		0.07	0.9°		0.19	0.9°
	64D		0.04	0.8°		0.17	0.8°
20	92A	+0.8 -0.4	0.13	1.0°	+0.8 -0.8	0.26	1.0°
	98A		0.08	0.9°		0.24	0.9°
	64D		0.05	0.8°		0.21	0.8°
25	92A	+0.8 -0.4	0.14	1.0°	+0.9 -0.9	0.32	1.0°
	98A		0.08	0.9°		0.29	0.9°
	64D		0.05	0.8°		0.25	0.8°
30	92A	+1.0 -0.5	0.15	1.0°	+1.0 -1.0	0.37	1.0°
	98A		0.09	0.9°		0.33	0.9°
	64D		0.06	0.8°		0.29	0.8°
40	92A	+1.2 -0.5	0.10	1.0°	+1.2 -1.0	0.45	1.0°
	98A		0.06	0.9°		0.41	0.9°
	64D		0.04	0.8°		0.36	0.8°
55	92A	+1.4 -0.5	0.14	1.0°	+1.4 -1.0	0.59	1.0°
	98A		0.10	0.9°		0.53	0.9°
	64D		0.07	0.8°		0.47	0.8°
65	92A	+1.5 -0.7	0.15	1.0°	+1.5 -1.4	0.66	1.0°
	98A		0.11	0.9°		0.60	0.9°
	64D		0.08	0.8°		0.53	0.8°
80	92A	+1.8 -0.7	0.17	1.0°	+1.8 -1.4	0.77	1.0°
	98A		0.12	0.9°		0.69	0.9°
	64D		0.09	0.8°		0.61	0.8°
95	98A	+2.0 -1.0	0.14	0.9°	-		
	64D		0.10	0.8°			
105	98A	+2.1 -1.0	0.16	0.9°	-		
	64D		0.11	0.8°			
120	98A	+2.2 -1.0	0.17	0.9°	-		
	64D		0.12	0.8°			
135	98A	+2.6 -1.0	0.18	0.9°	-		
	64D		0.13	0.8°			



Ordering instruction

Positioning screw fixed



JM

Binodal



JDM

Clamping screw



JM-C

Ringfeder



JM-T

For example :

JM-30 - RD - 8 - 8

Positioning screw fixed

JM-30	RD	8	8
model	Elastomer	Aperture	Aperture

For example :

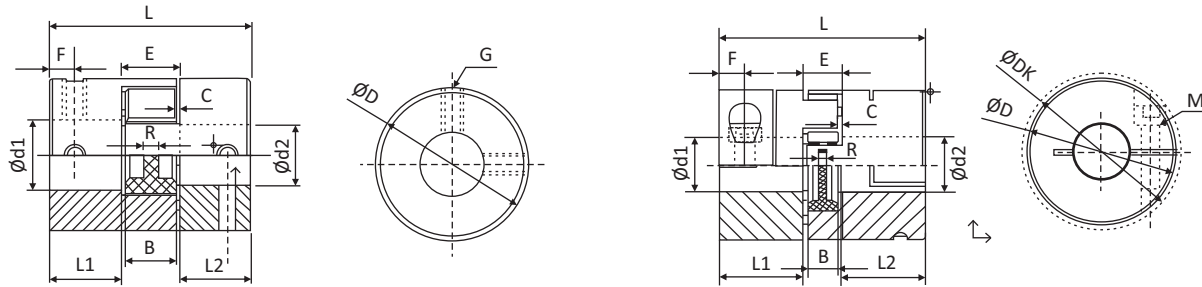
JM40C - RD - 16 - 19

clamping screw

JM40C	RD	16	19
model	Elastomer	Aperture	Aperture



Specification :



must be sure the distance of *C*

Dimension : (mm)

model	aperture				D	L	L1	L2	F	E	B	C	R	DK	G	M	Tightening torque (N.m)
	d1		d2														
	Min	Max	Min	Max													
JM 14	3	7	3	7	14	22.0	7.0	7.0	3.5	8.0	6.0	1.0	Through	14	M3	-	0.7
JM14C	3	6	3	6	14	22.0	7.0	7.0	3.5	8.0	6.0	1.0	Through	17.2	-	M2.5	0.5
JM 16	3	7	3	7	16	22.0	7.0	7.0	3.5	8.0	6.0	1.0	Through	16	M3	-	0.7
JM16C	3	7	3	7	16	22.0	7.0	7.0	3.5	8.0	6.0	1.0	Through	19.2	-	M2.5	0.5
JM 20	4	10	4	10	20	30.0	10.0	10.0	5.0	10.0	8.0	1.0	1.2	20	M3	-	0.7
JM20C	4	10	4	10	20	30.0	10.0	10.0	5.0	10.0	8.0	1.0	1.2	24	-	M3	1.5
JM 25	4	12	4	12	25	34.0	11.0	11.0	5.0	12.0	10.0	1.0	2.0	25	M4	-	1.7
JM25C	4	12	4	12	25	34.0	11.0	11.0	5.0	12.0	10.0	1.0	2.0	26.5	-	M4	1.5
JM 30	5	16	5	16	30	35.0	11.0	11.0	5.0	13.0	10.0	1.5	2.0	30	M4	-	1.7
JM30C	5	16	5	16	30	35.0	11.0	11.0	5.0	13.0	10.0	1.5	2.0	31.4	-	M4	1.7
JM 40	8	24	8	24	40	66.0	25.0	25.0	10.0	16.0	12.0	2.0	4.0	40	M5	-	4.0
JM40C	8	24	8	24	40	66.0	25.0	25.0	12.0	16.0	12.0	2.0	4.0	47	-	M5	8.0
JM 55	10	28	10	28	55	78.0	30.0	30.0	10.0	18.0	14.0	2.0	4.0	55	M6	-	7.0
JM55C	10	28	10	28	55	78.0	30.0	30.0	10.5	18.0	14.0	2.0	4.0	60	-	M6	8.0
JM 65	12	38	12	38	65	90.0	35.0	35.0	15.0	20.0	15.0	2.5	4.0	65	M8	-	15.0
JM65C	12	38	12	38	65	90.0	35.0	35.0	11.5	20.0	15.0	2.5	4.0	72	-	M8	16.0
JM 80	16	45	16	45	80	114.0	45.0	45.0	15.0	24.0	18.0	3.0	4.0	80	M8	-	15.0
JM80C	16	45	16	45	80	114.0	45.0	45.0	15.5	24.0	18.0	3.0	4.0	80	-	M8	16.0
JM 95	20	55	20	55	95	126.0	50.0	50.0	20.0	26.0	20.0	3.0	Through	95	M8	-	15.0
JM95C	20	55	20	55	95	126.0	50.0	50.0	18.0	26.0	20.0	3.0	Through	95	-	M10	40
JM 105	20	62	20	62	105	140.0	56.0	56.0	20.0	28.0	21.0	3.5	Through	105	M10	-	32
JM105C	20	62	20	62	105	140.0	56.0	56.0	21.0	28.0	21.0	3.5	Through	105	-	M12	115
JM 120	20	74	20	74	120	160.0	65.0	65.0	20.0	30.0	22.0	4.0	Through	120	M10	-	32
JM120C	20	74	20	74	120	160.0	65.0	65.0	26.0	30.0	22.0	4.0	Through	120	-	M12	115
JM 135	22	80	22	80	135	185.0	75.0	75.0	20.0	35.0	26.0	4.5	Through	135	M10	-	32
JM135C	22	80	22	80	135	185.0	75.0	75.0	33.0	35.0	26.0	4.5	Through	135	-	M12	115
JM 160	30	88	30	88	160	208	85	85	-	38	30	4	-	160	-	-	-



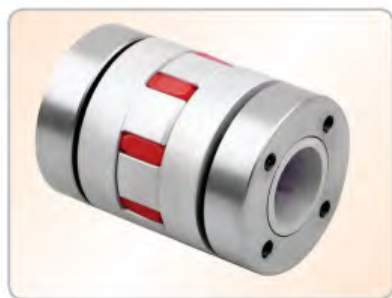
Specification :

standard	elastomer rigidity (/sh)	allowable speed (min ⁻¹)		Torque (N.m)		Torsional stiffness (N.m/rad)	Dynamic stiffness (N.m/rad)	Moment of inertia (kg.m ²)	net weight (g)
		Fixed mode		Rated torque (TKN)	Max torque (TK max)				
		Set screw (JM)	Cramp screw (JM)						
JM 14	92A	28000	25000	1.2	2.4	14.3	43.0	0.085x10 ⁻⁶	6.7
	98A			2.0	4.0	22.9	69.0		
	64D			2.4	4.8	34.3	103.0		
JM 16	92A	27000	24700	1.4	2.8	14.8	45.0	0.09x10 ⁻⁶	9.0
	98A			2.2	4.4	23.4	72.0		
	64D			3.0	6.0	36.0	108.0		
JM 20	92A	26000	25500	3.0	6.0	31.5	95.0	0.49x10 ⁻⁶	19.8
	98A			5.0	10.0	51.6	155.0		
	64D			6.0	12.0	74.6	224.0		
JM 25	92A	19000	17000	5.0	10.0	160.4	482.0	1.3x10 ⁻⁶	37.0
	98A			9.0	18.0	240.7	718.0		
	64D			12.0	24.0	327.9	982.0		
JM 30	92A	15200	12600	7.5	15.0	114.6	344.0	2.8x10 ⁻⁶	50.0
	98A			12.5	25.0	171.9	513.0		
	64D			16.0	32.0	234.2	702.0		
JM 40	92A	10000	9000	10.0	20.0	1090	1815	20.4x10 ⁻⁶	156.0
	98A			17.0	34.0	1512	2540		
	64D			21.0	42.0	2560	3810		
JM 55	92A	8200	6500	35.0	70.0	2280	4010	50.8x10 ⁻⁶	362.0
	98A			60.0	120.0	3640	5980		
	64D			75.0	150.0	5030	10895		
JM 65	92A	6300	5260	95.0	190.0	4080	6745	200.3x10 ⁻⁶	582.0
	98A			160.0	320.0	6410	9920		
	64D			200.0	400.0	10260	20177		
JM 80	92A	5800	4600	190.0	380.0	6525	11050	400.6x10 ⁻⁶	966.0
	98A			325.0	650.0	11800	17160		
	64D			405.0	810.0	26300	42515		
JM 95	-	4000	3800	-	-	-	-	2246x10 ⁻⁶	1820.0
	98A			450.0	900.0	21594	37692		
	-			-	-	-	-		
JM 105	-	3600	3300	-	-	-	-	3786x10 ⁻⁶	2430.0
	98A			525.0	1050.0	25759	45620		
	-			-	-	-	-		
JM 120	-	3200	2800	-	-	-	-	7496x10 ⁻⁶	4530
	98A			685.0	1370.0	42117	61550		
	-			-	-	-	-		
JM 135	-	3000	2500	-	-	-	-	12000x10 ⁻⁶	6980
	98A			940.0	1880.0	48520	71660		
	-			-	-	-	-		

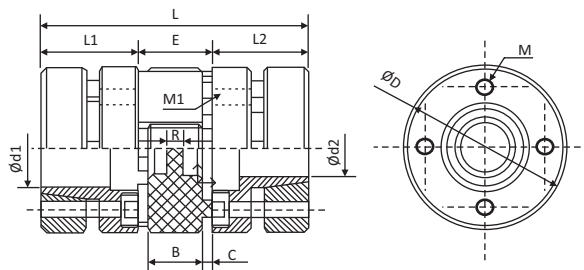
Example :

JM	40	C	RD	16	19
model	outside diameter	Fixed mode	elastomer	aperture	aperture





Ringfeder



must be sure the distance of *C*

Dimension : (mm)

model	aperture				D	L	L1	L2	E	B	C	R	DK	M1	M	Tightening torque (N.m)
	d1		d2													
	Min	Max	Min	Max												
JM30T	6	14	6	14	30	50.0	18.5	18.5	13.0	10.0	1.5	2.0	30	M3	M3x4	1.5
JM40T	10	20	10	20	40	66.0	25.0	25.0	16.0	12.0	2.0	4.0	40	M4	M4x6	2.5
JM55T	11	28	11	28	55	78.0	30.0	30.0	18.0	14.0	2.0	4.0	55	M5	M5x4	4.0
JM65T	15	38	15	38	65	90.0	35.0	35.0	20.0	15.0	2.5	4.0	65	M5	M5x8	4.0
JM80T	20	45	20	45	80	114.0	45.0	45.0	24.0	18.0	3.0	4.0	80	M6	M6x8	8.0

◆ Dismantle screw "M1" between cramp screw "M"

Specification :

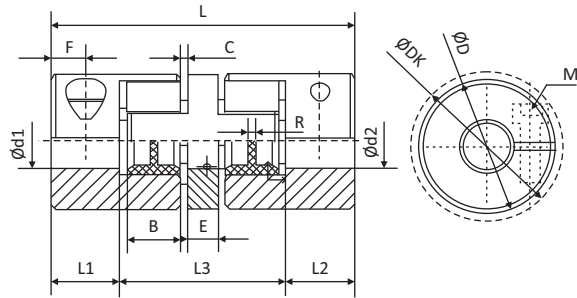
Standard	elastomer rigidity (/sh)	allowable speed (min ⁻¹)	Torque (N.m)		Torsional stiffness (N.m/rad)	Dynamic stiffness (N.m/rad)	Moment of inertia (kg.m ²)	net weight (g)
			Rated torque (TKN)	Max torque (TK max)				
JM30T	92A	25000	7.5	15.0	114.6	344	2.8x10 ⁻⁶	110.0
	98A		12.5	25.0	171.9	513		
	64D		16.0	32.0	234.2	702		
JM40T	92A	16500	10.0	20.0	1090	1815	20.4x10 ⁻⁶	290.0
	98A		17.0	34.0	1512	2540		
	64D		21.0	42.0	2560	3810		
JM55T	92A	12200	35.0	70.0	2280	4010	50.8x10 ⁻⁶	700.0
	98A		60.0	120.0	3640	5980		
	64D		75.0	150.0	5030	10895		
JM65T	92A	10500	95.0	190.0	4080	6745	200.3x10 ⁻⁶	1130.0
	98A		160.0	320.0	6410	9920		
	64D		200.0	400.0	10260	20177		
JM80T	92A	8650	190.0	380.0	6525	11050	400.6x10 ⁻⁶	2360.0
	98A		325.0	650.0	11800	17160		
	64D		405.0	810.0	26300	42515		

Example :

JM	55	T	RD	22	24
model	outside diameter	Fixed mode	elastomer	aperture	aperture



Double jaw coupling :



must be sure the distance of *C*

Dimension : (mm)

model	aperture				D	L	L1/L2	L3	F	E	B	C	R	DK	M	Tightening torque (N.m)
	d1		d2													
	Min	Max	Min	Max												
JDM20C	4	10	4	10	20	45.0	10.0	25.0	5.0	10.0	8.0	1.0	1.2	24	M3	1.5
JDM25C	4	12	4	12	25	52.0	11.0	30.0	5.0	12.0	10.0	1.0	2.0	26.5	M3	1.5
JDM30C	5	16	5	16	30	56.0	11.0	34.0	5.0	13.0	10.0	1.5	2.0	31.4	M3	1.5
JDM40C	8	24	8	24	40	92.0	25.0	42.0	12.0	16.0	12.0	2.0	4.0	47	M6	8.0
JDM55C	10	28	10	28	55	112.0	30.0	52.0	10.5	18.0	14.0	2.0	4.0	60	M6	8.0
JDM65C	12	38	12	38	65	128.0	35.0	58.0	11.5	20.0	15.0	2.5	4.0	72	M8	16
JDM80C	16	45	16	45	80	158.0	45.0	68.0	15.5	24.0	18.0	3.0	4.0	80	M8	16

Example :

JDM	30	C	YL	8	10
model	outside diameter	Fixed mode	elastomer	aperture	aperture



OBC		RW	Sungil	Rotex
كود جديد	كود قديم			
MPA & MPA-C				
MPA 26	HPS 26	-	-	-
MPA26C	HPS26C	-	-	-
MPA34C	HPS34C	-	-	-
MPA39C	HPS39C	-	-	-
MPA44C	HPS44C	-	-	-
MPA56C	HPS56C	-	-	-
MPA68C	HPS68C	-	-	-
MPA82C	HPS82C	-	-	-
MPA94C	HPS94C	-	-	-
MPA104C	HPS104C	-	-	-
MPB-C & MPC-C				
MPB34C	-	-	-	-
MPC34C	-	-	-	-
MPB44C	-	-	-	-
MPC44C	-	-	-	-
MPB56C	-	-	-	-
MPC56C	-	-	SHDS56C	-
MPB68C	-	-	-	-
MPC68C	-	-	SHDS66C	-
MPB82C	-	-	-	-
MPC82C	-	-	SHDS88C	-
DMPA-C & DMPB-C				
DMPA26C	HPL26C	-	-	-
DMPA34C	HPL34C	-	SDWB22C	-
DMPB34C	-	-	-	-
DMPA39C	HPL39C	-	-	-
DMPA44C	HPL44C	-	SDWB42C	-
DMPB44C	-	-	-	-
DMPA56C	HPL56C	-	SDWB54C	-
DMPB56C	-	-	-	-
DMPA68C	HPL68C	-	-	-
DMPB68C	-	-	-	-
DMPA82C	HPL82C	-	-	-
DMPB82C	-	-	-	-
DMPA94C	HPL94C	-	SDWB90C	-
DMPA104C	HPL104C	-	-	-
DMPC-C & DMPD-C				
DMPC34C	TM4-34C	-	-	-
DMPD34C	-	-	-	-
DMPD39C	-	-	-	-
DMPC44C	TM4-44C	-	-	-
DMPD44C	-	-	-	-
DMPC56C	TM4-56C	-	SHDW-56C	-
DMPD56C	-	-	-	-
DMPC68C	TM4-68C	-	SHDW-68C	-
DMPD68C	-	-	-	-
DMPC82C	TM4-82C	-	SHDW-82C	-
DMPD82C	-	-	-	-

OBC		RW	Sungil	Rotex
كود جديد	كود قديم			
JT & JT-C				
JT 16	PK 16	-	-	-
JT16C	PK16C	-	SBR16C	-
JT 20	PK 20	-	-	-
JT20C	PK20C	-	SBR20C	-
JT 25	PK 25	-	-	-
JT25C	PK25C	-	SBR25C	-
JT 32	PK 32	-	-	-
JT32C	PK32C	-	SBR32C	-
JT 40	PK 40	-	-	-
JT40C	PK40C	-	SBR40C	-
JT 50	PK 50	-	-	-
JT50C	PK50C	-	SBR50C	-
JT 63	PK 63	-	-	-
JT63C	PK63C	-	SBR63C	-
JR-C & JRL-C				
JR16C	JG2-16C	-	SRG-16C	-
JR20C	JG2-20C	-	SRG-20C	-
JRL20C	-	-	SRGL-20C	-
JR25C	JG2-25C	-	SRG-25C	-
JRL25C	-	-	SRGL-25C	-
JR32C	JG2-32C	-	SRG-32C	-
JRL32C	-	-	SRGL-32C	-
JR43C	JG2-43C	-	SRG-43C	-
JRL43C	-	-	SRGL-43C	-
JR53C	JG2-53C	-	SRG-53C	-
JRL53C	-	-	SRGL-53C	-
BW & BW-C & BW-T				
BW 16	JB2-16	-	-	-
BW16C	JB2-16C	-	-	-
BW 20	JB2-20	-	-	-
BW20C	JB2-20C	-	-	-
BW 25	JB2-25	-	-	-
BW25C	JB2-25C	-	-	-
BW 32	JB2-32	-	-	-
BW32C	JB2-32C	MK2/45	-	-
BW 40	JB2-40	-	-	-
BW40C	JB2-40C	MK2/100	-	-
BW 55	JB2-55	-	-	-
BW55C	JB2-55C	BKL30	-	-
BW65C	JB2-65C	BKL60	-	-
BW82C	JB2-82C	BKL80	-	-
BW40T	JB2-40T	-	-	-
BW55T	JB2-55T	-	-	-
BW65T	JB2-65T	-	-	-
BW82T	JB2-82T	-	-	-



OBC		RW	Sungil	Rotex
کد جدید	کد قدیم			
JM & JM-C				
JM 14	SRJ 14	-	-	-
JM14C	SRJ14C	-	SJC14C-RD	-
JM 16	SRJ 16	-	-	-
JM16C	SRJ16C	-	-	-
JM 20	JSRJ 20	-	-	-
JM20C	SRJ20C	-	SJC20C-RD	-
JM 25	SRJ 25	-	-	-
JM25C	SRJ25C	EKL5A	SJC25C-RD	GS9-12
JM 30	SRJ 30	-	-	-
JM30C	SRJ30C	EKL10A	SJCB30C-RD	GS 14
JM 40	SRJ 40	-	-	-
JM40C	SRJ40C	EK2/20	SJCB40C-RD	GS 19
JM 55	SRJ 55	-	-	-
JM55C	SRJ55C	EK2/60	SJC55C-RD	GS 24
JM 65	SRJ 65	-	-	-
JM65C	SRJ65C	EK2/150	SJC65C-RD	GS 28
JM 80	SRJ 80	-	-	-
JM80C	SRJ80C	EK2/300	SJC80C-RD	GS38-42
JM 95	SRJ 95	-	-	-
JM95C	SRJ95C	-	-	-
JM 105	SRJ 105	-	-	-
JM105C	SRJ105C	EK2/450	SJC100C-RD	-
JM 120	SRJ 120	-	-	GS48
JM120C	SRJ120C	-	-	-
JM 135	SRJ 135	-	-	-
JM 135C	SRJ 135C	-	-	-
JH				
JH16C	JH2-16C	-	SOH-16C	-
JH20C	JH2-20C	-	SOH-20C	-
JH25C	JH2-25C	-	SOH-25C	-
JH32C	JH2-32C	-	SOH-32C	-
JH40C	JH2-40C	-	SOH-43C	-
JH50C	JH2-50C	-	SOH-53C	-
JH63C	JH2-63C	-	SOH-70C	-
NM-Coupling				
50	NM-50	-	-	-
67	NM-67	-	-	-
82	NM-82	-	-	-
97	NM-97	-	-	-
112	NM-112	-	-	-
128	NM-128	-	-	-
148	NM-148	-	-	-
168	NM-168	-	-	-
194	NM-194	-	-	-
214	NM-214	-	-	-

OBC		RW	Sungil	Rotex
کد جدید	کد قدیم			
L-Coupling				
L035	L-SRJ035	-	-	-
L050	L-SRJ050	-	-	-
L070	L-SRJ070	-	-	-
L075	L-SRJ075	-	-	-
L090	L-SRJ090	-	-	-
L095	L-SRJ095	-	-	-
L099	L-SRJ099	-	-	-
L100	L-SRJ100	-	-	-
L110	L-SRJ110	-	-	-
L150	L-SRJ150	-	-	-
L190	L-SRJ190	-	-	-
L225	L-SRJ225	-	-	-
L276	L-SRJ276	-	-	-
XL				
XL-0	XL-SRJ0(30)	-	-	-
XL-1	XL-SRJ1(40)	-	-	-
XL-2	XL-SRJ2(55)	-	-	-
XL-3	XL-SRJ3(65)	-	-	-
XL-4	XL-SRJ4(80)	-	-	-
XL-5	XL-SRJ5(95)	-	-	-
XL-6	XL-SRJ6(105)	-	-	-
XL-7	XL-SRJ7	-	-	-
XL-8	XL-SRJ8	-	-	-
XL-9	XL-SRJ9	-	-	-
XL-10	XL-SRJ10	-	-	-
XL-11	XL-SRJ11	-	-	-
XL-12	XL-SRJ12	-	-	-
XL-13	XL-SRJ13	-	-	-
XL-14	XL-SRJ14	-	-	-
XL-15	XL-SRJ15	-	-	-
XL-16	XL-SRJ16	-	-	-

