Engraving Spindle

HIGH DUTY HIGH FREQUENCY MILLING

Engraving electromechanical spindle –62

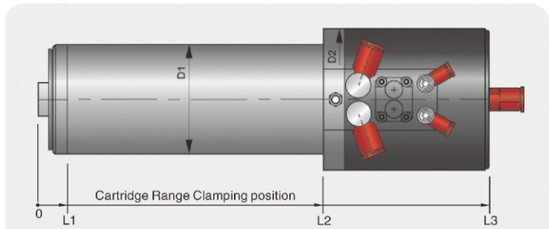
Water-Cooling



ETS–62g EMS–62g

ETS/EMS **Series**

Specifications		Type	62(Collet Elastic Collet ECA)	62(ISO–10)
			ETS–62g	EMS–62g
Model	Total length	mm	249.5	255.5
	Approx.weight	kg	4.5	4.8
	Flange mounting		No	No
	Operation position		V/H	V/H
Lubrication	Grease		Yes	Yes
	Oil/air lubrication		–	–
	Oil injection lubrication		–	–
	Spindle model		60000	60000
Motor	Number of pole	pole	2	2
	Voltage	V	220	220
	Max current (200V/380V)	A	6. 8	6. 8
	Max.frequency	Hz	1000	1000
	Rotation direction		CW/CCW	CW/CCW
Duty	Power S1 100% / S6 60%(P)	kw	2.0/2.4	2.0/2.4
	Torque S1 100% / S6 60%(T)	N.m	0.32/0.38	0.32/0.38
	at speed (n0)	1/min	60000	60000
Clamping System	Front bearing size	mm	Φ17	Φ20
	Taper size		Collet elastic collet ECA	ISO–10
	Drive dogs		–	–
	Tool dimensions	mm	Φ6	Φ0.5~Φ7
	Static clamping force(static)	N	600	800
	Tool release pressure	Bar	Air > 6	Air > 6
Equipment	Taper blow out(cleaning)	Bar	5	5
	Shaft positioning(vector control)		op	op
	Front seal	Bar	1~1.5	1~1.5
	Cooling system	kw	0.5	0.5
	Tool detection		S	S
Options	External coolant		–	–
	CTS		–	–
	Bearing temperature		–	–
	Accelerate gauge		–	–

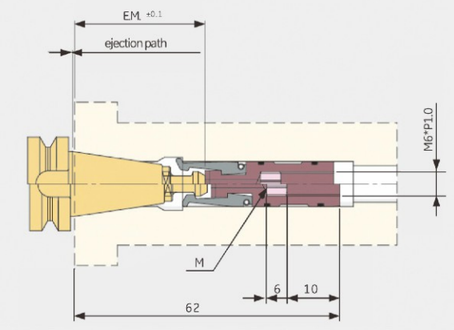


Spindle Type	Cartridge Range		L3	D1	D2
	L1	L2			
ETS–62	26.5	165.5	249.5	Φ61.91	Φ80
EMS–62	16.5	161.5	255.5	Φ61.91	Φ80



Gripper

Series #10

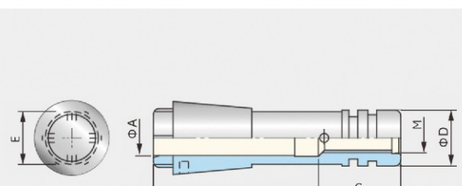


Tool standard	DIN 69871/69872 ISO 7388/1/1 15°			
E.M. (mm)	Ejection path (mm)	Max pull force (N)	Max Stroke (mm)	Medium transfer
32.2	0.3	1200	3	axial transfer
M Nm– ⬡ SW	14–1.5			



Collet

ECA06,ECB06/08/10



Collet Model	A +0.005 +0	B –0.1	C	D +0 +0.004	E –0.1	M
ECA06	6	42	14	9.5	9	M5*P0.8
ECB06	6	50	19	13.5	13	M8*P1.0
ECB08	8	50	19	13.5	13	M8*P1.0
ECB10	10	50	19	13.5	13	M8*P1.0

Engraving Spindle

HIGH DUTY HIGH FREQUENCY MILLING

Engraving electromechanical spindle –80

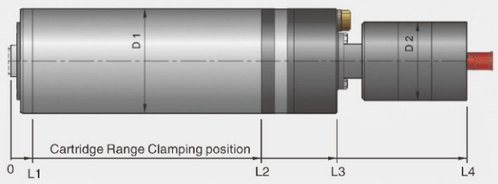
Water-Cooling



EES–80g



EES–ISO20



Spindle Type	Cartridge Range		L3	L4	D1	D2
	L1	L2				
EPS–80	32	207	265	364	Φ80	Φ60
EE(F)S–80	17	192	250	349	Φ80	Φ60

EPS/EES/EFS Series

Specifications			80(Collet Elastic Collet clamp ECB) NO ENCODER		80(ISO–15) NO ENCODER	
	Type		EPS–80g	EPS–80m	EES–80g	EES–80m
Model	Total length	mm	364		349	
	Approx.weight	kg	8		8.5	
	Flange mounting		No		No	
	Operation position		V/H		V/H	
Lubrication	Grease		Yes	–	Yes	–
	Oil/air lubrication		–	Yes	–	Yes
	Oil injection lubrication		–	–	–	–
	Spindle model		50000	60000	50000	60000
Motor	Number of pole	pole	4		4	
	Voltage	V	220/380		220/380	
	Max current (200V/380V)	A	12.5/7.5		12.5/7.5	
	Max.frequency	Hz	1667	2000	1667	2000
	Rotation direction		CW/CCW		CW/CCW	
Duty	Power S1 100% / S6 60%(P)	kw	2.0/2.4		2.0/2.4	
	Torque S1 100% / S6 60%(T)	N.m	1.0/1.2		1.0/1.2	
	at speed (n0)	1/min	18000		18000	
Clamping System	Front bearing size	mm	Φ25		Φ25	
	Taper size		Collet elastic collet clamp ECB		ISO–15	
	Drive dogs		–		–	
	Tool dimensions	mm	Φ6/Φ8/Φ10		Φ0.5~Φ10	
	Static clamping force(static)	N	1000		1000	
	Tool release pressure	Bar	Air > 6		Air > 6	
Equipment	Taper blow out(cleaning)	Bar	5		5	
	Shaft positioning(vector control)		–		–	
	Front seal	Bar	1~1.5		1~1.5	
	Cooling system	kw	0.5		0.5	
	Tool detection		S		S	
Options	External coolant		–		–	
	CTS		–		–	
	Bearing temperature		–		–	
	Accelerate gauge		–		–	

80(ISO–20) NO ENCODER		80(HSK–E25) NO ENCODER		Specifications / Type		
EES–80g	EES–80m	EFS–80g	EFS–80m			
349		349		Total length	mm	Model
8.5		8.5		Approx.weight	kg	
No		No		Flange mounting		
V/H		V/H		Operation position		
Yes	–	Yes	–	Grease		Lubrication
–	Yes	–	Yes	Oil/air lubrication		
–	–	–	–	Oil injection lubrication		
50000	60000	50000	60000	Spindle model		
4		4		Number of pole	pole	Motor
220/380		220/380		Voltage	V	
12.5/7.5		12.5/7.5		Max current (200V/380V)	A	
1667	2000	1667	2000	Max.frequency	Hz	
CW/CCW		CW/CCW		Rotation direction		
2.0/2.4		2.0/2.4		Power S1 100% / S6 60%(P)	kw	Duty
1.0/1.2		1.0/1.2		Torque S1 100% / S6 60%(T)	N.m	
18000		18000		at speed (n0)	1/min	
Φ30		Φ25		Front bearing size	mm	Clamping System
ISO–20		HSK–E25		Taper size		
–		–		Drive dogs		
Φ1.0~Φ10		Φ0.5~Φ10		Tool dimensions	mm	
1500		2800		Static clamping force(static)	N	
Air > 6		Air > 6		Tool release pressure	Bar	
5		6		Taper blow out(cleaning)	Bar	Equipment
–		–		Shaft positioning(vector control)		
1~1.5		1~1.5		Front seal	Bar	
0.5		0.5		Cooling system	kw	
S		S		Tool detection		
–		–		External coolant		Options
–		–		CTS		
–		–		Bearing temperature		
–		–		Accelerate gauge		

Engraving Spindle

HIGH DUTY HIGH FREQUENCY MILLING

Engraving electromechanical spindle –80

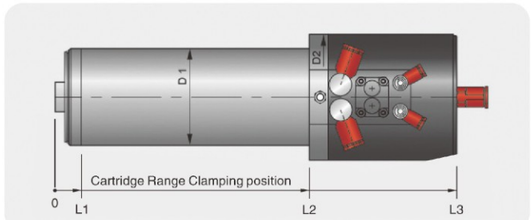
Water-Cooling



EMS–80g.m

EMS/ECS Series

Specifications	Type		80(ISO–15)		80(ISO–20)		80(HSK–E25)	
			EMS–80g	EMS–80m	EMS–80g	EMS–80m	ECS–80g	ECS–80m
Model	Total length	mm	288		288		288	
	Approx.weight	kg	9.5		9.5		9.5	
	Flange mounting		No		No		No	
	Operation position		V/H		V/H		V/H	
Lubrication	Grease		Yes	–	Yes	–	Yes	–
	Oil/air lubrication		–	Yes	–	Yes	–	Yes
	Oil injection lubrication		–	–	–	–	–	–
	Spindle model		50000	60000	50000	60000	50000	60000
Motor	Number of pole	pole	4		4		4	
	Voltage	V	220/380		220/380		220/380	
	Max current (200V/380V)	A	12.5/7.5		12.5/7.5		12.5/7.5	
	Max.frequency	Hz	1667	2000	1667	2000	1667	2000
	Rotation direction		CW/CCW		CW/CCW		CW/CCW	
Duty	Power S1 100% / S6 60%(P)	kw	2.0/2.4		2.0/2.4		2.0/2.4	
	Torque S1 100% / S6 60%(T)	N.m	1.0/1.2		1.0/1.2		1.0/1.2	
	at speed (n0)	1/min	18000		18000		18000	
Clamping System	Front bearing size	mm	Φ25		Φ30		Φ25	
	Taper size		ISO–15		ISO–20		HSK–E25	
	Drive dogs		–		–		–	
	Tool dimensions	mm	Φ0.5~Φ10		Φ1.0~Φ10		Φ0.5~Φ10	
	Static clamping force(static)	N	1000		1500		2800	
	Tool release pressure	Bar	Air > 6		Air > 6		Air > 6	
Equipment	Taper blow out(cleaning)	Bar	5		5		6	
	Shaft positioning(vector control)		op		op		op	
	Front seal	Bar	1~1.5		1~1.5		1~1.5	
	Cooling system	kw	0.5		0.5		0.5	
	Tool detection		S		S		S	
Options	External coolant		–		–		–	
	CTS		–		–		–	
	Bearing temperature		–		–		–	
	Accelerate gauge		–		–		–	



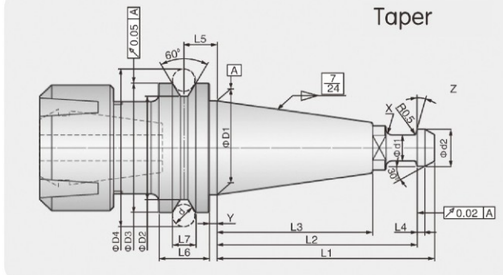
Spindle Type	Cartridge Range		L3	D1	D2
	L1	L2			
EM(C)S–80	17	192	288	Φ80	Φ100

ISO10,15,20,25,30

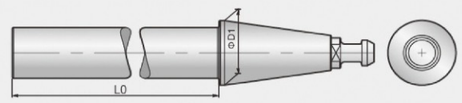
Toolholder



Taper



Test Bar



Taper Model	ΦD1	ΦD2	ΦD3 h8	ΦD4	d	d1 –0 –0.1	d2 –0 –0.1	X	Z
ISO 10	15.875	18	23	28.072	Φ4	Φ4	Φ6	r 1.0	15°
ISO 15	19.05	21	27	33.340	Φ5	Φ5	Φ7	r 1.2	15°
ISO 20	22.225	24	30	36.340	Φ5	Φ6	Φ8.5	r 1.2	15°
ISO 25	25.4	28	35	42.608	Φ6	Φ7	Φ10	r 1.6	15°
ISO 30	31.75	38	46	56.144	Φ8	Φ7	Φ11	r 1.6	45°

Test Bar Model	L0	L1 +0.05 –0.15	L2 +0.05 –0.15	L3 ±0.15	L4 0 –0.1	L5 ±0.1	L6	L7 +0.1	Y –0.4
ISO 10	100	32.5	29.5	22	1.3	6	10	4	1.0
ISO 15	150	39	35.5	27	1.5	7	11	5	1.5
ISO 20	150	47	43	33	1.8	7	11	5	1.5
ISO 25	150.	56	51.5	40	2	8.5	13	6	2
ISO 30	200	71.4	66.4	48.4	2.5	13.6	20	8	2

EC Collet Model	Standard Collets	Standard Nut	Clamping Range	Max Torque
ISO 10	ER11	ER11	0.5~7.0mm	20Nm
ISO 15	ER11	ER11	0.5~7.0mm	20Nm
	ER16	ER16	1.0~10mm	70Nm
ISO 20	ER16	ER16	1.0~10mm	70Nm
ISO 25	ER20	ER20	2.0~13mm	100Nm
ISO 30	ER25	ER25	2.0~16mm	130Nm
	ER32	ER32	2.0~20mm	170Nm

Engraving Spindle

HIGH DUTY HIGH FREQUENCY MILLING

Engraving electromechanical spindle -100

Water-Cooling



ECS–100g

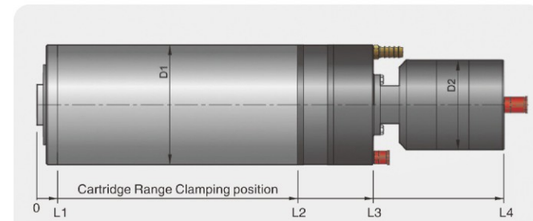


ECS–E32

ETS/EMS/ECS Series

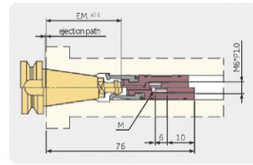
Specifications	Type		100(Collet Elastic Collet clamp ECB)		100(ISO–20)	
			ETS–100g	ETS–100m	EMS–100g	EMS–100m
Model	Total length	mm	406. 5		390.5	
	Approx.weight	kg	15		15	
	Flange mounting		No		No	
	Operation position		V/H		V/H	
Lubrication	Grease		Yes	–	Yes	–
	Oil/air lubrication		–	Yes	–	Yes
	Oil injection lubrication		–	–	–	–
	Spindle model		40000	45000	40000	45000
Motor	Number of pole	pole	4		4	
	Voltage	V	220/380		220/380	
	Max current (200V/380V)	A	33.9/19		33.9/19	
	Max.frequency	Hz	1334	1500	1334	1500
	Rotation direction		CW/CCW		CW/CCW	
Duty	Power S1 100% / S6 60%(P)	kw	5.5/6.6		5.5/6.6	
	Torque S1 100% / S6 60%(T)	N.m	3.3/3.96		3.3/3.96	
	at speed (n0)	1/min	16000		16000	
Clamping System	Front bearing size	mm	Φ30		Φ30	
	Taper size		Collet elastic collet clamp ECB		ISO–20	
	Drive dogs		–		–	
	Tool dimensions	mm	Φ6/Φ8/Φ10		Φ1~Φ10	
	Static clamping force(static)	N	1500		1500	
	Tool release pressure	Bar	Air > 6		Air > 6	
Equipment	Taper blow out(cleaning)	Bar	5		5	
	Shaft positioning(vector control)		op		op	
	Front seal	Bar	1~1.5		1~1.5	
	Cooling system	kw	1		1	
	Tool detection		S		S	
Options	External coolant		–		–	
	CTS		–		op	
	Bearing temperature		–		op	
	Accelerate gauge		–		–	

100(ISO–25)		100(HSK–E32)	
EMS–100g	EMS–100m	ECS–100g	ECS–100m
390.5		390.5	
15		15	
No		No	
V/H		V/H	
Yes	–	Yes	–
–	Yes	–	Yes
–	–	–	–
36000	42000	36000	42000
4		4	
220/380		220/380	
33.9/19		33.9/19	
1200	1400	1200	1400
CW/CCW		CW/CCW	
5.5/6.6		5.5/6.6	
3.3/3.96		3.3/3.96	
16000		16000	
Φ35		Φ35	
ISO–25		HSK–E32	
–		–	
Φ1~Φ13		Φ1~Φ13	
1700		5000	
Air > 6		Air > 6	
5		6	
op		op	
1~1.5		1~1.5	
1		1	
S		S	
–		–	
op		op	
op		op	
–		–	



Spindle Type	Cartridge Range		L3	L4	D1	D2
	L1	L2				
ETS–100	33	234	297	406.5	Φ100	Φ72
EM(C)S–100	17	218	281	390.5	Φ100	Φ72

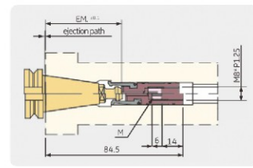




Gripper Series #15

Tool standard	DIN 69871/69872 ISO 7388/1/1 15°			
E.M. (mm)	Ejection path (mm)	Max pull force (N)	Max Stroke (mm)	Medium transfer
38.7	0.3	1700	3	axial transfer
M Nm– ⬡ SW	14–2			

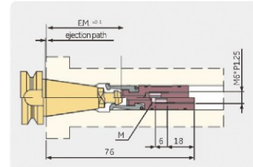




Gripper Series #20

Tool standard	DIN 69871/69872 ISO 7388/1/1 15°			
E.M. (mm)	Ejection path (mm)	Max pull force (N)	Max Stroke (mm)	Medium transfer
46.7	0.3	2000	3.5	axial transfer
M Nm– ⬡ SW	15–2			





Gripper Series #25

Tool standard	DIN 69871/69872 ISO 7388/1/1 15°			
E.M. (mm)	Ejection path (mm)	Max pull force (N)	Max Stroke (mm)	Medium transfer
55.7	0.3	2500	4	axial transfer
M Nm– ⬡ SW	15–2.5			