

PRODUCT NAME INDEX

[A]

ADJUSTMENT HOSES	706
ADJUSTMENT PINS	699
AIR CYLINDERS FOR LIFTER UNITS	929
AIR JET COOLERS FOR DIES	705
AIR MANIFOLDS	934
AIR TUBE BRACKETS	933
AIR TUBE ONE-TOUCH JOINTS	931
AIR TUBES	706
AIR TUBES / SPECIAL TUBE CUTTERS	932
AIR VENTS FOR DRAWING DIES	872
ANGLE STAYS	872
ANGULAR BUTTON DIES	
Headed type	269
Straight type	271

[B]

BACKUP KEYS	870
BALL BUTTONS	736
BALL CAGES	760-827
BALL CAGES FOR DIE SETS	802
BALL CARRIERS	939
BALL GUIDE BUSHINGS	827
BALL GUIDE BUSHINGS FOR DIE SETS	799
Detachable type	800
BALL GUIDE BUSHINGS FOR LOWER DIE SETS	801
BALL GUIDE PILLAR SETS	
Fixed stoppers (aluminum-resin)	819
For die guide and pad	850
Movable stoppers (aluminum-resin)	817
BALL GUIDE PILLAR SETS FOR DIE SETS	
Detachable pillars	787
Press-fit pillars	789
BALL PLUNGERS	737
BALL PLUNGERS WITH FLANGES	736
BALL-LOCK BUTTON DIES	657
BALL-LOCK JECTOR PUNCHES	
Heavy load type (economy)	650
Heavy load type with spanner groove	654
Light load type (economy)	649
Light load type with spanner groove	653
BALL-LOCK PUNCH BLANKS	
Economy type	655
Type with spanner groove	656
BALL-LOCK PUNCHES	
Heavy load type (economy)	648
Heavy load type with spanner groove	652
Light load type (economy)	647
Light load type with spanner groove	651
BALL-LOCK RETAINERS	
Components, jigs, and spanners	665
Heavy load type (compact)	660
Heavy load type (triangle)	662
Light load type (compact)	659
Light load type (triangle compact)	663
Light load type (triangle)	661
Light load, space saving, single fixing-bolt type	664
BENDING AND CHAMFERING PUNCHES & DIES	
Configurable size type	587
Fixed size type	583
BENDING DIES, FIXING-BOLT TYPE	589
BLANK HOLDER STOPPER BOLTS	864
BLANKING PUNCHES	175
BLOCK DIE BLANKS	383
BLOCK DIE BLANKS, FIXING-BOLT TYPE	384
BLOCK DIE SPACERS	385
BLOCK DIES	369
Configurable size type	375
Fixing-bolt type	379

Small type	371
BLOCK GUIDE LIFTERS	724
BLOCK LIFTER SETS	726
BLOCK LIFTERS	
Detachable type	726
Detachable type, configurable guide width	723
Fixing-key type	731
BLOCK PUNCH BLANKS	359
BLOCK PUNCHES	305
Configurable size type	329
Configurable size type, TiCN coating	347
Double flanges	319
Flange stopper type	327
Flange thickness 10 mm type, TiCN coating	343
Flange thickness 10mm type	345
Flange thickness 10mm type, double flanges	325
Flange thickness 10mm type, single flange	323
HW coating	335
Single flange	315
Tapped	307
TiCN coating	333
With key groove	311
WPC treatment	331
BRACKETS FOR SENSORS	537
BURRING DIE UNITS	547
BURRING PUNCHES	541
Half-made tapered tip type	545
Half-made tip R type	543
Normal-lapping	542
BUSHINGS FOR INSPECTION FIXTURES	1073
BUSHINGS FOR INTEGRATED TYPE PLAIN GUIDE PILLAR SETS	822
BUSHINGS FOR LIFTER CUSHION PINS	875
BUSHINGS FOR PUNCH HOLE POSITION ADJUSTMENT	639
BUTTON DIE BLANKS	295
BUTTON DIES	
DOWEL SLOT TYPE	287
Headed type (economy)	253
Headed type (regular)	251
Straight type (economy)	257
Straight type (regular)	255
BUTTON DIES FOR FLAME HARDENING, DOWEL SLOT TYPE	290
Button dies, configurable full length type	279
BUTTON DIES, CONFIGURABLE SIZE	283
BUTTON DIES, DEEP HOLE TYPE	277

[C]

CAM BOTTOM GUIDE PLATES	957
CAM BOTTOM SLIDE PLATES	957
CAM POSITIVE RETURN BLOCKS	958
CAM POSITIVE RETURN FOLLOWERS	958
CAM RETURN UNITS	961
CAM SIDE BLOCKS	954
CAM SIDE PLATES	953
CAM SLIDE PLATES	953
CAM STOPPERS	959
CAM STROKE PLATES	
15° type	956
30° type	955
CAM UPPER PLATES	954
CARBIDE ANGULAR BUTTON DIES, HEADED TYPE-STRAIGHT TYPE	487
CARBIDE BLOCK DIE BLANKS	523-524
Machined type	525
CARBIDE BLOCK DIES	
CARBIDE BLOCK PUNCH BLANKS	509
CARBIDE BLOCK PUNCH BLANKS WITH AIR HOLES	511
CARBIDE BLOCK PUNCH TIP BLANKS	507
CARBIDE BLOCK PUNCHES	497
Configurable size type	501
CARBIDE BLOCK PUNCHES WITH AIR HOLES	499
Configurable size type	521

PRODUCT NAME INDEX

Straight type / Single flange type	517
CARBIDE BUTTON DIE BLANKS	493
CARBIDE BUTTON DIES	481
CARBIDE DOUBLE-STEPPED PUNCHES	435
CARBIDE DOUBLE-STEPPED PUNCHES WITH KEY GROOVES	
Minus D tolerance	467
Normal-TiCN coating	449
CARBIDE FLANGE STOPPER PUNCHES	457
TiCN coating	461
CARBIDE JECTOR PUNCHES	427
CARBIDE KEY FLAT SHANK SHOULDER PUNCHES WITH AIR HOLES, NORMAL-TiCN COATING	439
CARBIDE KEY FLAT SHANK SHOULDER PUNCHES, NORMAL-TiCN COATING	437
CARBIDE PILOT PUNCHES	461
CARBIDE PILOT PUNCHES FOR FIXING TO STRIPPER PLATES	471
TiCN coating	472
Tip R and taper combined type, minus head tolerance- Normal-lapping-TiCN coating	475
CARBIDE PILOT PUNCHES WITH KEY GROOVES	465
Minus D tolerance	447
TiCN coating	445
Normal-lapping	423
TiCN coating	425
CARBIDE PUNCHES WITH KEY GROOVES	443
CARBIDE PUNCHES WITH KEY GROOVES AND AIR HOLES	451
Minus D tolerance	455
TiCN coating	453
CARBIDE SHOULDER PUNCHES	
Lapping	419
Mirror finished type	431
Short type, normal-lapping-TiCN coating	433
TiCN coating	421
CARBIDE SHOULDER QUILL PUNCHES	429
CARBIDE STRAIGHT PILOT PUNCHES	469
CARBIDE STRAIGHT PILOT PUNCHES FOR FIXING TO STRIPPER PLATES	473
TiCN coating	474
Tip R and taper combined type, minus head tolerance- Normal-lapping-TiCN coating	476
CARBIDE STRAIGHT PILOT PUNCHES WITH KEY GROOVES	470
CARBIDE STRAIGHT PUNCHES	503
CARBIDE STRAIGHT PUNCHES WITH AIR HOLES	505
CARBIDE TAPPED PUNCHES	441
CAST-IN HOOKS	1054
CAST-IN LIFTING BOLTS	1049
CHAIN JOINTS	942
CHAINS, GENERAL PURPOSE	942
CHAMFERING PUNCHES	
Type A	553
Type B	555
CLAMPS FOR STRIPPER GUIDE PINS	754-776
COIL SPRINGS	
Alteration to remove the coating	991
SWB	983
SWC	973
SWF	975
SWG	985
SWH	981
SWL	977
SWM	979
SWR	969
SWS	971
SWU	968
SWV	989
SWX	990
SWY	967
SWZ	987
COILED MATERIAL GUIDES	921
COLLARS FOR HEADED BUTTON DIES	298
COMPACT OIL-FREE SLIDE PLATES	949
COMPONENTS FOR BALL GUIDE POST SETS	851
COMPONENTS FOR MATERIAL GUIDE UNITS	743
COMPONENTS FOR SPRING GUIDE UNITS	1004
CONTACT TYPE MISFEED SENSOR UNITS	528
CONTACT TYPE MISFEED SENSOR UNITS	529
CURL CORD HOOKS	938
CUSHION PINS	873
[D]	
DIE ADHESIVE (LOCTITE)	714-808
DIE CHECK BUTTONS/SHIMS	576
DIE CLEANING AGENT	714
DIE CONTACT INSPECTION AGENT (SHINMYOTAN)	714
DIE FIXING PLATES	1055
DIE NAME PLATES	713
DIE NAME STICKERS	713
DIE STEEL PILOT PUNCHES, FIXED TIP DIAMETER TYPE	235
DIE STORAGE BUSHINGS	1056
DISTANCE GUIDE RINGS	852
DOUBLE-STEPPED SHOULDER PUNCHES FOR HEAVY LOAD, NORMAL-TiCN COATING-HW COATING	145
DOUBLE-STEPPED SHOULDER PUNCHES, NORMAL-TiCN COATING-HW COATING	75
Quill punches	77
DOUBLE-STEPPED TAPPED PUNCHES	155
DOWEL BUSHING BLANKS	676
DOWEL BUSHINGS	676
DOWEL PIN EXTRACTORS	674
DOWEL PINS	671
DOWEL PINS (ECONOMY PACKS)	673
DRAWING DIES	571
Carbide	569
Steel	567
DRAWING JECTOR PINS	912
DRAWING PUNCHES	
Dicoat treatment-TiCN coating-HW coating	561
Jector type, normal-lapping	563
Normal-lapping	559
Tip shapes	557
[E]	
ECONOMY URETHANES	1037
EMBOSSED SHOOTER PLATES	940
EMBOSSING PUNCHES	551
END RETAINER SETS FOR EDGE-MATCHING MACHINING	622
25mm thick type	620
For heavy-load punches	624
END RETAINER SETS FOR NC MACHINING	
25 mm thick, triangular type	625
25mm thick type	619
Space saving, single bolt type for punches with locating dowel holes	
32 mm thick, triangular type	626
For heavy-load punches	623
For punches with locating dowel holes	621
ENGRAVING BLOCK PUNCHES	577-579
ENGRAVING PUNCH HOLDERS	581
ENGRAVING PUNCHES	573-575
ENGRAVING PUNCHES FOR SLANTED SURFACES/SHIMS	574
[F]	
FITTING GUIDE SETS	744
FIXING KEYS FOR PUNCHES WITH KEY GROOVES	189-366
FLANGE HOLDERS	365
FLANGE STOPPER PILOT PUNCHES	206
FLANGE STOPPER PUNCHES WITH AIR HOLES	402
FLANGE STOPPER PUNCHES, NORMAL-TiCN COATING	167
FLUORORESIN TUBES	706
FREE WASHERS	685
[G]	
GAS SPRINGS	
Standard type	1015
Heavy load mini type	1018
High allowable Eccentricity and high speed type	1013

ISO/CNOMO standard type	1021
Mini type	1019
Short type	1017
Slow return type	1023
Threaded type	1020
GUIDE BUSHINGS	825
GUIDE HOLDERS	825
GUIDE LIFTER SETS	719
GUIDE LIFTERS	722
Detachable type / Type for heavy load	721
Type with air hole / Lifter pins with air holes	725
GUIDE PILLARS	825-845
GUIDE PILLARS FOR DIE SETS	795
Long type, configurable full length	797
GUIDE PILLARS WITH OIL GROOVES	823

[H]

HEADED TYPE	415
HEAVY DUTY SQUARE RETAINER SETS FOR HIGH-TENSILE STEEL ...	618
HEAVY DUTY END RETAINER SETS FOR HIGH-TENSILE STEEL	
For NC machining, punches for heavy load	617
For NC machining, punches with locating	
dowel holes	616
HEEL GUIDE PLATES WITH OIL GROOVES	854-856
HEIGHT ADJUSTMENT UNITS FOR CAMBER CORRECTION ...	591
HEXAGON SOCKET HEAD CAP SCREWS	680
HEXAGON SOCKET HEAD CAP SCREWS	677-679
HEXAGON SOCKET HEAD CAP SCREWS FOR DIE SETS	807
HEXAGON SOCKET HEAD CAP SCREWS FOR FEMALE THREAD STRIPPER BOLTS ...	694
HIGH-RIGIDITY ROLLER STRIPPER GUIDE PIN SETS	
Type fixed to stripper plate	773
Type fixed to stripper plate, single roller type	774
HIGH-RIGIDITY STRIPPER GUIDE PINS	753
HINGE PIN KEYS	879
HINGE PINS	879
HOLDING PIPES FOR TRANSPORT	1055
HOLE REPAIR SCREWS	878
HOOKS	
Bold type / Large head bolt type	1050
Large head type	1052
Plate type	1051
HOOKS FOR TRANSPORT DEVICES	938

[I]

INTEGRATED TYPE PLAIN GUIDE PILLARS	821
INTEGRATED TYPE PLAIN GUIDE PILLARS, OIL/OIL-FREE TYPES ...	815

[J]

JECTOR BLOCK PUNCH BLANKS	361
JECTOR BLOCK PUNCHES	
Double flanges	321
HW coating	341
Single flange	317
Tapped	309
TiCN coating	339
With key groove	313
WPC treatment	337
JECTOR DRAWING PUNCHES	
Dicoat treatment-TiCN coating	565
JECTOR PIN SETS	183
Long	185
JECTOR PUNCHES	57
Configurable full length, fixed B type, normal-WPC treatment ...	67
Dicoat treatment	59
Lapping	65
Large-diameter pin type, lapping	69
TiCN coating	61
WPC treatment-HW coating	63

JECTOR PUNCHES FOR HEAVY LOAD

Configurable full length type, WPC treatment-HW coating ...	127
Configurable full length. Fixed B type	123
Configurable full length. Fixed B type,	
TiCN coating	125
Dicoat treatment	115
Finished for retainers	113
Lapping	121
TiCN coating	117
WPC treatment-HW coating	119
JECTOR PUNCHES FOR HEAVY LOAD WITH DOWEL HOLES ...	139
TiCN coating	141
WPC treatment-HW coating	143
JECTOR PUNCHES WITH KEY GROOVES, NORMAL-WPC TREATMENT ...	165
JECTOR PUNCHES WITH LOCATING DOWEL HOLES	95
Dicoat treatment	97
TiCN coating	99
WPC treatment-HW coating	101
JECTOR STRAIGHT PUNCHES	351
Normal-lapping	171
TiCN coating	355
JUNCTION BOXES WITH TERMINAL BLOCKS	937

[K]

KEY FLAT SHANK JECTOR PUNCHES	
Normal-TiCN coating	83
WPC treatment-HW coating	85
KEY FLAT SHANK SHOULDER PUNCHES	
Normal-TiCN coating	79
WPC treatment-HW coating	81
KEY FLAT SHANK TAPPED PUNCHES	157
KEYS FOR PUNCHES	190
KNOCKOUT PIN SETS FOR EMBOSING PUNCHES	552
KNOCKOUT PINS	568-738

[L]

LIFTER CUSHION PINS	875
LIFTER PIN SETS	727
LIFTER PIN SETS WITH PILOT PUNCH RELIEF HOLE	729
LIFTER PINS, RESIN TYPE	727
LIFTER PLATE STOPPERS	876
LIFTER UNITS	927
LIFTING BARS	1048
LIFTING COLLARS	698
LIFTING EYE BOLTS	1049
LIFTING HOOKS, INSERT TYPE	1053
LIFTING PADS	930
LIMIT GAUGES	1065
LOCATING BARS FOR TAPPING POSITIONS	1075
LOCATING DOWEL RINGS	675
LOCATING KEYS	870
LOCATING PILOT PINS	897-900
LOCATING PINS FOR SETUP	902
LOCATION PINS	903
LOCKING END BLOCKS FOR GUIDE BUSHINGS	848
LOCKING STOPPERS FOR GUIDE POSTS	846
LOW HEAD AND ULTRA-LOW HEAD HEXAGON SOCKET HEAD CAP SCREWS ...	681
LOW REPULSION URETHANE DIE PADS	1042
LOW REPULSION URETHANE SHEETS	1042
LOW REPULSION URETHANES	1040
LOW REPULSION URETHANES WITH COUNTERBORE	1041

[M]

MAGNET LIFTER PINS	904
MAGNETS	711-915
MARKING PINS FOR CHECKING FIXTURES	1075
MATERIAL FEED LIFTER UNITS	925
MATERIAL GUIDE ROLLER SETS	

PRODUCT NAME INDEX

Bearing type	923
Oil-free bushing type	924
MATERIAL GUIDE UNITS	741
Induction-hardened type	739
MATERIAL GUIDES	922
MATERIAL LIFTERS	925
MICROSWITCH MOUNTING PLATES	532•534
MINI PUNCHES	177
MINI STRAIGHT PUNCHES	178
MISFEED SENSOR UNITS	
Contact type	538
Groove feed type	531
Hole feed type	533
MISGRIPPING SENSOR UNITS	
High-rigidity type	936
Lightweight type	935
MOVABLE CARBIDE PILOT PUNCHES	477

(N)

NEST GUIDE BLANKS	895
NEST GUIDE MOUNTING PLATES	895
NEST GUIDES	
Configurable guide shape type	893
No pilot hole for dowel, guide R type	889
Reinforced type (economy)	888
Surface support type	896
Upper die relief type	887
NEST GUIDES (WITH MOUNTING PLATES, CONFIGURABLE LENGTH)	
Reinforced type (economy)	892
NEST GUIDES (WITH MOUNTING PLATES, CONFIGURABLE SHAPE)	
Economy type	891
Reinforced type	890
NON-CLOGGING BUTTON DIES	
Headed type	267
Straight type	267
NON-CLOGGING CARBIDE ANGULAR BUTTON DIES	491
NON-CLOGGING CARBIDE BUTTON DIES	485

(O)

OIL-FREE GUIDE BUSHING, PRESS-FIT TYPE	830
OIL-FREE GUIDE BUSHINGS WITH FLANGES	845
OIL-FREE GUIDE PILLAR SETS, PRESS-FIT TYPE	829
OIL-FREE HEEL GUIDE PLATES	853•855
OIL-FREE WEAR PLATES	
Cast 20mm type, 2 bolt holes or 4 bolt holes	945
Copper alloy 10 mm type, 2 bolt holes or 4 bolt holes	947
Copper alloy 20 mm type, 2 bolt holes or 4 bolt holes	946
OIL-FREE THIN SLIDE PLATE, COPPER ALLOY 5mm TYPE	950

(P)

PAD GUIDE BLOCKS	858
PAD KEEPERS	857
PANEL INPUT DETECTORS	885
Linear type	883
PHOTOELECTRIC MISFEED SENSOR UNITS	535
PILOT EJECTOR BUSHINGS	236
PILOT PUNCHES	195
Configurable type	205•901
Dicoat treatment	201
Lapping	197
Tapped, normal •TiCN coating	207
TiCN •HW coating	199
With key groove, normal •TiCN coating	209
PILOT PUNCHES FOR FIXING TO STRIPPER PLATS	223•227~229
PILOT PUNCHES WITH LOCATING DOWEL HOLES	
Dicoat treatment	203

TiCN •HW coating	203
PILOT PUNCHES, MOVABLE TYPE	
Headed, Normal •lapping	231
Headed, TiCN coating	232
Normal •lapping	233
TiCN coating	234
PLAIN GUIDE BUSHINGS FOR DIE SETS	805
PLAIN GUIDE PILLAR SET, OIL/OIL-FREE TYPES	813
PLAIN GUIDE PILLAR SETS FOR DIE SETS	
Detachable pillars	791
Press-fit pillars	793
PLATE LIFTER PINS	876
PLUG GAUGES FOR CHECKING FIXTURES	
Oblong type	1068
Stepped type, configurable gauge length	1070
Stepped type, fixed gauge length	1069
Straight type	1067
PRECISION ANGULAR BUTTON DIES, FULLY TAPERED TYPE ...	413
PRECISION CARBIDE ANGULAR BUTTON DIES	414
PRECISION CARBIDE ANGULAR BUTTON DIES, NON-CLOGGING TYPE	
Headed type with air hole	416
Straight type with air hole	416
PRECISION CARBIDE BLOCK PUNCHES	403
PRECISION CARBIDE BLOCK PUNCHES WITH AIR HOLES	405
PRECISION CARBIDE FLANGE STOPPER PUNCHES	402
PRECISION CARBIDE LIMIT GAUGES, ONE-END STEPPED TYPE-BOTH-ENDS STEPPED TYPE ...	1063
PRECISION CARBIDE PILOT PUNCHES	411
PRECISION CARBIDE PILOT PUNCHES FOR FIXING TO STRIPPER PLATES ...	412
PRECISION CARBIDE PIN GAUGES	1066
PRECISION CARBIDE PUNCHES WITH KEY GROOVES, NORMAL •LAPPING ...	399
PRECISION CARBIDE QUILL PUNCHES, NORMAL •LAPPING ...	395
PRECISION CARBIDE SHOULDER PUNCHES WITH AIR HOLES, NORMAL •LAPPING ...	394
PRECISION CARBIDE SHOULDER PUNCHES, NORMAL •LAPPING ...	393
PRECISION CARBIDE STRAIGHT PUNCHES	407
PRECISION CARBIDE STRAIGHT PUNCHES WITH AIR HOLES ...	409
PRECISION CARBIDE STRIPPER GUIDE PINS	
Headed type	766
Straight type	766
PRECISION ENGRAVING BLOCK PUNCHES	580
PRECISION FLANGE STOPPER PUNCHES	401
PRECISION LARGE-DIAMETER CARBIDE LIMIT GAUGES ...	1064
Both-ends stepped type	1064
One-end stepped type	1064
PRECISION MULTIPURPOSE PLATES	709
PRECISION PUNCHES WITH KEY GROOVES	397
PRECISION PUNCHES WITH KEY GROOVES AND AIR HOLES ...	398
Punches with air holes, normal •lapping	400
PRECISION SHOULDER PUNCHES	391
PRECISION SHOULDER PUNCHES WITH AIR HOLES	392
PRECISION STRIPPER GUIDE BUSHINGS, OIL/OIL-FREE TYPES ...	769
PRECISION STRIPPER GUIDE PINS	
Detachable type	768
Headed type, straight type	767
PRE-HOLDING PIN SETS	
Economy type	907
Standard type	905
PRE-HOLDING PINS	
Air type	910
Long stroke type	908
With lock mechanism	909
PRESSURE PINS/STOPPERS/COLLARS	700
PRODUCT SHOOTERS	292
PUNCH & RETAINER SETS	613
PUNCH BLANKS	179•181
PUNCH GUIDE BUSHINGS	239
Block bushings, fixing-bolt type	245
Blocks, flange type	246
Double-stepped guide type	244
Extra long type	243
Long type	241
PUNCH HOLDERS	187

PUNCH SPACERS AND SHIMS	188
PUNCH TIP SHEAR ANGLE ALTERATIONS	176
PUNCHES FOR HEAVY LOAD	103
Dicoat treatment	105
Lapping	111
TiCN coating	107
WPC treatment · HW coating	109
PUNCHES FOR HEAVY LOAD WITH DOWEL HOLES	133
TiCN coating	135
WPC treatment · HW coating	137
PUNCHES WITH KEY GROOVES	159
TiCN coating	161
WPC treatment · HW coating	163
PUNCHES WITH LOCATING DOWEL HOLES	87
Dicoat treatment	89
TiCN coating	91
WPC treatment · HW coating	93
PUSH PIN SETS	911
PUSH PINS	186 · 738
PUSH-OUT PINS	912

(R)

REFERENCE PINS FOR CHECKING FIXTURES	1071
RETAINER BACKING PLATES	628
RETAINER PIN SETS	865
RIB PUNCHES	590
RINGS FOR PREVENTING RETAINER LIFTING	
For ball guides	804
For roller guides	786
ROLLER CAGES	775
ROLLER CARRIERS	939
ROLLER GUIDE PILLAR RETAINERS	785
ROLLER GUIDE PILLAR SETS FOR DIE SETS	783
ROLLER GUIDE PILLAR SPRINGS	786
ROLLER GUIDE PILLAR STOPPERS	785
ROLLER SPRINGS	775
ROLLER STOPPERS, FIXED TYPE	775
ROUGH GUIDES	886
ROUND DISTANCE PLATES	867
ROUND WIRE COIL SPRINGS	
NWL/NWM inner diameter standard type WP	1001
(70% deflection, long type)	
WB (25% deflection)	1000
WLCWT (40% deflection)	996
WM (35% deflection) / WH (30% deflection)	998
WR (60% deflection) / WF (45% deflection)	994
WY (75% deflection)	993

(S)

SCRAP BREAKERS FOR CAM PIERCE DIES	871
SCRAP CUTTERS, GENERAL PURPOSE	592
SCRAP REMOVERS	293
SCRAP RETENTION ANGULAR BUTTON DIES	275
SCRAP RETENTION BLOCK DIES	373
Configurable size type	377
Fixing-bolt type	381
SCRAP RETENTION BUTTON DIES	
Dowel slot type	288
Headed type (economy)	261
Headed type (regular)	259
Straight type (economy)	265
Straight type (regular)	263
SCRAP RETENTION BUTTON DIES, CONFIGURABLE FULL LENGTH TYPE	281
SCRAP RETENTION BUTTON DIES, CONFIGURABLE SIZE	
Headed type	285
Straight type	285
SCRAP RETENTION CARBIDE ANGULAR BUTTON DIES	
Headed type	489
Straight type	489

SCRAP RETENTION CARBIDE BLOCK DIES	
Single flange type	519
Straight type	519
SCRAP RETENTION CARBIDE BLOCK DIES, CONFIGURABLE SIZE TYPE	522
SCRAP RETENTION CARBIDE BUTTON DIES	
Headed type	483
Straight type	483
SCRAP RETENTION PRECISION CARBIDE ANGULAR BUTTON DIES	415
SCRAP SHOOTERS	941
SCRAP VACUUM UNITS	291
SCRAPLESS BURRING PUNCHES	549
SCREW PLUGS	687
Hole type	688
SCREW PLUGS FOR LOOSENING PREVENTION	686
SELECT RETAINER SETS	
Air type for heavy load	634
Air type for standard punches	632
Compact type for standard punches, air type	631
Manual type for standard punches	633
SHANKS FOR DIE SETS	807
SHAPED PILOT PUNCHES FOR FIXING TO	
STRIPPER PLATS	225
SHEET LIFTERS	926
SHIM PLATES FOR INSPECTION FIXTURES (ZERO PLATES)	1076
SHIM TAPE	708
SHIMS FOR OIL-FREE SLIDE PLATES	948
SHIMS FOR ROUND DISTANCE PLATES	868
SHIMS FOR SQUARE DISTANCE PLATES	868
SHORT BENDING PUNCHES & DIES, FIXED SIZE TYPE	585
SHORT BLOCK PUNCH BLANKS	363
SHORT STRAIGHT PUNCHES	357
SHOULDER PUNCHES	47
Dicoat treatment	49
Lapping	55
Quill punches, normal · TiCN coating · lapping	71
Short type, normal · TiCN coating · HW coating	73
TiCN coating	51
WPC treatment · HW coating	53
SILENCER URETHANES	960
SKID BRACKETS WITH SLIDE ADJUSTMENT FUNCTION	918
SPACER LAYER PLATES	707
SPACERS	
Counterbore type	684
For angular button dies	297 · 494
For bushing-type stripper bolts	683
For guide lifters and lifter pins	684
For straight button dies with relief holes	297 · 494
For stripper bolt MSB	683
For stripper bolts with female threads	683
SPACERS FOR GUIDE PILLAR SETS	
Cast type	831
Steel type	833
SPARE PUNCH BOXES	710 · 877
SPECIAL RETAINER SETS	
Configurable size type	637
Fixed size type	635
For ball-lock punches	667
SPECIAL SHAPED BALL-LOCK PUNCHES	601
SPECIAL SHAPED BLOCK DIES	609
SPECIAL SHAPED BLOCK PUNCHES	603
SPECIAL SHAPED JECTOR PUNCHES	599
SPECIAL SHAPED PUNCH GUIDE BUSHINGS & BUTTON DIES	607
SPECIAL SHAPED PUNCH TIPS AND DIE HOLES	595
SPECIAL SHAPED PUNCHES	597
SPECIAL SHAPED STRAIGHT PUNCHES	605
SPOOL RETAINERS	861
Counterbore type	864
Large flange type	863
Thick type	863
SPRING GUIDE PINS	1005

PRODUCT NAME INDEX

SPRING GUIDE RETAINERS	1006
SPRING GUIDE UNITS	963•1003
SPRING PLUGS FOR PREVENTING DOWEL PIN FALL-OUT ...	673
SPRING PLUNGERS	
Hex pin type	735•914
Short type	735
Special wrench for hex pin type	914
Steel type	733•913
Type for slanted surfaces	914
Wrench for PJHR	735
SPRING PLUNGERS WITH FLANGES	736
SPRING UNIT FLANGES	1007
SPRING WASHERS	678
SPRINGS FOR BALL CAGES	760
SPRINGS FOR BALL GUIDE PILLAR SETS	828
SQUARE DISTANCE PLATES	867
SQUARE RETAINER SETS	627
SQUARE SKID BRACKETS / ROUND SKID BRACKETS	917
SQUARE URETHANES FOR HEAVY LOADS	1030
STEPPED DOWEL PINS	674
STOPPERS	828
STOPPERS AND SPRINGS FOR BALL GUIDES	803
STOPPERS FOR BALL CAGES, FIXED TYPE	754
STRAIGHT PILOT PUNCHES	211
Lapping	213
Tapped, normal • TiCN coating	217
TiCN coating	215
With key groove, normal • TiCN coating	219
STRAIGHT PUNCHES	349
Normal • lapping	169
TiCN coating	170•353
STRAIGHT PUNCHES FOR HEAVY LOAD	
Lapping	174
Normal	173
STRIPPER BOLTS, BUSHING TYPE	
Half-made type	695
Thick type / Washers	696
STRIPPER BOLTS, FEMALE THREADS	693
STRIPPER BOLTS, MALE THREADS	691
Precision L dimension type	692
STRIPPER GUIDE BUSHINGS	
3µ range type	763
For ball cages	759
Integrated ball cage type	758
Oil/oil-free types	755
Oil-free type	757
STRIPPER GUIDE PINS	
3µ range type	762
Detachable type	751
Detachable type with both ends tapped	752
Headed type	749
Straight type	750
STRIPPER PRESSURE PINS	697•698
STROKE ADJUSTMENT COLLARS FOR	
SPOOL RETAINERS	862
STROKE END BLOCKS	703•835
Flat type	837
For draw/wrist/presser balancers	869
For press-fit posts and large outer diameter types	847
Hardened and tapped type	702
Hardened type	701
Square hardened type, end block chains	704
STROKE END PIPES	1059
STROKE EXTENSION RETAINERS FOR STRIPPER BOLT	692

(T)

TAPERED HEAD JECTOR PUNCHES	
Normal	131
WPC treatment • HW coating	129

TAPERED HEAD PUNCHES	129
TAPERED REFERENCE PINS FOR CHECKING FIXTURES, THREADED TYPE ...	1072
TAPPED JECTOR PUNCHES, NORMAL • WPC TREATMENT ...	153
TAPPED PILOT PUNCHES, NORMAL •	
TiCN COATING • HW COATING	207
TAPPED PUNCHES	147
Dicoat treatment • TiCN coating	149
WPC treatment • HW coating	151
TAPPED STRAIGHT PUNCHES, NORMAL • LAPPING	172
TENSION SPRING PINS	879
TENSION SPRINGS	880
TENSION SPRINGS RINGS	880
TILTING BUTTON DIES, DOWEL SLOT TYPE	289
T-SHAPED BOLTS	1054
TUBE NIPPLES / COUPLINGS	706
TUBING TERMINALS	933

(U)

URETHANE ABSORBERS	1060
URETHANE DIE PADS	1036
URETHANE FALL-STOPPER UNITS	640
URETHANE FOAM (POROUS) FOR HIGH-DEFLECTION USE	1039
URETHANE PADS	1060
URETHANE SHEETS	1035
URETHANE STOCK BLOCK SETS	1057
URETHANE STOCK BLOCKS	1030•1032•1060
URETHANE STRIPPERS	
For compact cams and select retainers	644
URETHANE STRIPPERS FOR FALL-OUT PREVENTION UNITS ...	641
URETHANE WASHERS	862
URETHANES FOR HEAVY LOADS	1029•1031•1033
URETHANES WITH COUNTERBORE	1034

(W)

WASHERS	
For coil springs	683
For lifting collars	684
For oblong holes	684
For pressure pins	684
For stripper bolts	683
For stripper guide pins	684
WASHERS FOR ADJUSTING HEIGHT OF SPRING GUIDE UNITS ...	1004
WASHERS FOR COIL SPRINGS	1002
WASHERS FOR DIE FASTENING	871
WASHERS FOR LOOSENING PREVENTION	682
WASHERS FOR OBLONG HOLES	871
WASHERS FOR PREVENTING DOWEL PIN FALL-OUT	828
WRENCHES FOR BALL PLUNGERS	737