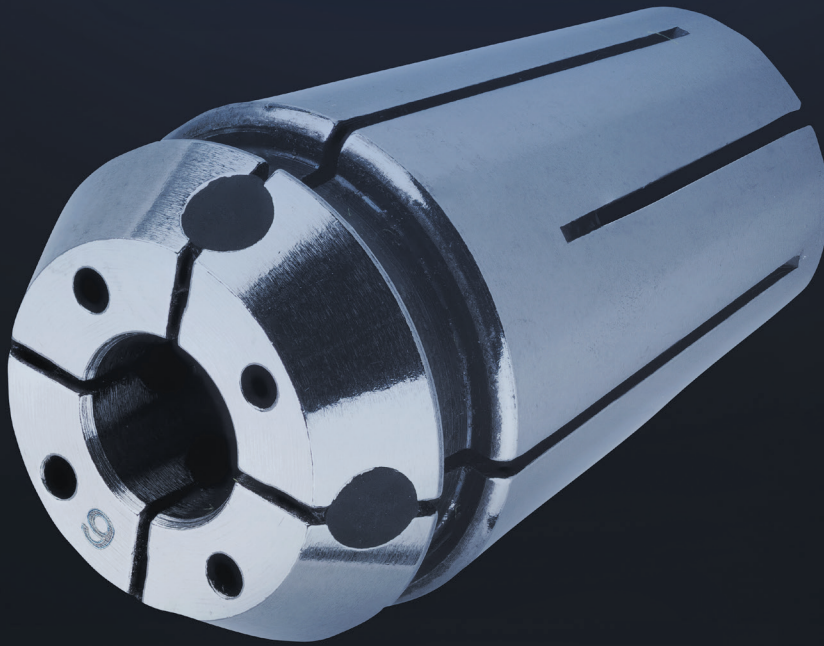




INTRODUCING THE BROAD AND COMPLETE RANGE OF ER COLLETS



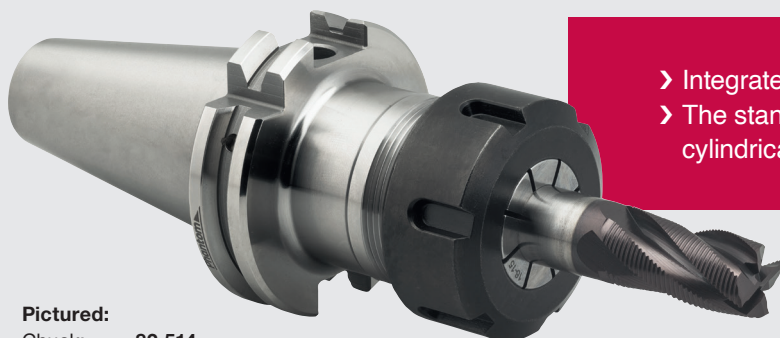
Why PHANTOM ER COLLETS?

- Ground externally and internally, with ultra-fine finish
- Wide clamping range of 0.5 - 30.0 mm
- Extensive range of chucks and other accessories, too

THERE'S NO END TO WHAT YOU CAN DO.

CHOOSE THE RIGHT ER COLLET FOR YOU

ER STANDARD COLLET

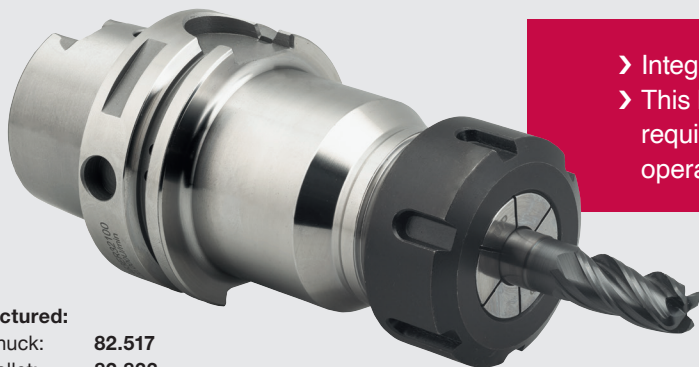


Pictured:

Chuck: 82.514
Collet: 82.832
Cutter: 35.324

- › Integrated run-out < 0,015 mm
- › The standard collet is used for tools with a cylindrical shank.

ER SUPER HIGH PRECISION COLLET

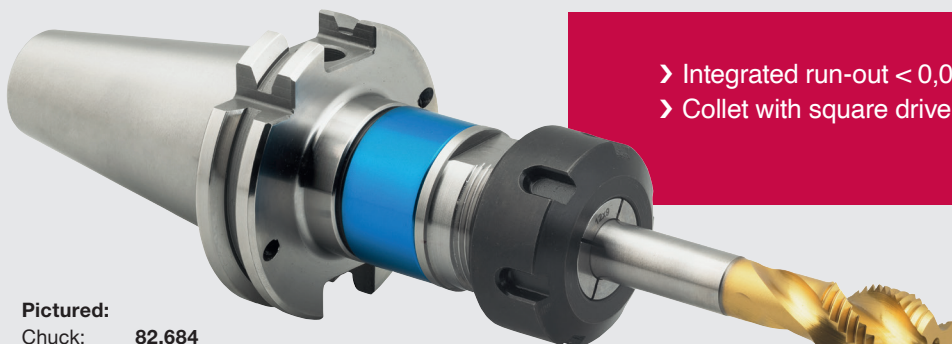


Pictured:

Chuck: 82.517
Collet: 82.833
Cutter: 34.316

- › Integrated run-out < 0,005 mm
- › This highly accurate collet is used when high precision is required, e.g. when using VHM tools, for drilling and milling operations as well as for reaming.

ER TAP COLLET



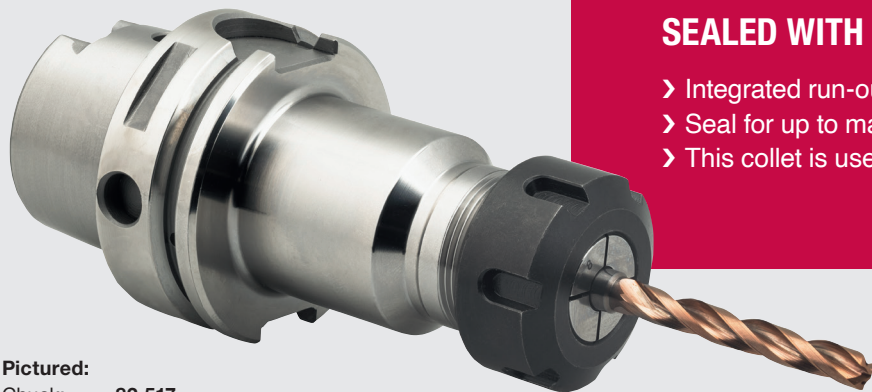
Pictured:

Chuck: 82.684
Collet: 82.885
Cutter: 23.321

- › Integrated run-out < 0,008 mm
- › Collet with square driver for clamping taps.

CHOOSE THE RIGHT ER COLLET FOR TOOLS WITH COOLING

ER SEALED PRECISION COLLET

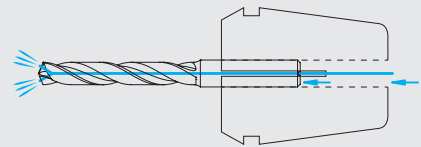


Pictured:

Chuck: 82.517
Collet: 82.925
Cutter: 82.934

SEALED WITH RUBBER

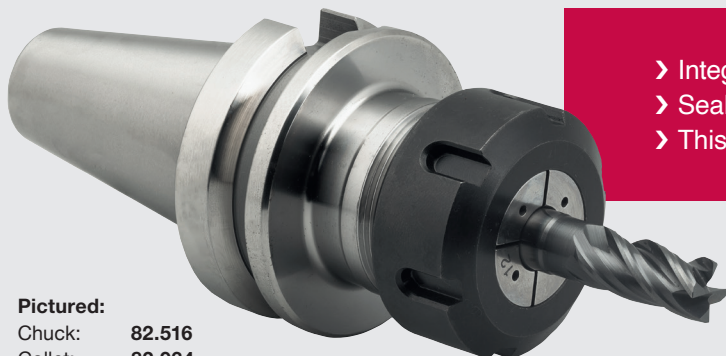
- › Integrated run-out < 0,008 mm
- › Seal for up to max. 40 ba
- › This collet is used for tools with internal cooling.



SEALED WITH STEEL

- › Integrated run-out < 0,008 mm
- › Seal for up to max. 120 bar
- › This collet is used for tools with internal cooling and where pressures higher than 40 bar are applied, e.g. gun drills.

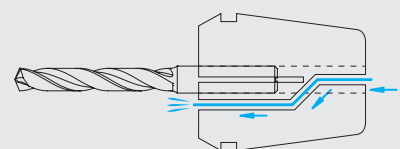
ER COOLANT JET COLLET



Pictured:

Chuck: 82.516
Collet: 82.934
Cutter: 34.314

- › Integrated run-out < 0,008 mm
- › Seal for up to max. 40 bar
- › This collet is used for tools without internal cooling.



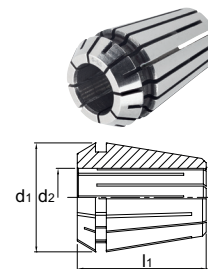
> 82.811 Phantom

EN Collet ER 11 4008E, standard, 15 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.811.0100	ER11	1	0,5-1	11.6	18	€ 12,02
82.811.0150	ER11	1.5	1-1,5	11.6	18	€ 12,02
82.811.0200	ER11	2	1,5-2	11.6	18	€ 12,02
82.811.0250	ER11	2.5	2-2,5	11.6	18	€ 12,02
82.811.0300	ER11	3	2,5-3	11.6	18	€ 10,68
82.811.0350	ER11	3.5	3-3,5	11.6	18	€ 10,68
82.811.0400	ER11	4	3,5-4	11.6	18	€ 10,68

Ref.	Type	d2	Ø mm	d1	l1	€
82.811.0450	ER11	4.5	4-4,5	11.6	18	€ 10,68
82.811.0500	ER11	5	4,5-5	11.6	18	€ 10,68
82.811.0550	ER11	5.5	5-5,5	11.6	18	€ 10,68
82.811.0600	ER11	6	5,5-6	11.6	18	€ 10,68
82.811.0650	ER11	6.5	6-6,5	11.6	18	€ 10,68
82.811.0700	ER11	7	6,5-7	11.6	18	€ 10,68



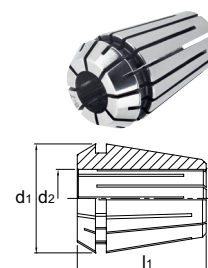
> 82.816 Phantom

EN Collet ER 16 426E, standard, 15 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.816.0100	ER16	1	0,5-1	17	27	€ 12,02
82.816.0150	ER16	1.5	1-1,5	17	27	€ 12,02
82.816.0200	ER16	2	1,5-2	17	27	€ 12,02
82.816.0250	ER16	2.5	2-2,5	17	27	€ 12,02
82.816.0300	ER16	3	2-3	17	27	€ 10,14
82.816.0400	ER16	4	3-4	17	27	€ 10,14
82.816.0500	ER16	5	4-5	17	27	€ 10,14

Ref.	Type	d2	Ø mm	d1	l1	€
82.816.0600	ER16	6	5-6	17	27	€ 10,14
82.816.0700	ER16	7	6-7	17	27	€ 10,14
82.816.0800	ER16	8	7-8	17	27	€ 10,14
82.816.0900	ER16	9	8-9	17	27	€ 10,14
82.816.1000	ER16	10	9-10	17	27	€ 10,14
82.816.1200	ER16	12	11-12	17	27	€ 19,53



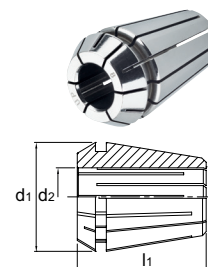
> 82.817 Phantom

EN Collet ER 16 426E, Ultra precise, 5 µm



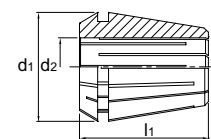
Ref.	Type	d2	Ø mm	d1	l1	€
82.817.0100	ER16	1	0,5-1	17	27	€ 19,53
82.817.0150	ER16	1.5	1-1,5	17	27	€ 19,53
82.817.0200	ER16	2	1,5-2	17	27	€ 19,53
82.817.0300	ER16	3	2-3	17	27	€ 18,14
82.817.0400	ER16	4	3-4	17	27	€ 18,14
82.817.0500	ER16	5	4-5	17	27	€ 18,14

Ref.	Type	d2	Ø mm	d1	l1	€
82.817.0600	ER16	6	5-6	17	27	€ 18,14
82.817.0700	ER16	7	6-7	17	27	€ 18,14
82.817.0800	ER16	8	7-8	17	27	€ 18,14
82.817.0900	ER16	9	8-9	17	27	€ 18,14
82.817.1000	ER16	10	9-10	17	27	€ 18,14



> 82.820 Phantom

EN Collet ER 20 428E, standard, 15 µm

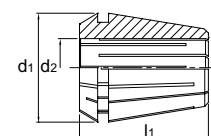
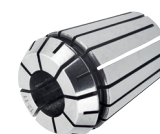


Ref.	Type	d2	Ø mm	d1	l1	€
82.820.0100	ER20	1	0,5-1	21	31	€ 12,02
82.820.0150	ER20	1.5	1-1,5	21	31	€ 12,02
82.820.0200	ER20	2	1,5-2	21	31	€ 12,02
82.820.0250	ER20	2.5	2-2,5	21	31	€ 12,02
82.820.0300	ER20	3	2-3	21	31	€ 10,28
82.820.0400	ER20	4	3-4	21	31	€ 10,28
82.820.0500	ER20	5	4-5	21	31	€ 10,28
82.820.0600	ER20	6	5-6	21	31	€ 12,85

Ref.	Type	d2	Ø mm	d1	l1	€
82.820.0700	ER20	7	6-7	21	31	€ 10,28
82.820.0800	ER20	8	7-8	21	31	€ 10,28
82.820.0900	ER20	9	8-9	21	31	€ 10,28
82.820.1000	ER20	10	9-10	21	31	€ 10,28
82.820.1100	ER20	11	10-11	21	31	€ 10,28
82.820.1200	ER20	12	11-12	21	31	€ 10,28
82.820.1300	ER20	13	12-13	21	31	€ 10,28

> 82.825 Phantom

EN Collet ER 25 430E, standard, 15 µm

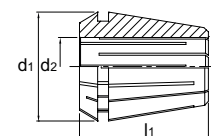


Ref.	Type	d2	Ø mm	d1	l1	€
82.825.0100	ER25	1	0,5-1	26	35	€ 12,02
82.825.0150	ER25	1.5	1-1,5	26	35	€ 12,02
82.825.0200	ER25	2	1,5-2	26	35	€ 12,02
82.825.0250	ER25	2.5	2-2,5	26	35	€ 12,02
82.825.0300	ER25	3	2-3	26	35	€ 10,28
82.825.0400	ER25	4	3-4	26	35	€ 10,28
82.825.0500	ER25	5	4-5	26	35	€ 10,28
82.825.0600	ER25	6	5-6	26	35	€ 10,28
82.825.0700	ER25	7	6-7	26	35	€ 10,28
82.825.0800	ER25	8	7-8	26	35	€ 10,28
82.825.0900	ER25	9	8-9	26	35	€ 10,28

Ref.	Type	d2	Ø mm	d1	l1	€
82.825.1000	ER25	10	9-10	26	35	€ 10,28
82.825.1100	ER25	11	10-11	26	35	€ 10,28
82.825.1200	ER25	12	11-12	26	35	€ 10,28
82.825.1300	ER25	13	12-13	26	35	€ 10,28
82.825.1400	ER25	14	13-14	26	35	€ 10,28
82.825.1500	ER25	15	14-15	26	35	€ 10,28
82.825.1600	ER25	16	15-16	26	35	€ 10,28
82.825.1700	ER25	17	16-17	26	35	€ 21,63
82.825.1800	ER25	18	17-18	26	35	€ 21,63
82.825.1900	ER25	19	18-19	26	35	€ 21,63
82.825.2000	ER25	20	19-20	26	35	€ 21,63

> 82.826 Phantom

EN Collet ER 25 430E, Ultra precise, 5 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.826.0100	ER25	1	0,5-1	26	35	€ 19,53
82.826.0150	ER25	1.5	1-1,5	26	35	€ 19,53
82.826.0200	ER25	2	1,5-2	26	35	€ 19,53
82.826.0300	ER25	3	2-3	26	35	€ 18,14
82.826.0400	ER25	4	3-4	26	35	€ 18,14
82.826.0500	ER25	5	4-5	26	35	€ 18,14
82.826.0600	ER25	6	5-6	26	35	€ 18,14
82.826.0700	ER25	7	6-7	26	35	€ 18,14
82.826.0800	ER25	8	7-8	26	35	€ 18,14

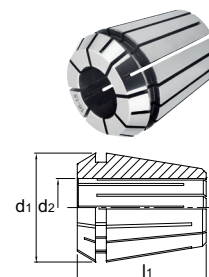
Ref.	Type	d2	Ø mm	d1	l1	€
82.826.0900	ER25	9	8-9	26	35	€ 18,14
82.826.1000	ER25	10	9-10	26	35	€ 18,14
82.826.1100	ER25	11	10-11	26	35	€ 18,14
82.826.1200	ER25	12	11-12	26	35	€ 18,14
82.826.1300	ER25	13	12-13	26	35	€ 18,14
82.826.1400	ER25	14	13-14	26	35	€ 18,14
82.826.1500	ER25	15	14-15	26	35	€ 18,14
82.826.1600	ER25	16	15-16	26	35	€ 18,14

› **82.832** **Phantom**

EN Collet ER 32 470E, standard, 15 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.832.0200	ER32	2	1,5-2	33	40	€ 12,02
82.832.0300	ER32	3	2-3	33	40	€ 10,28
82.832.0400	ER32	4	3-4	33	40	€ 10,28
82.832.0500	ER32	5	4-5	33	40	€ 10,28
82.832.0600	ER32	6	5-6	33	40	€ 10,28
82.832.0700	ER32	7	6-7	33	40	€ 10,28
82.832.0800	ER32	8	7-8	33	40	€ 10,28
82.832.0900	ER32	9	8-9	33	40	€ 10,28
82.832.1000	ER32	10	9-10	33	40	€ 10,28
82.832.1100	ER32	11	10-11	33	40	€ 10,28

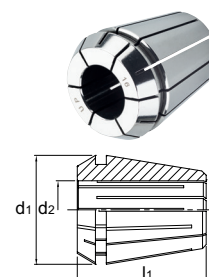


› **82.833** **Phantom**

EN Collet ER 32 470E, Ultra precise, 5 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.833.0200	ER32	2	1,5-2	33	40	€ 19,53
82.833.0300	ER32	3	2-3	33	40	€ 17,44
82.833.0400	ER32	4	3-4	33	40	€ 17,44
82.833.0500	ER32	5	4-5	33	40	€ 17,44
82.833.0600	ER32	6	5-6	33	40	€ 17,44
82.833.0700	ER32	7	6-7	33	40	€ 17,44
82.833.0800	ER32	8	7-8	33	40	€ 17,44
82.833.0900	ER32	9	8-9	33	40	€ 17,44
82.833.1000	ER32	10	9-10	33	40	€ 17,44
82.833.1100	ER32	11	10-11	33	40	€ 17,44

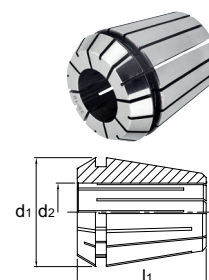


› **82.840** **Phantom**

EN Collet ER 40 472E, standard, 15 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.840.0300	ER40	3	2-3	41	46	€ 17,34
82.840.0400	ER40	4	3-4	41	46	€ 17,34
82.840.0500	ER40	5	4-5	41	46	€ 14,68
82.840.0600	ER40	6	5-6	41	46	€ 14,68
82.840.0700	ER40	7	6-7	41	46	€ 14,68
82.840.0800	ER40	8	7-8	41	46	€ 14,68
82.840.0900	ER40	9	8-9	41	46	€ 14,68
82.840.1000	ER40	10	9-10	41	46	€ 14,68
82.840.1100	ER40	11	10-11	41	46	€ 14,68
82.840.1200	ER40	12	11-12	41	46	€ 14,68
82.840.1300	ER40	13	12-13	41	46	€ 14,68
82.840.1400	ER40	14	13-14	41	46	€ 14,68
82.840.1500	ER40	15	14-15	41	46	€ 14,68
82.840.1600	ER40	16	15-16	41	46	€ 14,68



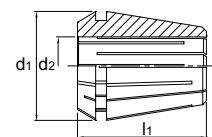
Ref.	Type	d2	Ø mm	d1	l1	€
82.832.1200	ER32	12	11-12	33	40	€ 10,28
82.832.1300	ER32	13	12-13	33	40	€ 10,28
82.832.1400	ER32	14	13-14	33	40	€ 10,28
82.832.1500	ER32	15	14-15	33	40	€ 10,28
82.832.1600	ER32	16	15-16	33	40	€ 10,28
82.832.1700	ER32	17	16-17	33	40	€ 10,28
82.832.1800	ER32	18	17-18	33	40	€ 10,28
82.832.1900	ER32	19	18-19	33	40	€ 10,28
82.832.2000	ER32	20	19-20	33	40	€ 10,28

Ref.	Type	d2	Ø mm	d1	l1	€
82.833.1200	ER32	12	11-12	33	40	€ 17,44
82.833.1300	ER32	13	12-13	33	40	€ 17,44
82.833.1400	ER32	14	13-14	33	40	€ 17,44
82.833.1500	ER32	15	14-15	33	40	€ 17,44
82.833.1600	ER32	16	15-16	33	40	€ 17,44
82.833.1700	ER32	17	16-17	33	40	€ 17,44
82.833.1800	ER32	18	17-18	33	40	€ 17,44
82.833.1900	ER32	19	18-19	33	40	€ 17,44
82.833.2000	ER32	20	19-20	33	40	€ 17,44

Ref.	Type	d2	Ø mm	d1	l1	€
82.840.1700	ER40	17	16-17	41	46	€ 14,68
82.840.1800	ER40	18	17-18	41	46	€ 14,68
82.840.1900	ER40	19	18-19	41	46	€ 14,68
82.840.2000	ER40	20	19-20	41	46	€ 14,68
82.840.2100	ER40	21	20-21	41	46	€ 14,68
82.840.2200	ER40	22	21-22	41	46	€ 14,68
82.840.2300	ER40	23	22-23	41	46	€ 14,68
82.840.2400	ER40	24	23-24	41	46	€ 14,68
82.840.2500	ER40	25	24-25	41	46	€ 14,68
82.840.2600	ER40	26	25-26	41	46	€ 14,68
82.840.2700	ER40	27	26-27	41	46	€ 25,12
82.840.2800	ER40	28	27-28	41	46	€ 25,12
82.840.2900	ER40	29	28-29	41	46	€ 25,12
82.840.3000	ER40	30	29-30	41	46	€ 25,12

> 82.841 Phantom

EN Collet ER 40 472E, Ultra precise, 5 µm

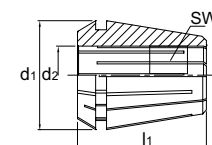


Ref.	Type	d2	Ø mm	d1	l1	€
82.841.0300	ER40	3	2-3	41	46	€ 24,40
82.841.0400	ER40	4	3-4	41	46	€ 24,40
82.841.0500	ER40	5	4-5	41	46	€ 20,93
82.841.0600	ER40	6	5-6	41	46	€ 20,93
82.841.0700	ER40	7	6-7	41	46	€ 20,93
82.841.0800	ER40	8	7-8	41	46	€ 20,93
82.841.0900	ER40	9	8-9	41	46	€ 20,93
82.841.1000	ER40	10	9-10	41	46	€ 20,93
82.841.1100	ER40	11	10-11	41	46	€ 20,93
82.841.1200	ER40	12	11-12	41	46	€ 20,93
82.841.1300	ER40	13	12-13	41	46	€ 20,93
82.841.1400	ER40	14	13-14	41	46	€ 20,93
82.841.1500	ER40	15	14-15	41	46	€ 20,93
82.841.1600	ER40	16	15-16	41	46	€ 20,93

Ref.	Type	d2	Ø mm	d1	l1	€
82.841.1700	ER40	17	16-17	41	46	€ 20,93
82.841.1800	ER40	18	17-18	41	46	€ 20,93
82.841.1900	ER40	19	18-19	41	46	€ 20,93
82.841.2000	ER40	20	19-20	41	46	€ 20,93
82.841.2100	ER40	21	20-21	41	46	€ 20,93
82.841.2200	ER40	22	21-22	41	46	€ 20,93
82.841.2300	ER40	23	22-23	41	46	€ 20,93
82.841.2400	ER40	24	23-24	41	46	€ 20,93
82.841.2500	ER40	25	24-25	41	46	€ 20,93
82.841.2600	ER40	26	25-26	41	46	€ 20,93
82.841.2700	ER40	27	26-27	41	46	€ 20,93
82.841.2800	ER40	28	27-28	41	46	€ 20,93
82.841.2900	ER40	29	28-29	41	46	€ 20,93
82.841.3000	ER40	30	29-30	41	46	€ 20,93

> 82.880 Phantom

EN Collet ER 16G 426G, for taps, 15 µm

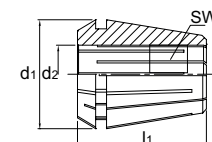


Ref.	Type	d2	sw	d1	l1	€
82.880.0350	ER16G	3.5	2.7	17	27	€ 20,79
82.880.0400	ER16G	4	3	17	27	€ 20,79
82.880.0450	ER16G	4.5	3.4	17	27	€ 20,79
82.880.0500	ER16G	5	4	17	27	€ 20,79
82.880.0600	ER16G	6	4.9	17	27	€ 20,79

Ref.	Type	d2	sw	d1	l1	€
82.880.0630	ER16G	6.3	5	17	27	€ 20,79
82.880.0700	ER16G	7	5.5	17	27	€ 20,79
82.880.0800	ER16G	8	6.2	17	27	€ 20,79
82.880.0900	ER16G	9	7.1	17	27	€ 20,79
82.880.1000	ER16G	10	8	17	27	€ 20,79

> 82.885 Phantom

EN Collet ER 25G 430G, for taps, 15 µm



Ref.	Type	d2	sw	d1	l1	€
82.885.0350	ER25G	3.5	2.7	26	35	€ 27,89
82.885.0400	ER25G	4	3	26	35	€ 27,89
82.885.0450	ER25G	4.5	3.4	26	35	€ 20,79
82.885.0500	ER25G	5	4	26	35	€ 20,79
82.885.0550	ER25G	5.5	4.3	26	35	€ 27,89
82.885.0600	ER25G	6	4.9	26	35	€ 20,79
82.885.0630	ER25G	6.3	5	26	35	€ 20,79

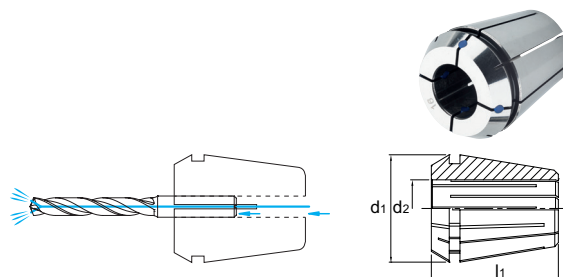
Ref.	Type	d2	sw	d1	l1	€
82.885.0700	ER25G	7	5.5	26	35	€ 20,79
82.885.0800	ER25G	8	6.2	26	35	€ 20,79
82.885.0900	ER25G	9	7	26	35	€ 20,79
82.885.1000	ER25G	10	8	26	35	€ 20,79
82.885.1100	ER25G	11	9	26	35	€ 27,89
82.885.1120	ER25G	11.2	9	26	35	€ 20,79
82.885.1200	ER25G	12	9	26	35	€ 27,89

> 82.916 Phantom

EN Collet ER 16 425E, rubber sealed, 8 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.916.0300	ER16	3	3h10	17	27	€ 32,76
82.916.0400	ER16	4	4h10	17	27	€ 32,76
82.916.0600	ER16	6	6h10	17	27	€ 32,76



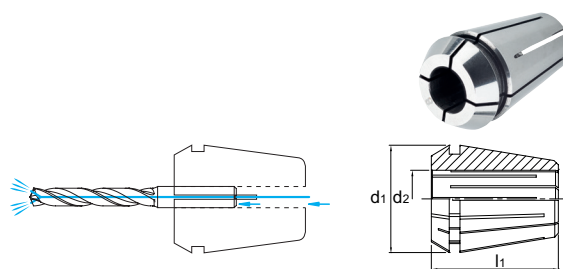
Ref.	Type	d2	Ø mm	d1	l1	€
82.916.0800	ER16	8	8h10	17	27	€ 32,76
82.916.1000	ER16	10	10h10	17	27	€ 32,76

> 82.917 Phantom

EN Collet ER 16 425E, steel sealed, 8 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.917.0300	ER16	3	3h10	17	27	€ 34,14
82.917.0400	ER16	4	4h10	17	27	€ 34,14
82.917.0600	ER16	6	6h10	17	27	€ 34,14



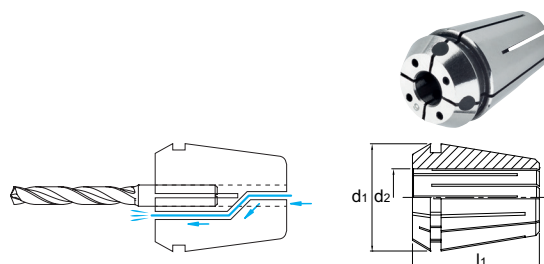
Ref.	Type	d2	Ø mm	d1	l1	€
82.917.0800	ER16	8	8h10	17	27	€ 34,14
82.917.1000	ER16	10	10h10	17	27	€ 34,14

> 82.918 Phantom

EN Collet ER 16 425E, Coolant Jet, 8 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.918.0300	ER16	3	3h10	17	27	€ 36,83
82.918.0400	ER16	4	4h10	17	27	€ 36,83
82.918.0500	ER16	5	5h10	17	27	€ 36,83



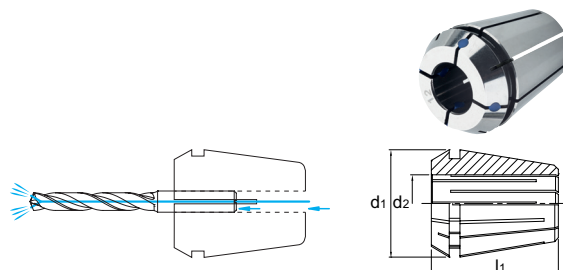
Ref.	Type	d2	Ø mm	d1	l1	€
82.918.0600	ER16	6	6h10	17	27	€ 36,83
82.918.0700	ER16	7	7h10	17	27	€ 36,83

> 82.925 Phantom

EN Collet ER 25 429E, rubber sealed, 8 µm



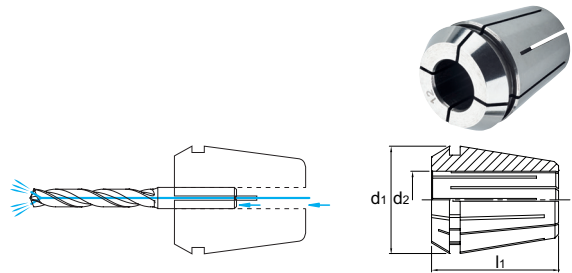
Ref.	Type	d2	Ø mm	d1	l1	€
82.925.0300	ER25	3	3h10	26	35	€ 29,99
82.925.0400	ER25	4	4h10	26	35	€ 29,99
82.925.0600	ER25	6	6h10	26	35	€ 29,99
82.925.0800	ER25	8	8h10	26	35	€ 29,99



Ref.	Type	d2	Ø mm	d1	l1	€
82.925.1000	ER25	10	10h10	26	35	€ 29,99
82.925.1200	ER25	12	12h10	26	35	€ 29,99
82.925.1400	ER25	14	14h10	26	35	€ 29,99
82.925.1600	ER25	16	16h10	26	35	€ 29,99

> 82.926 Phantom

EN Collet ER 25 429E, steel sealed, 8 µm

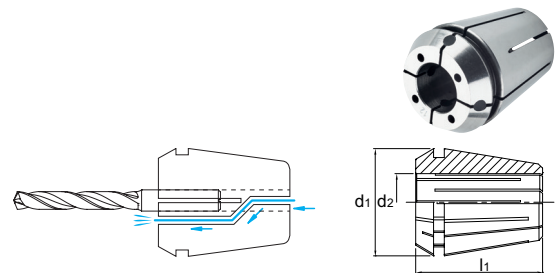


Ref.	Type	d2	Ø mm	d1	l1	€
82.926.0300	ER25	3	3h10	26	35	€ 34,14
82.926.0400	ER25	4	4h10	26	35	€ 34,14
82.926.0600	ER25	6	6h10	26	35	€ 34,14
82.926.0800	ER25	8	8h10	26	35	€ 34,14

Ref.	Type	d2	Ø mm	d1	l1	€
82.926.1000	ER25	10	10h10	26	35	€ 34,14
82.926.1200	ER25	12	12h10	26	35	€ 34,14
82.926.1400	ER25	14	14h10	26	35	€ 34,14
82.926.1600	ER25	16	16h10	26	35	€ 34,14

> 82.927 Phantom

EN Collet ER 25 429E, Coolant Jet, 8 µm

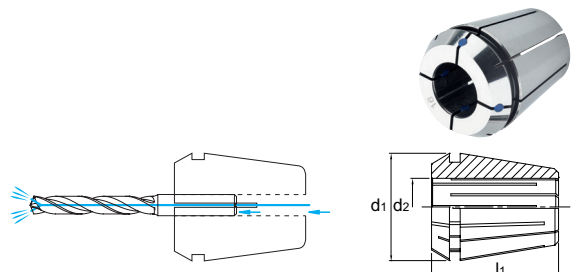


Ref.	Type	d2	Ø mm	d1	l1	€
82.927.0300	ER25	3	3h10	26	35	€ 38,51
82.927.0400	ER25	4	4h10	26	35	€ 38,51
82.927.0500	ER25	5	5h10	26	35	€ 38,51
82.927.0600	ER25	6	6h10	26	35	€ 38,51
82.927.0700	ER25	7	7h10	26	35	€ 38,51
82.927.0800	ER25	8	8h10	26	35	€ 38,51

Ref.	Type	d2	Ø mm	d1	l1	€
82.927.0900	ER25	9	9h10	26	35	€ 38,51
82.927.1000	ER25	10	10h10	26	35	€ 38,51
82.927.1100	ER25	11	11h10	26	35	€ 38,51
82.927.1200	ER25	12	12h10	26	35	€ 38,51
82.927.1300	ER25	13	13h10	26	35	€ 38,51
82.927.1400	ER25	14	14h10	26	35	€ 38,51

> 82.932 Phantom

EN Collet ER 32 469E, rubber sealed, 8 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.932.0300	ER32	3	3h10	33	40	€ 29,99
82.932.0400	ER32	4	4h10	33	40	€ 29,99
82.932.0600	ER32	6	6h10	33	40	€ 29,99
82.932.0800	ER32	8	8h10	33	40	€ 29,99
82.932.1000	ER32	10	10h10	33	40	€ 29,99

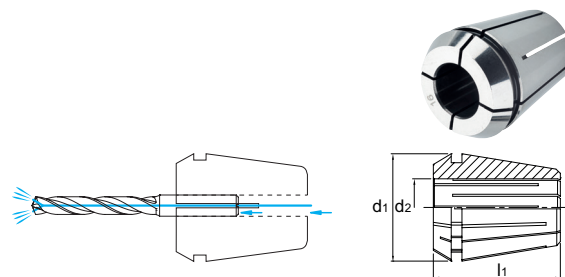
Ref.	Type	d2	Ø mm	d1	l1	€
82.932.1200	ER32	12	12h10	33	40	€ 29,99
82.932.1400	ER32	14	14h10	33	40	€ 29,99
82.932.1600	ER32	16	16h10	33	40	€ 29,99
82.932.1800	ER32	18	18h10	33	40	€ 29,99
82.932.2000	ER32	20	20h10	33	40	€ 29,99

> 82.933 Phantom

EN Collet ER 32 469E, steel sealed, 8 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.933.0300	ER32	3	3h10	33	40	€ 33,47
82.933.0400	ER32	4	4h10	33	40	€ 33,47
82.933.0600	ER32	6	6h10	33	40	€ 33,47
82.933.0800	ER32	8	8h10	33	40	€ 33,47
82.933.1000	ER32	10	10h10	33	40	€ 33,47

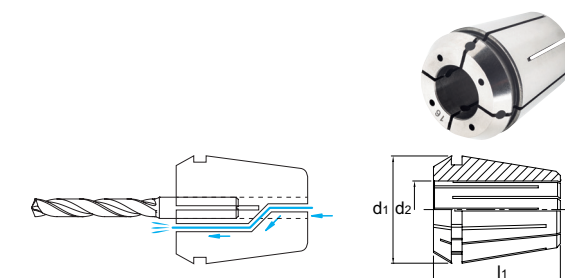


> 82.934 Phantom

EN Collet ER 32 469E, Coolant Jet, 8 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.934.0300	ER32	3	3h10	33	40	€ 39,61
82.934.0400	ER32	4	4h10	33	40	€ 39,61
82.934.0500	ER32	5	5h10	33	40	€ 39,61
82.934.0600	ER32	6	6h10	33	40	€ 39,61
82.934.0700	ER32	7	7h10	33	40	€ 39,61
82.934.0800	ER32	8	8h10	33	40	€ 39,61
82.934.0900	ER32	9	9h10	33	40	€ 39,61
82.934.1000	ER32	10	10h10	33	40	€ 39,61
82.934.1100	ER32	11	11h10	33	40	€ 39,61

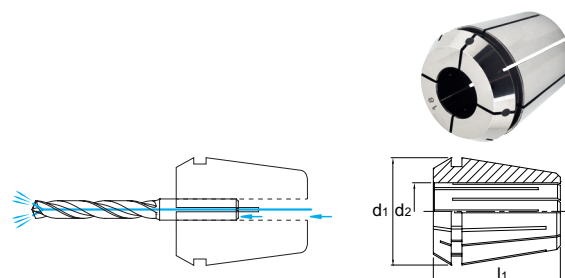


> 82.940 Phantom

EN Collet ER 40 471E, rubber sealed, 8 µm



Ref.	Type	d2	Ø mm	d1	l1	€
82.940.0300	ER40	3	3h10	41	46	€ 41,83
82.940.0400	ER40	4	4h10	41	46	€ 41,83
82.940.0600	ER40	6	6h10	41	46	€ 41,83
82.940.0800	ER40	8	8h10	41	46	€ 41,83
82.940.1000	ER40	10	10h10	41	46	€ 41,83



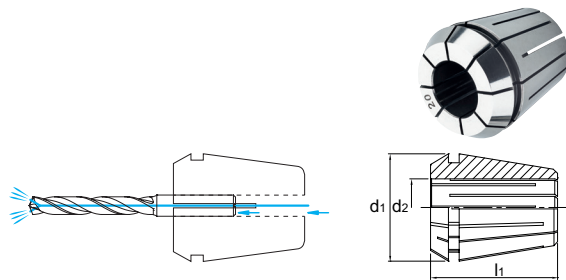
Ref.	Type	d2	Ø mm	d1	l1	€
82.933.1200	ER32	12	12h10	33	40	€ 33,47
82.933.1400	ER32	14	14h10	33	40	€ 33,47
82.933.1600	ER32	16	16h10	33	40	€ 33,47
82.933.1800	ER32	18	18h10	33	40	€ 33,47
82.933.2000	ER32	20	20h10	33	40	€ 33,47

Ref.	Type	d2	Ø mm	d1	l1	€
82.934.1200	ER32	12	12h10	33	40	€ 39,61
82.934.1300	ER32	13	13h10	33	40	€ 39,61
82.934.1400	ER32	14	14h10	33	40	€ 39,61
82.934.1500	ER32	15	15h10	33	40	€ 39,61
82.934.1600	ER32	16	16h10	33	40	€ 39,61
82.934.1700	ER32	17	17h10	33	40	€ 39,61
82.934.1800	ER32	18	18h10	33	40	€ 39,61
82.934.1900	ER32	19	19h10	33	40	€ 39,61
82.934.2000	ER32	20	20h10	33	40	€ 39,61

Ref.	Type	d2	Ø mm	d1	l1	€
82.940.1200	ER40	12	12h10	41	46	€ 41,83
82.940.1400	ER40	14	14h10	41	46	€ 41,83
82.940.1600	ER40	16	16h10	41	46	€ 41,83
82.940.1800	ER40	18	18h10	41	46	€ 41,83
82.940.2000	ER40	20	20h10	41	46	€ 41,83

> 82.941 Phantom

EN Collet ER 40 471E, steel sealed, 8 µm

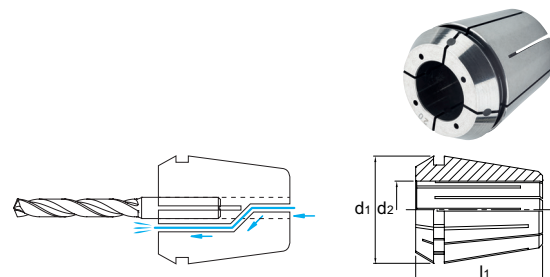


Ref.	Type	d2	Ø mm	d1	l1	€
82.941.0300	ER40	3	3h10	41	46	€ 43,94
82.941.0400	ER40	4	4h10	41	46	€ 43,94
82.941.0600	ER40	6	6h10	41	46	€ 43,94
82.941.0800	ER40	8	8h10	41	46	€ 43,94
82.941.1000	ER40	10	10h10	41	46	€ 43,94

Ref.	Type	d2	Ø mm	d1	l1	€
82.941.1200	ER40	12	12h10	41	46	€ 43,94
82.941.1400	ER40	14	14h10	41	46	€ 43,94
82.941.1600	ER40	16	16h10	41	46	€ 43,94
82.941.1800	ER40	18	18h10	41	46	€ 43,94
82.941.2000	ER40	20	20h10	41	46	€ 43,94

> 82.942 Phantom

EN Collet ER 40 471E, Coolant Jet, 8 µm

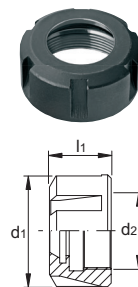


Ref.	Type	d2	Ø mm	d1	l1	€
82.942.0400	ER40	4	4h10	41	46	€ 47,42
82.942.0500	ER40	5	5h10	41	46	€ 47,42
82.942.0600	ER40	6	6h10	41	46	€ 47,42
82.942.0700	ER40	7	7h10	41	46	€ 47,42
82.942.0800	ER40	8	8h10	41	46	€ 47,42
82.942.0900	ER40	9	9h10	41	46	€ 47,42
82.942.1000	ER40	10	10h10	41	46	€ 47,42
82.942.1100	ER40	11	11h10	41	46	€ 47,42
82.942.1200	ER40	12	12h10	41	46	€ 47,42
82.942.1300	ER40	13	13h10	41	46	€ 47,42
82.942.1400	ER40	14	14h10	41	46	€ 47,42

Ref.	Type	d2	Ø mm	d1	l1	€
82.942.1500	ER40	15	15h10	41	46	€ 47,42
82.942.1600	ER40	16	16h10	41	46	€ 47,42
82.942.1700	ER40	17	17h10	41	46	€ 47,42
82.942.1800	ER40	18	18h10	41	46	€ 47,42
82.942.1900	ER40	19	19h10	41	46	€ 47,42
82.942.2000	ER40	20	20h10	41	46	€ 47,42
82.942.2100	ER40	21	21h10	41	46	€ 47,42
82.942.2200	ER40	22	22h10	41	46	€ 47,42
82.942.2300	ER40	23	23h10	41	46	€ 47,42
82.942.2400	ER40	24	24h10	41	46	€ 47,42
82.942.2500	ER40	25	25h10	41	46	€ 47,42

> 82.960 Phantom

EN Nut for Collet Chuck



Ref.	Type	d1	M	l1	€
82.960.1600	ER16	32	M22x1,5	17.5	€ 17,46
82.960.2500	ER25	42	M32x1,5	20	€ 18,80

Ref.	Type	d1	M	l1	€
82.960.3200	ER32	50	M40x1,5	22.5	€ 21,46
82.960.4000	ER40	63	M50x1,5	25.5	€ 24,15

> 82.962 Phantom

EN Nut for Collet Chuck, for sealing ring 82.963

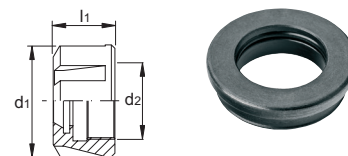


Ref.	Type	d1	M	l1	€
82.962.1600	ER16	32	M22 x 1,5	23.5	€ 17,46
82.962.2500	ER25	42	M32 x 1,5	26	€ 17,46

Ref.	Type	d1	M	l1	€
82.962.3200	ER32	50	M40 x 1,5	28.5	€ 17,46
82.962.4000	ER40	63	M50 x 1,5	31.5	€ 20,14

› **82.963** **Phantom**

EN Sealing Ring for collets, ER



Ref.	Type	Ø	€
82.963.1603	ER16	3-2,5	€ 5,38
82.963.1604	ER16	4-3,5	€ 5,38
82.963.1605	ER16	5-4,5	€ 5,38
82.963.1606	ER16	6-5,5	€ 5,38
82.963.1607	ER16	7-6,5	€ 5,38
82.963.1608	ER16	8-7,5	€ 5,38
82.963.1609	ER16	9-8,5	€ 5,38
82.963.1610	ER16	10-9,5	€ 5,38
82.963.2503	ER25	3-2,5	€ 5,38
82.963.2504	ER25	4-3,5	€ 5,38
82.963.2506	ER25	6-5,5	€ 5,38
82.963.2507	ER25	7-6,5	€ 5,38
82.963.2508	ER25	8-7,5	€ 5,38
82.963.2509	ER25	9-8,5	€ 5,38
82.963.2510	ER25	10-9,5	€ 5,38
82.963.2511	ER25	11-10,5	€ 5,38
82.963.2512	ER25	12-11,5	€ 5,38
82.963.2513	ER25	13-12,5	€ 5,38
82.963.2514	ER25	14-13,5	€ 5,38
82.963.2515	ER25	15-14,5	€ 5,38
82.963.2516	ER25	16-15,5	€ 5,38
82.963.3203	ER32	3-2,5	€ 6,72
82.963.3204	ER32	4-3,5	€ 6,72
82.963.3205	ER32	5-4,5	€ 6,72
82.963.3206	ER32	6-5,5	€ 6,72
82.963.3207	ER32	7-6,5	€ 6,72
82.963.3208	ER32	8-7,5	€ 6,72
82.963.3209	ER32	9-8,5	€ 6,72
82.963.3210	ER32	10-9,5	€ 6,72
82.963.3211	ER32	11-10,5	€ 6,72
82.963.3212	ER32	12-11,5	€ 6,72
82.963.3213	ER32	13-12,5	€ 6,72

Ref.	Type	Ø	€
82.963.3214	ER32	14-13,5	€ 6,72
82.963.3215	ER32	15-14,5	€ 6,72
82.963.3216	ER32	16-15,5	€ 6,72
82.963.3217	ER32	17-16,5	€ 6,72
82.963.3218	ER32	18-17,5	€ 6,72
82.963.3219	ER32	19-18,5	€ 6,72
82.963.3220	ER32	20-19,5	€ 6,72
82.963.4003	ER40	3-2,5	€ 8,05
82.963.4004	ER40	4-3,5	€ 8,05
82.963.4005	ER40	5-4,5	€ 8,05
82.963.4006	ER40	6-5,5	€ 8,05
82.963.4007	ER40	7-6,5	€ 8,05
82.963.4008	ER40	8-7,5	€ 8,05
82.963.4009	ER40	9-8,5	€ 8,05
82.963.4010	ER40	10-9,5	€ 8,05
82.963.4011	ER40	11-10,5	€ 8,05
82.963.4012	ER40	12-11,5	€ 8,05
82.963.4013	ER40	13-12,5	€ 8,05
82.963.4014	ER40	14-13,5	€ 8,05
82.963.4015	ER40	15-14,5	€ 8,05
82.963.4016	ER40	16-15,5	€ 8,05
82.963.4017	ER40	17-16,5	€ 8,05
82.963.4018	ER40	18-17,5	€ 8,05
82.963.4019	ER40	19-18,5	€ 8,05
82.963.4020	ER40	20-19,5	€ 8,05
82.963.4021	ER40	21-20,5	€ 8,05
82.963.4022	ER40	22-21,5	€ 8,05
82.963.4023	ER40	23-22,5	€ 8,05
82.963.4024	ER40	24-23,5	€ 8,05
82.963.4025	ER40	25-24,5	€ 8,05
82.963.4026	ER40	26-25,5	€ 8,05

› **82.965** **Phantom**

EN Mini-nut, ER



Ref.	Type	d1	M	€
82.965.1100	ER11	16	M13 x 0,75	€ 12,55
82.965.1600	ER16	22	M22 x 1,5	€ 13,25

Ref.	Type	d1	M	€
82.965.2000	ER20	28	M24 x 1	€ 13,95
82.965.2500	ER25	35	M32 x 1,5	€ 15,34

› **82.990** **Phantom**

EN Key for Collet Nut DIN 6499



Ref.	Type	€
82.990.1600	ER16	€ 7,51
82.990.2500	ER25	€ 9,67

Ref.	Type	€
82.990.3200	ER32	€ 11,02
82.990.4000	ER40	€ 13,82

› **82.993** **Phantom**

EN Key for Collet Nut mini, ER DIN 6499

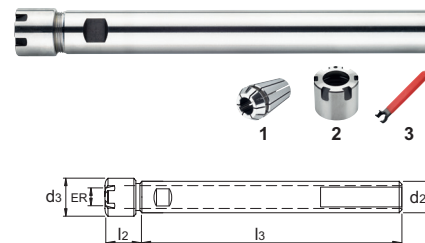


Ref.	Type	€
82.993.1100	ER11	€ 13,95
82.993.1600	ER16	€ 13,95

Ref.	Type	€
82.993.2000	ER20	€ 13,95
82.993.2500	ER25	€ 15,34

> 82.509 Phantom

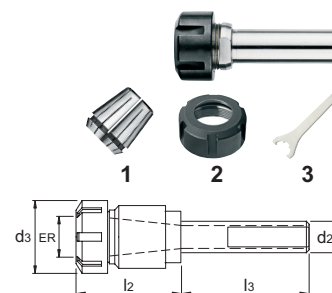
EN ER Collet Chuck, cylindrical, Mini-nut



Ref.	d2	Type	Ø mm	l2	l3	d3	1 excl.	2 incl.	3 excl.	€
82.509.1611	16 mm	ER11	1-7	19	160	16	82.811	82.965.1100	82.993.1100	€ 75,30
82.509.2016	20 mm	ER16	1-12	31	160	22	82.816	82.965.1600	82.993.1600	€ 69,72
82.509.2520	25 mm	ER20	1-14	28	160	28	82.820	82.965.2000	82.993.2000	€ 78,12
82.509.2525	25 mm	ER25	1-20	40	160	42	82.825	82.965.2500	82.993.2500	€ 97,61

> 82.510 Phantom

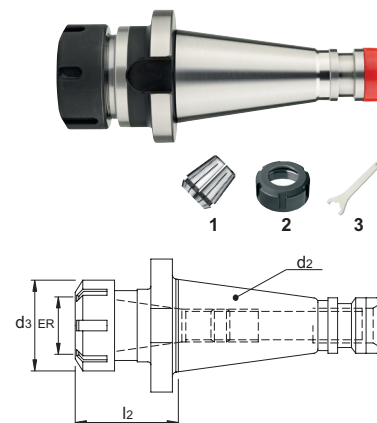
EN ER Collet Chuck, cylindrical



Ref.	d2	Type	Ø mm	l2	l3	d3	1 excl.	2 incl.	3 excl.	€
82.510.3232	32 mm	ER32	2-20	48	70	50	82.832	82.960.3200	82.990.3200	€ 48,26

> 82.513 Phantom

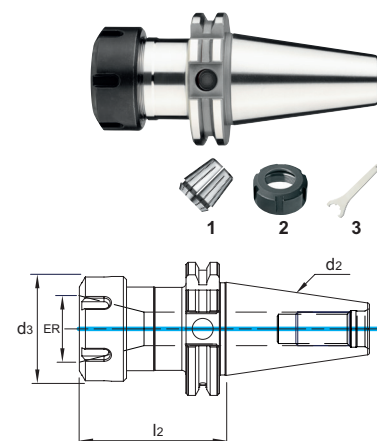
EN ER Collet Chuck, SK according to DIN 2080



Ref.	d2	Type	Ø mm	l2	d3	M	1 excl.	2 incl.	3 excl.	€
82.513.3065	SK30	ER32	2-20	50	50	M12	82.832	82.960.3200	82.990.3200	€ 25,50
82.513.4053	SK40	ER25	1-20	50	42	M16	82.825	82.960.2500	82.990.2500	€ 27,22
82.513.4063	SK40	ER32	2-20	50	50	M16	82.832	82.960.3200	82.990.3200	€ 30,74
82.513.4071	SK40	ER40	3-30	80	63	M16	82.840	82.960.4000	82.990.4000	€ 35,11
82.513.5071	SK50	ER40	3-30	63	63	M24	82.840	82.960.4000	82.990.4000	€ 63,67

> 82.514 Phantom

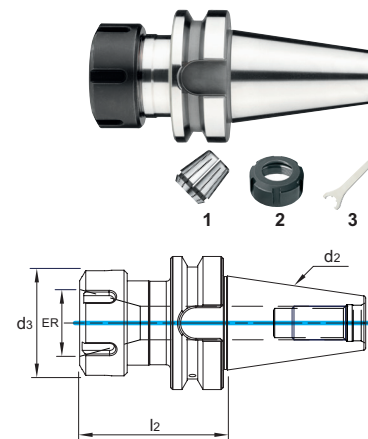
EN ER Collet Chuck, SK according to DIN 69871



Ref.	d2	Type	Ø mm	l2	d3	M	1 excl.	2 incl.	3 excl.	€
82.514.4161	SK40	ER16	1-12	70	32	M16	82.816	82.960.1600	82.990.1600	€ 39,23
82.514.4162	SK40	ER16	1-12	100	32	M16	82.816	82.960.1600	82.990.1600	€ 44,22
82.514.4166	SK40	ER16	1-12	160	32	M16	82.816	82.960.1600	82.990.1600	€ 74,38
82.514.4251	SK40	ER25	1-20	70	42	M16	82.825	82.960.2500	82.990.2500	€ 39,23
82.514.4252	SK40	ER25	1-20	100	42	M16	82.825	82.960.2500	82.990.2500	€ 49,22
82.514.4256	SK40	ER25	1-20	160	42	M16	82.825	82.960.2500	82.990.2500	€ 74,38
82.514.4321	SK40	ER32	2-20	70	50	M16	82.832	82.960.3200	82.990.3200	€ 41,20
82.514.4322	SK40	ER32	2-20	100	50	M16	82.832	82.960.3200	82.990.3200	€ 49,22
82.514.4326	SK40	ER32	2-20	160	50	M16	82.832	82.960.3200	82.990.3200	€ 76,36
82.514.4401	SK40	ER40	3-30	70	63	M16	82.840	82.960.4000	82.990.4000	€ 43,18
82.514.4402	SK40	ER40	3-30	100	63	M16	82.840	82.960.4000	82.990.4000	€ 55,27
82.514.4406	SK40	ER40	3-30	160	63	M16	82.840	82.960.4000	82.990.4000	€ 79,38
82.514.5162	SK50	ER16	1-12	100	32	M24	82.816	82.960.1600	82.990.1600	€ 74,38
82.514.5166	SK50	ER16	1-12	160	32	M24	82.816	82.960.1600	82.990.1600	€ 101,51
82.514.5251	SK50	ER25	1-20	70	42	M24	82.825	82.960.2500	82.990.2500	€ 61,32
82.514.5252	SK50	ER25	1-20	100	42	M24	82.825	82.960.2500	82.990.2500	€ 74,38
82.514.5256	SK50	ER25	1-20	160	42	M24	82.825	82.960.2500	82.990.2500	€ 101,51
82.514.5321	SK50	ER32	2-20	70	50	M24	82.832	82.960.3200	82.990.3200	€ 63,38
82.514.5322	SK50	ER32	2-20	100	50	M24	82.832	82.960.3200	82.990.3200	€ 88,41
82.514.5326	SK50	ER32	2-20	160	50	M24	82.832	82.960.3200	82.990.3200	€ 101,51
82.514.5401	SK50	ER40	3-30	80	63	M24	82.840	82.960.4000	82.990.4000	€ 63,38
82.514.5402	SK50	ER40	3-30	100	63	M24	82.840	82.960.4000	82.990.4000	€ 90,51
82.514.5406	SK50	ER40	3-30	160	63	M24	82.840	82.960.4000	82.990.4000	€ 104,54

> 82.516 Phantom

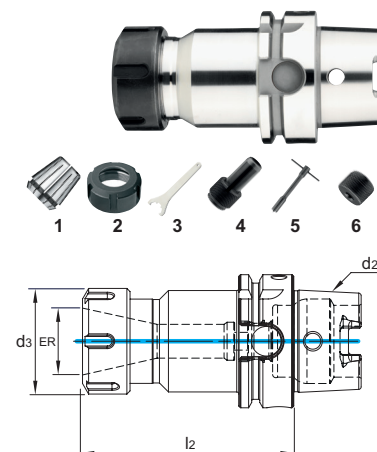
EN ER Collet Chuck, according to MAS 403 BT



Ref.	d2	Type	Ø mm	l2	d3	M	1 excl.	2 incl.	3 excl.	€
82.516.4161	BT40	ER16	1-12	70	32	M16	82816	82.960.1600	82.990.1600	€ 39,23
82.516.4162	BT40	ER16	1-12	100	32	M16	82816	82.960.1600	82.990.1600	€ 44,22
82.516.4166	BT40	ER16	1-12	160	32	M16	82816	82.960.1600	82.990.1600	€ 74,38
82.516.4251	BT40	ER25	1-20	70	42	M16	82.825	82.960.2500	82.990.2500	€ 39,23
82.516.4252	BT40	ER25	1-20	100	42	M16	82.825	82.960.2500	82.990.2500	€ 49,22
82.516.4256	BT40	ER25	1-20	160	42	M16	82.825	82.960.2500	82.990.2500	€ 74,38
82.516.4321	BT40	ER32	2-20	70	50	M16	82.832	82.960.3200	82.990.3200	€ 41,20
82.516.4322	BT40	ER32	2-20	100	50	M16	82.832	82.960.3200	82.990.3200	€ 54,39
82.516.4326	BT40	ER32	2-20	160	50	M16	82.832	82.960.3200	82.990.3200	€ 76,36
82.516.4401	BT40	ER40	3-30	70	63	M16	82.840	82.960.4000	82.990.4000	€ 43,18
82.516.4402	BT40	ER40	3-30	100	63	M16	82.840	82.960.4000	82.990.4000	€ 55,27
82.516.4406	BT40	ER40	3-30	160	63	M16	82.840	82.960.4000	82.990.4000	€ 79,38
82.516.5162	BT50	ER16	1-12	100	32	M24	82816	82.960.1600	82.990.1600	€ 74,38
82.516.5166	BT50	ER16	1-12	160	32	M24	82816	82.960.1600	82.990.1600	€ 101,51
82.516.5251	BT50	ER25	1-20	80	42	M24	82.825	82.960.2500	82.990.2500	€ 61,32
82.516.5252	BT50	ER25	1-20	100	42	M24	82.825	82.960.2500	82.990.2500	€ 74,38
82.516.5256	BT50	ER25	1-20	160	42	M24	82.825	82.960.2500	82.990.2500	€ 101,51
82.516.5321	BT50	ER32	2-20	80	50	M24	82.832	82.960.3200	82.990.3200	€ 63,38
82.516.5322	BT50	ER32	2-20	100	50	M24	82.832	82.960.3200	82.990.3200	€ 88,41
82.516.5326	BT50	ER32	2-20	160	50	M24	82.832	82.960.3200	82.990.3200	€ 101,51
82.516.5401	BT50	ER40	3-30	80	63	M24	82.840	82.960.4000	82.990.4000	€ 63,38
82.516.5402	BT50	ER40	3-30	100	63	M24	82.840	82.960.4000	82.990.4000	€ 90,51
82.516.5406	BT50	ER40	3-30	160	63	M24	82.840	82.960.4000	82.990.4000	€ 104,54

> 82.517 Phantom

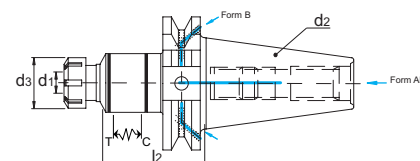
EN ER Collet Chuck, HSK-A according to DIN 69893



Ref.	d2	Type	Ø mm	l2	d3	1 excl.	2 incl.	3 excl.	4 excl.	5 excl.	6 excl.	€
82.517.6252	HSK63A	ER25	1-20	100	42	82.825	82.960.2500	82.990.2500	84.790.1800	84.791.1800	84.789.1800	€ 76,36
82.517.6256	HSK63A	ER25	1-20	160	42	82.825	82.960.2500	82.990.2500	84.790.1800	84.791.1800	84.789.1800	€ 101,51
82.517.6322	HSK63A	ER32	2-20	100	50	82.832	82.960.3200	82.990.3200	84.790.1800	84.791.1800	84.789.1800	€ 79,38
82.517.6326	HSK63A	ER32	2-20	160	50	82.832	82.960.3200	82.990.3200	84.790.1800	84.791.1800	84.789.1800	€ 103,53
82.517.6404	HSK63A	ER40	3-30	120	63	82.840	82.960.4000	82.990.4000	84.790.1800	84.791.1800	84.789.1800	€ 84,42
82.517.6406	HSK63A	ER40	3-30	160	63	82.840	82.960.4000	82.990.4000	84.790.1800	84.791.1800	84.789.1800	€ 108,53

> 81.684 Phantom

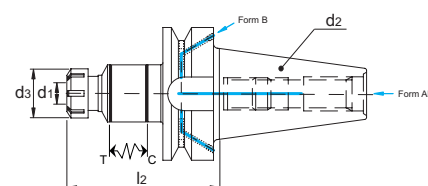
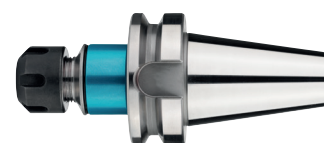
EN Synchro Tapping Holder SK according to DIN 69871-AD/B, for usage with ER collets (with square socket)



Ref.	d2	d1	Ø mm	l2	d3	T	C	1 excl.	€
81.684.4016	SK40	ER16	1-10	79	32	0.5	0.5	82.880	€ 305,76
81.684.4025	SK40	ER25	3,5-16	84	42	0.5	0.5	82.885	€ 344,40
81.684.5025	SK50	ER25	3,5-16	84	42	0.5	0.5	82.885	€ 400,68

> 81.686 Phantom

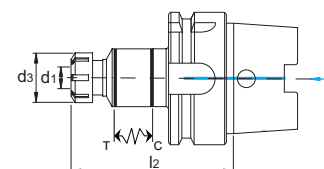
EN Synchro Tapping Holder according to MAS 403-BT AD/B, for usage with ER collets (with square socket)



Ref.	d2	d1	Ø mm	l2	d3	T	C	1 excl.	€
81.686.4016	BT40	ER16	1-10	79	32	0.5	0.5	82.880	€ 305,76
81.686.4025	BT40	ER25	3,5-16	89	42	0.5	0.5	82.885	€ 344,40
81.686.5025	BT50	ER25	3,5-16	110	42	0.5	0.5	82.885	€ 400,68

> 81.687 Phantom

EN Synchro Tapping Holder HSK-A according to DIN 69893, for usage with ER collets (with square socket)



Ref.	d2	d1	Ø mm	l2	d3	T	C	1 excl.	2 excl.	3 excl.	4 excl.	€
81.687.0631	HSK63A	ER16	1-10	89	32	0.5	0.5	82.880	84.790.1800	84.791.1800	84.789.1800	€ 433,44
81.687.0632	HSK63A	ER25	3,5-16	94	42	0.5	0.5	82.885	84.790.1800	84.791.1800	84.789.1800	€ 455,28
81.687.1002	HSK100A	ER25	3,5-16	101	42	0.5	0.5	82.885	84.790.1800	84.791.1800	84.789.1800	€ 530,04

> 89.250 Phantom

EN Set of Collets, standard quality, 15 µm



DIN
6499-B



Ref.	#	Type	Ø mm	€
89.250.1600	10	ER16	1-10	€ 126,63
89.250.2500	15	ER25	2-16	€ 185,22
89.250.3200	18	ER32	3-20	€ 218,40
89.250.4000	23	ER40	4-26	€ 383,88

> 89.252 Phantom

EN Set of Collets, Ultra precise, 5 µm



DIN
6499



Ref.	#	Type	Ø mm	€
89.252.1600	10	ER16	1-10	€ 241,08
89.252.2500	15	ER25	2-16	€ 319,20
89.252.3200	18	ER32	3-20	€ 364,56
89.252.4000	23	ER40	4-26	€ 548,52

> 89.260 Phantom

EN Set of Collets, rubber sealed, 8 µm



DIN
6499



40
BAR

Ref.	#	Type	Ø mm	€
89.260.1600	5	ER16	3,4,6,8,10	€ 191,78
89.260.2500	8	ER25	3,4,6,8,10,12,14,16	€ 273,00
89.260.3200	10	ER32	3,4,6,8,10,12,14,16,18,20	€ 336,00
89.260.4000	10	ER40	3,4,6,8,10,12,14,16,18,20	€ 460,32

> **89.262** **Phantom**

EN Set of Collets, steel sealed, 8 µm



DIN 6499 ER 0,008 120 BAR

Ref.	#	Type	Ø mm	€
89.262.1600	5	ER16	3,4,6,8,10	€ 198,74
89.262.2500	8	ER25	3,4,6,8,10,12,14,16	€ 306,60
89.262.3200	10	ER32	3,4,6,8,10,12,14,16,18,20	€ 371,28
89.262.4000	10	ER40	3,4,6,8,10,12,14,16,18,20	€ 481,32

> **89.264** **Phantom**

EN Set of Collets, Coolant Jet, 8 µm



DIN 6499 ER 0,008 40 BAR

Ref.	#	Type	Ø mm	€
89.264.1600	5	ER16	3,4,6,8,10	€ 225,96
89.264.2500	8	ER25	3,4,6,8,10,12,14,16	€ 348,60
89.264.3200	10	ER32	3,4,6,8,10,12,14,16,18,20	€ 437,64
89.264.4000	9	ER40	4,6,8,10,12,14,16,18,20	€ 515,76

TIGHTENING TORQUE TABLE

In order to ensure that the collet and chuck are maintained and operate properly, we advise application of the tightening torques shown below.

Shank	Collet nut	Shank dia.	Max. tightening torque [Nm]	Permissible transmitted torque [Nm] (With smallest shank size h6)	Max. rotational speed in rpm.
ER 11	M14 x 0.75	0.5 - 2.5	7	< 1.0	40000
		3.0 - 7.0	10	2.5 - 10.0	
ER 16	M22 x 1.50	0.5 - 1.0	10	< 1.0	40000
		1.5 - 3.5	25 - 30	1.0 - 3.0	
		4.0 - 10.0	50 - 55	10.0 - 55.0	
ER 20	M25 x 1.50	1.5 - 2.0	15	1.0 - 2.0	40000
		2.5 - 6.5	30 - 35	2.5 - 15.0	
		7.0 - 13.0	50 - 55	26.0 - 60.0	
ER 25	M32 x 1.50	1.0 - 3.0	25 - 30	1.0 - 3.0	35000
		3.5 - 6.5	35 - 40	4.0 - 15.0	
		7.0 - 16.0	55 - 60	38.0 - 130.0	
ER 25	M40 x 1.50	1.5 - 3.0	30 - 35	1.0 - 4.0	35000
		3.5 - 6.5	55 - 60	6.0 - 25.0	
		7.0 - 20.0	110 - 120	55.0 - 250.0	
ER 40	M50 x 1.50	2.0 - 7.0	60 - 70	3.0 - 25.0	25000
		8.0 - 11.0	100 - 110	35.0 - 50.0	
		12.0 - 26.0	140 - 150	85.0 - 250.0	

TIPS & TRICKS

BEFORE

- Check the collets for damage. Damaged collets will damage tools and chucks and will impair runout.
- Check the collets for rust. Rusty collets increase friction in the chuck - even after sanding clean - resulting in reduced clamping force.
- Make sure that the collets are clean and dry before use. Oil on the inside of the collet can impair tool clamping.
- Clean the tool shank thoroughly before inserting it into the collet.

DURING USE

- Insert the full clamping length - at least two thirds - of the tool into the collet.
- Never clamp the spiral part of the tool.
- Make sure that any Weldon shank is fully inserted into the collet.
- Make sure that the slots of the collet are not filled up. If so, the diameter of the collet will be too big for the selected tool.

- Make sure that the slots of the collet are evenly distributed. If not, the way that the tool has been clamped will not be centred. Find out the cause and reclamp.
- When tightening the nut manually, tap the chuck with a copper or plastic hammer. This will make the collet sit better, ensuring better run-out integration.

AFTER

- Clean and dry the collets after use.
- After cleaning, spray the collets with an anti-corrosion agent for a longer service life.

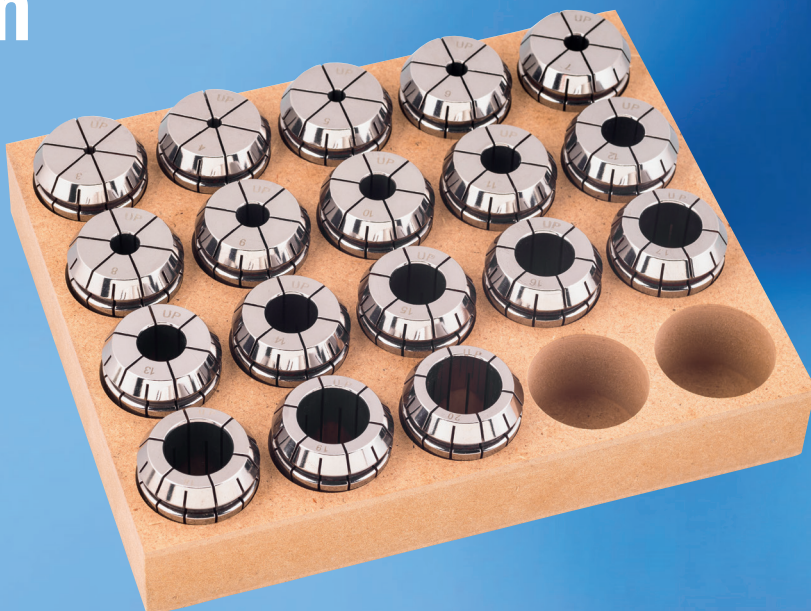
**For more advice, please contact
Phantom technical support
on +31 55 506 76 80**

Phantom

89.252.3200

SET OF ER 32 COLLETS, ULTRA PRECISE, 5 μ m

- > Set of 18: 3-20 mm
- > Filled with collets from article group 82.833



PROMOTIONAL PRICE:*

€ 364,56

€ 455,70

Phantom

YOUR DEALER:

ORDER PLACED BEFORE 19:00 VIA PHANTOM.EU WILL BE SHIPPED THE SAME DAY.

THERE'S NO END TO WHAT YOU CAN DO.

www.phantom.eu