CERTIFIED ISO 9001:2015 COMPANY

High Performance Live Center

NSR

NEWSERIM TECH CO., LTD

뉴세림테크 주식회사

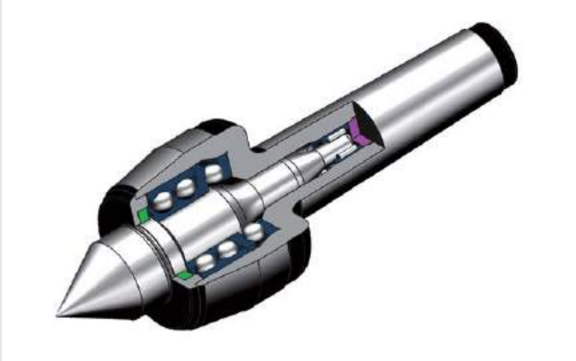
www.newserim.com

NO6.20201124

INDEX

SN Series

The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖



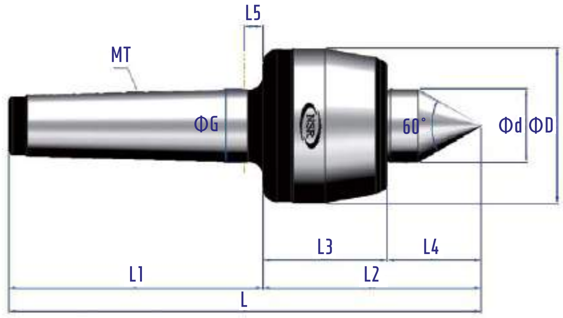
- 특수 OIL SEAL 채용 절삭유 및 이물질 침투방지
- 고정도 3중 베어링 구조를 채용하여 회전정밀도가 높고 수명이 길다.
- RUN OUT 0.003mm 이내

- Prevention the penetration of cutting oil and extraneous bodies by using the special oil seal
- High degree of accuracy of rotation and high durability by using the triplexed bearing structure as high degree of precision
- Run out - Max 0.003mm

- 采用特殊油封，有效防止切削液和粉尘进入
- 采用高精度三重轴承结构，回转精度高，寿命长
- 跳动公差为0.003mm以内

NSR-SN TYPE The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

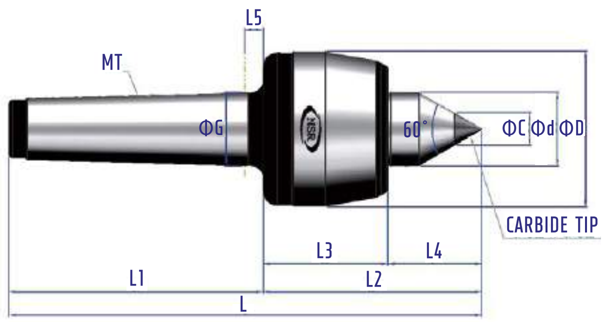
- 센터 축의 열처리 경도 HRC58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1001002	2SN	MT2	mm	49	25	140	68	72	42	30	6	500	5,000	0.003
			inch	1.93	0.98	5.51	2.68	2.83	1.65	1.18	0.24			
1001003	3SN	MT3	mm	49	25	157	85	72	42	30	6	500	5,000	0.003
			inch	1.93	0.98	6.18	3.35	2.83	1.65	1.18	0.24			
1001004	4SN	MT4	mm	66	31.4	201	108	93	53	40	8	800	3,800	0.003
			inch	2.6	1.24	7.91	4.25	3.66	2.09	1.57	0.31			
1001005	5SN	MT5	mm	83	40	251	136	115	65	50	8	2,000	3,000	0.003
			inch	3.27	1.57	9.88	5.35	4.53	2.56	1.97	0.31			
1001006	6SN	MT6	mm	105	50	324	189	135	75	60	10	3,500	2,800	0.003
			inch	4.13	1.97	12.76	7.44	5.31	2.95	2.36	0.39			

NSR-SNC TYPE The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1001012	2SNC	MT2	mm	49	25	140	68	72	42	30	6	10	500	5,000	0.003
			inch	1.93	0.98	5.51	2.68	2.83	1.65	1.18	0.24	0.39			
1001013	3SNC	MT3	mm	49	25	157	85	72	42	30	6	10	500	5,000	0.003
			inch	1.93	0.98	6.18	3.35	2.83	1.65	1.18	0.24	0.39			
1001014	4SNC	MT4	mm	66	31.4	201	108	93	53	40	8	14	800	3,800	0.003
			inch	2.6	1.24	7.91	4.25	3.66	2.09	1.57	0.31	0.55			
1001015	5SNC	MT5	mm	83	40	251	136	115	65	50	8	18	2,000	3,000	0.003
			inch	3.27	1.57	9.88	5.35	4.53	2.56	1.97	0.31	0.71			
1001016	6SNC	MT6	mm	105	50	324	189	135	75	60	10	30	3,500	2,800	0.003
			inch	4.13	1.97	12.76	7.44	5.31	2.95	2.36	0.39	1.18			

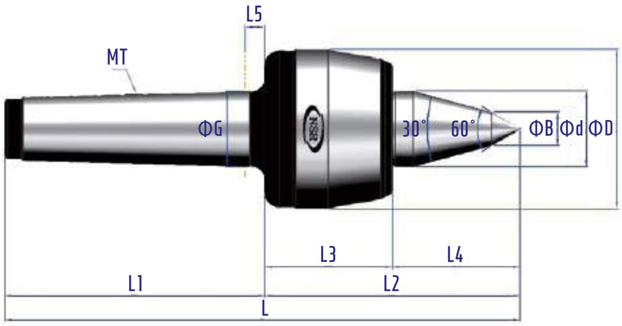
NSR-SNA TYPE

The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터 축의 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦB			
1001022	2SNA	MT2	mm	49	25	155	68	87	42	45	6	10	300	5,000	0.003
			inch	1.93	0.98	6.1	2.68	3.43	1.65	1.77	0.24	0.39			
1001023	3SNA	MT3	mm	49	25	172	85	87	42	45	6	10	300	5,000	0.003
			inch	1.93	0.98	6.77	3.35	3.43	1.65	1.77	0.24	0.39			
1001024	4SNA	MT4	mm	66	31.4	214	108	106	53	53	8	14	500	3,800	0.003
			inch	2.6	1.24	8.43	4.25	4.17	2.09	2.09	0.31	0.55			
1001025	5SNA	MT5	mm	83	40	266	136	130	65	65	8	16	1,500	3,000	0.003
			inch	3.27	1.57	10.47	5.35	5.12	2.56	2.56	0.31	0.63			
1001026	6SNA	MT6	mm	105	50	342	189	153	75	78	10	18	2,500	2,800	0.003
			inch	4.13	1.97	13.46	7.44	6.02	2.95	3.07	0.39	0.71			

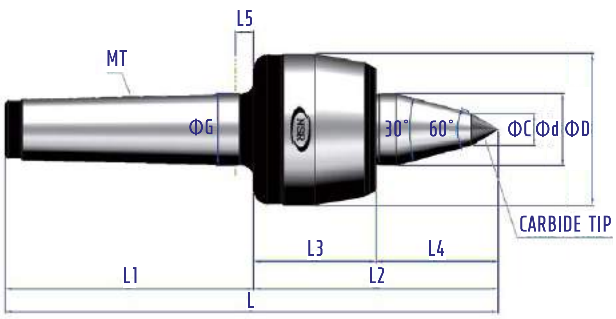
NSR-SNAC TYPE

The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Second step-angle application for minimize the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



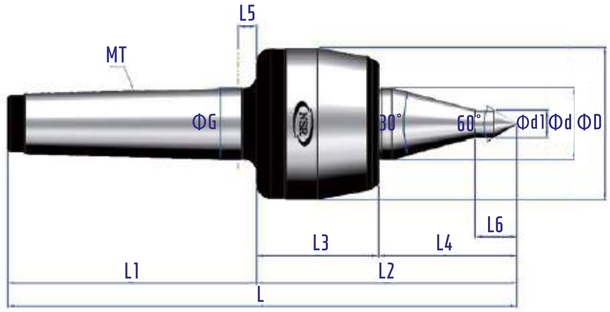
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1001032	2SNAC	MT2	mm	49	25	155	68	87	42	45	6	10	500	5,000	0.003
			inch	1.93	0.98	6.1	2.68	3.43	1.65	1.77	0.24	0.39			
1001033	3SNAC	MT3	mm	49	25	172	85	87	42	45	6	10	500	5,000	0.003
			inch	1.93	0.98	6.77	3.35	3.43	1.65	1.77	0.24	0.39			
1001034	4SNAC	MT4	mm	66	31.4	214	108	106	53	53	8	14	800	3,800	0.003
			inch	2.6	1.24	8.43	4.25	4.17	2.09	2.09	0.31	0.55			
1001035	5SNAC	MT5	mm	83	40	266	136	130	65	65	8	16	2,000	3,000	0.003
			inch	3.27	1.57	10.47	5.35	5.12	2.56	2.56	0.31	0.63			
1001036	6SNAC	MT6	mm	105	50	342	189	153	75	78	10	18	3,500	2,800	0.003
			inch	4.13	1.97	13.46	7.44	6.02	2.95	3.07	0.39	0.71			

NSR-SNAL TYPE
The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- 바이트 간섭을 가장 최소화함
- 센터 축의 열처리 경도 HRC 58~62

- Minimized the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 最大限度减少刀具干涉
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	Φd1			
1001042	2SNAL	MT2	mm	49	25	160	68	92	42	50	6	17	10	300	5,000	0.003
			inch	1.93	0.98	6.3	2.68	3.62	1.65	1.97	0.24	0.67	0.39			
1001043	3SNAL	MT3	mm	49	25	177	85	92	42	50	6	17	10	300	5,000	0.003
			inch	1.93	0.98	6.97	3.35	3.62	1.65	1.97	0.24	0.67	0.39			
1001044	4SNAL	MT4	mm	66	31.4	221	108	113	53	60	8	18	12	500	3,800	0.003
			inch	2.6	1.24	8.7	4.25	4.45	2.09	2.36	0.31	0.71	0.47			
1001045	5SNAL	MT5	mm	83	40	276	136	140	65	75	8	17.5	12	1,500	3,000	0.003
			inch	3.27	1.57	10.87	5.35	5.51	2.56	2.95	0.31	0.69	0.47			
1001046	6SNAL	MT6	mm	105	50	359	189	170	75	95	10	25	14	2,500	2,800	0.003
			inch	4.13	1.97	14.13	7.44	6.69	2.95	3.74	0.39	0.98	0.55			

NSR-SNALC TYPE
The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

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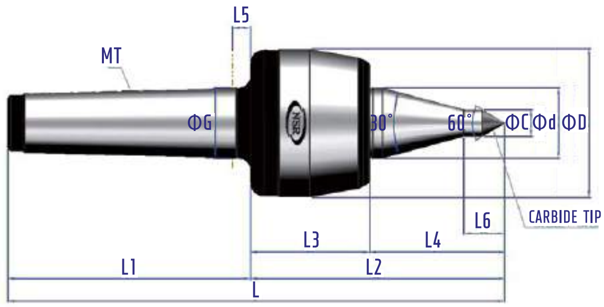
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Minimized the bite-interference
- Minimized the wear property by inserting tungsten admium alloy
  (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

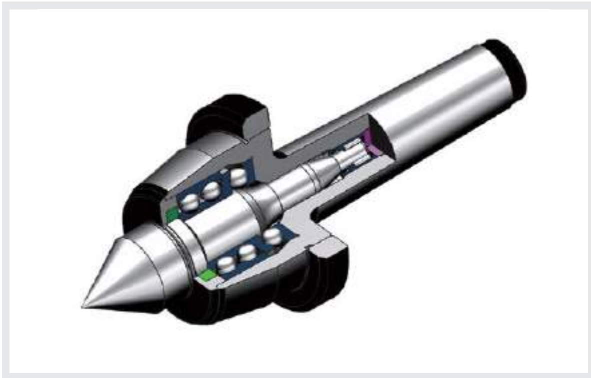
- 最大限度减少刀具干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	Φd1			
1001052	2SNALC	MT2	mm	49	25	160	68	92	42	50	6	17	10	300	5,000	0.003
			inch	1.93	0.98	6.3	2.68	3.62	1.65	1.97	0.24	0.67	0.39			
1001053	3SNALC	MT3	mm	49	25	177	85	92	42	50	6	17	10	300	5,000	0.003
			inch	1.93	0.98	6.97	3.35	3.62	1.65	1.97	0.24	0.67	0.39			
1001054	4SNALC	MT4	mm	66	31.4	221	108	113	53	60	8	18	12	500	3,800	0.003
			inch	2.6	1.24	8.7	4.25	4.45	2.09	2.36	0.31	0.71	0.47			
1001055	5SNALC	MT5	mm	83	40	276	136	140	65	75	8	17.5	12	1,500	3,000	0.003
			inch	3.27	1.57	10.87	5.35	5.51	2.56	2.95	0.31	0.69	0.47			
1001056	6SNALC	MT6	mm	105	50	359	189	170	75	95	10	25	14	2,500	2,800	0.003
			inch	4.13	1.97	14.13	7.44	6.69	2.95	3.74	0.39	0.98	0.55			

SNN Series

The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖



- 특수 OIL SEAL을 채용 절삭유 및 이물질 침투 방지
- 고정도 3중 베어링구조를 채용하여 회전정밀도가 높고 수명이 길다
- RUN OUT 0.003mm 이내

- Prevention the penetration of cutting oil and extraneous bodies by using the special oil seal
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NSR-SNN TYPE
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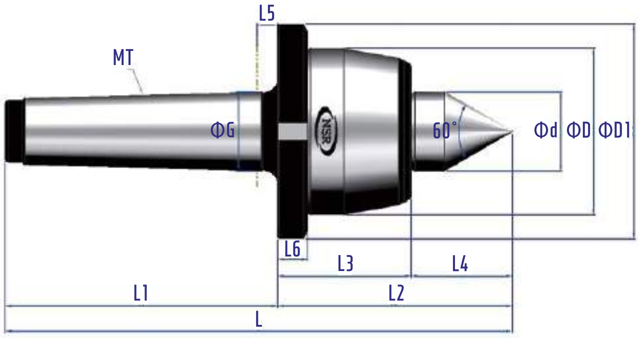
- NUT 부착용으로 착탈이 용이
- 센터 축의 열처리 경도 HRC 58~62

- Detachable by NUT attaching
- Heat treatment hardness of center axis, HRC 58~62

- 附螺母设计，易于拆卸
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	ΦD1	Φd	L	L1	L2	L3	L4	L5	L7			
1001062	2SNN	MT2	mm	49	65	25	140	68	72	42	30	6	10	500	5,000	0.003
			inch	1.93	2.56	0.98	5.51	2.68	2.83	1.65	1.18	0.24	0.39			
1001063	3SNN	MT3	mm	49	65	25	157	85	72	42	30	6	10	500	5,000	0.003
			inch	1.93	2.56	0.98	6.18	3.35	2.83	1.65	1.18	0.24	0.39			
1001064	4SNN	MT4	mm	66	85	31.4	201	108	93	53	40	8	12	800	3,800	0.003
			inch	2.6	3.35	1.24	7.91	4.25	3.66	2.09	1.57	0.31	0.47			
1001065	5SNN	MT5	mm	83	105	40	251	136	115	65	50	8	15	2,000	3,000	0.003
			inch	3.27	4.13	1.57	9.88	5.35	4.53	2.56	1.97	0.31	0.59			
1001066	6SNN	MT6	mm	105	125	50	324	189	135	75	60	10	17	3,500	2,800	0.003
			inch	4.13	4.92	1.97	12.76	7.44	5.31	2.95	2.36	0.39	0.67			

NSR-SNNC TYPE
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- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

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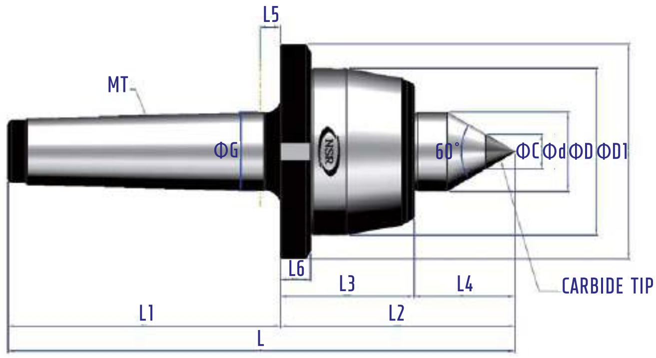

Model No	Model	Morse Taper	Unit	Dimension											MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	ΦD1	Φd	L	L1	L2	L3	L4	L5	L7	ΦC			
1001072	2SNNC	MT2	mm	49	65	25	140	68	72	42	30	6	10	10	500	5,000	0.003
			inch	1.93	2.56	0.98	5.51	2.68	2.83	1.65	1.18	0.24	0.39	0.39			
1001073	3SNNC	MT3	mm	49	65	25	157	85	72	42	30	6	10	10	500	5,000	0.003
			inch	1.93	2.56	0.98	6.18	3.35	2.83	1.65	1.18	0.24	0.39	0.39			
1001074	4SNNC	MT4	mm	66	85	31.4	201	108	93	53	40	8	12	14	800	3,800	0.003
			inch	2.6	3.35	1.24	7.91	4.25	3.66	2.09	1.57	0.31	0.47	0.55			
1001075	5SNNC	MT5	mm	83	105	40	251	136	115	65	50	8	15	18	2,000	3,000	0.003
			inch	3.27	4.13	1.57	9.88	5.35	4.53	2.56	1.97	0.31	0.59	0.71			
1001076	6SNNC	MT6	mm	105	125	50	324	189	135	75	60	10	17	30	3,500	2,800	0.003
			inch	4.13	4.92	1.97	12.76	7.44	5.31	2.95	2.36	0.39	0.67	1.18			

NSR-SNNA TYPE

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- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
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- Detachable by NUT attaching
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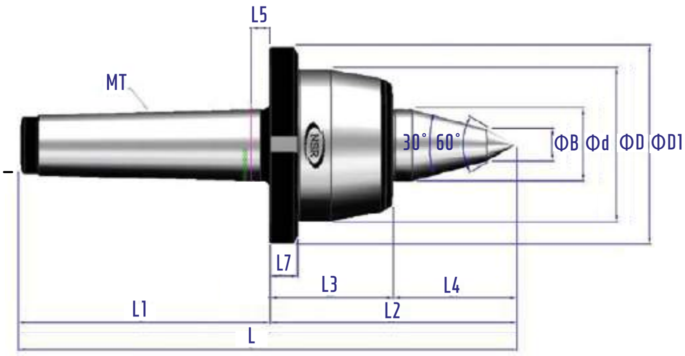
- 附螺母设计，易于拆卸
- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension											MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	ΦD1	Φd	L	L1	L2	L3	L4	L5	L7	ΦB			
1001082	2SNNA	MT2	mm	49	65	25	155	68	87	42	45	6	10	10	300	5,000	0.003
			inch	1.93	2.56	0.98	6.1	2.68	3.43	1.65	1.77	0.24	0.39	0.39			
1001083	3SNNA	MT3	mm	49	65	25	172	85	87	42	45	6	10	10	300	5,000	0.003
			inch	1.93	2.56	0.98	6.77	3.35	3.43	1.65	1.77	0.24	0.39	0.39			
1001084	4SNNA	MT4	mm	66	85	31.4	214	108	106	53	53	8	12	14	500	3,800	0.003
			inch	2.6	3.35	1.24	8.43	4.25	4.17	2.09	2.09	0.31	0.47	0.55			
1001085	5SNNA	MT5	mm	83	105	40	266	136	130	65	65	8	15	16	1,500	3,000	0.003
			inch	3.27	4.13	1.57	10.47	5.35	5.12	2.56	2.56	0.31	0.59	0.63			
1001086	6SNNA	MT6	mm	105	125	50	342	189	153	75	78	10	17	18	2,500	2,800	0.003
			inch	4.13	4.92	1.97	13.46	7.44	6.02	2.95	3.07	0.39	0.67	0.71			

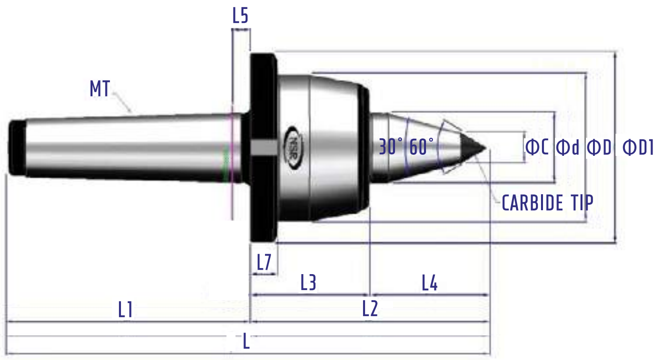
NSR-SNNAC TYPE

The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- NUT 부착용으로 착탈이 용이
- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Detachable by NUT attaching
- Second step-angle application for minimize the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 附螺母设计，易于拆卸
- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



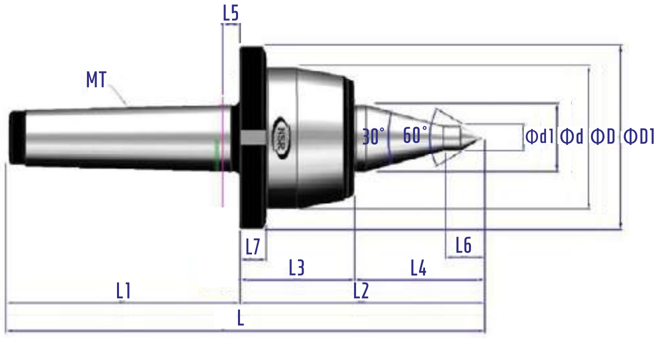
Model No	Model	Morse Taper	Unit	Dimension											MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	ΦD1	Φd	L	L1	L2	L3	L4	L5	L7	ΦC			
1001092	2SNNAC	MT2	mm	49	65	25	155	68	87	42	45	6	10	10	300	5,000	0.003
			inch	1.93	2.56	0.98	6.1	2.68	3.43	1.65	1.77	0.24	0.39	0.39			
1001093	3SNNAC	MT3	mm	49	65	25	172	85	87	42	45	6	10	10	300	5,000	0.003
			inch	1.93	2.56	0.98	6.77	3.35	3.43	1.65	1.77	0.24	0.39	0.39			
1001094	4SNNAC	MT4	mm	66	85	31.4	214	108	106	53	53	8	12	14	500	3,800	0.003
			inch	2.6	3.35	1.24	8.43	4.25	4.17	2.09	2.09	0.31	0.47	0.55			
1001095	5SNNAC	MT5	mm	83	105	40	266	136	130	65	65	8	15	16	1,500	3,000	0.003
			inch	3.27	4.13	1.57	10.47	5.35	5.12	2.56	2.56	0.31	0.59	0.63			
1001096	6SNNAC	MT6	mm	105	125	50	342	189	153	75	78	10	17	18	2,500	2,800	0.003
			inch	4.13	4.92	1.97	13.46	7.44	6.02	2.95	3.07	0.39	0.67	0.71			

NSR-SNNAL TYPE
The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- NUT 부착용으로 착탈이 용이
- 바이트 간섭을 가장 최소화함
- 센터 축의 열처리 경도 HRC 58~62

- Detachable by NUT attaching
- Minimized the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 附螺母设计，易于拆卸
- 最大限度减少刀具干涉
- 顶尖头的热处理硬度为 HRC 58-62



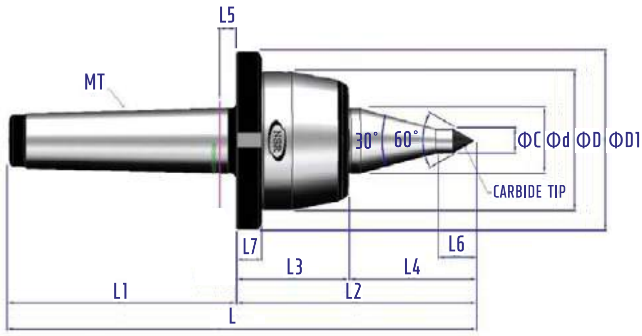
Model No	Model	Morse Taper	Unit	Dimension												MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	ΦD1	Φd	L	L1	L2	L3	L4	L5	L6	L7	Φd1			
1001102	2SNNAL	MT2	mm	49	65	25	160	68	92	42	50	6	17	10	10	300	5,000	0.003
			inch	1.93	2.56	0.98	6.3	2.68	3.62	1.65	1.97	0.24	0.67	0.39	0.39			
1001103	3SNNAL	MT3	mm	49	65	25	177	85	92	42	50	6	17	10	10	300	5,000	0.003
			inch	1.93	2.56	0.98	6.97	3.35	3.62	1.65	1.97	0.24	0.67	0.39	0.39			
1001104	4SNNAL	MT4	mm	66	85	31.4	221	108	113	53	60	8	18	12	12	500	3,800	0.003
			inch	2.6	3.35	1.24	8.7	4.25	4.45	2.09	2.36	0.31	0.71	0.47	0.47			
1001105	5SNNAL	MT5	mm	83	105	40	276	136	140	65	75	8	17.5	15	12	1,500	3,000	0.003
			inch	3.27	4.13	1.57	10.87	5.35	5.51	2.56	2.95	0.31	0.69	0.59	0.47			
1001106	6SNNAL	MT6	mm	105	125	50	359	189	170	75	95	10	25	17	14	2,500	2,800	0.003
			inch	4.13	4.92	1.97	14.13	7.44	6.69	2.95	3.74	0.39	0.98	0.67	0.55			

NSR-SNNALC TYPE
The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- NUT 부착용으로 착탈이 용이
- 바이트 간섭을 가장 최소화함
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Detachable by NUT attaching
- Minimized the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 附螺母设计，易于拆卸
- 最大限度减少刀具干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91

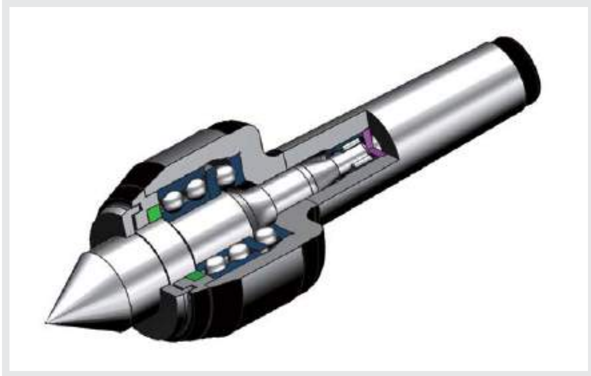


Model No	Model	Morse Taper	Unit	Dimension												MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	ΦD1	Φd	L	L1	L2	L3	L4	L5	L6	L7	ΦC			
1001112	2SNNALC	MT2	mm	49	65	25	160	68	92	42	50	6	17	10	10	300	5,000	0.003
			inch	1.93	2.56	0.98	6.3	2.68	3.62	1.65	1.97	0.24	0.67	0.39	0.39			
1001113	3SNNALC	MT3	mm	49	65	25	177	85	92	42	50	6	17	10	10	300	5,000	0.003
			inch	1.93	2.56	0.98	6.97	3.35	3.62	1.65	1.97	0.24	0.67	0.39	0.39			
1001114	4SNNALC	MT4	mm	66	85	31.4	221	108	113	53	60	8	18	12	12	500	3,800	0.003
			inch	2.6	3.35	1.24	8.7	4.25	4.45	2.09	2.36	0.31	0.71	0.47	0.47			
1001115	5SNNALC	MT5	mm	83	105	40	276	136	140	65	75	8	17.5	15	12	1,500	3,000	0.003
			inch	3.27	4.13	1.57	10.87	5.35	5.51	2.56	2.95	0.31	0.69	0.59	0.47			
1001116	6SNNALC	MT6	mm	105	125	50	359	189	170	75	95	10	25	17	14	2,500	2,800	0.003
			inch	4.13	4.92	1.97	14.13	7.44	6.69	2.95	3.74	0.39	0.98	0.67	0.55			

SW

SW Series

The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖



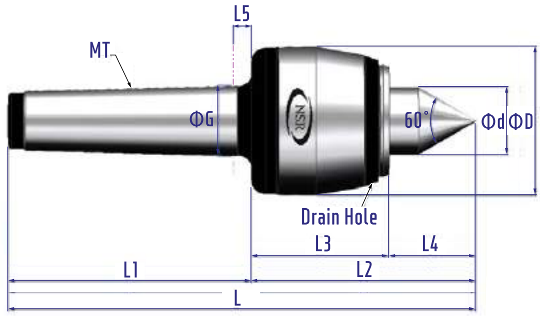
- 특수 OIL SEAL 에 비접촉실을 추가하여 절삭유 및 이물질 침투방지
- 고정도 3중 베어링 구조를 채용하여 회전정밀도가 높고 수명이 길다.
- RUN OUT 0.003mm 이내

- Add a contactless seal to prevent infiltration SPECIAL OIL SEAL to coolant and foreign matter
- High degree of accuracy of rotation and high durability by using the triplexed bearing structure as high degree of precision
- Run out - Max 0.003mm

- 采用特殊油封，有效防止切削液和异物质进入
- 采用高精度三重轴承结构，回转精度高，寿命长
- 跳动公差为0.003mm以内

NSR-SW TYPE The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

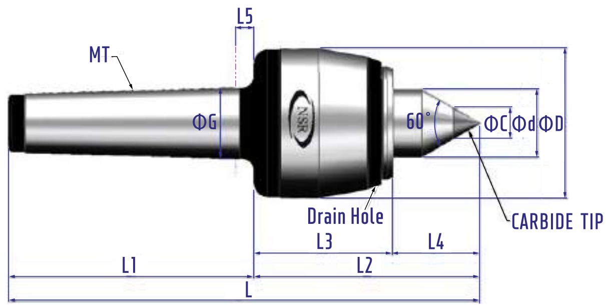
- 센터 축의 열처리 경도 HRC58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1011003	3SW	MT3	mm	49	24	165.5	85	80.5	51.5	29	6	500	5,000	0.003
			inch	1.93	0.94	6.52	3.35	3.17	2.03	1.14	0.24			
1011004	4SW	MT4	mm	66	30	207.5	108	99.5	61	38.5	8	800	3,800	0.003
			inch	2.6	1.18	8.17	4.25	3.92	2.4	1.52	0.31			
1011005	5SW	MT5	mm	83	39	259	136	123	73	50	8	2,000	3,000	0.003
			inch	3.27	1.54	10.2	5.35	4.84	2.87	1.97	0.31			
1011006	6SW	MT6	mm	105	49	330	189	141	81	60	10	3,500	2,800	0.003
			inch	4.13	1.93	12.99	7.44	5.55	3.19	2.36	0.39			

NSR-SWC TYPE The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



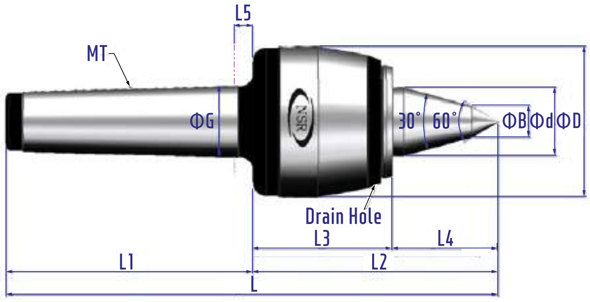
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1011013	3SWC	MT3	mm	49	24	165.5	85	80.5	51.5	29	6	10	500	5,000	0.003
			inch	1.93	0.94	6.52	3.35	3.17	2.03	1.14	0.24	0.39			
1011014	4SWC	MT4	mm	66	30	207.5	108	99.5	61	38.5	8	14	800	3,800	0.003
			inch	2.6	1.18	8.17	4.25	3.92	2.4	1.52	0.31	0.55			
1011015	5SWC	MT5	mm	83	39	259	136	123	73	50	8	18	2,000	3,000	0.003
			inch	3.27	1.54	10.2	5.35	4.84	2.87	1.97	0.31	0.71			
1011016	6SWC	MT6	mm	105	49	330	189	141	81	60	10	30	3,500	2,800	0.003
			inch	4.13	1.93	12.99	7.44	5.55	3.19	2.36	0.39	1.18			

NSR-SWA TYPE
The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터 축의 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头的热处理硬度为 HRC 58-62

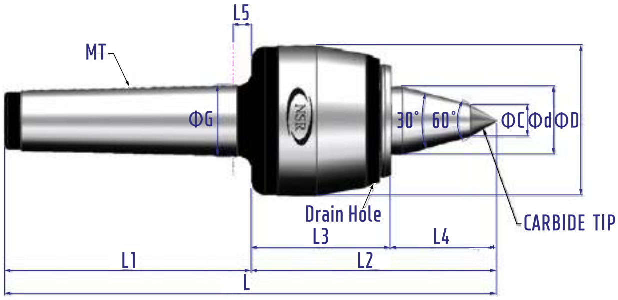


Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦB			
1011023	3SWA	MT3	mm	49	24	176.5	85	91.5	51.5	40	6	10	300	5,000	0.003
			inch	1.93	0.94	6.95	3.35	3.6	2.03	1.57	0.24	0.39			
1011024	4SWA	MT4	mm	66	30	215.5	108	107.5	61	46.5	8	14	500	3,800	0.003
			inch	2.6	1.18	8.48	4.25	4.23	2.4	1.83	0.31	0.55			
1011025	5SWA	MT5	mm	83	39	267.3	136	131.3	73	58.3	8	18	1,500	3,000	0.003
			inch	3.27	1.54	10.52	5.35	5.17	2.87	2.3	0.31	0.71			
1011026	6SWA	MT6	mm	105	49	348	189	159	81	78	10	18	2,500	2,800	0.003
			inch	4.13	1.93	13.7	7.44	6.26	3.19	3.07	0.39	0.71			

NSR-SWAC TYPE
The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Second step-angle application for minimize the bite-interference
- Minimized the wear property by inserting tungsten admium alloy
(= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91



- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91

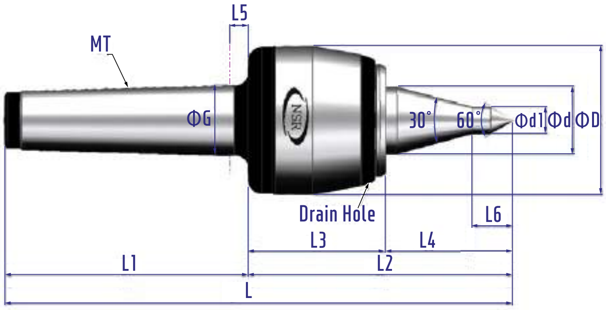
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1011033	3SWAC	MT3	mm	49	24	176.5	85	91.5	51.5	40	6	10	300	5,000	0.003
			inch	1.93	0.94	6.95	3.35	3.6	2.03	1.57	0.24	0.39			
1011034	4SWAC	MT4	mm	66	30	215.5	108	107.5	61	46.5	8	14	500	3,800	0.003
			inch	2.6	1.18	8.48	4.25	4.23	2.4	1.83	0.31	0.55			
1011035	5SWAC	MT5	mm	83	39	267.3	136	131.3	73	58.3	8	18	1,500	3,000	0.003
			inch	3.27	1.54	10.52	5.35	5.17	2.87	2.3	0.31	0.71			
1011036	6SWAC	MT6	mm	105	49	348	189	159	81	78	10	18	2,500	2,800	0.003
			inch	4.13	1.93	13.7	7.44	6.26	3.19	3.07	0.39	0.71			

NSR-SWAL TYPE The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- 바이트 간섭을 가장 최소화함
- 센터 축의 열처리 경도 HRC 58~62

- Minimized the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 最大限度减少刀具干涉
- 顶尖头的热处理硬度为 HRC 58-62



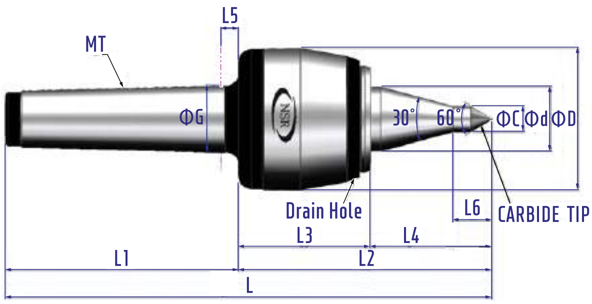
Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	Φd1			
1011043	3SWAL	MT3	mm	49	24	184.6	85	99.6	51.5	48.1	6	19	10	300	5,000	0.003
			inch	1.93	0.94	7.27	3.35	3.92	2.03	1.89	0.24	0.75	0.39			
1011044	4SWAL	MT4	mm	66	30	225.5	108	117.5	61	56.5	8	18	12	500	3,800	0.003
			inch	2.6	1.18	8.88	4.25	4.63	2.4	2.22	0.31	0.71	0.47			
1011045	5SWAL	MT5	mm	83	39	279.2	136	143.2	73	70.2	8	19.5	14	1,500	3,000	0.003
			inch	3.27	1.54	10.99	5.35	5.64	2.87	2.76	0.31	0.77	0.55			
1011046	6SWAL	MT6	mm	105	49	370	189	181	81	100	10	30	14	2,500	2,800	0.003
			inch	4.13	1.93	14.57	7.44	7.13	3.19	3.94	0.39	1.18	0.55			

NSR-SWALC TYPE The Rotation center for NC Machining | NC 공작기계용 회전센타 | NC车床旋转型顶尖

- 바이트 간섭을 가장 최소화함
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- To minimize the interference of bite
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 最大限度减少刀具干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	ΦC			
1011053	3SWALC	MT3	mm	49	24	184.6	85	99.6	51.5	48.1	6	19	10	300	5,000	0.003
			inch	1.93	0.94	7.27	3.35	3.92	2.03	1.89	0.24	0.75	0.39			
1011054	4SWALC	MT4	mm	66	30	225.5	108	117.5	61	56.5	8	18	12	500	3,800	0.003
			inch	2.6	1.18	8.88	4.25	4.63	2.4	2.22	0.31	0.71	0.47			
1011055	5SWALC	MT5	mm	83	39	279.2	136	143.2	73	70.2	8	19.5	14	1,500	3,000	0.003
			inch	3.27	1.54	10.99	5.35	5.64	2.87	2.76	0.31	0.77	0.55			
1011056	6SWALC	MT6	mm	105	49	370	189	181	81	100	10	30	14	2,500	2,800	0.003
			inch	4.13	1.93	14.57	7.44	7.13	3.19	3.94	0.39	1.18	0.55			

SNP Series

Points interchangeable rotating center | 포인트 교체형 회전 센터 | 中心点可换型旋转顶尖

NSR-SNP

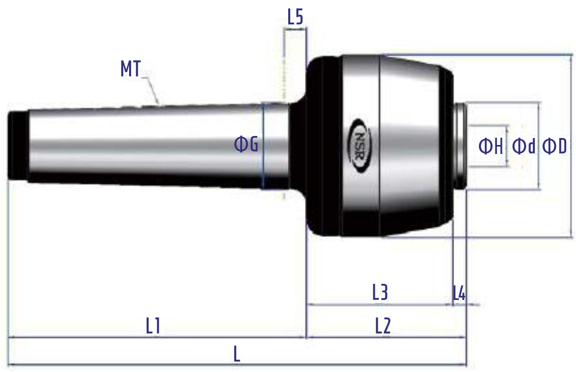
NSR-SNP TYPE Points interchangeable rotating center | 포인트 교체형 회전 센터 | 中心点可换型旋转顶尖

SNP-BODY

- 다양한 제품의 가공이 용이하게 포인트를 교체하여 사용할 수 있음
- 센터 축과 포인트 열처리 경도 HRC 58~62
- RUN OUT 0.003mm 이내
- 포인트 체결 RUN OUT 0.005 이내

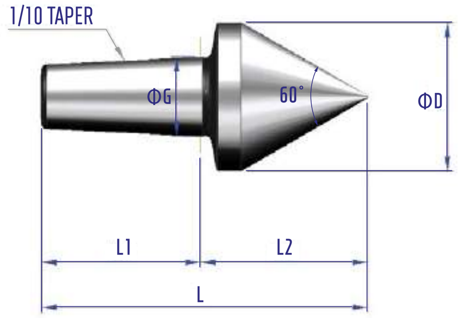
- High-speed precision bearing structure .
- Heat treatment hardness of center axis and point, HRC 58~62
- RUN OUT - Max 0.003mm
- Point clamping RUN OUT - Max 0.005

- 种类繁多的产品加工 以方便切换顶尖使用
- 中心轴点热处理硬度为 HRC 58-62
- 跳动精度0.003以内
- 点紧固件跳动精度0.005以内



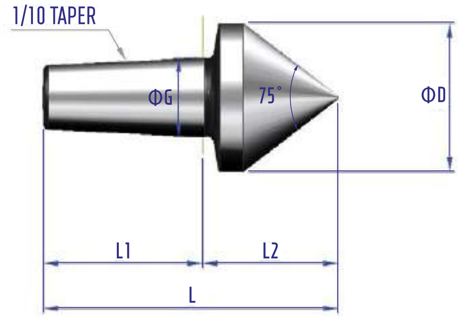
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦH			
1002012	2SNP BODY	MT2	mm	49	25	115	68	47	42	5	6	12	100	5,000	0.003
			inch	1.93	0.98	4.53	2.68	1.85	1.65	0.2	0.24	0.47			
1002013	3SNP BODY	MT3	mm	49	25	132	85	47	42	5	6	12	180	5,000	0.003
			inch	1.93	0.98	5.2	3.35	1.85	1.65	0.2	0.24	0.47			
1002014	4SNP BODY	MT4	mm	66	31.4	166	108	58	53	5	8	15	300	3,800	0.003
			inch	2.6	1.24	6.54	4.25	2.28	2.09	0.2	0.31	0.59			
1002015	5SNP BODY	MT5	mm	83	40	207.5	136	71.5	65	6.2	8	22	700	3,000	0.003
			inch	3.27	1.57	8.17	5.35	2.81	2.56	0.24	0.31	0.87			

SNP POINT 60



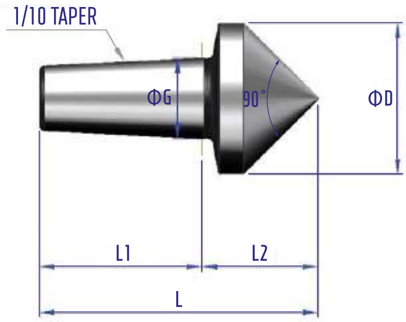
Model No	Model	Morse Taper	Unit	Dimension				
				ΦD	ΦG	L	L1	L2
1002012-1	2SNP POINT	1:10	mm	20	12	48	24	24
			inch	0.79	0.47	1.89	0.94	0.94
1002013-1	3SNP POINT	1:10	mm	20	12	48	24	24
			inch	0.79	0.47	1.89	0.94	0.94
1002014-1	4SNP POINT	1:10	mm	28	15	61.5	30	31.5
			inch	1.1	0.59	2.42	1.18	1.24
1002015-1	5SNP POINT	1:10	mm	28	22	78	35	43
			inch	1.1	0.87	3.07	1.38	1.69

SNP POINT 75



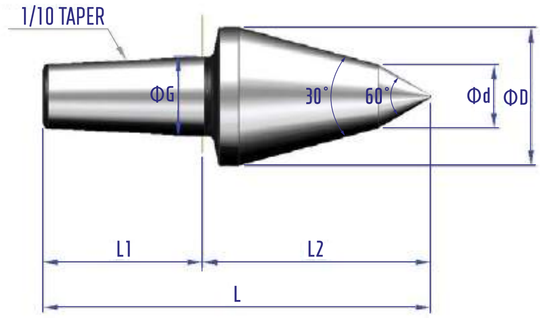
Model No	Model	Morse Taper	Unit	Dimension				
				ΦD	ΦG	L	L1	L2
1002012-2	2SNP POINT	1:10	mm	20	12	43.8	24	19.8
			inch	0.79	0.47	1.72	0.94	0.78
1002013-2	3SNP POINT	1:10	mm	20	12	43.8	24	19.8
			inch	0.79	0.47	1.72	0.94	0.78
1002014-2	4SNP POINT	1:10	mm	28	15	55.6	30	25.9
			inch	1.1	0.59	2.19	1.18	1.02
1002015-2	5SNP POINT	1:10	mm	28	22	70	35	35
			inch	1.1	0.87	2.76	1.38	1.38

SNP POINT 90



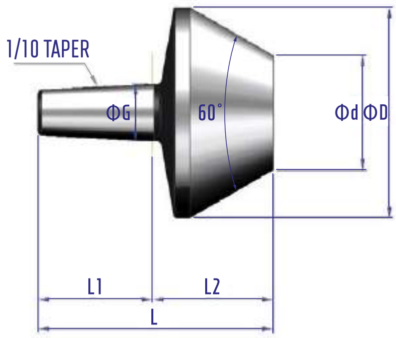
Model No	Model	Morse Taper	Unit	Dimension				
				ΦD	ΦG	L	L1	L2
1002012-3	2SNP POINT	1:10	mm	20	12	40.9	24	16.9
			inch	0.79	0.47	1.61	0.94	0.67
1002013-3	3SNP POINT	1:10	mm	20	12	40.9	24	16.9
			inch	0.79	0.47	1.61	0.94	0.67
1002014-3	4SNP POINT	1:10	mm	28	15	51.5	30	21.5
			inch	1.1	0.59	2.03	1.18	0.85
1002015-3	5SNP POINT	1:10	mm	28	22	64.3	35	29.3
			inch	1.1	0.87	2.53	1.38	1.15

SNP POINT A30



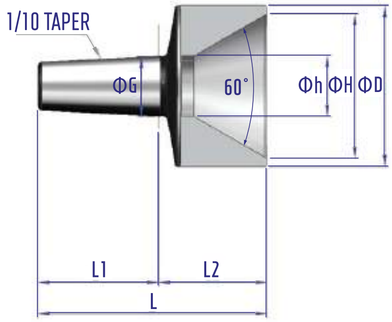
Model No	Model	Morse Taper	Unit	Dimension					
				ΦD	ΦG	L	L1	L2	Φd
1002012-4	2SNP POINT	1:10	mm	18	12	54	24	30	10
			inch	0.71	0.47	2.13	0.94	1.18	0.39
1002013-4	3SNP POINT	1:10	mm	18	12	54	24	30	10
			inch	0.71	0.47	2.13	0.94	1.18	0.39
1002014-4	4SNP POINT	1:10	mm	26	15	73	30	43	12
			inch	1.02	0.59	2.87	1.18	1.69	0.47
1002015-4	5SNP POINT	1:10	mm	32	22	90	35	55	14
			inch	1.26	0.87	3.54	1.38	2.17	0.55

SNP POINT B60



Model No	Model	Morse Taper	Unit	Dimension					
				ΦD	ΦG	L	L1	L2	Φd
1002012-5	2SNP POINT	1:10	mm	45	12	51	24	27	25
			inch	1.77	0.47	2.01	0.94	1.06	0.98
1002013-5	3SNP POINT	1:10	mm	45	12	51	24	27	25
			inch	1.77	0.47	2.01	0.94	1.06	0.98
1002014-5	4SNP POINT	1:10	mm	55	15	61.5	30	31.5	30
			inch	2.17	0.59	2.42	1.18	1.24	1.18
1002015-5	5SNP POINT	1:10	mm	70	22	73	35	38	40
			inch	2.76	0.87	2.87	1.38	1.5	1.57

SNP POINT H60



Model No	Model	Morse Taper	Unit	Dimension						
				ΦD	ΦG	L	L1	L2	ΦH	Φh
1002012-6	2SNP POINT	MT2	mm	22	12	40	24	16	18	6
			inch	0.87	0.47	1.57	0.94	0.63	0.71	0.24
1002013-6	3SNP POINT	MT3	mm	22	12	40	24	16	18	6
			inch	0.87	0.47	1.57	0.94	0.63	0.71	0.24
1002014-6	4SNP POINT	MT4	mm	40	15	57	30	27	36	15
			inch	1.57	0.59	2.24	1.18	1.06	1.42	0.59
1002015-6	5SNP POINT	MT5	mm	50	22	65	35	30	47	25
			inch	1.97	0.87	2.56	1.38	1.18	1.85	0.98

JIG

Model No	Model
1002013-7	2.3SNP JIG
1002014-7	4SNP JIG
1002015-7	5SNP JIG

CNP Series

Point replacement type (Small processing piece only)
포인트교체형(소형가공물전용) | 轴头部交替型（小型工件专用）

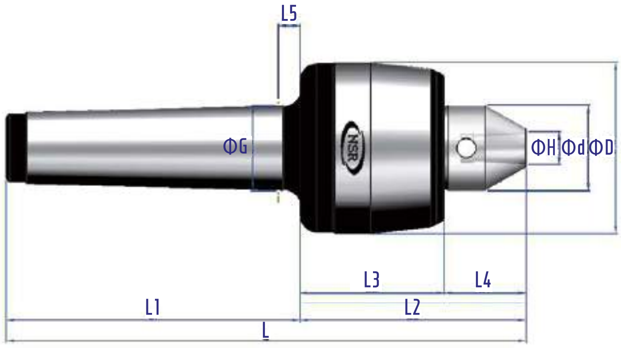
- 다양한 제품의 가공이 용이하게 포인트를 교체해서 사용할 수 있다.
- RUN OUT 0.003mm 이내
- 포인트 체결 RUN OUT 0.005mm이내

- Points can be replaced to facilitate machining of various products.
- Run out - Max 0.003mm
- Point Tightening RUN OUT - Max 0.005mm

- 方便多种场合的交替使用和拆卸。
- RUN OUT 0.003mm 以内
- 结合头部后 RUN OUT 0.005mm以内

NSR-CNP BODY TYPE

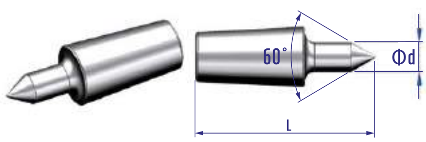
- 센타축의 열처리 경도 HRC 58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖轴的热处理硬度 HRC 58-62



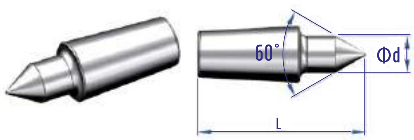
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦH		
1022013	3CNP BODY	MT3	mm	49	31.4	158.5	85	73.5	42	31.5	6	12	5,000	0.003
			inch	1.93	1.24	6.24	3.35	2.89	1.65	1.24	0.24	0.47		
1022014	4SNP BODY	MT4	mm	63	31.4	191	108	83	53	30	8	12	3,800	0.003
			inch	2.48	1.24	7.52	4.25	3.27	2.09	1.18	0.31	0.47		
1022015	5CNP BODY	MT5	mm	83	40	235	136	99	65	34	8	12	2,800	0.003
			inch	3.27	1.57	9.25	5.35	3.9	2.56	1.34	0.31	0.47		

NSR-CNP POINT (3,4,5 겸용)

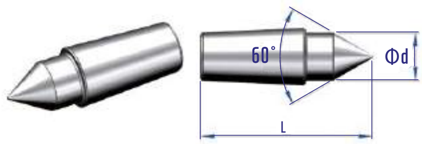
CNP-P06



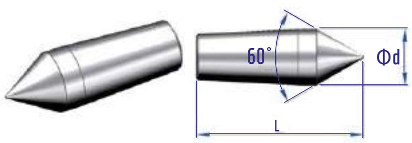
CNP-P08



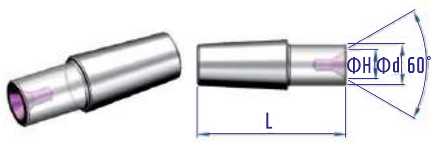
CNP-P10



CNP-P12



CNP-H60



CNP-B60

CNP-JIG

Model No	Model	Morse Taper	Unit	Dimension			
				Φd	ΦD	L	H
CNP P06	CNP POINT	1:10	mm	6	12.2	40	-
			inch	0.24	0.48	1.57	-
CNP P08	CNP POINT	1:10	mm	8	12.2	36	-
			inch	0.31	0.48	1.42	-
CNP P10	CNP POINT	1:10	mm	10	12.2	36	-
			inch	0.39	0.48	1.42	-
CNP P12	CNP POINT	1:10	mm	12	12.2	36	-
			inch	0.47	0.48	1.42	-
CNP H60	CNP POINT	1:10	mm	10	12.2	36	7
			inch	0.39	0.48	1.42	0.28
CNP B60	CNP POINT	1:10	mm	11	31.4	44.1	-
			inch	0.43	1.24	1.74	-

SH Series

General type for high speed rotation center | 고속회전용 일반타입 | 高速旋转用普通类型

NSR-SH
NSR-SHC
NSR-SHA
NSR-SHAC
NSR-SHAL
NSR-SHALC

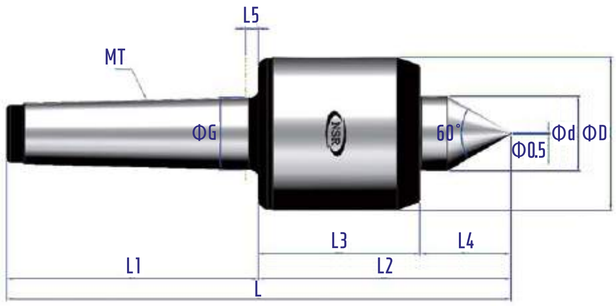
- 고속용베어링과 특수 오일실을 사용함
- 고속작업이 용이
- RUN OUT 0.002mm 이내

- Use high speed bearing and special oil seal
- Easy to work at high speed
- Run out - Max 0.002mm

- 使用高速轴承和特殊密封胶条
- 适用于高速加工
- RUN OUT 0.002mm 以内

NSR-SH TYPE

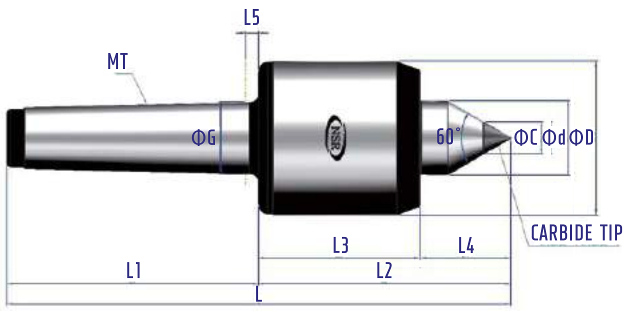
- 센터 축의 열처리 경도 HRC 58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖部热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1023003	3SH	MT3	mm	49	25	167.4	85	82.4	54.4	28	4.5	750	6,000	0.002
			inch	1.93	0.98	6.59	3.35	3.24	2.14	1.1	0.18			
1023004	4SH	MT4	mm	66	32	216.6	108	108.6	69.6	39	5.3	1,400	6,000	0.002
			inch	2.6	1.26	8.53	4.25	4.28	2.74	1.54	0.21			
1023005	5SH	MT5	mm	82	40	258.8	136	122.8	79.8	43	6.3	2,500	5,000	0.002
			inch	3.23	1.57	10.19	5.35	4.83	3.14	1.69	0.25			

NSR-SHC TYPE

- 센타부에 초경을 삽입하여 마모성 최소
- 초경 경도 HRA 90~91
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 心轴头部嵌入硬质合金，具备高耐磨度。
- 硬质合金硬度 HRA 90-91



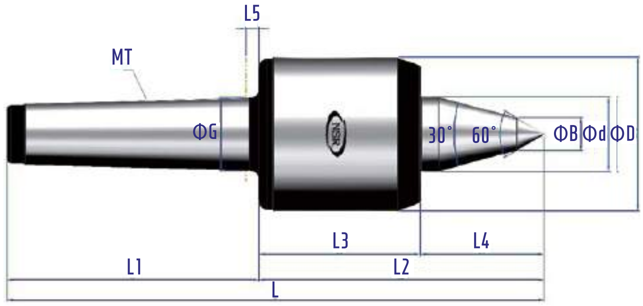
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1023013	3SHC	MT3	mm	49	25	167.4	85	82.4	54.4	28	4.5	10	750	6,000	0.002
			inch	1.93	0.98	6.59	3.35	3.24	2.14	1.1	0.18	0.39			
1023014	4SHC	MT4	mm	66	32	216.6	108	108.6	69.6	39	5.3	14	1,400	6,000	0.002
			inch	2.6	1.26	8.53	4.25	4.28	2.74	1.54	0.21	0.55			
1023015	5SHC	MT5	mm	82	40	258.8	136	122.8	79.8	43	6.3	18	2,500	5,000	0.002
			inch	3.23	1.57	10.19	5.35	4.83	3.14	1.69	0.25	0.71			

NSR-SHA TYPE

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센타축의 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 为了最小化工件的干涉，心轴做了2段角度
- 顶尖轴的热处理硬度 HRC 58-62



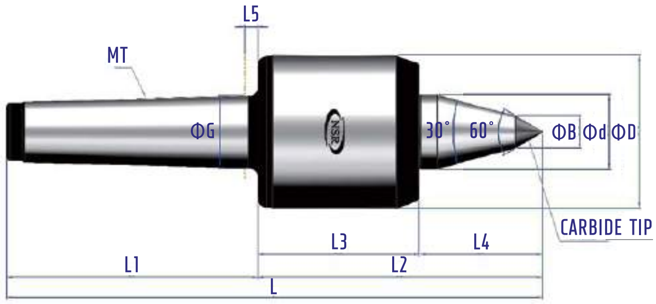
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦB			
1023023	3SHA	MT3	mm	49	25	177.4	85	92.4	54.4	38	4.5	12	600	6,000	0.002
			inch	1.93	0.98	6.98	3.35	3.64	2.14	1.5	0.18	0.47			
1023024	4SHA	MT4	mm	66	32	230.6	108	122.6	69.6	53	5.3	14	1,100	6,000	0.002
			inch	2.6	1.26	9.08	4.25	4.83	2.74	2.09	0.21	0.55			
1023025	5SHA	MT5	mm	82	40	279	136	143	79.8	63.2	6.3	16	2,000	5,000	0.002
			inch	3.23	1.57	10.98	5.35	5.63	3.14	2.49	0.25	0.63			

NSR-SHAC TYPE

- 바이트 간섭을 최소화 하기 위해 센타부에 2단각도 체택
- 센타부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Second step-angle application for minimize the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 为了最小化工件的干涉，心轴做了2段角度
- 心轴头部嵌入硬质合金，具备高耐磨度
- 硬质合金硬度 HRA 90-91



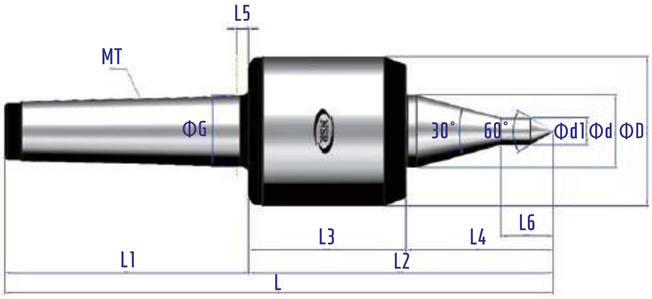
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1023033	3SHAC	MT3	mm	49	25	177.4	85	92.4	54.4	38	4.5	12	600	6,000	0.002
			inch	1.93	0.98	6.98	3.35	3.64	2.14	1.5	0.18	0.47			
1023034	4SHAC	MT4	mm	66	32	230.6	108	122.6	69.6	53	5.3	14	1,100	6,000	0.002
			inch	2.6	1.26	9.08	4.25	4.83	2.74	2.09	0.21	0.55			
1023035	5SHAC	MT5	mm	82	40	279	136	143	79.8	63.2	6.3	16	2,000	5,000	0.002
			inch	3.23	1.57	10.98	5.35	5.63	3.14	2.49	0.25	0.63			

NSR-SHAL TYPE

- 바이트간섭을 가장 최소화함
- 센타축의 열처리 경도 HRC 58~62

- Minimize byte intervention
- Heat treatment hardness of center axis, HRC 58~62

- 最小化了工件干涉
- 顶尖轴的热处理硬度 HRC 58-62



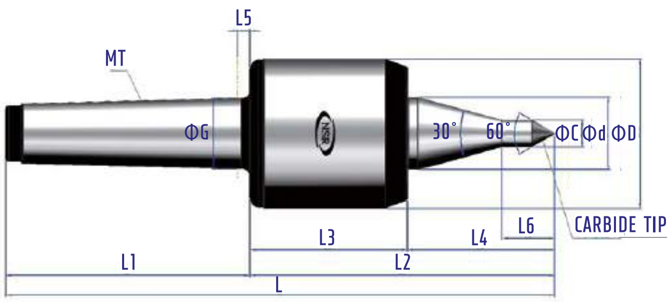
Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	Φd1			
1023043	3SHAL	MT3	mm	49	25	184.4	85	99.4	54.4	45	4.5	15	10	600	6,000	0.002
			inch	1.93	0.98	7.26	3.35	3.91	2.14	1.77	0.18	0.59	0.39			
1023044	4SHAL	MT4	mm	66	32	242.6	108	134.6	69.6	65	5.3	23	12	1,100	6,000	0.002
			inch	2.6	1.26	9.55	4.25	5.3	2.74	2.56	0.21	0.91	0.47			
1023045	5SHAL	MT5	mm	82	40	296.5	136	160.5	79.8	80.7	6.3	24	12	2,000	5,000	0.002
			inch	3.23	1.57	11.67	5.35	6.32	3.14	3.18	0.25	0.93	0.47			

NSR-SHALC TYPE

- 바이트간섭을 가장 최소화함
- 센타부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Minimize byte intervention
- The initial diameter is inserted in the center area to minimize wearability
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 最小化了工件干涉
- 心轴头部嵌入硬质合金，具备高耐磨度。
- 硬质合金硬度 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	ΦC			
1023053	3SHALC	MT3	mm	49	25	184.4	85	99.4	54.4	45	4.5	15	10	600	6,000	0.002
			inch	1.93	0.98	7.26	3.35	3.91	2.14	1.77	0.18	0.59	0.39			
1023054	4SHALC	MT4	mm	66	32	242.6	108	134.6	69.6	65	5.3	23	12	1,100	6,000	0.002
			inch	2.6	1.26	9.55	4.25	5.3	2.74	2.56	0.21	0.91	0.47			
1023055	5SHALC	MT5	mm	82	40	296.5	136	160.5	79.8	80.7	6.3	24	12	2,000	5,000	0.002
			inch	3.23	1.57	11.67	5.35	6.32	3.14	3.18	0.25	0.93	0.47			

SNH Series

For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

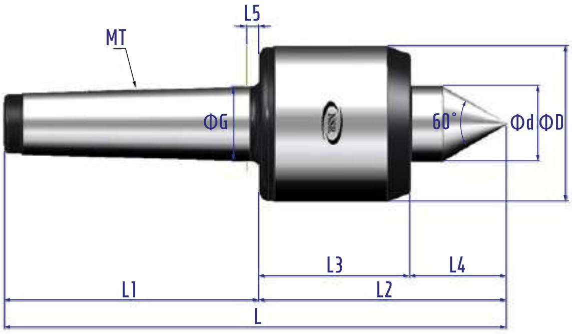
- 고속용 특수 정밀 베어링과 특수 오일실을 사용함
- 고속, 고정밀 작업이 용이
- RUN OUT 0.002mm 이내

- Using the Special-precision bearing for a high-speed and special oil seal
- High-speed, high-precision work easy.
- RUN OUT - Max 0.002mm

- 高速专用精密轴承和特殊油泵使用
- 适合高速精密加工使用
- 跳动精度0.002以内

NSR-SNH TYPE For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

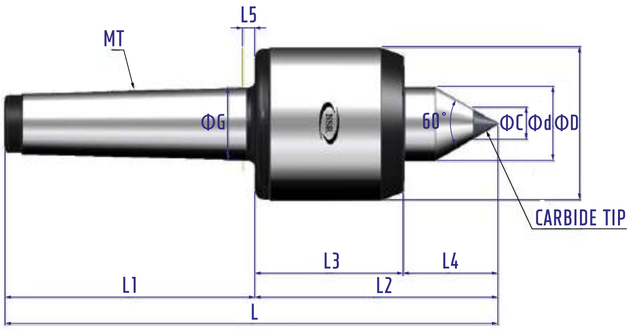
- 센터 축의 열처리 경도 HRC 58~62
- Heat treatment center shaft hardness HRC 58 ~ 62
- 顶尖轴热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1003003	3SNH	MT3	mm	49	25	162.5	85	77.5	49.5	28	4.5	750	6,000	0.002
			inch	1.93	0.98	6.4	3.35	3.05	1.95	1.1	0.18			
1003004	4SNH	MT4	mm	66	32	213	108	105	64	41	5.3	1,500	6,000	0.002
			inch	2.6	1.26	8.39	4.25	4.13	2.52	1.61	0.21			
1003005	5SNH	MT5	mm	82	40	251	136	115	72	43	6.3	2,500	5,000	0.002
			inch	3.23	1.57	9.88	5.35	4.53	2.83	1.69	0.25			

NSR-SNHC TYPE For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1003013	3SNHC	MT3	mm	49	25	162.5	85	77.5	49.5	28	4.5	10	750	6,000	0.002
			inch	1.93	0.98	6.4	3.35	3.05	1.95	1.1	0.18	0.39			
1003014	4SNHC	MT4	mm	66	32	213	108	105	64	41	5.3	14	1,500	6,000	0.002
			inch	2.6	1.26	8.39	4.25	4.13	2.52	1.61	0.21	0.55			
1003015	5SNHC	MT5	mm	82	40	251	136	115	72	43	6.3	18	2,500	5,000	0.002
			inch	3.23	1.57	9.88	5.35	4.53	2.83	1.69	0.25	0.71			

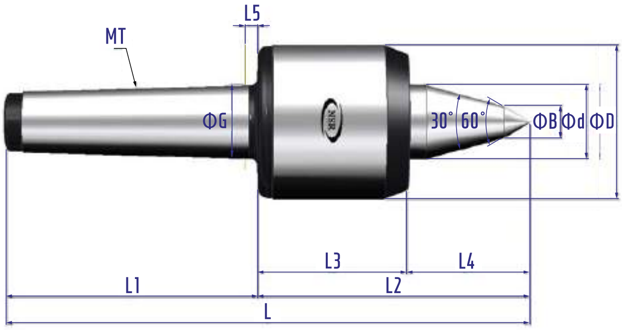
NSR-SNHA TYPE

For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터 축의 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center axis and point, HRC 58~62

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖轴热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦB			
1003023	3SNHA	MT3	mm	49	25	172.5	85	87.5	49.5	38	4.5	12	600	6,000	0.002
			inch	1.93	0.98	6.79	3.35	3.44	1.95	1.5	0.18	0.47			
1003024	4SNHA	MT4	mm	66	32	225	108	117	64	53	5.3	14	1,100	6,000	0.002
			inch	2.6	1.26	8.86	4.25	4.61	2.52	2.09	0.21	0.55			
1003025	5SNHA	MT5	mm	82	40	273	136	137	72	65	6.3	16	2,000	5,000	0.002
			inch	3.23	1.57	10.75	5.35	5.39	2.83	2.56	0.25	0.63			

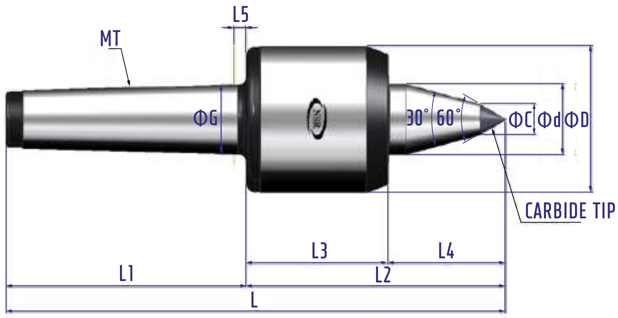
NSR-SNHAC TYPE

For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Second step-angle application for minimize the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1003033	3SNHAC	MT3	mm	49	25	172.5	85	87.5	49.5	38	4.5	12	600	6,000	0.002
			inch	1.93	0.98	6.79	3.35	3.44	1.95	1.5	0.18	0.47			
1003034	4SNHAC	MT4	mm	66	32	225	108	117	64	53	5.3	14	1,100	6,000	0.002
			inch	2.6	1.26	8.86	4.25	4.61	2.52	2.09	0.21	0.55			
1003035	5SNHAC	MT5	mm	82	40	273	136	137	72	65	6.3	16	2,000	5,000	0.002
			inch	3.23	1.57	10.75	5.35	5.39	2.83	2.56	0.25	0.63			

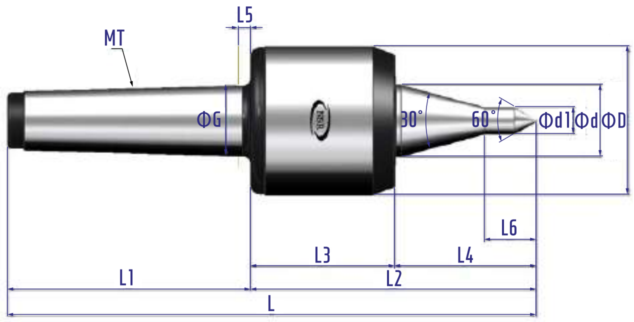
NSR-SNHAL TYPE

For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터 축의 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center axis and point, HRC 58~62

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖轴热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	Φd1			
1003043	3SNHAL	MT3	mm	49	25	183.5	85	98.5	49.5	49	4.5	19	10	500	6,000	0.002
			inch	1.93	0.98	7.22	3.35	3.88	1.95	1.93	0.18	0.75	0.39			
1003044	4SNHAL	MT4	mm	66	32	235	108	127	64	63	5.3	23	12	900	6,000	0.002
			inch	2.6	1.26	9.25	4.25	5	2.52	2.48	0.21	0.91	0.47			
1003045	5SNHAL	MT5	mm	82	40	288	136	152	72	80	6.3	23	12	1,700	5,000	0.002
			inch	3.23	1.57	11.34	5.35	5.98	2.83	3.15	0.25	0.91	0.47			

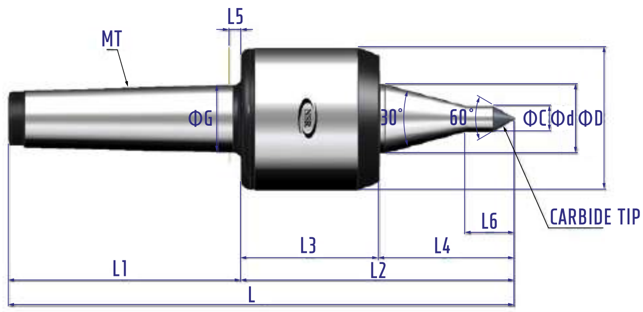
NSR-SNHALC TYPE

For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Second step-angle application for minimize the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	ΦC			
1003053	3SNHALC	MT3	mm	49	25	183.5	85	98.5	49.5	49	4.5	19	10	500	6,000	0.002
			inch	1.93	0.98	7.22	3.35	3.88	1.95	1.93	0.18	0.75	0.39			
1003054	4SNHALC	MT4	mm	66	32	235	108	127	64	63	5.3	23	12	900	6,000	0.002
			inch	2.6	1.26	9.25	4.25	5	2.52	2.48	0.21	0.91	0.47			
1003055	5SNHALC	MT5	mm	82	40	288	136	152	72	80	6.3	23	12	1,700	5,000	0.002
			inch	3.23	1.57	11.34	5.35	5.98	2.83	3.15	0.25	0.91	0.47			

SSH Series

For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

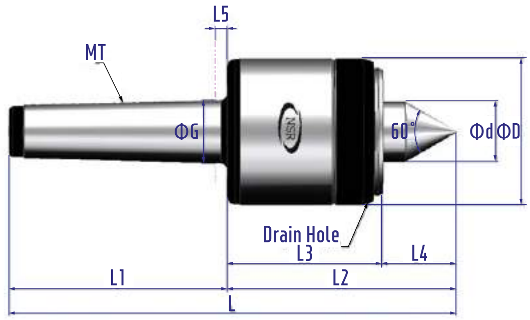
- 초고속 정밀 베어링 구조
- 비접촉 오일실을 사용하여 발열방지, 절삭유 및 이물질 침투 방지
- 초고속 정밀 작업에 용이
- RUN OUT 0.002mm 이내

- High-speed precision bearing structure .
- Using the non-contact oil seal to prevent heat-resistant, coolant and foreign matter ingress.
- It facilitates high-speed precision work.
- Run out - Max 0.002mm

- 超高速精密轴承构造
- 非接触式油泵使用，防止发热，防止切削油及异物质侵入
- 适合加工使用超高速精密
- 跳动公差为0.002mm以内

NSR-SSH TYPE For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

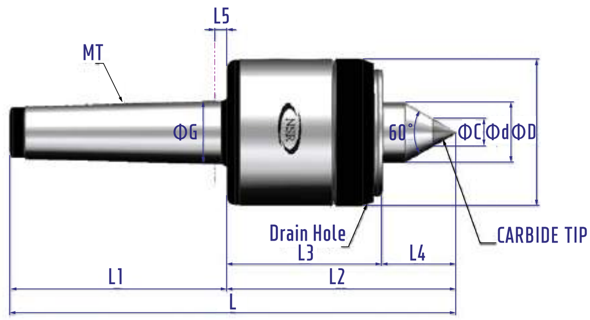
- 센터 축의 열처리 경도 HRC 58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1012002	2SSH	MT2	mm	49	20	149	68	81	55.5	25.5	4.5	350	15,000	0.002
			inch	1.93	0.79	5.87	2.68	3.19	2.19	1	0.18			
1012003	3SSH	MT3	mm	49	20	166	85	81	55.5	25.5	4.5	350	15,000	0.002
			inch	1.93	0.79	6.54	3.35	3.19	2.19	1	0.18			
1012004	4SSH	MT4	mm	73	30	222	108	114	77	37	6	650	12,000	0.002
			inch	2.87	1.18	8.74	4.25	4.49	3.03	1.46	0.24			
1012005	5SSH	MT5	mm	73	30	250	136	114	77	37	6	650	12,000	0.002
			inch	2.87	1.18	9.84	5.35	4.49	3.03	1.46	0.24			

NSR-SSHC TYPE For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- 센터부에 초경을 삽입하여 마모성 최소
- 초경 경도 HRA 90~91
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度 HRA 90-91



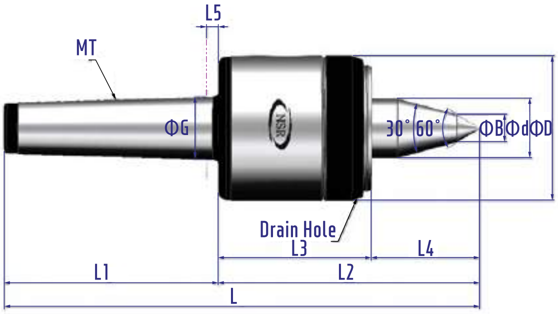
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1012012	2SSHC	MT2	mm	49	20	149	68	81	55.5	25.5	4.5	10	350	15,000	0.002
			inch	1.93	0.79	5.87	2.68	3.19	2.19	1	0.18	0.39			
1012013	3SSHC	MT3	mm	49	20	166	85	81	55.5	25.5	4.5	10	350	15,000	0.002
			inch	1.93	0.79	6.54	3.35	3.19	2.19	1	0.18	0.39			
1012014	4SSHC	MT4	mm	73	30	222	108	114	77	37	6	14	650	12,000	0.002
			inch	2.87	1.18	8.74	4.25	4.49	3.03	1.46	0.24	0.55			
1012015	5SSHC	MT5	mm	73	30	250	136	114	77	37	6	18	650	12,000	0.002
			inch	2.87	1.18	9.84	5.35	4.49	3.03	1.46	0.24	0.71			

NSR-SSHA TYPE For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터 축의 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头的热处理硬度为 HRC 58-62

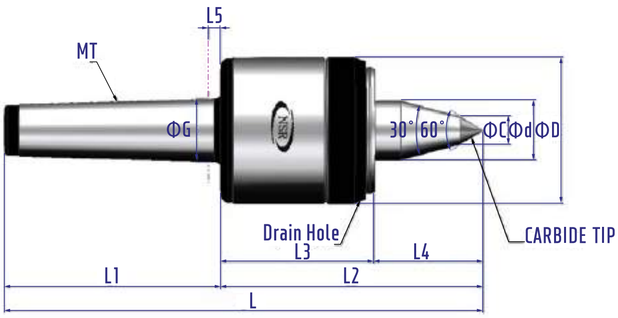


Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦB			
1012022	2SSHA	MT2	mm	49	20	155.5	68	87.5	55.5	32	4.5	10	280	15,000	0.002
			inch	1.93	0.79	6.12	2.68	3.44	2.19	1.26	0.18	0.39			
1012023	3SSHA	MT3	mm	49	20	172.5	85	87.5	55.5	32	4.5	10	280	15,000	0.002
			inch	1.93	0.79	6.79	3.35	3.44	2.19	1.26	0.18	0.39			
1012024	4SSHA	MT4	mm	73	30	236	108	128	77	51	6	14	450	12,000	0.002
			inch	2.87	1.18	9.29	4.25	5.04	3.03	2.01	0.24	0.55			
1012025	5SSHA	MT5	mm	73	30	264	136	128	77	51	6	16	450	12,000	0.002
			inch	2.87	1.18	10.39	5.35	5.04	3.03	2.01	0.24	0.63			

NSR-SSHAC TYPE For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Second step-angle application for minimize the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91



- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91

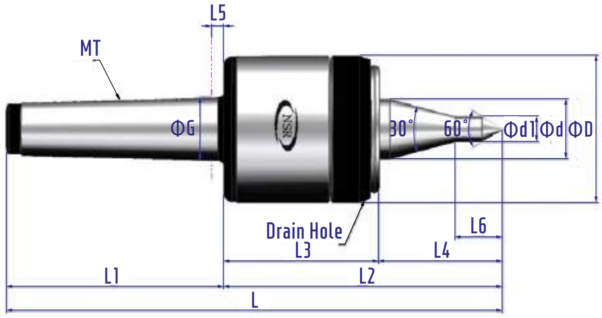
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1012032	2SSHAC	MT2	mm	49	20	155.5	68	87.5	55.5	32	4.5	10	280	15,000	0.002
			inch	1.93	0.79	6.12	2.68	3.44	2.19	1.26	0.18	0.39			
1012033	3SSHAC	MT3	mm	49	20	172.5	85	87.5	55.5	32	4.5	10	280	15,000	0.002
			inch	1.93	0.79	6.79	3.35	3.44	2.19	1.26	0.18	0.39			
1012034	4SSHAC	MT4	mm	73	30	236	108	128	77	51	6	14	450	12,000	0.002
			inch	2.87	1.18	9.29	4.25	5.04	3.03	2.01	0.24	0.55			
1012035	5SSHAC	MT5	mm	73	30	264	136	128	77	51	6	16	450	12,000	0.002
			inch	2.87	1.18	10.39	5.35	5.04	3.03	2.01	0.24	0.63			

NSR-SSHAL TYPE For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- 바이트 간섭을 가장 최소화함
- 센터 축의 열처리 경도 HRC 58~62

- Minimized the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 最大限度减少刀具干涉
- 顶尖头的热处理硬度为 HRC 58-62



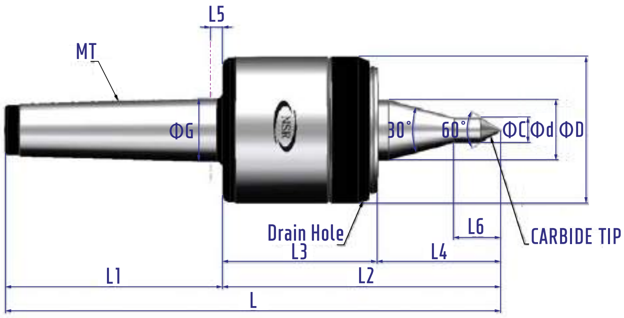
Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	Φd1			
1012042	2SSHAL	MT2	mm	49	20	166.5	68	98.5	55.5	43	4.5	19	10	250	15,000	0.002
			inch	1.93	0.79	6.56	2.68	3.88	2.19	1.69	0.18	0.75	0.39			
1012043	3SSHAL	MT3	mm	49	20	183.5	85	98.5	55.5	43	4.5	19	10	250	15,000	0.002
			inch	1.93	0.79	7.22	3.35	3.88	2.19	1.69	0.18	0.75	0.39			
1012044	4SSHAL	MT4	mm	73	30	246.5	108	138.5	77	61.5	6	23.5	12.5	390	12,000	0.002
			inch	2.87	1.18	9.7	4.25	5.45	3.03	2.42	0.24	0.93	0.49			
1012045	5SSHAL	MT5	mm	73	30	274.5	136	138.5	77	61.5	6	23.5	12.5	390	12,000	0.002
			inch	2.87	1.18	10.81	5.35	5.45	3.03	2.42	0.24	0.93	0.49			

NSR-SSHALC TYPE For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- 바이트 간섭을 가장 최소화함
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Minimized the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

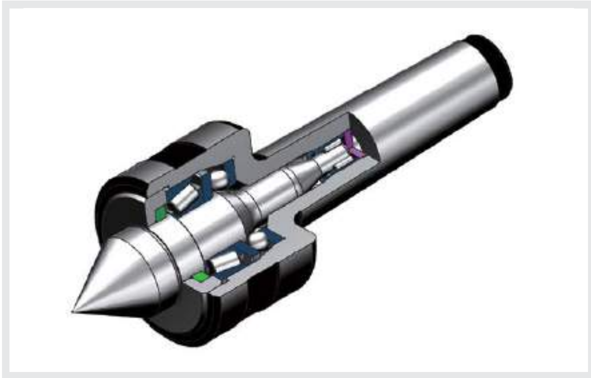
- 最大限度减少刀具干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	ΦC			
1012052	2SSHALC	MT2	mm	49	20	166.5	68	98.5	55.5	43	4.5	19	10	250	15,000	0.002
			inch	1.93	0.79	6.56	2.68	3.88	2.19	1.69	0.18	0.75	0.39			
1012053	3SSHALC	MT3	mm	49	20	183.5	85	98.5	55.5	43	4.5	19	10	250	15,000	0.002
			inch	1.93	0.79	7.22	3.35	3.88	2.19	1.69	0.18	0.75	0.39			
1012054	4SSHALC	MT4	mm	73	30	246.5	108	138.5	77	61.5	6	23.5	12.5	390	12,000	0.002
			inch	2.87	1.18	9.7	4.25	5.45	3.03	2.42	0.24	0.93	0.49			
1012055	5SSHALC	MT5	mm	73	30	274.5	136	138.5	77	61.5	6	23.5	12.5	390	12,000	0.002
			inch	2.87	1.18	10.81	5.35	5.45	3.03	2.42	0.24	0.93	0.49			

TH Series

Suitable to high-speed cutting | 고속 중절삭에 적합 | 适合高速重切削符合



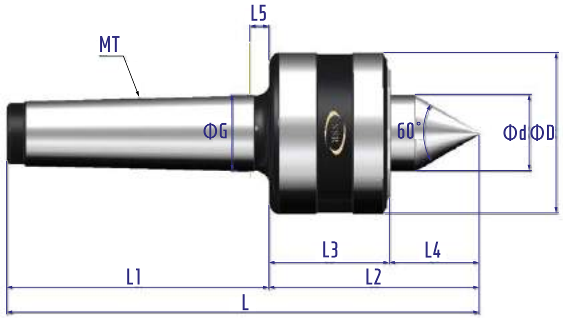
- 센터축의 흔들림을 NUT로 조절해 사용할 수 있음
- RUN OUT 0.003mm 이내

- Adjustable to wobble of center axis by nut
- RUN OUT - Max 0.003mm

- 顶尖轴的跳动用来螺帽可调使用
- 跳动精度0.003以内

NSR-TH TYPE Suitable to high-speed cutting | 고속 중절삭에 적합 | 适合高速重切削符合

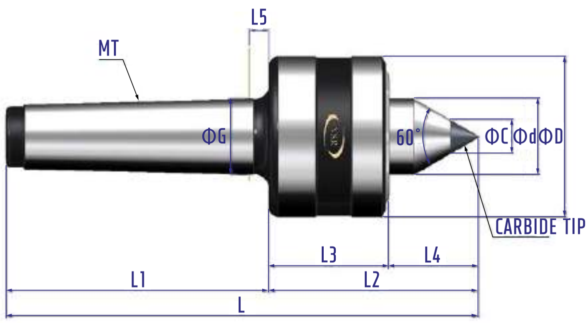
- 센터 축의 열처리 경도 HRC 58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖轴热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1006003	3TH	MT3	mm	49	25	154	85	69	43	26	6	500	4,000	0.003
			inch	1.93	0.98	6.06	3.35	2.72	1.69	1.02	0.24			
1006004	4TH	MT4	mm	66	31.4	194.5	108	86.5	49.5	37	8	1,000	3,000	0.003
			inch	2.6	1.24	7.66	4.25	3.41	1.95	1.46	0.31			
1006005	5TH	MT5	mm	81	40	242	136	106	61	45	8	2,000	2,500	0.003
			inch	3.19	1.57	9.53	5.35	4.17	2.4	1.77	0.31			
1006005G	5THG	MT5	mm	93	40	250	136	114	71	43	8	2,500	2,000	0.003
			inch	3.66	1.57	9.84	5.35	4.49	2.8	1.69	0.31			
1006006	6TH	MT6	mm	126	60	334.2	189	145.2	85.2	60	10	4,500	1,000	0.003
			inch	4.96	2.36	13.16	7.44	5.72	3.35	2.36	0.39			

NSR-THC TYPE Suitable to high-speed cutting | 고속 중절삭에 적합 | 适合高速重切削符合

- 센터부에 초경을 삽입하여 마모성 최소화
- 초경경도 HRA 90~91
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度 HRA 90-91

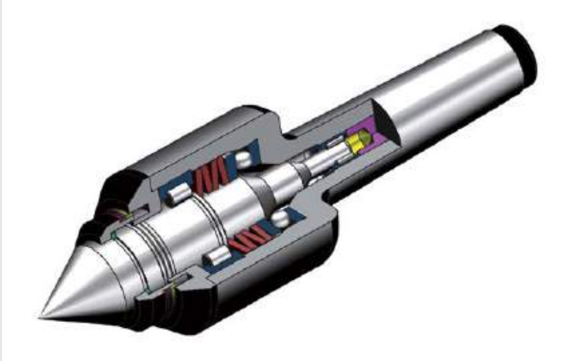


Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1006013	3THC	MT3	mm	49	25	154	85	69	43	26	6	10	500	4,000	0.003
			inch	1.93	0.98	6.06	3.35	2.72	1.69	1.02	0.24	0.39			
1006014	4THC	MT4	mm	66	31.4	194.5	108	86.5	49.5	37	8	14	1,000	3,000	0.003
			inch	2.6	1.24	7.66	4.25	3.41	1.95	1.46	0.31	0.55			
1006015	5THC	MT5	mm	81	40	242	136	106	61	45	8	18	2,000	2,500	0.003
			inch	3.19	1.57	9.53	5.35	4.17	2.4	1.77	0.31	0.71			
1006015G	5THGC	MT5	mm	93	40	250	136	114	71	43	8	18	2,500	2,000	0.003
			inch	3.66	1.57	9.84	5.35	4.49	2.8	1.69	0.31	0.71			
1006016	6THC	MT6	mm	126	60	334.2	189	145.2	85.2	60	10	30	4,500	1,000	0.003
			inch	4.96	2.36	13.16	7.44	5.72	3.35	2.36	0.39	1.18			

SR Series

Cardiometer pressure display | 심압대 압력 표시형 | 可表示尾座压力

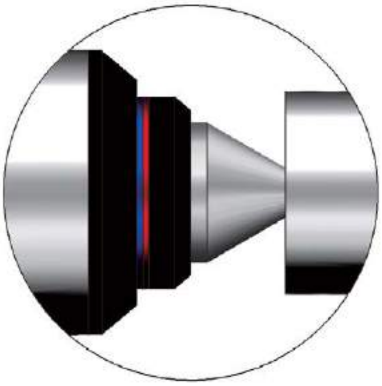
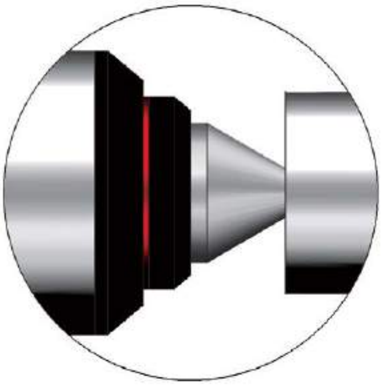
NSR-SR
NSR-SRC
NSR-SRA
NSR-SRAC
NSR-SRAL
NSR-SRALC



- 공작물의 지지력을 쉽게 알수 있다.
- FACE DRIVER와 함께 사용하면 계속적인 충격에 의한 스핀들 베어링 마모를 최소화 할 수 있다
- RUN OUT 0.003mm 이내

- You can easily tell the support of a workpiece
- When used with a face driver, it is possible to minimize wear on spindle bearings due to continuous impact.
- Run out - Max 0.003mm

- 轻松掌握工件的支撑力
- 配合使用FACE DRIVER，可以最小化由于持续撞击引起的主轴轴承的磨损
- RUN OUT 0.003mm 以内

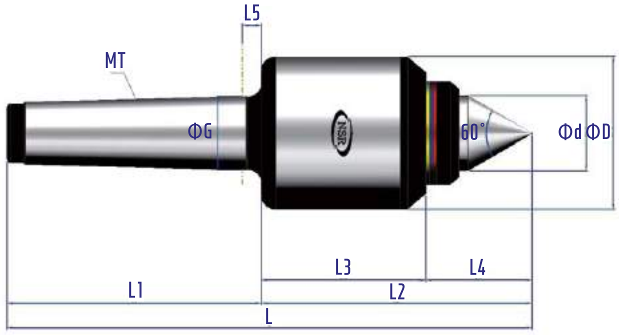
LOW Pressure | Medium Pressure | High Pressure

SR TYPE 압력표시표

색상/품명	2SR	3SR	4SR	5SR
YELLOW	0~500 kgf	0~500 kgf	0~1,000 kgf	0~1,500 kgf
BLUE	500~1,500 kgf	500~1,500 kgf	1,000~2,000 kgf	1,500~3,000 kgf
RED	1,500~2,500 kgf	1,500~2,500 kgf	2,000~3,000 kgf	3,000~4,500 kgf

NSR-SR TYPE

- 센타축의 열처리 경도 HRC 58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖轴的热处理硬度 HRC 58-62



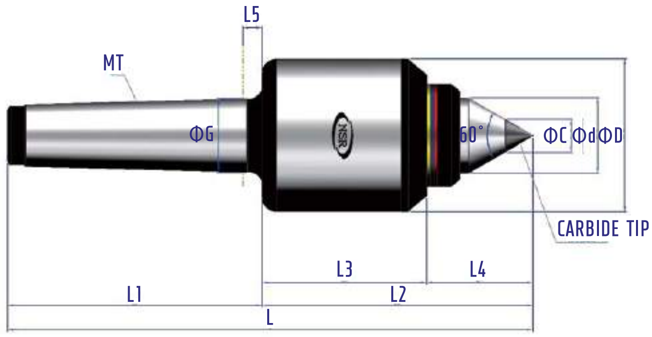
Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1001502	2SR	MT2	mm	50	25	155	68	87	52.6	34.4	6	400	5,000	0.003
			inch	1.97	0.98	6.1	2.68	3.43	2.07	1.35	0.24			
1001503	3SR	MT3	mm	50	25	172	85	87	52.6	34.4	6	700	5,000	0.003
			inch	1.97	0.98	6.77	3.35	3.43	2.07	1.35	0.24			
1001504	4SR	MT4	mm	65	32	223	108	115	70	45	8	1,200	3,000	0.003
			inch	2.56	1.26	8.78	4.25	4.53	2.76	1.77	0.31			
1001505	5SR	MT5	mm	94	55	294	136	158	88	70	8	2,000	2,000	0.003
			inch	3.7	2.17	11.57	5.35	6.22	3.46	2.76	0.31			

NSR-SRC TYPE

- 센타부에 초경을 삽입하여 마모성 최소
- 초경 경도 HRA 90~91

- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 心轴头部嵌入硬质合金，具备高耐磨度。
- 硬质合金硬度 HRA 90-91



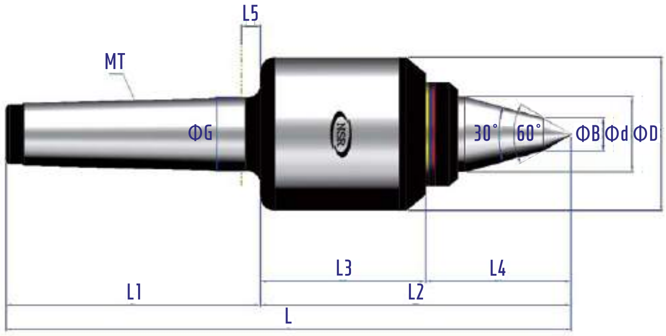
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1001512	2SRC	MT2	mm	50	25	155	68	87	52.6	34.4	6	10	400	5,000	0.003
			inch	1.97	0.98	6.1	2.68	3.43	2.07	1.35	0.24	0.39			
1001513	3SRC	MT3	mm	50	25	172	85	87	52.6	34.4	6	10	700	5,000	0.003
			inch	1.97	0.98	6.77	3.35	3.43	2.07	1.35	0.24	0.39			
1001514	4SRC	MT4	mm	65	32	223	108	115	70	45	8	14	1,200	3,000	0.003
			inch	2.56	1.26	8.78	4.25	4.53	2.76	1.77	0.31	0.55			
1001515	5SRC	MT5	mm	94	55	294	136	158	88	70	8	18	2,000	2,000	0.003
			inch	3.7	2.17	11.57	5.35	6.22	3.46	2.76	0.31	0.71			

NSR-SRA TYPE

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센타축의 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 为了最小化工件的干涉，心轴做了2段角度。
- 顶尖轴的热处理硬度 HRC 58-62



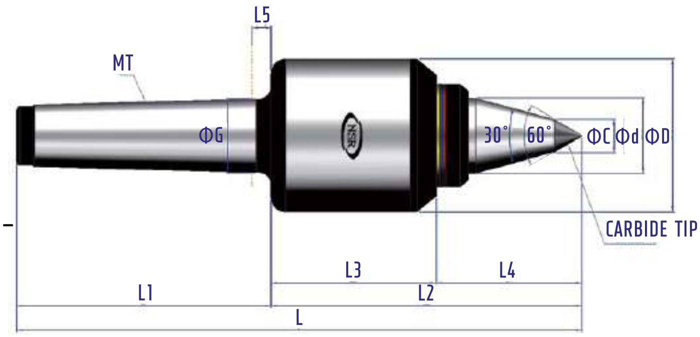
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦB			
1001522	2SRA	MT2	mm	50	25	172	68	104	52.6	51.4	6	10	320	5,000	0.003
			inch	1.97	0.98	6.77	2.68	4.09	2.07	2.02	0.24	0.39			
1001523	3SRA	MT3	mm	50	25	189	85	104	52.6	51.4	6	10	560	5,000	0.003
			inch	1.97	0.98	7.44	3.35	4.09	2.07	2.02	0.24	0.39			
1001524	4SRA	MT4	mm	65	32	240	108	132	70	62	8	14	960	3,000	0.003
			inch	2.56	1.26	9.45	4.25	5.2	2.76	2.44	0.31	0.55			
1001525	5SRA	MT5	mm	94	55	329	136	193	88	105	8	18	1,600	2,000	0.003
			inch	3.7	2.17	12.95	5.35	7.6	3.46	4.13	0.31	0.71			

NSR-SRAC TYPE

- 바이트 간섭을 최소화 하기 위해 센타부에 2단각도 체택
- 센타부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Second step-angle application for minimize the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90-91

- 为了最小化工件的干涉，心轴做了2段角度。
- 心轴头部嵌入硬质合金，具备高耐磨度。
- 硬质合金硬度 HRA 90-91



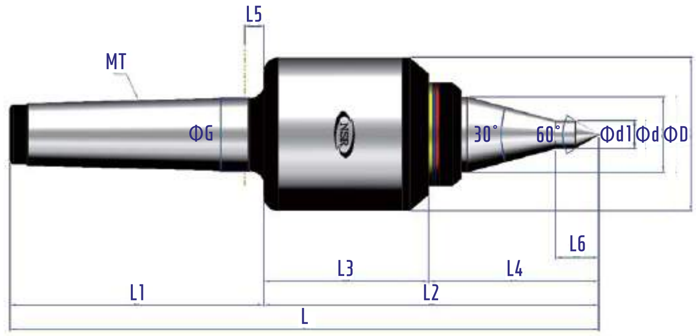
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1001532	2SRAC	MT2	mm	50	25	172	68	104	52.6	51.4	6	10	320	5,000	0.003
			inch	1.97	0.98	6.77	2.68	4.09	2.07	2.02	0.24	0.39			
1001533	3SRAC	MT3	mm	50	25	189	85	104	52.6	51.4	6	10	560	5,000	0.003
			inch	1.97	0.98	7.44	3.35	4.09	2.07	2.02	0.24	0.39			
1001534	4SRAC	MT4	mm	65	32	240	108	132	70	62	8	14	960	3,000	0.003
			inch	2.56	1.26	9.45	4.25	5.2	2.76	2.44	0.31	0.55			
1001535	5SRAC	MT5	mm	94	55	329	136	193	88	105	8	18	1,600	2,000	0.003
			inch	3.7	2.17	12.95	5.35	7.6	3.46	4.13	0.31	0.71			

NSR-SRAL TYPE

- 바이트간섭을 가장 최소화함
- 센타축의 열처리 경도 HRC 58~62

- Minimize byte intervention
- Heat treatment hardness of center axis, HRC 58~62

- 最小化了工件干涉
- 顶尖轴的热处理硬度 HRC 58-62



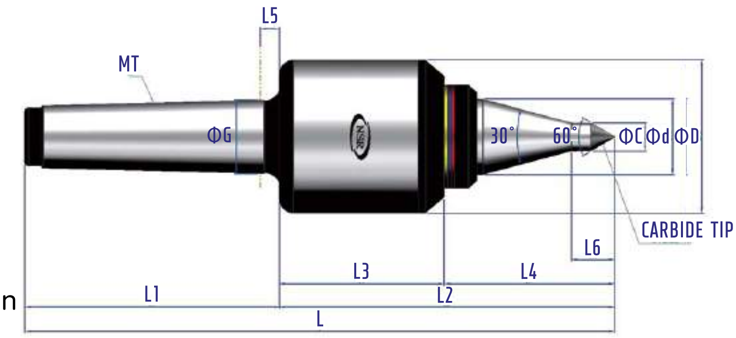
Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	Φd1			
1001542	2SRAL	MT2	mm	50	25	177	68	109	52.6	56.4	6	13.2	10	320	5,000	0.003
			inch	1.97	0.98	6.97	2.68	4.29	2.07	2.22	0.24	0.52	0.39			
1001543	3SRAL	MT3	mm	50	25	194	85	109	52.6	56.4	6	13.2	10	560	5,000	0.003
			inch	1.97	0.98	7.64	3.35	4.29	2.07	2.22	0.24	0.52	0.39			
1001544	4SRAL	MT4	mm	65	32	250.5	108	142.5	70	58.5	8	18.5	12	960	3,000	0.003
			inch	2.56	1.26	9.86	4.25	5.61	2.76	2.3	0.31	0.73	0.47			
1001545	5SRAL	MT5	mm	94	55	344	136	208	88	120	8	22.7	14	1,600	2,000	0.003
			inch	3.7	2.17	13.54	5.35	8.19	3.46	4.72	0.31	0.89	0.55			

NSR-SRALC TYPE

- 바이트간섭을 가장 최소화함
- 센타부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Minimize byte intervention
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 最小化了工件干涉
- 心轴头部嵌入硬质合金，具备高耐磨度
- 硬质合金硬度 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	ΦC			
1001552	2SRALC	MT2	mm	50	25	177	68	109	52.6	56.4	6	13.2	10	320	5,000	0.003
			inch	1.97	0.98	6.97	2.68	4.29	2.07	2.22	0.24	0.52	0.39			
1001553	3SRALC	MT3	mm	50	25	194	85	109	52.6	56.4	6	13.2	10	560	5,000	0.003
			inch	1.97	0.98	7.64	3.35	4.29	2.07	2.22	0.24	0.52	0.39			
1001554	4SRALC	MT4	mm	65	32	250.5	108	142.5	70	58.5	8	18.5	12	960	3,000	0.003
			inch	2.56	1.26	9.86	4.25	5.61	2.76	2.3	0.31	0.73	0.47			
1001555	5SRALC	MT5	mm	94	55	344	136	208	88	120	8	22.7	14	1,600	2,000	0.003
			inch	3.7	2.17	13.54	5.35	8.19	3.46	4.72	0.31	0.89	0.55			

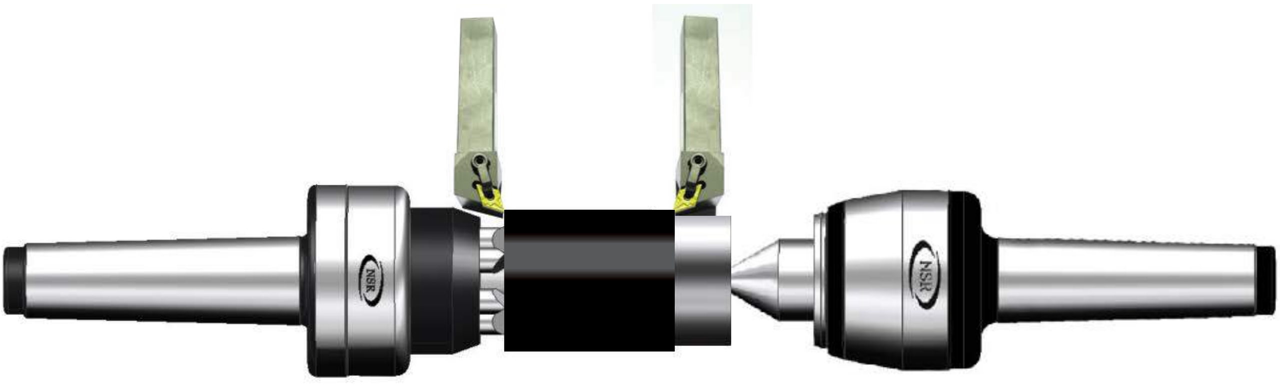
FC Series

NC center for repeated-massed production and high accurated concentricity
반복, 대량생산 및 고정밀 동심도를 요구하는 NC용 CENTER | 要求量产及超精密同心度的NC专用顶尖

- 1회 CLAMPING으로 작업을 완료할 수 있어 작업시간의 LOSS를 최대한 줄일 수 있으며 생산성향상에 용이
- 공작물표면에 대한 정도가 자체 조정됨
- 내마모성이 우수
- MORSE TAPER TYPE 및 STRAIGHT TYPE으로 제작 되어있어 기종에 관계없이 CHUCKING이 가능하므로 NC 범용에 다양하게 사용할 수 있다.

- Minimum working time loss and productivity improvement by 1-time clamping
- Auto-adjustable accuracy as in itself to material surface
- High-wear performance
- Wide-use to NC. owing to possible the chucking regardless of any model with morse taper type and straight type

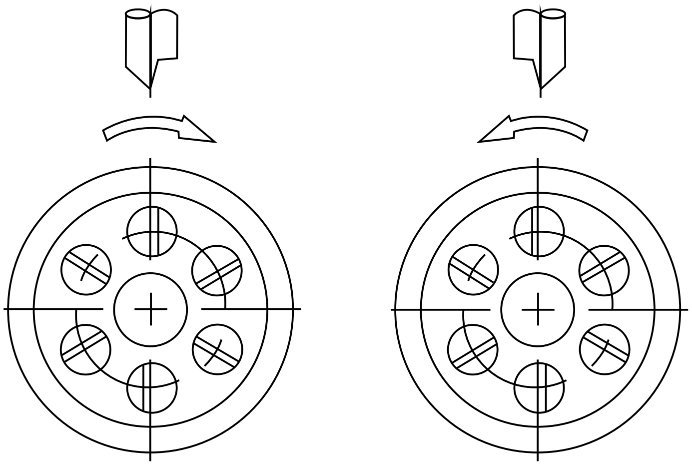
- 一次性夹紧工作 减少工作时间损失 可完成生产量提升
- 对于工件表面精度本体自然调节
- 耐磨性优
- 目前我司有两种锥度柄径和直柄柄径的顶尖制作而成 不管什么机型都可以装夹 种类繁多的NC车床可使用



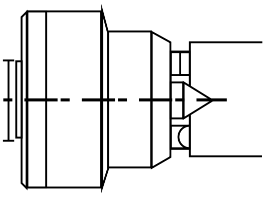
테이퍼용 페이스드라이버
(锥度型)

척작업용 페이스드라이버
(使用刀柄型)

FC TYPE PIN 체결
방향에 따른
작업 방향 조정 가능
(FC TYPE PIN 随着装夹方向 可调工作方向)



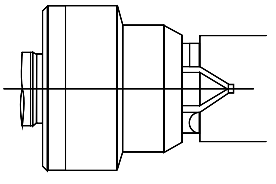
페이스 드라이버 센타홀 SIZE
(FACE DRIVER 中心孔尺寸)



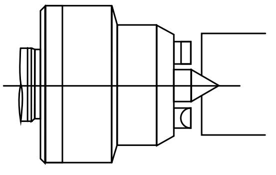
NO	MODEL	CENTER HOLE DIA LIMITS	
		MIN(Φ)	MAX(Φ)
1	FC10	2	4
2	FC20	4	8
3	FC30	6	12
4	FC40	8	16

잘못된 페이스드라이버 체결
(装夹错误的 FACE DRIVER)

센타홀이 너무
큰 경우
(中心孔大的情况下)

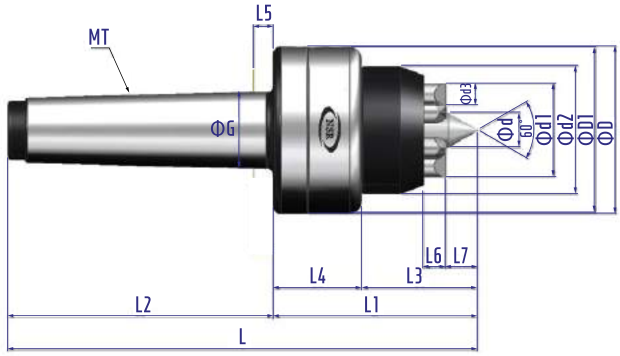


센타홀이 너무
작은 경우
(中心孔小的情况下)



NSR-FC TYPE

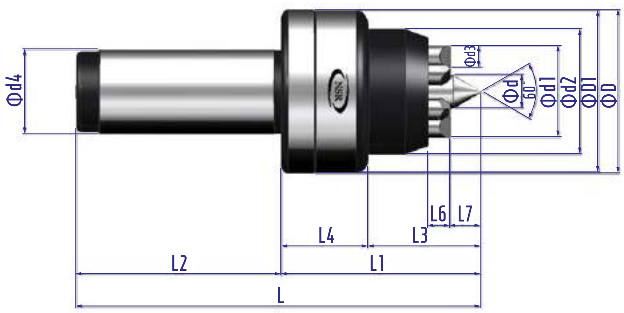
- 반복, 대량생산 및 고정밀 동심도를 요구하는 NC용 CENTER
- NC center for repeated-massed production and high accuratedconcentricityHeat treatment hardness of center axis, HRC 58~62
- 适合用于反复量产及要求高精密同心度的NC车床顶尖



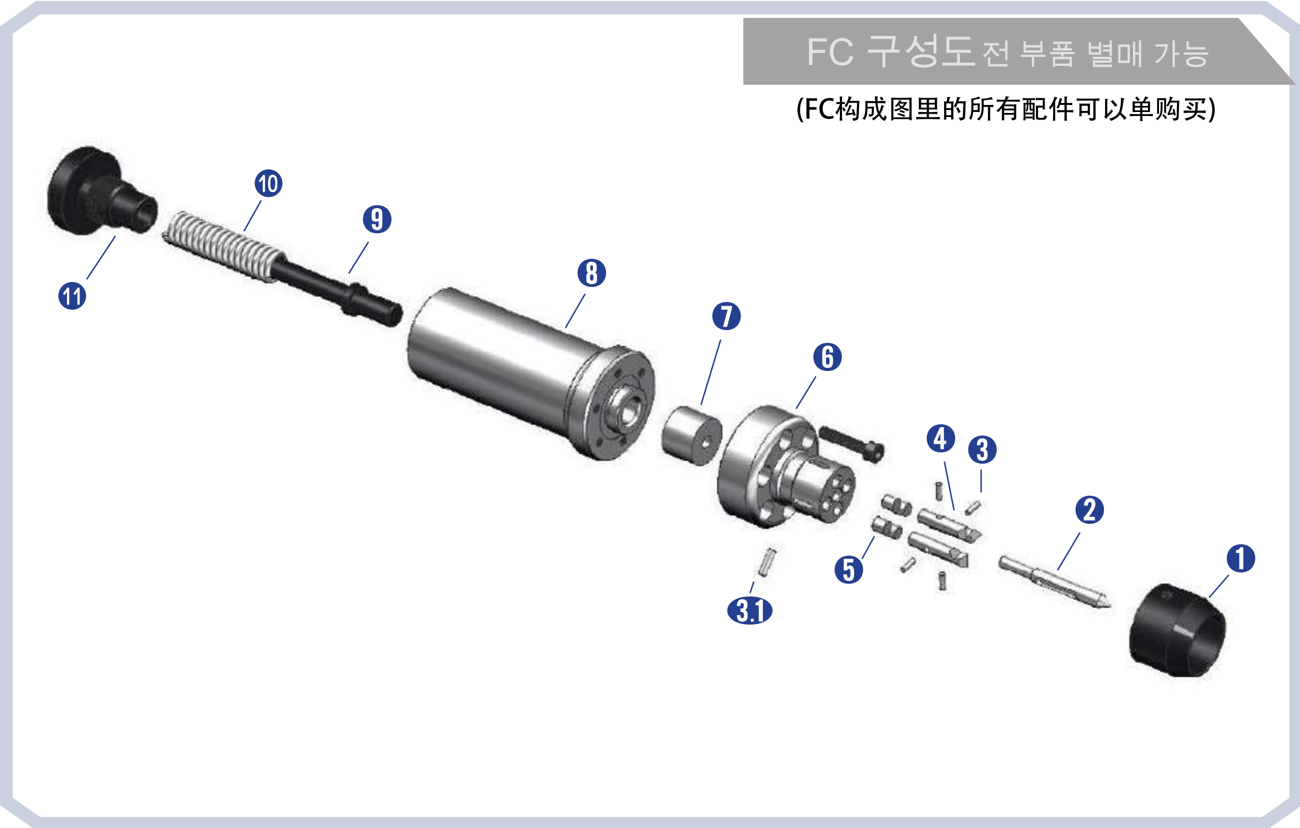
Model No	Model	Morse Taper	Unit	Dimension														Work Size	MAX Weight(kg)
				Φd	Φd1	Φd2	Φd3	ΦD	ΦD1	L	L1	L2	L3	L4	L5	L6	L7		
1007013	3FC10	MT3	mm	5	17	28	5	41.4	41	141.3	56.3	85	31.8	24.5	6	5	5.3	Φ18~Φ38	55
			inch	0.2	0.67	1.1	0.2	1.63	1.61	5.56	2.22	3.35	1.25	0.96	0.24	0.2	0.21		
1007014	4FC10	MT4	mm	5	17	28	5	41.4	41	164.3	56.3	108	31.8	24.5	8	5	5.3		
			inch	0.2	0.67	1.1	0.2	1.63	1.61	6.47	2.22	4.25	1.25	0.96	0.31	0.2	0.21		
1007015	5FC10	MT5	mm	5	17	28	5	41.4	41	192.3	56.3	136	31.8	24.5	8	5	5.3		
			inch	0.2	0.67	1.1	0.2	1.63	1.61	7.57	2.22	5.35	1.25	0.96	0.31	0.2	0.21		
1007023	3FC20	MT3	mm	9	26	38	7	52	51.4	148.8	63.8	85	36.8	27	6	6.5	8.8	Φ27~Φ55	60
			inch	0.35	1.02	1.5	0.28	2.05	2.02	5.86	2.51	3.35	1.45	1.06	0.24	0.26	0.35		
1007024	4FC20	MT4	mm	9	26	38	7	52	51.4	171.8	63.8	108	36.8	27	8	6.5	8.8		
			inch	0.35	1.02	1.5	0.28	2.05	2.02	6.76	2.51	4.25	1.45	1.06	0.31	0.26	0.35		
1007025	5FC20	MT5	mm	9	26	38	7	52	51.4	199.8	63.8	136	36.8	27	8	6.5	8.8		
			inch	0.35	1.02	1.5	0.28	2.05	2.02	7.87	2.51	5.35	1.45	1.06	0.31	0.26	0.35		
1007033	3FC30	MT3	mm	14	38	52	9	68	67.4	168	83	85	47	36	6	9	13	Φ39~Φ75	70
			inch	0.55	1.5	2.05	0.35	2.68	2.65	6.61	3.27	3.35	1.85	1.42	0.24	0.35	0.51		
1007034	4FC30	MT4	mm	14	38	52	9	68	67.4	191	83	108	47	36	8	9	13		
			inch	0.55	1.5	2.05	0.35	2.68	2.65	7.52	3.27	4.25	1.85	1.42	0.31	0.35	0.51		
1007035	5FC30	MT5	mm	14	38	52	9	68	67.4	219	83	136	47	36	8	9	13		
			inch	0.55	1.5	2.05	0.35	2.68	2.65	8.62	3.27	5.35	1.85	1.42	0.31	0.35	0.51		
1007044	4FC40	MT4	mm	18	54	72	14	83.5	82.5	200.6	92.6	108	57.6	35	8	11	15.6	Φ55~Φ100	100
			inch	0.71	2.13	2.83	0.55	3.29	3.25	7.9	3.65	4.25	2.27	1.38	0.31	0.43	0.61		
1007045	5FC40	MT5	mm	18	54	72	14	83.5	52.5	228.6	92.6	136	57.6	35	8	11	15.6		
			inch	0.71	2.13	2.83	0.55	3.29	2.07	9	3.65	5.35	2.27	1.38	0.31	0.43	0.61		

NSR-FCST TYPE

- 반복, 대량생산 및 고정밀 동심도를 요구하는 NC용 CENTER
- NC center for repeated-massed production and high accuratedconcentricityHeat treatment hardness of center axis, HRC 58~62
- 适合用于反复量产及要求高精密同心度的NC车床顶尖



Model No	Model	Unit	Dimension														Work Size	MAX Weight(kg)
			Φd	Φd1	Φd2	Φd3	Φd4	ΦD	ΦD1	L	L1	L2	L3	L4	L6	L7		
1007010ST	FCST10	mm	5	17	28	5	35	41.4	41	141.3	56.3	85	31.8	24.5	5	5.3	Φ18~Φ38	55
		inch	0.2	0.67	1.1	0.2	1.38	1.63	1.61	5.56	2.22	3.35	1.25	0.96	0.2	0.21		
1007020ST	FCST20	mm	9	26	38	7	35	52	51.4	148.3	63.8	85	36.8	27	6.5	8.8	Φ27~Φ55	60
		inch	0.35	1.02	1.5	0.28	1.38	2.05	2.02	5.84	2.51	3.35	1.45	1.06	0.26	0.35		
1007030ST	FCST30	mm	14	38	52	9	35	68	67.4	168	83	85	47	36	9	13	Φ39~Φ75	70
		inch	0.55	1.5	2.05	0.35	1.38	2.68	2.65	6.61	3.27	3.35	1.85	1.42	0.35	0.51		
1007040ST	FCST40	mm	18	54	72	14	41	83.5	82.5	177.6	92.6	85	57.6	35	11	15.6	Φ55~Φ100	100
		inch	0.71	2.13	2.83	0.55	1.61	3.29	3.25	6.99	3.65	3.35	2.27	1.38	0.43	0.61		



FC부품별 발주 코드

부품번호	품명/TYPE	FC10	FC20	FC30	FC40
1	FC COVER	1007010-1	1007020-1	1007030-1	1007040-1
2	FC POINT	1007010-2	1007020-2	1007030-2	1007040-2
3	FC PIN-PIN	1007010-3	1007020-3	1007030-3	1007040-3
3.1	FC POINT-PIN	1007010-3.1	1007020-3.1	1007030-3.1	1007040-3.1
4	FC PIN	1007010-4	1007020-4	1007030-4	1007040-4
5	FC ROLLER	1007010-5	1007020-5	1007030-5	1007040-5
6	FC HEAD	1007010-6	1007020-6	1007030-6	1007040-6
7	FC 우레탄	1007010-7	1007020-7	1007030-7	1007040-7
8	FC SHANK	1007010-8	1007020-8	1007030-8	1007040-8
9	FC SPRING LODE	1007010-9	1007020-9	1007030-9	1007040-9
10	FC SPRING	1007010-10	1007020-10	1007030-10	1007040-10
11	FC END COVER	1007010-11	1007020-11	1007030-11	1007040-11

WN Series

For high-speed rotation | 고속회전에 적합 | 适合高速旋转符合

- HEAD 회전형
- 바이트 간섭을 줄이기 위해 몸체부를 작게 함
- RUN OUT 0.003mm 이내

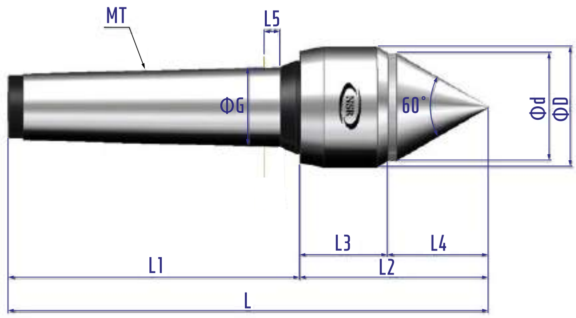
- HEAD rotation type
- Minimized the body for reducing the bite-interference
- RUN OUT - Max 0.003mm

- HEAD 旋转型
- 减少工件干涉 本体旋转顶尖部分缩小
- 跳动精度0.003以内

WN TYPE 채택시 주의사항

NSR-WN TYPE Waterproof center | 방수용 센타 | 止水顶尖

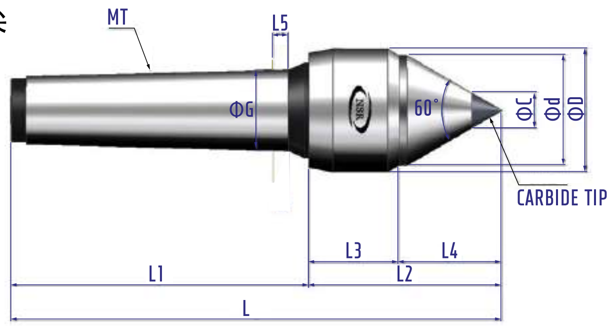
- 센터 축의 열처리 경도 HRC 58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖轴热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1004002	2WN	MT2	mm	30	27	123	75	48	22	26	4.5	200	4,000	0.003
			inch	1.18	1.06	4.84	2.95	1.89	0.87	1.02	0.18			
1004003	3WN	MT3	mm	35	32	144.2	89	55.2	25	30.2	5	400	3,000	0.003
			inch	1.38	1.26	5.68	3.5	2.17	0.98	1.19	0.2			
1004004	4WN	MT4	mm	48	43	191	116	75	35	40	6	700	3,000	0.003
			inch	1.89	1.69	7.52	4.57	2.95	1.38	1.57	0.24			
1004005	5WN	MT5	mm	62	57	238	144	94	40.4	53.6	8	1,300	2,000	0.003
			inch	2.44	2.24	9.37	5.67	3.7	1.59	2.11	0.31			

NSR-WNC TYPE Waterproof center | 방수용 센타 | 止水顶尖

- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度 HRA 90-91



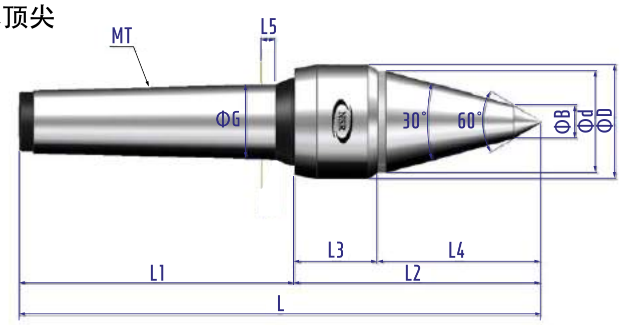
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1004012	2WNC	MT2	mm	30	27	123	75	48	22	26	4.5	10	200	4,000	0.003
			inch	1.18	1.06	4.84	2.95	1.89	0.87	1.02	0.18	0.39			
1004013	3WNC	MT3	mm	35	32	144.2	89	55.2	25	30.2	5	10	400	3,000	0.003
			inch	1.38	1.26	5.68	3.5	2.17	0.98	1.19	0.2	0.39			
1004014	4WNC	MT4	mm	48	43	191	116	75	35	40	6	14	700	3,000	0.003
			inch	1.89	1.69	7.52	4.57	2.95	1.38	1.57	0.24	0.55			
1004015	5WNC	MT5	mm	62	57	238	144	94	40.4	53.6	8	18	1,300	2,000	0.003
			inch	2.44	2.24	9.37	5.67	3.7	1.59	2.11	0.31	0.71			

NSR-WNA TYPE Waterproof center | 방수용 센타 | 止水顶尖

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터 축의 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖轴热处理硬度为 HRC 58-62



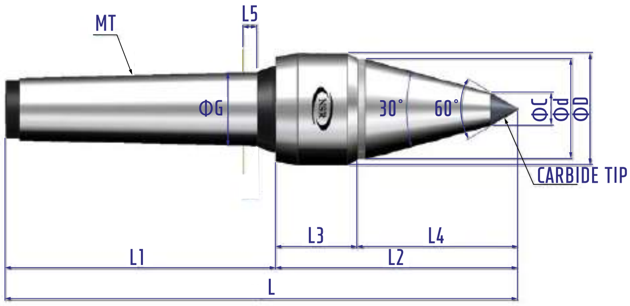
Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦB			
1004022	2WNA	MT2	mm	30	27	140	75	65	22	43	4.5	10	120	4,000	0.003
			inch	1.18	1.06	5.51	2.95	2.56	0.87	1.69	0.18	0.39			
1004023	3WNA	MT3	mm	35	32	168	89	79	25	54	5	10	320	3,000	0.003
			inch	1.38	1.26	6.61	3.5	3.11	0.98	2.13	0.2	0.39			
1004024	4WNA	MT4	mm	48	43	220	116	104	35	69	6	14	550	3,000	0.003
			inch	1.89	1.69	8.66	4.57	4.09	1.38	2.72	0.24	0.55			
1004025	5WNA	MT5	mm	62	57	279	144	135	40.4	94.6	8	16	1,000	2,000	0.003
			inch	2.44	2.24	10.98	5.67	5.31	1.59	3.72	0.31	0.63			

NSR-WNAC TYPE Waterproof center | 방수용 센타 | 止水顶尖

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Second step-angle application for minimize the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度 HRA 90-91

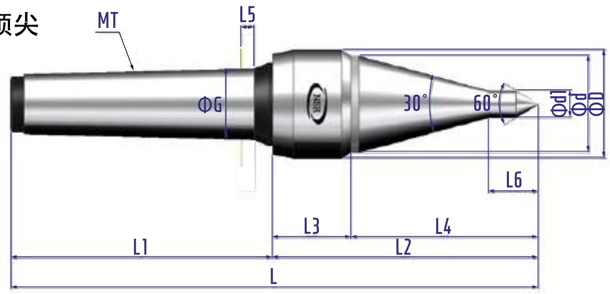


Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1004032	2WNAC	MT2	mm	30	27	140	75	65	22	43	4.5	10	120	4,000	0.003
			inch	1.18	1.06	5.51	2.95	2.56	0.87	1.69	0.18	0.39			
1004033	3WNAC	MT3	mm	35	32	168	89	79	25	54	5	10	320	3,000	0.003
			inch	1.38	1.26	6.61	3.5	3.11	0.98	2.13	0.2	0.39			
1004034	4WNAC	MT4	mm	48	43	220	116	104	35	69	6	14	550	3,000	0.003
			inch	1.89	1.69	8.66	4.57	4.09	1.38	2.72	0.24	0.55			
1004035	5WNAC	MT5	mm	62	57	279	144	135	40.4	94.6	8	16	1,000	2,000	0.003
			inch	2.44	2.24	10.98	5.67	5.31	1.59	3.72	0.31	0.63			

WN

NSR-WNAL TYPE Waterproof center | 방수용 센타 | 止水顶尖

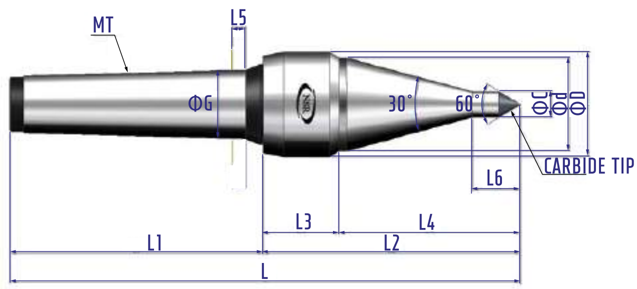
- 센터 축의 열처리 경도 HRC 58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖轴热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	Φd1			
1004042	2WNAL	MT2	mm	30	27	143.8	75	68.8	22	46.8	4.5	12	10	100	4,000	0.003
			inch	1.18	1.06	5.66	2.95	2.71	0.87	1.84	0.18	0.47	0.39			
1004043	3WNAL	MT3	mm	35	32	172	89	83	25	58	5	14	10	280	3,000	0.003
			inch	1.38	1.26	6.77	3.5	3.27	0.98	2.28	0.2	0.55	0.39			
1004044	4WNAL	MT4	mm	48	43	234	116	118	35	83	6	22	12	500	3,000	0.003
			inch	1.89	1.69	9.21	4.57	4.65	1.38	3.27	0.24	0.87	0.47			
1004045	5WNAL	MT5	mm	62	57	294.4	144	150.4	40.4	110	8	21.4	12	900	2,000	0.003
			inch	2.44	2.24	11.59	5.67	5.92	1.59	4.33	0.31	0.84	0.47			

NSR-WNALC TYPE Waterproof center | 방수용 센타 | 止水顶尖

- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度 HRA 90-91

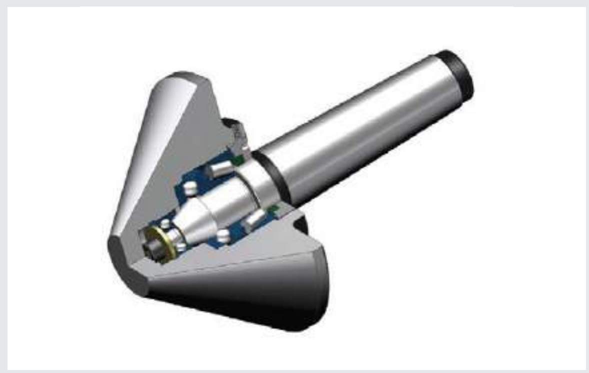


Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	ΦC			
1004052	2WNALC	MT2	mm	30	27	143.8	75	68.8	22	46.8	4.5	12	10	100	4,000	0.003
			inch	1.18	1.06	5.66	2.95	2.71	0.87	1.84	0.18	0.47	0.39			
1004053	3WNALC	MT3	mm	35	32	172	89	83	25	58	5	14	10	280	3,000	0.003
			inch	1.38	1.26	6.77	3.5	3.27	0.98	2.28	0.2	0.55	0.39			
1004054	4WNALC	MT4	mm	48	43	234	116	118	35	83	6	22	12	500	3,000	0.003
			inch	1.89	1.69	9.21	4.57	4.65	1.38	3.27	0.24	0.87	0.47			
1004055	5WNALC	MT5	mm	62	57	294.4	144	150.4	40.4	110	8	21.4	12	900	2,000	0.003
			inch	2.44	2.24	11.59	5.67	5.92	1.59	4.33	0.31	0.84	0.47			

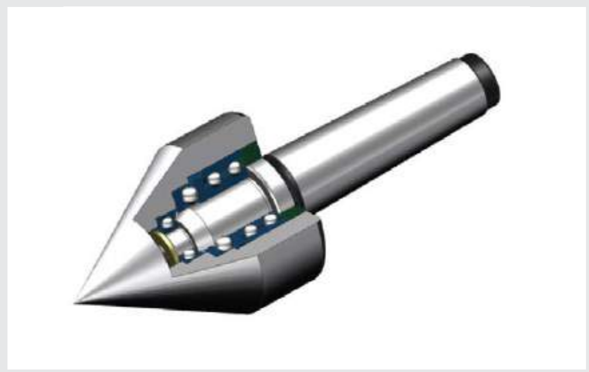
PC Series

Using to pipe manufacturing | 파이프 가공시 사용 | 加工 管件时 使用

NSR-PC80



NSR-PC60
NSR-PC60L



- HEAD 회전형
- RUN OUT 0.003mm 이내

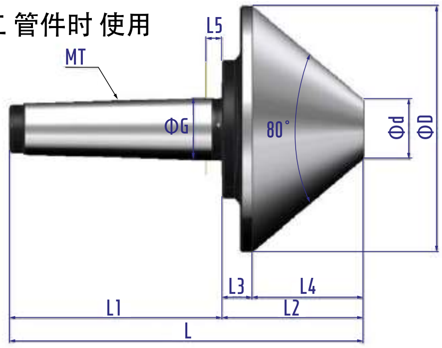
- HEAD rotation type
- RUN OUT - Max 0.003mm

- **HEAD旋转型**
- 跳动精度**0.003**以内

PC TYPE 채택시 주의사항

NSR-PC80 TYPE

Using to pipe manufacturing | 파이프 가공시 사용 | 加工 管件时 使用



- 센터머리부 흔들림을 NUT로 조절해 사용할수 있음
- 센타부 각도 80도
- 센터 HEAD 열처리 경도 HRC 58~62

- Adjustable to wobble of center head position by nut
- Center position angle 80degree
- Heat treatment hardness of center head, HRC 58~62

- 顶尖轴的跳动用来（NUT）螺帽可调使用
- 顶尖锥度为80°
- 顶尖部热处理硬度 HRC 58-62

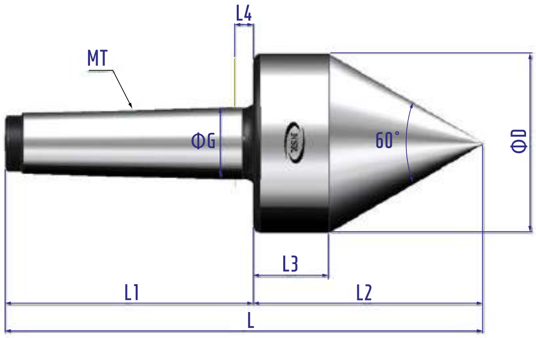
Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1005023	3PC80	MT3	mm	95	20	143	85	58	12.3	44.7	6	400	4,000	0.003
			inch	3.74	0.79	5.63	3.35	2.28	0.48	1.76	0.24			
1005024	4PC80	MT4	mm	125	30	180	108	72	15.4	56.6	8	800	3,000	0.003
			inch	4.92	1.18	7.09	4.25	2.83	0.61	2.23	0.31			
1005025	5PC80	MT5	mm	150	35	220	136	84	15.5	68.5	8	1,600	2,000	0.003
			inch	5.91	1.38	8.66	5.35	3.31	0.61	2.7	0.31			
1005026	6PC80	MT6	mm	200	38	305	189	116	19.5	96.5	10	2,500	1,500	0.003
			inch	7.87	1.5	12.01	7.44	4.57	0.77	3.8	0.39			

NSR-PC60 TYPE
Using to pipe manufacturing | 파이프 가공시 사용 | 加工 管件时 使用

- 센타부 각도 60도
- 센터 HEAD 열처리 경도 HRC 58~62

- Center position angle 60degree
- Heat treatment hardness of center head, HRC 58~62

- 顶尖锥度为60°
- 顶尖部热处理硬度 HRC 58-62



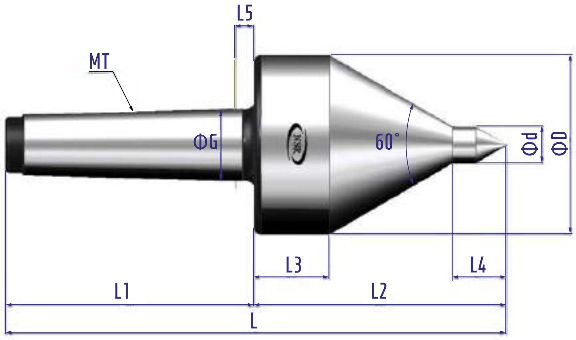
Model No	Model	Morse Taper	Unit	Dimension						MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	L	L1	L2	L3	L4			
1005002	2PC60	MT2	mm	44	134	68	66	28.3	6	400	5,000	0.003
			inch	1.73	5.28	2.68	2.6	1.11	0.24			
1005003	3PC60	MT3	mm	56	163	85	78	30	6	400	5,000	0.003
			inch	2.2	6.42	3.35	3.07	1.18	0.24			
1005004	4PC60	MT4	mm	78	208	108	100	33	8	800	3,800	0.003
			inch	3.07	8.19	4.25	3.94	1.3	0.31			
1005005	5PC60	MT5	mm	98	261	136	125	41	8	1,600	3,000	0.003
			inch	3.86	10.28	5.35	4.92	1.61	0.31			
1005006	6PC60	MT6	mm	118	343	189	154	52.7	10	2,500	2,800	0.003
			inch	4.65	13.5	7.44	6.06	2.07	0.39			

NSR-PC60L TYPE
Using to pipe manufacturing | 파이프 가공시 사용 | 加工 管件时 使用

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센타부 각도 60도
- 센터 HEAD 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Center position angle 60degree
- Heat treatment hardness of center head, HRC 58~62

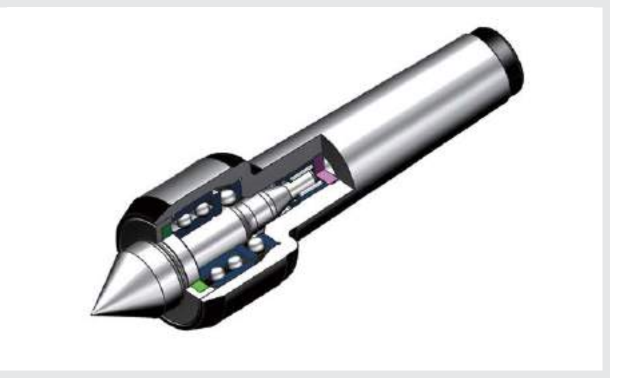
- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖锥度为60°
- 顶尖部热处理硬度 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1005012	2PC60L	MT2	mm	44	12	147	68	79	31.3	20	6	300	5,000	0.003
			inch	1.73	0.47	5.79	2.68	3.11	1.23	0.79	0.24			
1005013	3PC60L	MT3	mm	56	12	173	85	88	30	20	6	300	5,000	0.003
			inch	2.2	0.47	6.81	3.35	3.46	1.18	0.79	0.24			
1005014	4PC60L	MT4	mm	78	16	218	108	110	33	23.4	8	550	3,800	0.003
			inch	3.07	0.63	8.58	4.25	4.33	1.3	0.92	0.31			
1005015	5PC60L	MT5	mm	98	19	276	136	140	41	30.6	8	1,200	3,000	0.003
			inch	3.86	0.75	10.87	5.35	5.51	1.61	1.2	0.31			
1005016	6PC60L	MT6	mm	118	20	353	189	164	46.1	33	10	2,000	2,800	0.003
			inch	4.65	0.79	13.9	7.44	6.46	1.81	1.3	0.39			

LP Series

Low cost rotation center for NC machining | NC공작기계용 저가형 회전센타 | 专用NC车床经济型旋转顶尖



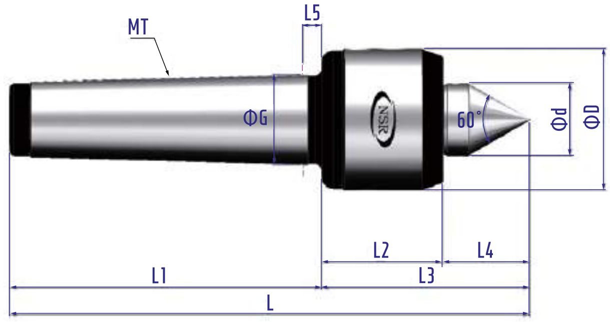
- CNC선반용 저가형 센터
- 특수 OIL SEAL 채용 절삭유 및 이물질 침투방지
- 고정도 3중 베어링 구조
- RUN OUT 0.003mm 이내

- Low cost rotation center for CNC machining
- Special oil seal adopted to prevent penetration by coolant and foreign matter
- Triplexed bearing structure as high degree of precision
- Run out - Max 0.003mm

- CNC车床经济型顶尖
- 采用特殊油封，有效防止切削液和异物质进入
- 采用高精度三重轴承结构
- 跳动精度0.003以内

NSR-LP TYPE
Low cost rotation center for NC machining | NC공작기계용 저가형 회전센타 | 专用NC车床经济型旋转顶尖

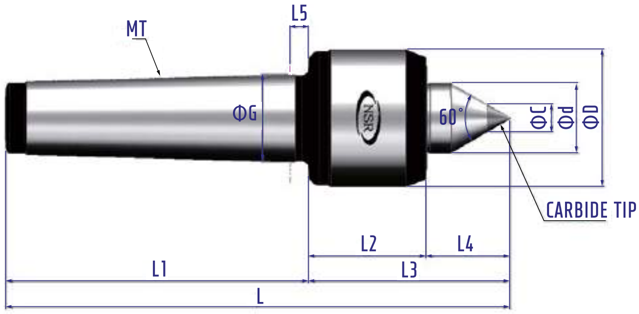
- 센터 축의 열처리 경도 HRC58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1014004	4LP	MT4	mm	49	25	180	108	42	72	30	6.5	500	5,000	0.003
			inch	1.93	0.98	7.09	4.25	1.65	2.83	1.18	0.26			
1014005	5LP	MT5	mm	66	31.4	229	136	53	93	40	6.5	800	3,800	0.003
			inch	2.6	1.24	9.02	5.35	2.09	3.66	1.57	0.26			

NSR-LPC TYPE
Low cost rotation center for NC machining | NC공작기계용 저가형 회전센타
专用NC车床经济型旋转顶尖

- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91
- Minimized the wear property by inserting tungsten cadmium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1014014	4LPC	MT4	mm	49	25	180	108	42	72	30	6.5	10	500	5,000	0.003
			inch	1.93	0.98	7.09	4.25	1.65	2.83	1.18	0.26	0.39			
1014015	5LPC	MT5	mm	66	31.4	229	136	53	93	40	6.5	14	800	3,800	0.003
			inch	2.6	1.24	9.02	5.35	2.09	3.66	1.57	0.26	0.55			

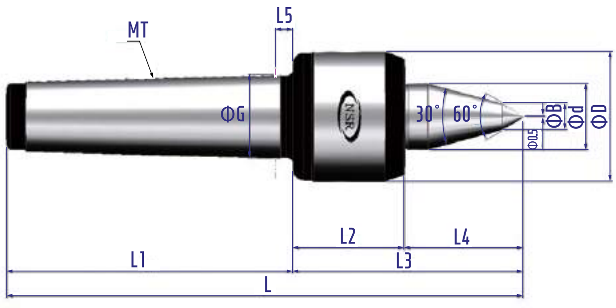
NSR-LPA TYPE

Low cost rotation center for NC machining | NC공작기계용 저가형 회전센타 | 专用NC车床经济型旋转顶尖

- 바이트 간섭 최소화
- 센터 축의 열처리 경도 HRC58~62

- To minimize the interference of bite
- Heat treatment hardness of center axis, HRC 58~62

- 最大限度减少刀具干涉
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦB			
1014024	4LPA	MT4	mm	49	25	195	108	42	87	45	6.5	10	500	5,000	0.003
			inch	1.93	0.98	7.68	4.25	1.65	3.43	1.77	0.26	0.39			
1014025	5LPA	MT5	mm	66	31.4	242	136	53	106	53	6.5	14	500	3,800	0.003
			inch	2.6	1.24	9.53	5.35	2.09	4.17	2.09	0.26	0.55			

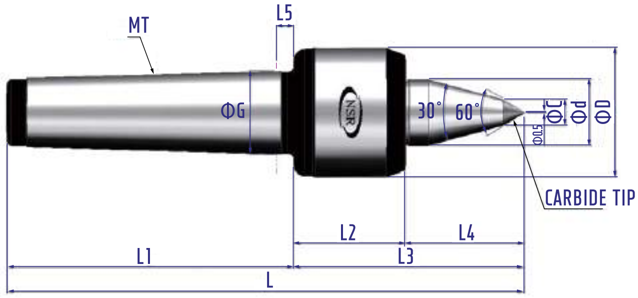
NSR-LPAC TYPE

Low cost rotation center for NC machining | NC공작기계용 저가형 회전센타
专用NC车床经济型旋转顶尖

- 바이트 간섭 최소화
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- To minimize the interference of bite
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 最大限度减少刀具干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1014034	4LPAC	MT4	mm	49	25	195	108	42	87	45	6.5	10	500	5,000	0.003
			inch	1.93	0.98	7.68	4.25	1.65	3.43	1.77	0.26	0.39			
1014035	5LPAC	MT5	mm	66	31.4	242	136	53	106	53	6.5	14	500	3,800	0.003
			inch	2.6	1.24	9.53	5.35	2.09	4.17	2.09	0.26	0.55			

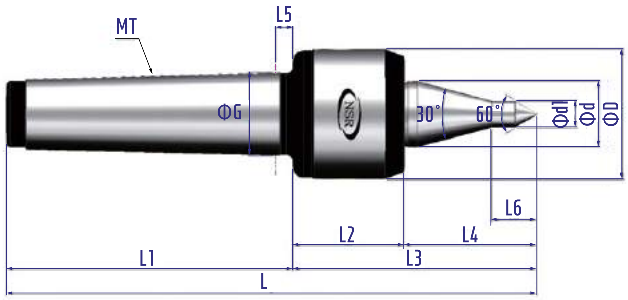
NSR-LPAL TYPE

Low cost rotation center for NC machining | NC공작기계용 저가형 회전센타 | 专用NC车床经济型旋转顶尖

- 바이트 간섭을 가장 최소화
- 센터 축의 열처리 경도 HRC 58~62

- To minimize the interference of bite
- Heat treatment hardness of center axis, HRC 58~62

- 最大限度减少刀具干涉
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	Φd1			
1014044	4LPAL	MT4	mm	49	25	200	108	42	92	50	6.5	17	10	500	5,000	0.003
			inch	1.93	0.98	7.87	4.25	1.65	3.62	1.97	0.26	0.67	0.39			
1014045	5LPAL	MT5	mm	66	31.4	249	136	53	113	60	6.5	18	12	500	3,800	0.003
			inch	2.6	1.24	9.8	5.35	2.09	4.45	2.36	0.26	0.71	0.47			

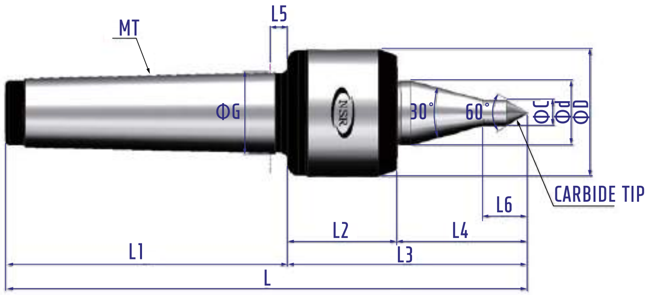
NSR-LPALC TYPE

Low cost rotation center for NC machining | NC공작기계용 저가형 회전센타
专用NC车床经济型旋转顶尖

- 바이트 간섭을 가장 최소화
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- To minimize the interference of bite
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

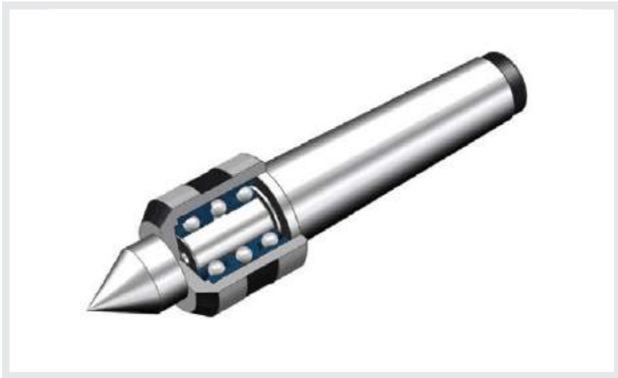
- 最大限度减少刀具干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension										MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	L6	ΦC			
1014054	4LPALC	MT4	mm	49	25	200	108	42	92	50	6.5	17	10	500	5,000	0.003
			inch	1.93	0.98	7.87	4.25	1.65	3.62	1.97	0.26	0.67	0.39			
1014055	5LPALC	MT5	mm	66	31.4	249	136	53	113	60	6.5	18	12	500	3,800	0.003
			inch	2.6	1.24	9.8	5.35	2.09	4.45	2.36	0.26	0.71	0.47			

HB Series

Low cost model to wide-use lathe | 범용선반의 일상작업에 적합한 저가형 모델 | 适合半自动车床 日常加工的 经济型 型号



- HEAD 회전형
- 소형 축가공등 미세한 선삭가공에 적합
- 회전정밀도 0.003mm 이내

- HEAD rotation type
- Suitable to elaborate turning operation such as manufacturing of small axis
- Degree of precision of rotation - Max 0.003mm

- 旋转型顶尖
- 小型轴加工及适用于精车刀
- 旋转精密度0.003以内

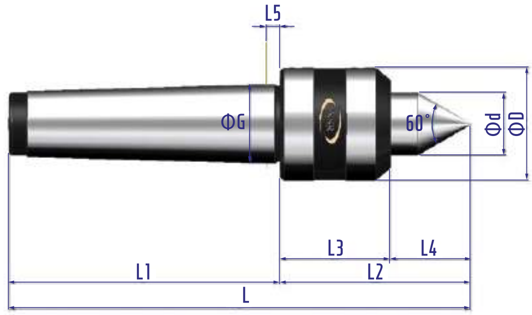
NSR-HB TYPE

Low cost model to wide-use lathe | 범용선반의 일상작업에 적합한 저가형 모델
适合半自动车床 日常加工的 经济型 型号

- 바이트 간섭을 줄이기 위해 몸체부를 작게 함
- 센터 HEAD 열처리 경도 HRC 58~62

- Minimized the body for reducing the bite-interference
- Heat treatment hardness of center head, HRC 58~62

- 减少工件干涉 本体旋转顶尖部分缩小
- 顶尖部热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1008002	2HB	MT2	mm	38	18	124	68	56	35	21	6	300	6,000	0.003
			inch	1.5	0.71	4.88	2.68	2.2	1.38	0.83	0.83			
1008003	3HB	MT3	mm	38	18	141	85	56	35	21	6	400	6,000	0.003
			inch	1.5	0.71	5.55	3.35	2.2	1.38	0.83	0.31			
1008004	4HB	MT4	mm	45	25	184	108	76	44	32	5.3	600	5,000	0.003
			inch	1.77	0.98	7.24	4.25	2.99	1.73	1.26	0.31			
1008005	5HB	MT5	mm	63	28	229	136	93	58	35	6.3	750	4,000	0.003
			inch	2.48	1.1	9.02	5.35	3.66	2.28	1.38	0.31			
1008006	6HB	MT6	mm	102	55	333	189	144	82	62	10	1,200	2,000	0.003
			inch	4.02	2.17	13.11	7.44	5.67	3.23	2.44	0.39			

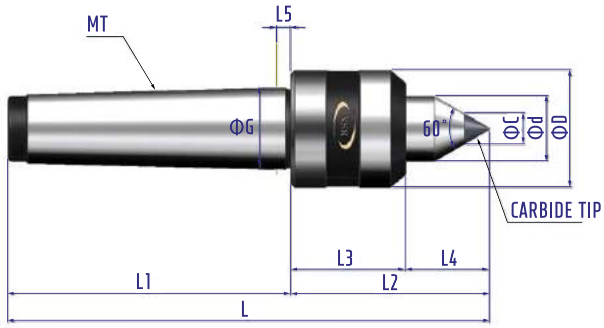
NSR-HBC TYPE

Low cost model to wide-use lathe | 범용선반의 일상작업에 적합한 저가형 모델
适合半自动车床 日常加工的 经济型 型号

- 바이트 간섭을 줄이기 위해 몸체부를 작게 함
- HEAD부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Minimized the body for reducing the bite-interference
- Minimized the wear property by inserting tungsten cadmium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 减少工件干涉 本体旋转顶尖部分缩小
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1008012	2HBC	MT2	mm	38	18	124	68	56	35	21	6	10	300	6,000	0.003
			inch	1.5	0.71	4.88	2.68	2.2	1.38	0.83	0.24	0.39			
1008013	3HBC	MT3	mm	38	18	141	85	56	35	21	6	10	400	6,000	0.003
			inch	1.5	0.71	5.55	3.35	2.2	1.38	0.83	0.24	0.39			
1008014	4HBC	MT4	mm	45	25	184	108	76	44	32	5.3	12	600	5,000	0.003
			inch	1.77	0.98	7.24	4.25	2.99	1.73	1.26	0.21	0.47			
1008015	5HBC	MT5	mm	63	28	229	136	93	58	35	6.3	14	750	4,000	0.003
			inch	2.48	1.1	9.02	5.35	3.66	2.28	1.38	0.25	0.55			

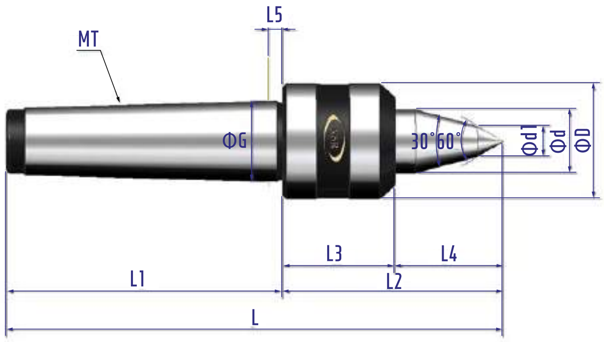
NSR-HBA TYPE

Low cost model to wide-use lathe | 범용선반의 일상작업에 적합한 저가형 모델
适合半自动车床 日常加工的 经济型 型号

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터 HEAD 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center head, HRC 58~62

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖部热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	Φd1			
1008024	4HBA	MT4	mm	45	25	194.2	108	86.2	44	42.2	5.3	12	600	5,000	0.003
			inch	1.77	0.98	7.65	4.25	3.39	1.73	1.66	0.21	0.47			
1008025	5HBA	MT5	mm	63	28	238	136	102	58	44	6.3	14	750	4,000	0.003
			inch	2.48	1.1	9.37	5.35	4.02	2.28	1.73	0.25	0.55			

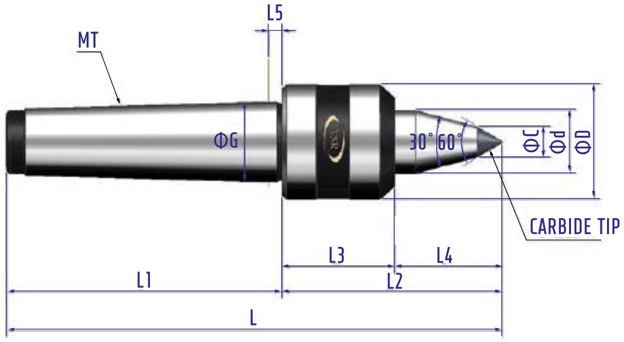
NSR-HBAC TYPE

Low cost model to wide-use lathe | 범용선반의 일상작업에 적합한 저가형 모델
适合半自动车床 日常加工的 经济型 型号

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- HEAD 부에 초경을 삽입하여 마모성 최소화 시킴
- 초경 경도 HRA 90~91

- Second step-angle application for minimize the bite-interference
- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center head, HRC 58~62

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91

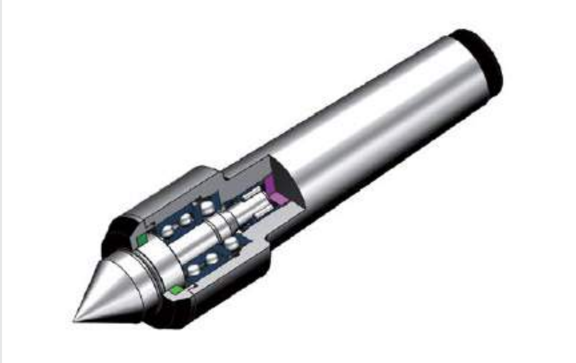


Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1008034	4HBAC	MT4	mm	45	25	194.2	108	86.2	44	42.2	5.3	12	600	5,000	0.003
			inch	1.77	0.98	7.65	4.25	3.39	1.73	1.66	0.21	0.47			
1008035	5HBAC	MT5	mm	63	28	238	136	102	58	44	6.3	14	750	4,000	0.003
			inch	2.48	1.1	9.37	5.35	4.02	2.28	1.73	0.25	0.55			

HN Series

Rotation center for NC machining (Tools to minimize interference)
NC공작기계용 (공구간섭 최소화 회전센타) | 专用NC车床有效减少刀具干涉的旋转型顶尖

NSR-HN
NSR-HNC
NSR-HNA



NSR-HNAC

- 공구 간섭을 최소화 시킨 SHAFT 회전형 센터
- 특수 OIL SEAL 채용 절삭유 및 이물질 침투방지
- 고정도 3중 베어링 구조
- RUN OUT 0.003mm 이내

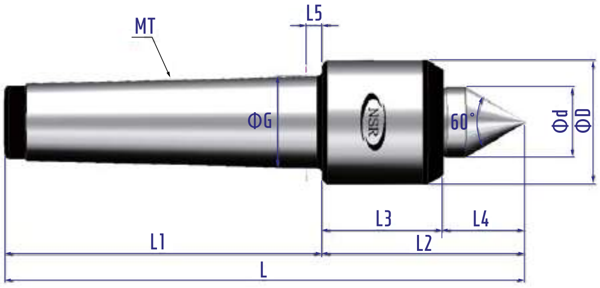
- SHAFT Rotating centers that minimizes interference to the tool
- Special oil seal adopted to prevent penetration by coolant and foreign matter
- Triplexed bearing structure as high degree of precision
- Run out - Max 0.003mm

- 最大限度减少刀具干涉的 旋转型轴顶尖
- 采用特殊油封，有效防止切削液和异物质进入
- 采用高精度三重轴承结构
- 跳动精度0.003以内

NSR-HN TYPE

Rotation center for NC machining (Tools to minimize interference)
NC공작기계용 (공구간섭 최소화 회전센타) | 专用NC车床（有效减少刀具干涉的旋转型顶尖）

- 센터 축의 열처리 경도 HRC 58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖头的热处理硬度为 HRC 58-62

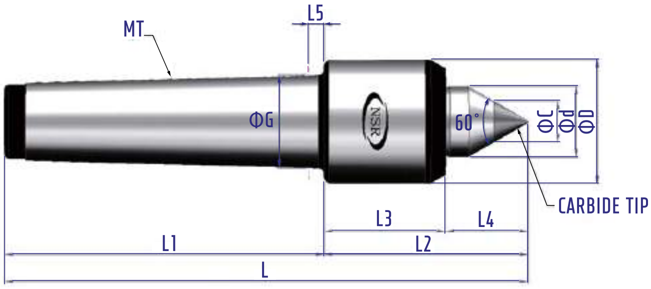


Model No	Model	Morse Taper	Unit	Dimension								MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5			
1013003	3HN	MT3	mm	34	18	146.5	85	61.5	40.5	21	5.3	300	6,000	0.003
			inch	1.34	0.71	5.77	3.35	2.42	1.59	0.83	0.21			
1013004	4HN	MT4	mm	42	24	177	108	69	41	28	5.3	400	5,000	0.003
			inch	1.65	0.94	6.97	4.25	2.72	1.61	1.1	0.21			
1013005	5HN	MT5	mm	58	31.4	229.3	134.3	95	60	35	6.3	700	4,000	0.003
			inch	2.28	1.24	9.03	5.29	3.74	2.36	1.38	0.25			

NSR-HNC TYPE

Rotation center for NC machining (Tools to minimize interference)
NC공작기계용 (공구간섭 최소화 회전센타) | 专用NC车床（有效减少刀具干涉的旋转型顶尖）

- 센터부에 초경을 삽입하여 마모성 최소화
- 초경경도 HRA 90~91
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Heat treatment hardness of center head, HRC 58~62
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1013013	3HNC	MT3	mm	34	18	146.5	85	61.5	40.5	21	5.3	10	300	6,000	0.003
			inch	1.34	0.71	5.77	3.35	2.42	1.59	0.83	0.21	0.39			
1013014	4HNC	MT4	mm	42	24	177	108	69	41	28	5.3	14	400	5,000	0.003
			inch	1.65	0.94	6.97	4.25	2.72	1.61	1.1	0.21	0.55			
1013015	5HNC	MT5	mm	58	31.4	229.3	134.3	95	60	35	6.3	18	700	4,000	0.003
			inch	2.28	1.24	9.03	5.29	3.74	2.36	1.38	0.25	0.71			

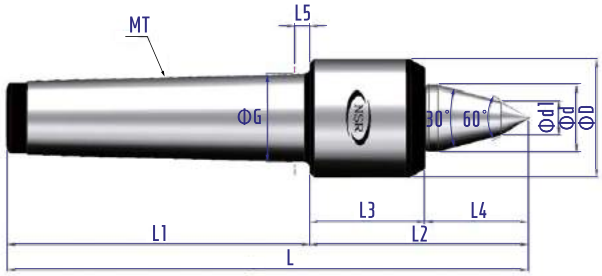
NSR-HNA TYPE

Rotation center for NC machining (Tools to minimize interference)
NC공작기계용 (공구간섭 최소화 회전센타) | 专用NC车床（有效减少刀具干涉的旋转型顶尖）

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터 축의 열처리 경도 HRC 58~62

- Second step-angle application for minimize the bite-interference
- Heat treatment hardness of center axis, HRC 58~62

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头的热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦB			
1013023	3HNA	MT3	mm	34	18	152.5	85	67.5	40.5	27	5.3	10	300	6,000	0.003
			inch	1.34	0.71	6	3.35	2.66	1.59	1.06	0.21	0.39			
1013024	4HNA	MT4	mm	42	24	186	108	78	41	37	5.3	12	400	5,000	0.003
			inch	1.65	0.94	7.32	4.25	3.07	1.61	1.46	0.21	0.47			
1013025	5HNA	MT5	mm	58	31.4	247.3	134.3	113	60	53	6.3	14	700	4,000	0.003
			inch	2.28	1.24	9.74	5.29	4.45	2.36	2.09	0.25	0.55			

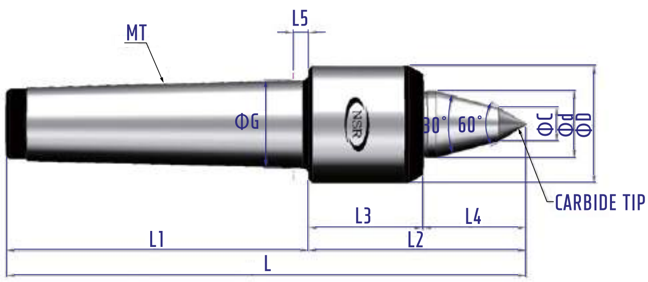
NSR-HNAC TYPE

Rotation center for NC machining (Tools to minimize interference)
NC공작기계용 (공구간섭 최소화 회전센타) | 专用NC车床（有效减少刀具干涉的旋转型顶尖）

- 바이트 간섭을 최소화 하기 위해 센타부에 2단 각도 체택
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경경도 HRA 90~91

- Second step-angle application for minimize the bite-interference
- Minimized the wear property by inserting tungsten admium alloy (= tungalloy) to center position.
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

- 顶尖头部采用两段锥度设计，有效减少干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension									MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC			
1013033	3HNAC	MT3	mm	34	18	152.5	85	67.5	40.5	27	5.3	10	300	6,000	0.003
			inch	1.34	0.71	6	3.35	2.66	1.59	1.06	0.21	0.39			
1013034	4HNAC	MT4	mm	42	24	186	108	78	41	37	5.3	12	400	5,000	0.003
			inch	1.65	0.94	7.32	4.25	3.07	1.61	1.46	0.21	0.47			
1013035	5HNAC	MT5	mm	58	31.4	247.3	134.3	113	60	53	6.3	14	700	4,000	0.003
			inch	2.28	1.24	9.74	5.29	4.45	2.36	2.09	0.25	0.55			

MT / DC Series

DEAD CENTER

NSR-MT
NSR-MTC
NSR-MTH
NSR-MTHC

NSR-DC
NSR-DCC

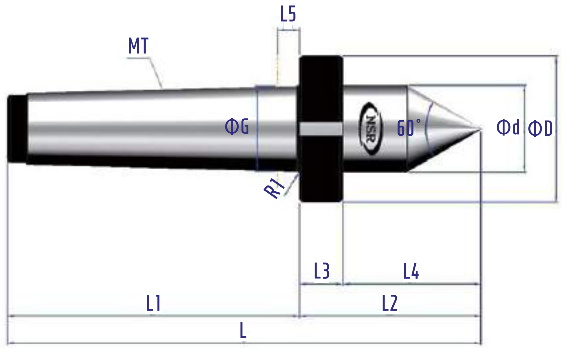
- 착탈용 NUT 별도 구매 가능
- RUN OUT 0.002mm 이내

- Possible buying the detachable nut
- Run out - Max 0.002mm

- 防脱型螺帽单独采购
- 跳动精度0.002以内

NSR-MT TYPE DEAD CENTER

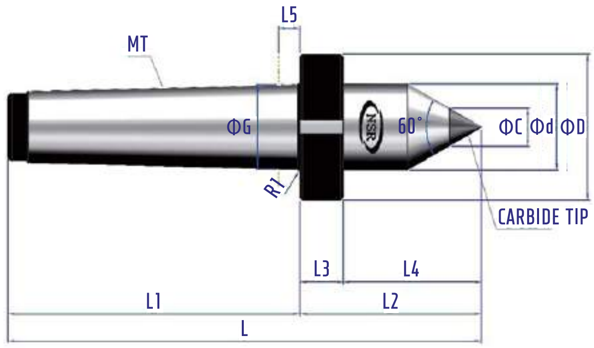
- 센터 축의 열처리 경도 HRC 58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖部热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension								MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	
1009002	MT2	MT2	mm	40	18	110	67	43	13	30	5	0.002
			inch	1.57	0.71	4.33	2.64	1.69	0.51	1.18	0.2	
1009003	MT3	MT3	mm	46	24	138	85	53	14	39	6	0.002
			inch	1.81	0.94	5.43	3.35	2.09	0.55	1.54	0.24	
1009004	MT4	MT4	mm	54	32	175	108	67	16	51	8	0.002
			inch	2.13	1.26	6.89	4.25	2.64	0.63	2.01	0.31	
1009005	MT5	MT5	mm	75	45	217.5	129.5	88	20	68	8	0.002
			inch	2.95	1.77	8.56	5.1	3.46	0.79	2.68	0.31	
1009006	MT6	MT6	mm	97	64	296	189	107	28	79	10	0.002
			inch	3.82	2.52	11.65	7.44	4.21	1.1	3.11	0.39	

NSR-MTC TYPE DEAD CENTER

- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRC 90~91
- Heat treatment hardness of center axis, HRC 58~62
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



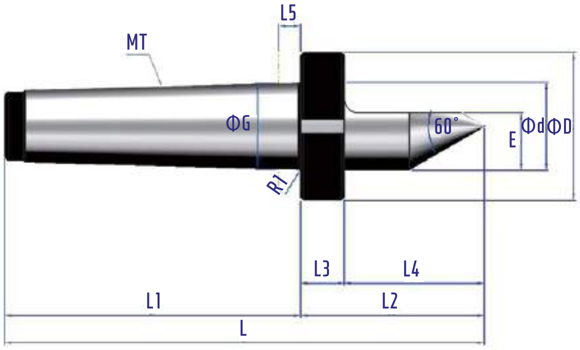
Model No	Model	Morse Taper	Unit	Dimension									MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	ΦC	
1009012	MTC2	MT2	mm	40	18	110	67	43	13	30	5	10	0.002
			inch	1.57	0.71	4.33	2.64	1.69	0.51	1.18	0.2	0.39	
1009013	MTC3	MT3	mm	46	24	138	85	53	14	39	6	10	0.002
			inch	1.81	0.94	5.43	3.35	2.09	0.55	1.54	0.24	0.39	
1009014	MTC4	MT4	mm	54	32	175	108	67	16	51	8	14	0.002
			inch	2.13	1.26	6.89	4.25	2.64	0.63	2.01	0.31	0.55	
1009015	MTC5	MT5	mm	75	45	217.5	129.5	88	20	68	8	18	0.002
			inch	2.95	1.77	8.56	5.1	3.46	0.79	2.68	0.31	0.71	
1009016	MTC6	MT6	mm	97	64	296	189	107	28	79	10	30	0.002
			inch	3.82	2.52	11.65	7.44	4.21	1.1	3.11	0.39	1.18	

NSR-MTH TYPE DEAD CENTER

- 숫돌 간섭 최소화
- 센터 축의 열처리 경도 HRC 58~62

- Minimized the interference of whetstone
- Heat treatment hardness of center axis, HRC 58~62

- 有效减少砂轮干涉
- 顶尖部热处理硬度为 HRC 58-62



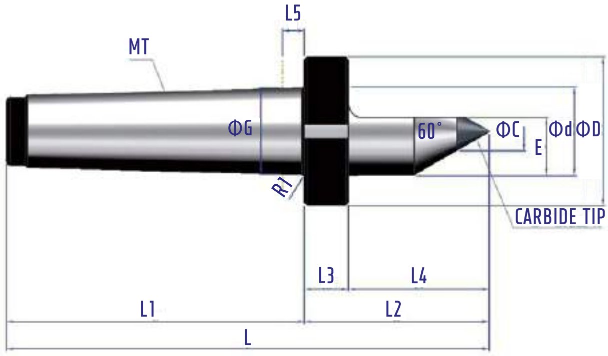
Model No	Model	Morse Taper	Unit	Dimension									MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	E	
1009022	MTH2	MT2	mm	40	18	110	67	43	13	30	5	11	0.002
			inch	1.57	0.71	4.33	2.64	1.69	0.51	1.18	0.2	0.43	
1009023	MTH3	MT3	mm	46	24	138	85	53	14	39	6	15	0.002
			inch	1.81	0.94	5.43	3.35	2.09	0.55	1.54	0.24	0.59	
1009024	MTH4	MT4	mm	54	32	175	108	67	16	51	8	21	0.002
			inch	2.13	1.26	6.89	4.25	2.64	0.63	2.01	0.31	0.83	
1009025	MTH5	MT5	mm	75	45	217.5	129.5	88	20	68	8	29.4	0.002
			inch	2.95	1.77	8.56	5.1	3.46	0.79	2.68	0.31	1.16	

NSR-MTHC TYPE DEAD CENTER

- 숫돌 간섭 최소화
- 센터부에 초경을 삽입하여 마모성 최소화
- 초경 경도 HRA 90~91

- Minimized the interference of whetstone
- Minimized the wear property by inserting tungsten cadmium alloy
(= tungalloy) to center position
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91

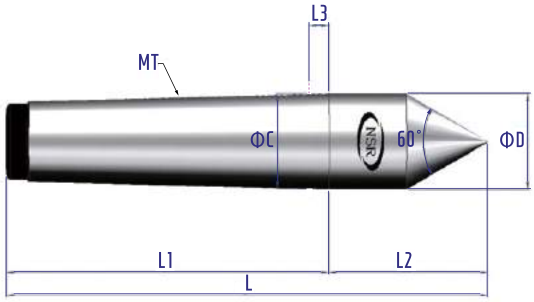
- 有效减少砂轮干涉
- 顶尖头部镶入硬质合金，耐磨性显著提高
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension										MAX Run Out(mm)
				ΦD	Φd	L	L1	L2	L3	L4	L5	E	ΦC	
1009032	MTHC2	MT2	mm	40	18	110	67	43	13	30	5	11	10	0.002
			inch	1.57	0.71	4.33	2.64	1.69	0.51	1.18	0.2	0.43	0.39	
1009033	MTHC3	MT3	mm	46	24	138	85	53	14	39	6	15	10	0.002
			inch	1.81	0.94	5.43	3.35	2.09	0.55	1.54	0.24	0.59	0.39	
1009034	MTHC4	MT4	mm	54	32	175	108	67	16	51	8	21	14	0.002
			inch	2.13	1.26	6.89	4.25	2.64	0.63	2.01	0.31	0.83	0.55	
1009035	MTHC5	MT5	mm	75	45	217.5	129.5	88	20	68	8	29.4	18	0.002
			inch	2.95	1.77	8.56	5.1	3.46	0.79	2.68	0.31	1.16	0.71	

NSR-DC TYPE Affordable fixed center

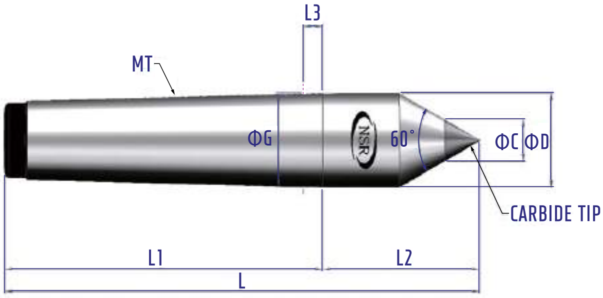
- 센터 축의 열처리 경도 HRC 58~62
- Heat treatment hardness of center axis, HRC 58~62
- 顶尖部热处理硬度为 HRC 58-62



Model No	Model	Morse Taper	Unit	Dimension					MAX Run Out(mm)
				ΦD	L	L1	L2	L3	
1009042	DC2	MT2	mm	18	100	67	33	5	0.002
			inch	0.71	3.94	2.64	1.3	0.2	
1009043	DC3	MT3	mm	24.1	123	84	39	5	0.002
			inch	0.95	4.84	3.31	1.54	0.2	
1009044	DC4	MT4	mm	31.6	159	106.5	52.5	6.5	0.002
			inch	1.24	6.26	4.19	2.07	0.26	
1009045	DC5	MT5	mm	44.7	205	134.5	70.5	6.5	0.002
			inch	1.76	8.07	5.3	2.78	0.26	
1009046	DC6	MT6	mm	63.8	275	187	88	8	0.002
			inch	2.51	10.83	7.36	3.46	0.31	

NSR-DCC TYPE Affordable fixed center

- 초경 경도 HRA 90~91
- Hardness of the tungsten cadmium alloy (= tungalloy) HRA 90~91
- 硬质合金硬度为 HRA 90-91



Model No	Model	Morse Taper	Unit	Dimension						MAX Run Out(mm)
				ΦD	L	L1	L2	L3	ΦC	
1009052	DCC2	MT2	mm	18	100	67	33	5	10	0.002
			inch	0.71	3.94	2.64	1.3	0.2	0.39	
1009053	DCC3	MT3	mm	24.1	123	84	39	5	10	0.002
			inch	0.95	4.84	3.31	1.54	0.2	0.39	
1009054	DCC4	MT4	mm	31.6	159	106.5	52.5	6.5	14	0.002
			inch	1.24	6.26	4.19	2.07	0.26	0.55	
1009055	DCC5	MT5	mm	44.7	205	134.5	70.5	6.5	18	0.002
			inch	1.76	8.07	5.3	2.78	0.26	0.71	
1009056	DCC6	MT6	mm	63.8	275	187	88	8	18	0.002
			inch	2.51	10.83	7.36	3.46	0.31	0.71	

HG Series

Large grinding center (Other TAPER available custom-made)
대형 그라인딩센타 (기타 TAPER 맞춤제작가능) | 大型磨削顶尖（其他锥度非标订做）

- 대형 공작물 가공용 센타
- 특수 OIL SEAL, 비접촉실 체택 (절삭유 및 이물질 침투 방지)
- 센타부 열처리 경도 HRC 58~62

- Large workpiece machining center
- Special oil seal, Adoption of contactless (Coolant and oreign matter to prevent infiltration)
- Heat treatment hardness of center axis, HRC 58~62

- 重型工件加工顶尖
- 采用特殊油封，有效防止切削液和异物质进入
- 顶尖部热处理硬度为 HRC 58-62

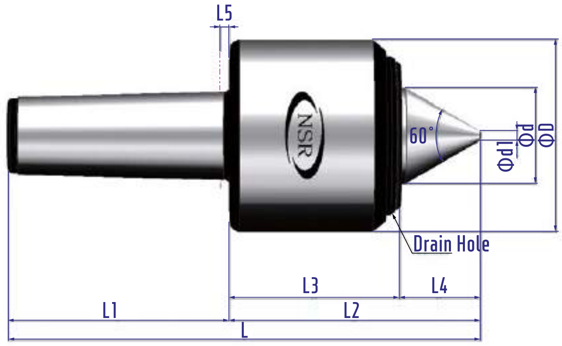
대형센타 주문제작

Order Production Huge Center | 大型顶尖订做

NSR-HG120S (30 TON)

NSR-HG TYPE

대형 그라인딩센타 (기타 TAPER 맞춤제작가능)
Large grinding center (Other TAPER available custom-made)
大型磨削顶尖（其他锥度非标订做）

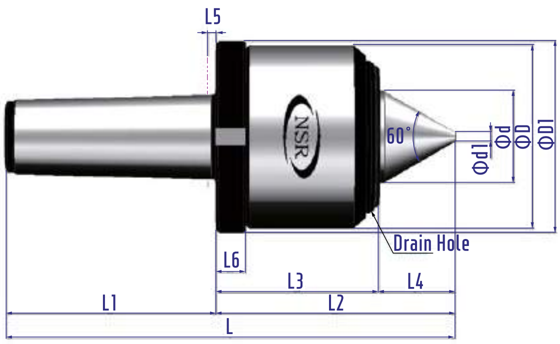


Model No	Model	Morse Taper	Unit	Dimension ΦD	Φd	Φd1	L	L1	L2	L3	L4	L5	MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
1006G60	6THG(60˚)	MT6	mm	165	79	3	400.7	191	209.7	138	71.7	12	8,000	800	0.005
			inch	6.5	3.11	0.12	15.78	7.52	8.26	5.43	2.82	0.47			
1006G75	6THG(75˚)		mm	165	79	3	384.4	191	193.4	138	55.4	12			
			inch	6.5	3.11	0.12	15.13	7.52	7.61	5.43	2.18	0.47			
1007G60	7THG(60˚)	MT7	mm	165	79	3	469.7	260	209.7	138	71.7	12	10,000	800	0.005
			inch	6.5	3.11	0.12	18.49	10.24	8.26	5.43	2.82	0.47			
1007G75	7THG(75˚)		mm	165	79	3	453.4	260	193.4	138	55.4	12			
			inch	6.5	3.11	0.12	17.85	10.24	7.61	5.43	2.18	0.47			
HG80	HG80	1:10	mm	178	109	3	442.3	203	239.3	138	101.3	10	10,000	850	0.005
		1:20													
		1:10	inch	7.01	4.29	0.12	17.41	7.99	9.42	5.43	3.99	0.39			
		1:20													
HG100	HG100	1:10	mm	218	109	3	534.6	250	284.6	193	91.6	10	15,000	750	0.005
		1:20													
		1:10	inch	8.58	4.29	0.12	21.05	9.84	11.2	7.6	3.61	0.39			
		1:20													
HG120	HG120	1:10	mm	310	124	3	619.5	268.5	351	242.5	108.4	15	25,000	500	0.005
		1:20													
		1:10	inch	12.2	4.88	0.12	24.39	10.57	13.82	9.55	4.27	0.59			
		1:20													

NSR-HGN TYPE

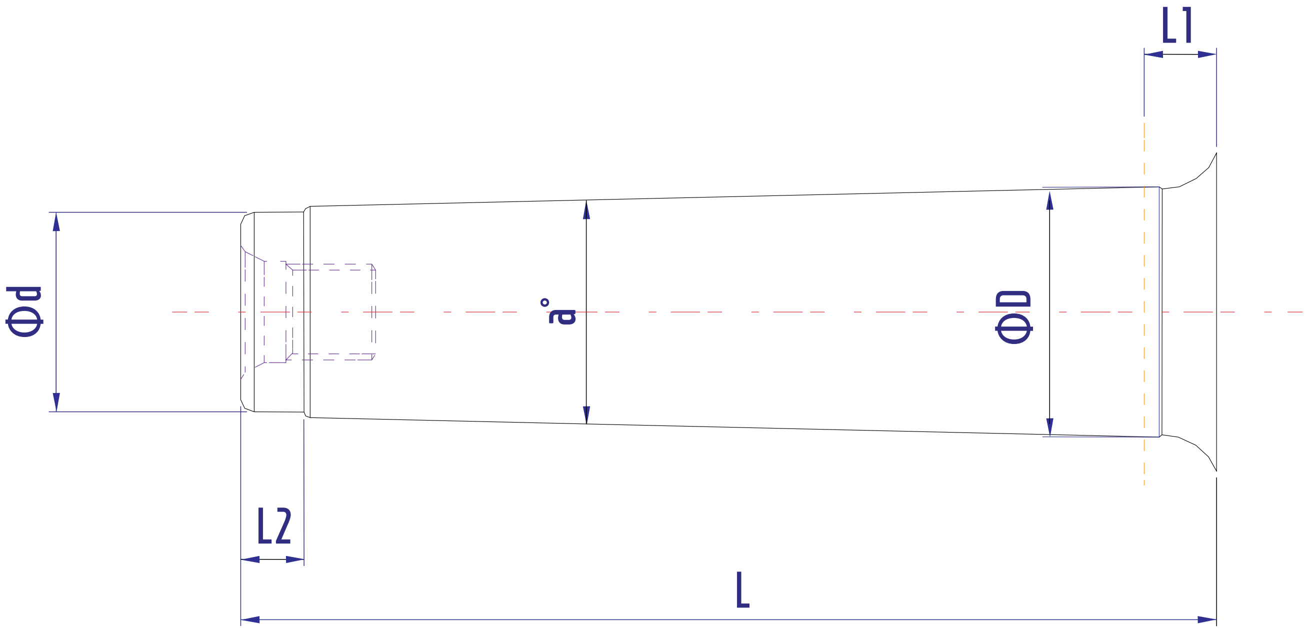
대형 그라인딩센타 (기타 TAPER 맞춤제작가능)
Large grinding center (Other TAPER available custom-made)
大型磨削顶尖（其他锥度非标订做）

- NUT 부착용
- NUT Mounting
- 螺母 附加



Model No	Model	Morse Taper	Unit	Dimension ΦD	ΦD1	Φd	Φd1	L	L1	L2	L3	L4	L5	MAX Weight(kg)	MAX R.P.M	MAX Run Out(mm)
HGN80	HGN80	1:10	mm	178	190	109	3	442.3	203	239.3	138	101.3	10	10,000	850	0.005
			inch	7.01	7.48	4.29	0.12	17.41	7.99	9.42	5.43	3.99	0.39			
		1:20	mm	178	190	109	3	442.3	203	239.3	138	101.3	10			
			inch	7.01	7.48	4.29	0.12	17.41	7.99	9.42	5.43	3.99	0.39			
HGN100	HGN100	1:10	mm	218	228	109	3	534.6	250	284.6	193	91.6	10	15,000	750	0.005
			inch	8.58	8.98	4.29	0.12	21.05	9.84	11.2	7.6	3.61	0.39			
		1:20	mm	218	228	109	3	534.6	250	284.6	193	91.6	10			
			inch	8.58	8.98	4.29	0.12	21.05	9.84	11.2	7.6	3.61	0.39			
HGN120	HGN120	1:10	mm	310	320	124	3	619.5	268.5	351	242.5	108.4	15	25,000	500	0.005
			inch	12.2	12.6	4.88	0.12	24.39	10.57	13.82	9.55	4.27	0.59			
		1:20	mm	310	320	124	3	619.5	268.5	351	242.5	108.4	15			
			inch	12.2	12.6	4.88	0.12	24.39	10.57	13.82	9.55	4.27	0.59			

Morse Taper



Model No	Dimension							
	a° (테이퍼 각)		ΦD(Gauge Line)	Unit	Φd	L	L1	L2
MT0	2° 49' 24.7802"	2.823 550 06°	Φ9.045	mm	6	53	3	4
				inch	0.24	2.09	0.12	0.16
MT1	2° 51' 26.9283"	2.857 480 08°	Φ12.065	mm	9	57	3.5	4
				inch	0.35	2.24	0.14	0.16
MT2	2° 51' 40.7960"	2.861 332 23°	Φ17.780	mm	14	68	6	4
				inch	0.55	2.68	0.24	0.16
MT3	2° 52' 31.4463"	2.875 401 76°	Φ23.825	mm	19	85	6	5
				inch	0.75	3.35	0.24	0.2
MT4	2° 58' 30.4217"	2.975 117 13°	Φ31.267	mm	25	108	8	7
				inch	0.98	4.25	0.31	0.28
MT5	3° 0' 52.3956"	3.014 554 34°	Φ44.399	mm	35	136	8	7
				inch	1.38	5.35	0.31	0.28
MT6	2° 59' 11.7258"	2.986 590 50°	Φ63.348	mm	51	189	10	10
				inch	2.01	7.44	0.39	0.39
MT7	2° 58' 56.7514"	2.982 430 93°	Φ83.058	mm	67	260	12	12
				inch	2.64	10.24	0.47	0.47

SPECIAL

전타입 특수주문제작 가능!!!

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Order Production All Type Center

全规格型号 特殊订做!!! NEWSERIM TECH 全规格型号的顶尖特殊制作

NSR-4SNS

NSR-4WNS

NSR-4SNS

NSR-4SNCS

NSR-4WNS

포인트교체형 NSR-CNP

19P~

심압대압력표시형 NSR-SR

35P~

고속회전용 일반타입 NSR-SH

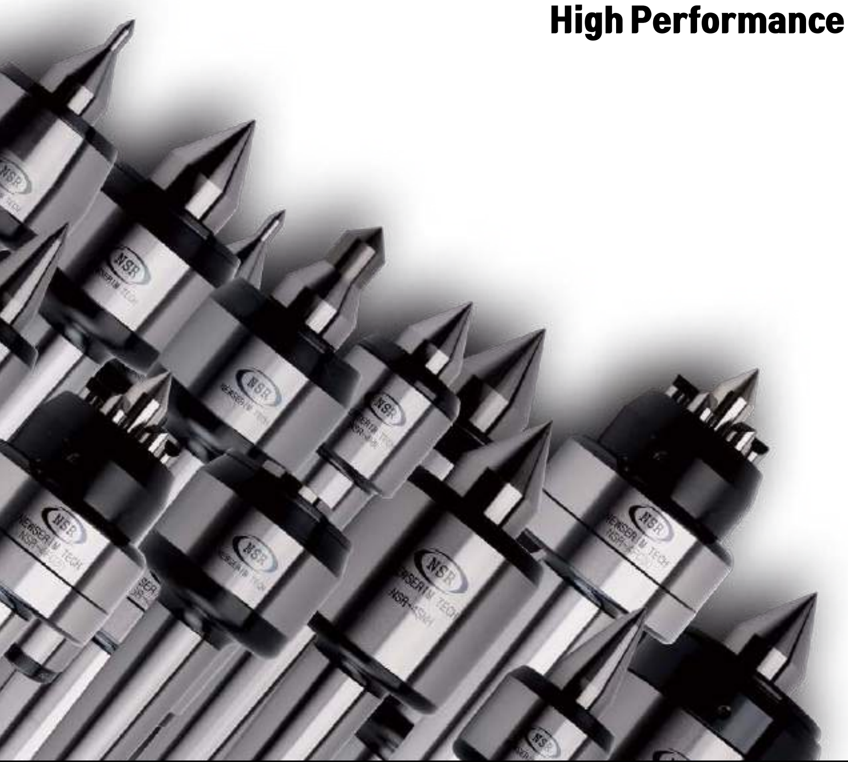
21P~

대형그라인딩센타 NSR-HG

64P~

CERTIFIED ISO 9001:2015 COMPANY

High Performance Live Center



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